

Design for Interpersonal Mood Regulation

Introducing a Framework and Three Tools to Support Mood-Sensitive Service Encounters

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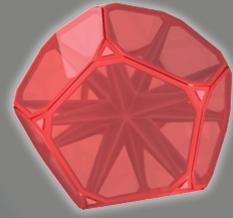
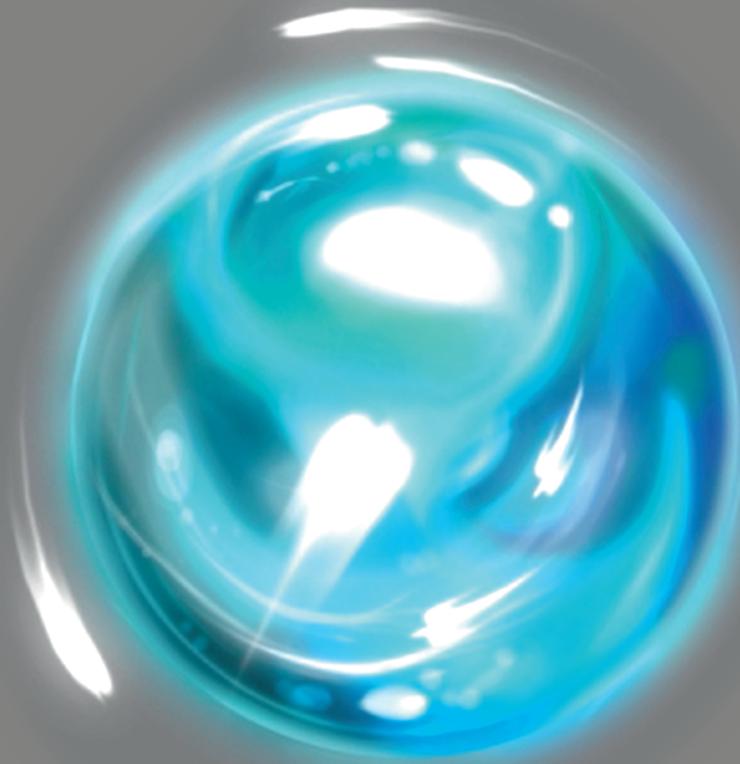
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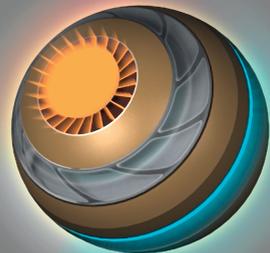
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Design for Interpersonal Mood Regulation:

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Service Encounters

Pelin Esnaf-Uslu



**DESIGN FOR INTERPERSONAL MOOD REGULATION:
INTRODUCING A FRAMEWORK AND THREE TOOLS TO
SUPPORT MOOD-SENSITIVE SERVICE ENCOUNTERS**

Pelin ESNAF-USLU

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**DESIGN FOR INTERPERSONAL MOOD REGULATION:
Introducing a Framework and Three Tools to Support Mood-Sensitive Service
Encounters**

Dissertation

for the purpose of obtaining the degree of doctor
at Delft University of Technology
by the authority of the Rector Magnificus Prof.dr.ir. T.H.J.J. van der Hagen,
Chair of the Board for Doctorates
to be defended publicly on
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1

Introduction

CHECKING IN

Last year, while waiting to check our luggage at the airport, my husband and I found ourselves curiously observing the interactions between the service providers and their customers, particularly the dynamics of their moods. One particular service provider caught our attention. Despite appearing visibly stressed, he maintained an air of politeness and reassurance, dedicating over 15 minutes to assist an agitated couple. As the couple eventually left, their demeanor seemed to have transformed to relaxation. When it was our turn at the counter, the service provider greeted us with a sigh but still managed a positive expression, albeit looking slightly overwhelmed. Given our own peaceful and amiable mood, we initiated a casual conversation and promptly handed him our documents, aiming to expedite the check-in procedure. This gesture seemed to relieve him, as he shared that it had been a hectic day from the start. Our conversation provided him with a brief break from the bustling pace, positively influencing his momentary mood. He even expressed his appreciation for assisting prepared clients like us, mentioning that it is always a pleasure. Our luggage was swiftly processed without any hitches and within minutes we were checked in, feeling peaceful and ready for our flight. Interestingly, the service provider's mood also appeared to have improved – at least until the next customer with a negative mood approached.

This airport anecdote illustrates the intricate interplay between mood and interpersonal interactions. This interplay is a pervasive aspect of our lives. More than merely responding to the moods of those around us, we often also try to influence these moods, whether we are consciously aware of this or not. For instance, we may try to lift the spirits of a gloomy sibling or offer soothing reassurance to an anxious friend. These mood-interaction dynamics take on particular significance in service encounters, where frontline service providers play a central role in shaping the customer's experience and cultivating loyalty. Among the various factors that underpin these interactions, the mood of the customer is particularly significant because it directly influences their perception of the service provider's conduct and performance.

Beyond providing efficient service, service providers are expected to manage their customers' moods as well as their own; fulfilling their job's emotional labor requirements. Due to the emotionally demanding nature of their work, service providers are vulnerable to experiencing well-being issues such as burnout and depression (Singh, Goolsby and Rhoads, 1994). While some service workers have the ability to successfully manage both their own moods and those of their customers, such proficiency is not universal. Moreover, this mood management is often done unconsciously. As a consequence, not every service

provider is equally capable of managing their own mood and accommodating their customers' moods to maintain effective communication.

The ability to identify and adapt to customers' moods can greatly enhance the quality of a service provider's interactions, resulting in improved customer satisfaction. Additionally, it can have a significant positive impact on the self-esteem and overall well-being of the service providers themselves. This, in turn, can contribute to their long-term health, happiness, and personal success. Therefore, it represents a significant opportunity for organizations to cultivate mood awareness in their employees and empower them to utilize this skill in optimizing their interactions with clients. By doing so, organizations can not only enhance customer satisfaction and loyalty but also promote the well-being of their service providers. Building on this idea, in this thesis, materials are developed for service providers that present a set of strategies with verbal and pictorial descriptions for training purposes.

In the following sections, first the mood phenomenon is described and the role of mood in human-human interaction is discussed. Then, an overview of the role of mood in service encounters is given, Emotional Intelligence is introduced (EI) and existing research and methods that support the EI of employees (aiming to improve communication skills, supporting the understanding of moods, mood regulation strategies and interpersonal mood regulation) are explained. Then, mood and mood regulation relevant design interventions are discussed. The central focus of this thesis is the phenomenon of "interpersonal mood regulation," which forms the foundation and driving force behind the research. The thesis draws upon a diverse range of disciplines, including experience design, service design, mood-focused design research, and organizational psychology, as the findings and contributions are intended to have broader interdisciplinary applicability.

1.1. MOOD AND ITS ROLE IN HUMAN-HUMAN INTERACTION

1.1.1. Affect and Mood

Even though the words affect, emotion and mood are frequently used interchangeably, they represent different types of human affect (Beedie, Terry & Lane, 2005; Russel, 2003; Ekkekakis, 2012). Affect refers to a neurophysiological state that can be characterized as a primitive valenced non-reflective feeling (Russel & Feldman Barret, 2009), which is primarily experienced as pleasant or unpleasant (Larsen, 2000). It encompasses various psychological states, including stress responses, emotions, and moods (Gross, 2014).

Among the various types of affects, one of the most extensively studied is emotion. Emotions are focused on a specific target, have a relatively short duration, arise quickly, are highly intense, and typically have a clear cause (Ekman, 1994). For example, spilling coffee purchased from your favorite shop may lead to feelings of anger or frustration, directed at the cause of the event. Emotions can arise from an event, a thought or a memory and function as a system to monitor our surroundings, indicating threats and opportunities that impact our well-being. Emotional responses help us to respond to the threat or benefit from the event (Frijda, 1994). These emotional responses involve action tendencies (Frijda, 1987) and observable expressions, often seen in the face (Ekman, 2003).

Moods, however, are global and diffuse affective states (Morris & Reilly, 1987). Unlike emotions, they tend to last longer, for example hours or days, are less intense and often not directed towards someone or something specific (Ekman, 1994). One of the main distinguishing aspects is that the cause of moods is often difficult to identify. In addition, unlike emotions, moods do not have a specific target and are “about nothing specific or about everything” or “the world as a whole” (Frijda, 2009, p.267). They can result from a combination of various events and experiences over time: A person who is feeling physically unwell, had a rough week at work and had an argument with a friend the previous day may start the day in a gloomy mood. We are always in some type of mood and “a felt sense of the “emotional atmosphere” of our experience is constantly present in the background of our awareness, typically fluctuating fluidly in its qualitative character throughout the day” (Gallegos, 2017, p.18). Moods can be considered a background experience while emotions are in the foreground and episodic (Davidson, 1994). Similar to emotions, moods have a hedonic valence (pleasant or unpleasant) and an activation level (high activation-low activation) (Watson & Tellegen, 1985; Russel, 1980). When someone asks how we are doing, we might respond with phrases like “I’m pretty good” when in a “happy” mood or say “I’ve been better” when in a “sad” mood (see Figure 1.1 for the different types of moods related to their valence and activation level).

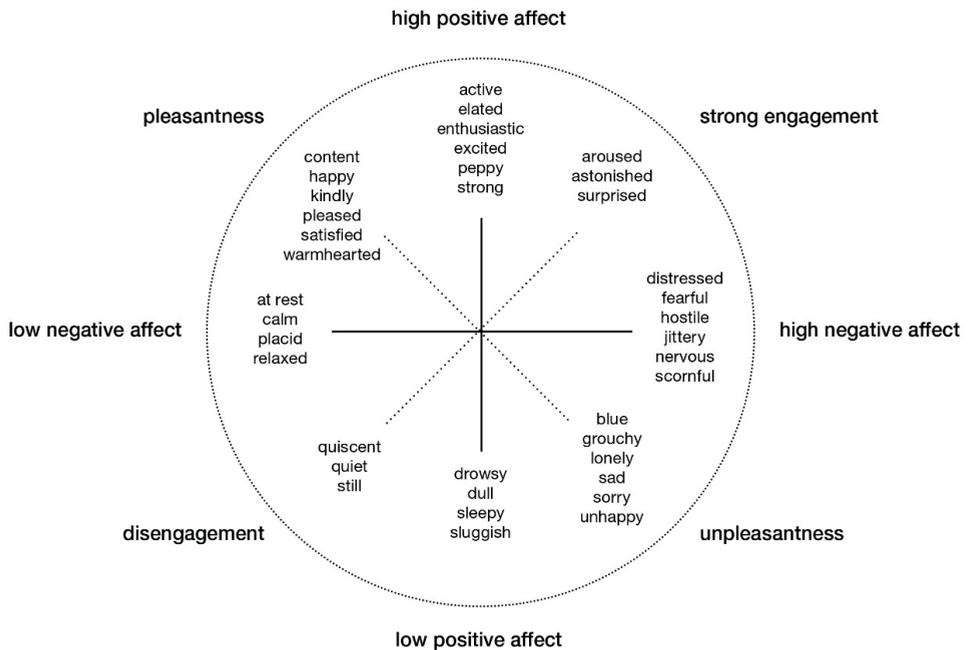


Figure 1.1.1. Circumplex model of affect (adapted from Watson and Tellegen, 1985)

The mood system serves as an indicator of how well we are doing in life in terms of physical, psychological and social resources which are influenced by internal and environmental factors (Morris, 1992). It plays an important role in self-regulation, nudging us to determine whether and how we should allocate, safeguard or replenish our resources within a given period (Thayer, 1989). This means that, for example, a cheerful mood suggests a surplus of resources, making us more open to experiences, while a gloomy mood indicates a deficiency of resources prompting us to protect ourselves by avoiding challenging situations. In essence, moods act as cues in a self-regulatory system that governs our goal-directed behavior.

Because of their diffuse nature, recognizing someone's mood can be more challenging compared to identifying their emotions. Nonetheless, mood changes often have observable expressions. Mood alterations might be expressed through subtle facial and bodily cues, such as changes in posture (Larsen, 2000, p.130).

1.1.2. Manifestations of Mood

A person's mood has an influence on their evaluations, interpretations, concerns (Parkinson 1996) and how they think (Clark & Isen, 1982; Fiedler & Forgas, 1988; Forgas, 2002; Gendolla, 2000) and behave (for reviews, see Hunsinger, Isbell, & Clore, 2012; Martin & Clore, 2013).

When in a good mood, individuals tend to be more outgoing, friendly and motivated to explore opportunities (Morris, 1992), making optimistic judgments about evaluations and expectations. They become more creative, better at problem-solving and make faster decisions. (Parkinson et al., 1996). When in a bad mood, people are more likely to perceive situations negatively and be critical and cautious (Parkinson et al., 1996; Forgas, 2017). Desmet, Xue, and Fokkinga (2019) compiled an overview of 68 mood-stimulated thought/action tendencies, such as “taking risks”, “being patient”, “being reserved”, and “being attentive”, and found distinct connections between various moods and these specific tendencies.

Moods also impact people’s interactions with others. Interpersonal communication is defined as “the verbal and non-verbal interaction between two or sometimes more than two interdependent people” (DeVito, 2019). It can occur through various mediums like face-to-face conversations or phone calls. The nature of interpersonal communication involves making choices based on the verbal and non-verbal cues exchanged during a conversation (DeVito, 2019). These interactions are complex, requiring strategic social behavior, and are influenced by moods. Moods have a broad influence, including on cognition, behavior, negotiation and verbal communication strategies, social perception, decision-making, stereotype judgments, environmental impression formation, relationship perception, politeness in requests, requesting strategies, coping with unwanted thoughts, and levels of fairness and selfishness (Forgas, 2017). For instance, when in a positive mood, a person might be trusting, optimistic, confident, and cooperative. They may also display more creativity and openness and engage in perspective-taking to understand others (Nelson, 2016). However, they could also show some selfish tendencies, be less fair, and less polite. Conversely, a negative mood may lead to more critical, avoidant, unfriendly, and defensive behavior, while still being polite, fair, and less selfish (Forgas, 2017).

Imagine a situation in which a person has experienced a challenging workday and finds themselves trapped in a frustrating traffic jam. Their sense of urgency to reach their destination increases as they are already running late to meet their friends. In the midst of their agitation, the cheerful friends call and playfully express their hunger and asking about their whereabouts. In return, the individual’s response might be characterized by impatience and defensiveness, as they perceive life to be full of obstacles. Consequently, their agitated mood influences the tone and style of communication throughout the phone conversation.

1.1.3. Mood Regulation

To change their own affect or those of others, individuals often engage in affect regulation, using intentional thoughts or behaviors (Niven et al., 2011). This process involves “initiating,

maintaining, adjusting, or altering the occurrence, intensity, or duration of internal emotional states, such as emotions or moods" (Eisenberg et al., 2000, p.137). Table 1.1 illustrates the four primary types of affect regulation defined by Niven et al (2011): People can improve their negative moods (intrinsic affect-improving) and those of others (extrinsic affect-improving) or worsen their moods (intrinsic affect-worsening) or those of others (extrinsic affect-worsening).

Table 1.1. Four main types of affect regulation (adapted from Niven et al., 2011)

		Target of Regulation	
		a. Own Affect	b. Other's Affect
Regulatory Motive	Improve Affect	Intrinsic affect- improving	Extrinsic affect-Improving
	Worsen Affect	Intrinsic affect- worsening	Extrinsic affect-worsening

a. Mood Regulation (Regulating own mood)

People frequently make efforts to influence their own mood. In accordance with their life expectations, people tend to alter, change, prolong, downgrade, maintain or savor their moods by applying different mood regulation strategies (Morris & Reilly, 1987; Larsen, 2000). These mood regulation attempts are often ingrained in our daily routines and behaviors and may be executed without conscious awareness, with diverse motives behind them (Parkinson et al., 1996). The strategies employed for mood regulation can fall into two categories: behavioral, referred to as "things to do" by Larsen (2000), such as relaxing by taking a shower or seeking out a friend's practical advice, and cognitive, referred to as "ways to think", such as daydreaming to forget troubling feelings or evaluating why things are not going well in life. The means of these strategies are to divert from the mood and the situation (e.g., through avoiding, such as mentally switching off or through distracting oneself such as watching Netflix) or to engage with the current state (e.g., through accepting the situation such as venting or letting oneself feel bad or through confronting the problem such as thinking about the reason of the current mood state) (Parkinson & Totterdell, 1999). Desmet (2015) assembled and clustered mood regulation strategies into 20 main strategies such as "withdraw", "seek relaxation", "rationalize", and "seek social support", and gave example activities for each.

Motives for Mood Regulation

Although the mood regulation strategies mentioned above often serve a hedonic motive, aiming to transform negative moods into positive ones, people may also seek to maintain negative moods or change positive moods into neutral or negative ones. For example, one may avoid positive moods to prepare oneself for potential challenges ahead or in order to increase focus and concentration as positive moods may cause distractibility (Parkinson et al., 1996).

In addition to personal motives, there are social reasons for mood regulation. People may adjust their mood to manage their relationships with others, protect themselves, and manage how they are perceived during social interactions (Manstead & Fischer, 2000). Research indicates that people often regulate their moods in anticipation of social encounters (Erber, Wegner & Theriault, 1996). For example, one might seek to adopt a gloomy mood to show empathy or elicit sympathy at a funeral, or maintain a serious mood during an important business dinner. It is worth noting that these mood adaptations can sometimes involve mimicking the expressions of certain moods without necessarily experiencing the corresponding mood state—a phenomenon termed “Emotional Labor”, which will be elaborated further in the section titled “Affect Regulation in Service Encounters – Service Provider Affect Regulation”.

b. Interpersonal Affect Regulation (Regulating others' mood)

Just as we seek support from others to regulate our moods, we also frequently attempt to influence the moods of those around us. Many of us can recall instances where we tried to lift a friend's spirits by making them laugh or intentionally aimed to put a sibling in a negative mood through criticism. Interpersonal affect regulation is formally defined as “deliberate attempts by one social entity, referred to as the 'agent,' to change the emotions or moods of another social entity, known as the 'target'” (Gross & Thompson, 2007). Similar to the strategies we employ for self-regulation, the act of influencing others' moods can occur automatically (without conscious intention) as these behaviors become woven into our daily routines. However, there are also conscious attempts, known as *controlled* interpersonal affect regulation, where we deliberately aim to influence another person's mood. The boundaries between controlled and automatic regulation are not always clear-cut, as behaviors aimed at changing others' feelings may start off as intentional but can evolve into automatic responses over time, occurring without conscious awareness (Gross, 1998, 1999 – cited from Niven, 2009). In this thesis, the focus will be on situations where the regulator/agent deliberately attempts to regulate the mood of another person (target) during live social interactions (Niven, 2017).

Karen Niven and her colleagues (2009a) provided a classification of controlled interpersonal affect regulation strategies, which regulators can use either to improve or to worsen the target's affect. Means of these strategies are to engage with the target's feelings (e.g., through positive engagement with the target such as complimenting the target's achievements or through negative engagement such as saying that the target is always unhappy), or to focus on the relationship with the target (e.g., through acceptance such as making jokes or taking the target out shopping or through rejection of the target's feelings such as not replying the target); see Table 1.2 and Table 1.3 for an overview. For example, if we think that our partner is feeling down, we might prepare a nice dinner for them to make them feel better (valuing) and have a supportive talk with them (target-focused engagement). Or when a family member is in a negative mood, we may straightforwardly point out the reality of the situation to help them see the realistic scenario (negative affective engagement), which could potentially worsen their mood. It is important to note that the resulting outcome of the regulators' actions may not always be in line with their intentions. For example, providing advice to an anxious friend and discussing their opportunities might inadvertently increase their level of anxiety.

Table 1.2. Overview of interpersonal affect-improving strategies, Niven et. al. (2009a)

	1 st Means	2 nd Means	Prototypical strategies
ENGAGEMENT STRATEGIES Positive Engagement		Affective Engagement	Problem-focused engagement Listening to the target's problems, allowing the target to vent his or her emotions, talking to the target about his or her problems, having a supportive conversation with the target, making time for the target
			Target-focused engagement Discussing positive characteristics of the target, blaming someone other than the target, reminding the target he or she has done fine in similar situations before, praising the target's work, expressing belief in the target's abilities
		Cognitive Engagement	Making the target aware that others support him or her, giving the target advice, trying to get the target to view a situation objectively, rationalizing a decision that the target made, discussing the target's opportunities

Table 1.2. (Continued)

	1 st Means	2 nd Means	Prototypical strategies
RELATIONSHIP ORIENTED	Acceptance	Attention	Valuing Spending time with the target, being there for the target, telling the target how much you value him or her, making the target feel special and cared about, saying 'hello' to the target
			Distraction Arranging a social activity for the target, giving the target a card signed by his or her friends, inviting the target on holiday, running a bath for the target, buying the target a drink
			Humor Acting silly to make the target laugh, laughing with the target, entertaining the target, sending the target a funny message, sticking funny notes on the target's work

Table 1.3. Overview of interpersonal affect-worsening strategies, Niven et. al. (2009a)

	1 st Means	2 nd Means	Prototypical strategies
ENGAGEMENT STRATEGIES	Negative Engagement	Affective Engagement	Explaining to the target why he or she has made you feel bad, making the target realise that he or she has hurt someone else, explaining to the target how he or she made others feel, challenging the target's behavior, highlighting the consequences of the target's actions
			Behavioral Engagement Letting the target know you think he or she is not pulling his or her weight, giving the target boring tasks, putting the target under pressure, telling the target that he or she missed a deadline, complaining that the target has forgotten to do something

Table 1.3. (Continued)

	1 st Means	2 nd Means	Prototypical strategies	
RELATIONSHIP ORIENTED	Rejection	Rejecting the Target's Feelings	Confrontational strategies	
			Criticizing	Pointing out the target's flaws, being unsympathetic to the target, making a nasty comment to the target, criticizing the target, belittling the target
			Disrespect	Being rude to the target, being unfriendly to the target, making unrealistic demands of the target, personally insulting the target, being obnoxious towards the target
			Non-confrontational strategies	
			Diminishing comparisons	Bragging to the target about how good you are, over-celebrating your achievements, exaggerating your own moods in communication with the target, playing down the target's achievements compared to yours, passing on compliments about yourself to the target
			Withdrawal	Refusing to talk with the target, giving the target the 'silent treatment', not replying to the target's message, making it clear that you do not care how the target feels, making the target believe no-one likes him or her
	Putting one's own feelings first		Acting annoyed towards the target, telling the target to stop interfering, sounding annoyed when speaking with the target, sulking around the target, patronizing the target	

Motives for Interpersonal Affect Regulation

Much like mood regulation strategies, interpersonal affect regulation strategies can also be used with different underlying motivations. Since the motives are likely to influence the "direction" of regulatory action (improve or worsen), the "path" of regulatory action (the strategies used) and the "effectiveness" of the regulatory action, Niven (2016) developed the Interpersonal Emotion Regulation Motivation Theory based on Deci and Ryan's (2000) self-determination theory. According to their theory, there are eight key motives for regulating others' emotions; see Table 1.4 for an overview. Although they are proposed specifically for emotion regulation, it is likely that similar motives could apply to interpersonal mood regulation. These motives are related to a persons' needs for competence, relatedness and autonomy, and they can be categorized as intrinsic or extrinsic (related to the need for autonomy), egoistic or prosocial (related to the need for relatedness) and pleasure-oriented and performance-oriented (related to the need of competence).

Table 1.4. Overview of motives for interpersonal emotion regulation (Niven, 2016)

	Extrinsic Motives	Intrinsic Motives
Egoistic	Identity Construction Motives: to promote sense of self (pleasure-oriented)	Hedonism Motives: to promote personal well-being (pleasure-oriented)
	Impression Management Motives: to promote career or reputation (performance-oriented)	Instrumentality Motives: boost one's own performance (performance-oriented)
Prosocial	Conformity Motives: to promote the smooth running of social situations (pleasure-oriented)	Compassion Motives: to promote other's well-being (pleasure-oriented)
	Emotional Labor Motives: to promote organizational performance (performance-oriented)	Coaching Motives: promote other's performance (performance-oriented)

For example, let us imagine a teacher trying to regulate an anxious student's mood by offering reassurance and expressing belief in their abilities. If the teacher engages in this regulation with a high level of autonomy, relatedness and competence, their motive could be the "coaching motive". This would indicate an intrinsic motivation, prosocial intentions, and a genuine focus on promoting the student's performance. In this case, the teacher is likely to employ deep acting strategies, genuinely seeking to change the student's emotions, resulting in a higher likelihood of success. In another scenario, the same teacher may use the same strategies but have a different motive, such as the "impression management motive". Here, the regulation might involve low levels of autonomy and relatedness, coupled with a high level of competence, suggesting strategic purposes to promote their reputation as they might hold the expectation that a good teacher should support their students. Such motive would likely result in surface acting strategies, merely changing the outward expression of emotions, and has a low likelihood of success. Niven (2016) suggests that individuals with higher autonomy motives (coaching, compassion, instrumentality, hedonism), tend to use deep acting strategies, putting in sustained effort to genuinely change others' emotions. Conversely, lower autonomy motives (emotional labor, conformity, impression management, identity construction) often lead to surface acting, where less energy is spent to change how emotions are displayed. Moreover, the motive might also influence the direction of regulation, in other words, whether the feelings will be improved or worsened. For example, the teacher with a coaching motive (high autonomy, relatedness and competence), may seek to elicit emotions that are most functional for the student's performance. Therefore, they might want to improve the mood of the student if a pleasant emotion is useful for the task at hand or might want to worsen their mood if it that's more useful. However, the teacher with an impression management motive (low autonomy and relatedness, high competence), will aim to enhance his/her

own performance. As a result, he/she will aim to evoke whatever emotion is believed to be most useful (either improve or worsen) for the task as the resulting benefits will be mutually shared.

1.2. MOOD IN SERVICE ENCOUNTERS

Service encounters are defined as “dyadic interactions between a customer and a service provider” (Surprenant & Solomon, 1987, p.87). A more recent definition defines it as “any discrete interaction between the customer and the service provider relevant to a core service offering, including the interaction involving provision of the core service offering itself”, encompassing pre- and post-core encounters as well (Voorhees, 2017, p.2). These encounters can take various forms such as online encounters, phone encounters, face-to-face encounters in an actual setting, through e-mail or even a catalogue (Bitner, Brown & Meuter, 2000). The entirety of a customer’s interactions with a company forms the service experience.

These interactions between clients and service providers significantly impact customer experience and loyalty (Bitner, 1990; Zomerdijk & Voss, 2010). According to the service-profit chain concept developed by Heskett and his colleagues (1994), concepts of profitability, customer loyalty, and employee satisfaction, loyalty, and productivity are closely tied to each other. It suggests that customer satisfaction is rooted in how companies manage and treat their own employees, in other words the internal service quality which is described as “quality of services that employees and managers receive from an organization to enable them to their jobs” (Heskett et al., 1994, p.209) with factors like workplace design, job design, employee selection, reward and recognition systems, training, policies, management style, communication and tools for serving customers (including information technology and automation such as live chat, e-mail management platforms, feedback and survey tools etc.). Employee satisfaction and productivity, in turn, influence customer satisfaction leading to repeat purchases and loyalty. This cycle of employee and customer satisfaction is mutually influential on both parties (Yee et al., 2008, 2009). Service encounters extend beyond mere economic transactions; they fulfill psychosocial needs of both customers *and* service providers (Jahoda, 1984). Given that mood plays a significant role in shaping a person's evaluations, interpretations, concerns, and communication during social interactions, it is a key factor in service experiences. As service encounters are dyadic interactions, the moods of both the service provider and the clients play important roles and it is crucial to consider the needs and values of both parties during service encounters (Bradley et al., 2010).

1.2.1. Customer Mood in Service Encounters

The mood of the customer plays a pivotal role in services. Research shows that customer mood influences their decision-making (Isen & Means, 1983), judgment (Hornik, 1993), purchase behavior (Sherman et al. 1997; Spies et al., 1997), intentions, memory, and evaluation of the service received (Knowles et al., 1993; Puccinelli, 2006, 2009; Swinyard, 1993). Moreover, mood impacts how customers evaluate products (Gorn, 1993; Forgas & Ciarrochi, 2001) and even influences their perception of others (Forgas & Bower, 1987).

In the realm of services, a client's pre-consumption mood directly impacts their evaluation of the service provider's behavior and performance during a service encounter (Liljander & Mattson, 2002). Furthermore, a client's post-encounter mood can continue to influence their overall service evaluation (Mattila, 2000). A customer in a negative mood might purchase fewer products, evaluate the service provider's performance negatively, and ultimately leave the service dissatisfied. On the other hand, a customer in a positive mood may purchase more products, evaluate the service provider positively, and leave with a sense of satisfaction.

Many factors within a store environment can influence a customer's mood, including the atmosphere of the service area (Bitner, 1990, 1992), service quality dimensions (Parasuraman et al., 1985), favorable and unfavorable events (Bitner et al., 1990), and employee behaviors (Tsai & Huang, 2002). Service encounters provide marketers with numerous chances to influence or respond to customers' mood states strategically, particularly through elements like the service setting, the procedures, and the interactions with the service provider (Gardner, 1985). Research attempts have investigated how customer mood can be influenced by scent, sound, temperature, color and light (Bitner, 1992). Furnham and Milner (2013) give an overview of the impact of mood on customer behavior (Figure 1.2).

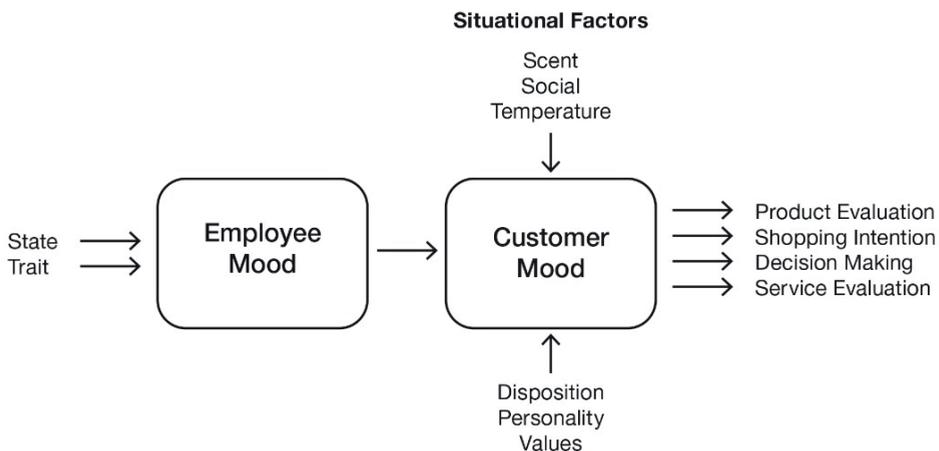


Figure 1.2. Model for understanding the role of customer mood (adapted from Furnham & Milner, 2019)

1.2.2. Service Provider Mood in Service Encounters

Studies found that the mood of service providers influences their behavior, customer mood and customers' evaluation of the service. The mood of a service provider can be reflected in the way they deliver the service (Swinyard, 2003). For example, service providers in a positive mood may tend to be more helpful and display more pro-social behaviors towards their clients and co-workers (Carlson, Charlin & Miller, 1988; George, 1991). The affective state displayed by service providers can impact the mood of clients and subsequently influence their evaluation of service quality (Luong, 2005; Pugh, 2001; Shaw Brown & Sulzer-Azaroff, 1994). According to the concept of emotional contagion (Hatfield et al., 1993), customers are more likely to leave an interaction feeling happier if the employee exhibits a positive mood. Conversely, if the employee displays a negative mood, it can negatively impact the customer's mood.

Various factors influence employees' moods in the workplace including situational factors related to their job, personal characteristics, and evaluative judgments. Consequently, the moods that emerge can have an effect on different aspects, such as affective responses, job satisfaction, cognitive performance, behavior, and relationships. Figure 1.3 shows the relationship between these concepts, as identified by Totterdell and Niven (2014).

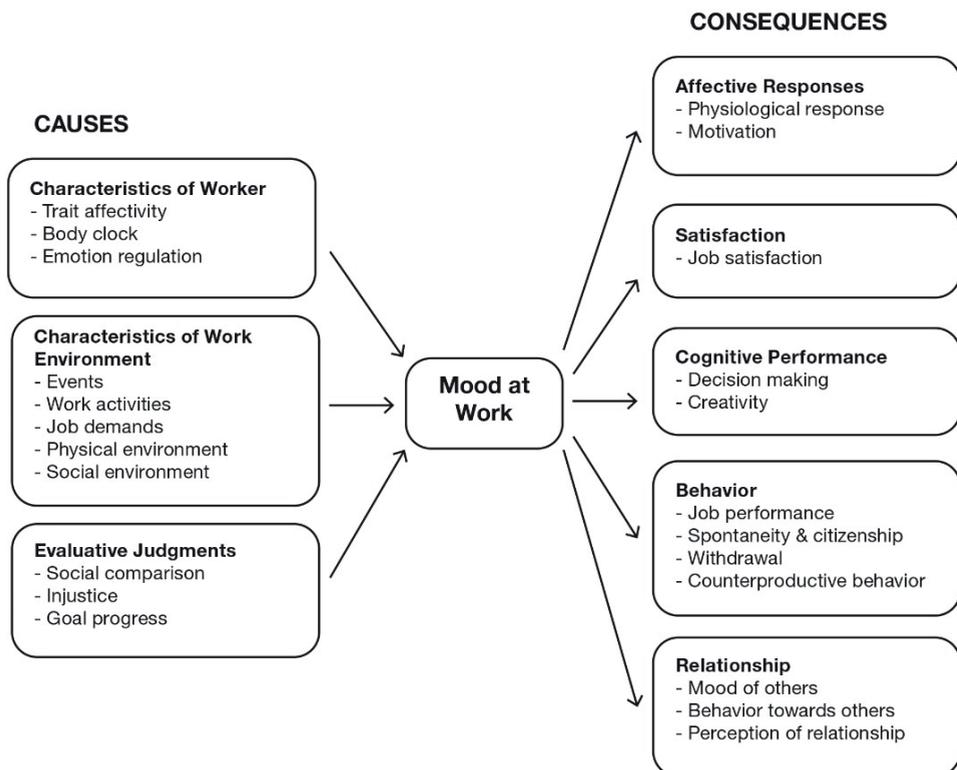


Figure 1.3. causes and consequences of mood at work (adapted from Totterdell & Niven, 2014)

For example, an employee may face personal issues outside of work, experience sleep problems, encounter negative interactions with clients and colleagues, deal with high job demands, and have slow progress towards their goals, resulting in a negative mood at work. This employee who interacts with multiple customers throughout the day may struggle to regulate their transient moods due to time constraints and a lack of supportive social and physical environments. As a result, their negative mood can impact their motivation, job performance and willingness to assist others, and may even lead to absenteeism (Brief & Weiss, 2002). Ultimately, these effects can take a toll on the employee's well-being. This illustrates that beyond satisfying the customer, positive interactions are also essential for the well-being of service providers.

1.2.3. Affect Regulation in Service Provider - Customer Interactions

a. Service Provider Affect Regulation

Service providers often experience stress due to the inherent characteristics of Emotional Labor (Adelmann, 1995; Pugliesi, 1999; Ashforth & Humphrey, 1993; Grandey, 1999). Hochschild (1979) coined the term "emotion work" to describe "the act of trying to change in degree or quality of an emotion or feeling", essentially managing one's emotions and moods for the sake of the interactions. When this emotion work is carried out for a wage and performed to display expected emotions according to an organization's rules, it is called "emotional labor" (Totterdell, 2003, p.55) which could be seen as a form of deliberate intrapersonal affect regulation (Grandey, 2000, cited in Niven et al., 2009 p.3). While some degree of emotional labor is found in most jobs that involve interactions with others, it is particularly prominent in roles that require frequent interactions with customers or clients, particularly within service-oriented positions. For instance, a retail customer service representative might project cheerfulness, a doctor might convey seriousness or a teacher might boost one's energy for a productive mood before a class starts. Such displays can involve "surface acting" (managing outward emotional expressions) or "deep acting" (consciously reshaping genuine feelings to match desired emotions).

Effects of Emotional Labor

When employees are unable to authentically express their emotions and moods, emotional labor can lead to a sense of disconnection from their true selves, jeopardizing their sense of self (Brotheridge & Lee, 2002; Gross & John, 2003; Lewig & Dollard, 2003; Zapf et al., 1999; Zapf & Holz, 2006). Therefore, emotional labor, especially surface acting may have negative effects on the employees' well-being (e.g., decreasing job satisfaction and causing burnout) and organizational well-being (e.g., decreased employee performance at work and increased withdrawal from work) (Grandey, 2003). The conceptual model of emotional labor proposed by Grandey (2000) outlines the key elements of emotional labor, its precursors

and consequences, and the potential impact of individual and organizational factors on the emotional labor process (see Figure 1.4).

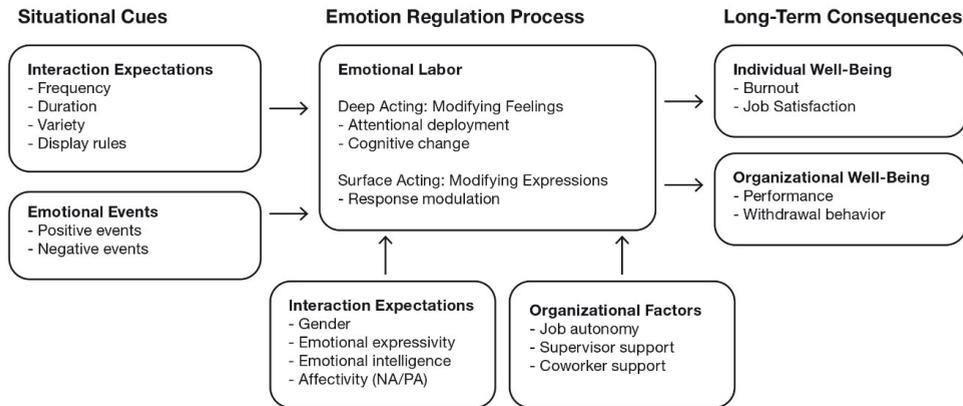


Figure 1.4. Conceptual model of emotional labor (adapted from Grandey, 2000).

b. Interpersonal Affect Regulation in Service Encounters

The exploration of interpersonal affect regulation first began in fields such as developmental psychology and sociology (Francis, 1997; Gianino & Tronick, 1988; Thoits, 1996) with studies examining a variety of social contexts. These contexts span from romantic relationships (Debrot et al., 2013; Parkinson, Simons & Niven, 2016; Horn & Maercker, 2016; Jitaru & Turliuc, 2022), parent-child relationships (Lougheed et al., 2015; López-Pérez et al., 2016; Gummerum, 2020), families (Thompson & Mayer, 2007), friendships (Nils & Rime, 2012; Niven, Holman & Totterdell, 2012; Kwon & López-Pérez, 2022), and support groups (Thoits, 1996), to sports teams – both among teammates and between coaches and team members (Friesen et. al., 2011, 2013; Tamminen, 2013; Palmateer, 2018; Braun, 2019).

Interpersonal affect regulation has also been explored as a strategic effort within work settings. For example, it has been examined within organizations, particularly among colleagues aiming to decrease stress (Lively, 2000), address team conflicts (Gobeli, Koenig & Bechinger, 1998; Glinow, Shapiro & Brett, 2004), and provide support (Frost & Robinson, 1999; Kahn, 1993; Martens, Gagné & Brown, 2010). In various fields, such as medical organizations, humor is utilized to help colleagues cope with distress (e.g., Francis, 1994). Additionally, research has investigated how leaders or superiors utilize interpersonal affect regulation strategies to influence their followers' affect (Brown & Moshavi, 2005; Conger & Kanungo, 1998; Cross & Parker, 2004; Lewis, 2000; Madrid et al., 2018; Holman & Niven, 2019; Vasquez, 2020). Similarly, research shows that employees may also use interpersonal affect regulation strategies when interacting with their superiors, for example, paralegals enhancing the moods and emotions of the lawyers they work with (Pierce, 1999).

The subject has also been explored in the context of service interactions between clients and service providers, with employees regulating their clients' affect in various fields including the medical field (Francis et al., 1999; Locke, 1996; Freemantle, 2022; Guan & Jepsen, 2023; Martínez-Íñigo et al., 2015, 2018, 2021; Horton, Holman and Hebson, 2022), retail settings (Sutton & Rafaeli, 1988; Dubinsky, 2003; Chiew, 2019; Reeck, 2022; Solomon, 2022), debt collection agencies (Sutton, 1991; Rafaeli & Sutton, 1991), and correctional facilities (Niven, Totterdell & Holman, 2007; Martínez-Íñigo, 2017, 2021).

Effects of Interpersonal Affect Regulation on well-being

Interpersonal affect regulation is particularly important for service providers because they have constant interactions with their clients, colleagues, and leaders. This practice can significantly impact the well-being of both the individual whose affect is being regulated (the target, in this case the clients) and the individual responsible for regulating affect (the agent, in this case the service provider) (Niven et al., 2009).

Interpersonal affect regulation may have an impact on the target's well-being. An interpersonal affect regulation attempt is considered successful when it results in a change in the target's affective state (Niven, Totterdell & Holman, 2007). This alteration can occur in two different ways (Niven et al., 2009): first, through changes in the target's resources (e.g., lowering self-esteem via criticizing) and, second, by triggering intrapersonal affect regulation in the target (e.g. providing compliments to prompt the target's reappraisal of their situation). As a result, the target's well-being would be negatively or positively influenced by the negative and positive interpersonal affect regulation strategies. Apparently, cognitive strategies (e.g., cognitive engagement strategies, see Table 1.2) facilitate greater emotional recovery from emotional events, whereas behavioral strategies, as mentioned "communal" responses (e.g., affective engagement strategies, see Table 1.2), have more positive social consequences, such as feelings of closeness between agent and target (Nils & Rime, 2012).

Interpersonal affect regulation may have an impact on the agent's well-being as well, depending on the strategy used. It may impact the agent in two different ways. Firstly, by changing the agent's resource levels, as the act of using interpersonal affect regulation requires effort. For example, a nurse's well-being might improve after a successful attempt at improvement but decline after a failure to do so (Martínez-Íñigo et al., 2015). Secondly, it might be through the reciprocation of interpersonal affect regulation by the target; the way the target appraises these regulation acts can influence the target's feelings and behavior towards the agent. Consider a service provider trying to lift an anxious client's mood through compliments. In most cases, the client would interpret the compliment positively, leading to a change in their behavior towards the agent. Positive appraisals resulting from

attempts to improve the target's feelings would lead to positive emotions and behaviors, while negative appraisals resulting from attempts to worsen the target's feelings would lead to negative emotions and behaviors towards the agent. Thus, the agent's well-being can be negatively or positively influenced by the target's responses (Niven et al., 2012). Indeed, Niven and her colleagues found that employing affect-improving strategies correlated with pleasant affective well-being, while using affect-worsening strategies correlated with worse affective well-being for the agent. Their study suggests that the target responses influence the agent's well-being and that individuals can consciously enhance their own well-being by changing their behavior towards others (Niven et al., 2012).

As outlined by Niven and her colleagues (2009), the outcomes of interpersonal affect regulation can vary depending on several factors, including the context, characteristics of the relationship, and the characteristics of the target and agent (e.g., emotional intelligence). Research suggests that showing flexibility in using interpersonal strategies, and adapting them effectively in diverse situations, is beneficial for some situations. For instance, the study of Francis et al. (1999) in hospital settings highlights how "dark" humor may be suitable for medical professionals to improve the emotions of a coworker, while such humor might not be suitable for improving the mood of a patient.

Why should we expand our knowledge on interpersonal affect regulation?

As previously discussed, affect regulation has consequences for employee well-being and for client satisfaction and well-being in service contexts. One challenge arises from the fact that individuals vary in their ability to regulate emotions, leading some to employ more effective strategies than others (Salovey & Mayer, 1990 – cited in Lopes, Salovey, Cote & Beers, 2005). Employees differ in their engagement with intrapersonal and interpersonal affect regulation strategies. These individual differences may explain the observed variations in outcomes, such as compromised employee well-being and reduced customer satisfaction (Niven et al., 2011). Furthermore, when individuals attempt to regulate the emotions and moods of others, they might not be entirely immune to the consequences of their own actions (Niven et al., 2012).

Interactions in which service providers (agents) seek to influence the affect of clients (targets) can potentially impact two areas: (1) clients' perceptions and evaluations of a service indirectly and (2) the well-being of the service providers. These two factors underscore the importance of deepening our understanding of interpersonal affect regulation.

1.3. SERVICE PROVIDERS' WELL-BEING AND CUSTOMER SATISFACTION

1.3.1. Emotional Intelligence and How it Relates to Mood

An opportunity to enhance the communication between service providers and customers, leading to improved well-being and increased client satisfaction, lies in the cultivation of Emotional Intelligence (EI) among service providers. EI can be defined as the capacity or knowledge to recognize and understand emotional processes/states and to adeptly regulate them (Salovey & Mayer, 1990). Although there are different models of EI and a lack of consensus on the definition, one of the principal conceptualizations comprises four fundamental skills, namely the ability to (1) understand emotions, (2) perceive emotions in self and others, (3) use emotions to facilitate thinking and (4) regulate emotions of self and others (Mayer, Caruso & Salovey, 1997). In Mayer's (2004) model, "emotion" refers to a feeling state that conveys information about relationships. Although moods are different from emotions, individuals equipped with emotionally intelligent skills are also capable of effectively managing their moods (Salovey & Mayer, 1990). Consequently, similar, corresponding abilities are likely applicable to moods.

Recent scholarly discussions have highlighted the distinction between self-focused EI from other-focused EI, as individuals may differ in these abilities (Brasseur et al, 2013; Mikolajczak, 2015; Troth et al., 2018). Consequently, efforts have been made to introduce measures that identify individual differences in affect regulation that entail both self and others. These measures include the Emotion Regulation of Others and Self (Niven et al., 2011), and the Rotterdam Emotional Intelligence Scale (Pekaar et al., 2018), which includes self-focused emotion appraisal, self-focused emotion regulation, other-focused emotion appraisal, and other-focused emotion regulation. The appraisal, defined as "an evaluation of the significance of knowledge about what is happening for our personal well-being" (Lazarus, 1991, pp. 352-354), draws attention to the emotion itself, whereas the regulation phase directs attention to the regulation of the emotion to facilitate mood and social interaction (Pekaar et al., 2018).

Self-focused EI components have a direct effect on one's own mood, which could be beneficial for one's well-being during emotionally demanding tasks, while other-focused EI components have a direct effect on changing other people's psychological states, which could be useful when attempting to influence others' moods (Pekaar et al., 2019). This distinction and emphasis could prove valuable for this thesis, given the focus on the regulation of other people's moods.

1.3.2. The Impact of EI on Employees

Research shows that Emotional Intelligence might impact a person's life in different areas such as health and well-being (Martins et al., 2010), relationships (Lopes et al., 2004; Schutte et al., 2001), and job performance (Joseph & Newman, 2010; O'Boyle et al., 2011).

Well-being

EI might support an individual's well-being since recognizing and adaptively regulating one's own emotions has a direct influence on one's mood state. Having a high EI can be beneficial for employees to alleviate the negative effects of emotional labor and burnout (Prentice, 2023), and to decrease work-related stress (Jordan, Ashkanasy & Hartel, 2002) as individuals with high EI are more prone to effectively change their emotional responses through adaptive strategies (e.g., seeking social support) instead of engaging with maladaptive strategies (e.g., aggression, suppression) when confronted with a negative situation (Austin & O'Donnell, 2013; Austin et al., 2014).

In addition, repetitive and successful regulation of one's emotional display in social interactions may lead to more frequent achievement of their goals, thereby enhancing feelings of efficacy and accomplishment (Wong, Tschan & Semmer, 2017). This can also help to replenish personal resources more quickly (Martínez-Íñigo, 2015). Previous research has explored how individuals with high EI engage in the regulation of others' emotions, using techniques like mood-improving strategies (e.g., providing reassurance or humor) (Austin & O'Donnell, 2013; Austin et al., 2014). Furthermore, those with high EI can gauge and enhance the mood of ostracized individuals based on situational cues, even preceding explicit emotional expression (Nozaki, 2015). Niven and colleagues (2012) have proposed that assisting service providers in regulating their own behaviors can aid in mitigating the adverse outcomes of interpersonal affect regulation. This might involve integrating self-monitoring of interpersonal affect regulation into a daily regimen that complements therapeutic practices.

Relationships

Individuals with high EI tend to have better social interactions due to their ability to promote positive emotions and manage emotions effectively during interactions (Lopes et al., 2004; Schutte et al., 2001). This can lead to improved relationship quality over the long term by reducing tension and conflict (Lopes et al., 2004), and promote friendship and trust (Niven, Totterdell & Holman 2012). Considering that positive relationships contribute to an individual's psychological well-being (Ryff & Keyes, 1995), this could also contribute to service providers' well-being.

Job Performance & Customer Satisfaction

Individuals with high emotional intelligence (EI) tend to manage emotions effectively and positively during interactions, resulting in improved performance outcomes. This correlation is especially notable in professions involving frequent interpersonal engagements (Pekaar et al., 2020). The interaction between service providers and individual customers creates a valuable opportunity for adapting service approaches based on the customer's mood. Consumer research suggests that service providers can enhance their communication with clients by better interpreting clients' moods, managing their own emotions and their interaction with customer moods, and developing a repertoire of interaction strategies suitable for customers with different moods and preferences (Gardner, 1985). Individuals with high EI, who possess social flexibility, excel in adapting to different customer preferences, for example by using humor or taking a neutral tone of voice. This flexibility, often facilitated by their other-focused EI, is a key strength (Salovey & Mayer, 1990). Therefore, EI can yield advantages for customers, enhancing service encounters and quality (Prentice, 2013). Indeed, research indicates that using appropriate strategies to manage others' affect results in better social interactions (Little et al., 2012; Niven et al., 2012) and higher customer satisfaction (Luong, 2005). For instance, a study on negotiations demonstrated that individuals with high EI generate higher satisfaction among their negotiation partners by instilling positive moods (Mueller & Curhan, 2006), while another study revealed that service providers with high EI contribute to heightened customer satisfaction (Kernbach & Schutte, 2005).

To summarize, an employee endowed with high EI would not only be more capable of regulating their own emotions and moods but also be more capable of effectively regulating a customer's mood, thereby excelling in the realm of effective communication. By skillful adaptation of strategies, they can elevate the quality and efficiency of their interpersonal interactions. Ultimately, an increased level of EI can help service providers maintain their own emotional well-being and mitigate the adverse effects of emotional labor, which, over time, is also likely to contribute to customer satisfaction.

1.3.3. Trainings on Developing Emotional Intelligence

What if service providers could deliberately use a repertoire of interaction strategies and tactics tailored to customers with varying moods? Equipping themselves with knowledge about moods, action tendencies and a diverse set of strategies, coupled with a deep understanding of both interpersonal and intrapersonal mood regulation strategies—essentially becoming mood-sensitive—can empower service providers to choose the most suitable strategies to apply during their interactions with clients. Research has explored the enhancement of EI across various domains such as healthcare (Dugan et al., 2019; Campo, 2015), care giving (Heaney, 1995), coaching (Grant, 2007), law enforcement

(Zacker & Bard, 1973), banking (Beigi & Shirmohammadi, 2011), and hospitality (Koc & Boz, 2020). In addition, many initiatives, such as Coursera, Udemy or UC Berkeley edX, offer programs on Emotional Intelligence.

Since this thesis focuses particularly on the regulation of others' moods, existing training materials, methods used, and research aimed at improving intrapersonal and interpersonal affect regulation skills will be explained. Additionally, empathy and communication will be briefly addressed, as these are considered important emotional skills in interpersonal interactions.

a. Trainings on Affect Regulation (managing own feelings/self-focused)

Most research focused on supporting individuals with emotion regulation is found in the context of psychotherapy, with the goal of helping patients deal with various disorders, including substance abuse, eating disorders, and borderline personality disorder (Cloitre, 2002; Clyne & Blampied, 2004; Conklin, 2006; Azizi, 2010; Schuppert, 2012). Therapeutic approaches such as Cognitive Behavioral Therapy (Butler, 2006), Dialectical Behavior Therapy (Linehan, 1993) which teaches patients emotion regulation skills such as identifying, accepting and modifying emotions, Emotion-focused therapy (Greenberg, 2004), Mindfulness-Based Cognitive Therapy (Segal, Williams and Teasdale, 2018), and Emotion Regulation Therapy (Mennin, 2004; Mennin & Fresco, 2014; Renna, 2017) focus on cultivating emotion regulation skills. To focus exclusively on emotion regulation and on building a repertoire of emotion regulation skills, Berking and Whitley (2014) have developed the Affect Regulation Training program based on the Adaptive Coping with Emotions Model, along with a manual for practitioners and participants that support adaptive emotion regulation skills (awareness of emotions, identifying and labeling, understanding, accepting and tolerating emotions, readiness to confront emotions, modification of emotions and effective self-support) for both the prevention and the treatment of mental health issues. Therapists are trained to deliver this curriculum which includes activities such as (1) mindfulness meditation, (2) progressive muscle relaxation technique, (3) breathing exercises, individual thought exercises and group discussions that allow participants to notice pleasurable events, to non-judgmentally feel and label emotions (Challenging and Positive Emotions Chart), to explore ways they can accept and tolerate their emotions (Acceptance and Tolerance Plan), to work on building self-esteem (Self-Esteem Building Worksheet), to explore ways to engage in positive experiences to feel better (Positive Activity Cards), (4) practicing gratefulness (Exercise of Gratitude), (5) keeping a diary on things one appreciates (Self-Support Diary), (6) drawing exercises that help participants analyze their emotions like the stimuli, needs and motives, and (7) exercises that help them to analyze and make a plan to modify these emotions (Analyzing

and Modifying Emotions Worksheets). These exercises are accompanied by worksheets and materials.

In addition, art therapy methods, such as drama and dance/movement therapy, have been used to address emotion regulation. For instance, Koch and her colleagues (2015) used a dance/movement and drama therapy-based training in a workshop developed by Lutz (2008) that was tailored to help prison inmates by asking them to interact with each other with Aikido sticks and experience what it was like to be both the “victim” and the “perpetrator”.

Emotion Regulation Training Programs have also been developed to support individuals' mental well-being in general (LeBlanc, 2017). Specifically, in the workplace context, studies explore ways to improve employee well-being and alleviate occupational stress and the negative effects of emotional labor by improving emotion regulation skills (Berking, 2010; Saedpanah, 2016; Buruck, 2016; Hulsheger, 2015; Wimmer, 2019; Weaver, 2019; Schaefer, 2019). These studies focus on emotions or affect in general. The study of Totterdell and Parkinson (1999) aims to examine if trainee teachers can be instructed to increase their use of mood-regulation strategies. This study differs from the other given examples by specifically focusing on mood-regulation. Overall, participants in these training programs are first provided with theoretical knowledge (e.g., negative consequences of employing emotional suppression, defining emotions and emotion regulation, differentiating between emotional reappraisal and suppression, biological and psychological origins, functions, mechanisms, and possible risks and benefits of affective states, short and long-term effects of emotions, definition of emotional labor, deep acting and surface acting etc.), and then engaged in either group or individual activities such as mindfulness, yoga, expressive writing, breathing exercises, progressive muscle relaxation techniques, method acting techniques, diary logging, and group discussions. Some individual exercises were instructed through mail and messages or through hard copy materials such as booklets or diaries.

b. Trainings on Interpersonal Affect Regulation (managing other's feelings/other focused)

In contrast to the extensive research on intrapersonal emotion regulation, the field of interpersonal affect regulation research is relatively emergent. Martínez-Íñigo, Mercado and Totterdell (2015) explored the application of interpersonal affect regulation strategies in simulated healthcare consultations to understand the combined effects of interpersonal affect regulation strategies used by the healthcare providers and the response from the patient on the healthcare providers' source depletion. Another study by Martínez-Íñigo and Crego (2017) aimed to influence the frequency of prison workers' use of interpersonal affect (improving) regulation strategies through a training program. The program's efficacy in enhancing their well-being was also evaluated. Similar to the emotion regulation

training programs, their program begins with theoretical knowledge followed by exercises based on a cognitive-behavioral approach. Building on the work of Niven, Totterdell & Holman (2009a), some recent studies have explored how people can be supported in using interpersonal affect regulation strategies. For example, Delamarre and his colleagues (2019) aim to train teachers through Virtual Training Environments by integrating emotionally intelligent virtual students within a 3D classroom training system. These virtual students generate relevant emotions for the conversation (e.g., anger), evaluate the teacher's actions when using the interpersonal emotion regulation strategies (e.g., taking an object away from the student), and generate non-verbal behavioral responses (e.g., head and body movements like staring at the teacher) along with actions to respond to the teacher trainee (e.g., getting up and taking the object back). The work of Harman (2020) aimed to train workgroups specifically on humor to support trust climates in the workplace. Similar to other trainings, their training includes a theoretical knowledge of humor (what is humor, humor styles, etc.) and activities such as improvisation acting. Another example is the work of Pacella and López-Pérez (2018), who developed a serious game, Emodiscovery, designed to enhance socio-emotional skills among children in classroom settings, with a specific focus on aiding children, including those with high-functioning autism, in utilizing interpersonal emotion regulation strategies. The game involves interacting with a 3D animated character to identify displayed emotions and applying one of four regulation strategies (two adaptive and two maladaptive) to improve the character's mood.

c. Trainings on (service provider) Empathy

Empathy is characterized by the ability to see the world from another's perspective while maintaining the distinction between self and other, to understand the other and effectively convey this understanding (Rogers, 1975). Empathy is considered a significant aspect of emotionally intelligent behavior. A strong body of research explored the effects, impact, and efficacy of empathy training on employees (Goldstein, 2021; Van Berkhout & Malouff, 2016; Winter, 2022; Patel et al., 2019; Klimecki et al., 2014). In the context of service encounters, most of the research that explores empathy training has primarily focused on the healthcare sector, including medical staff/trainees and nurses/trainees (see review of Stepien, 2006; Pedersen, 2010; Lam et al., 2011; Bas-Sarmiento, 2020; Brunero, 2010). This focus is rooted in the recognition that empathic communication skills are associated with increased patient satisfaction, better outcomes, decreased burnout, and increased physician well-being (Riess et al., 2012). In addition to the medical domain, research has explored supporting professionals' empathic abilities (Erera, 1997) among teachers (Whitford, 2019), social workers and social work students (Nerdrum, 1997; Greeno, 2017; Dupper, 2017), counselors (Barak, 1990), therapists (Nerdrum, 2004), and lawyers (Barkai, 1982).

A variety of methods and techniques are used to improve empathy in health and human services. These include providing (1) theoretical education covering empathy and perspective-taking; (2) communication skills training through activities like audio-video taping of patients' interactions and video-tagging exercise where trainees watch the videos back and tag their thoughts and feelings (Lobchuk et al., 2016) and get third perspective feedback (Bonvicini et al., 2009); (3) experiential learning such as shadowing patients (Henry-Tillman et al., 2002); (4) simulation-based approaches like hospitalization experiences (Nelson, 2018) and age suit (Sari, 2020); (5) arts and literature-based learning involving poetry (Adams, 2018), art-making (Potash, 2014), creative reflection (Webster, 2010), visual arts (Zazulak, 2017) literature (Hunter et al., 1995; Herman, 2000), theatrical performances (Stokes, 1980; Holleman, 2000; Shapiro, 2003; Dow et al., 2007; Reilly et al., 2012; Bodenhorn, 2005; Eisenberg, Rosenthal & Schluskel, 2015; Shao et al., 2018; Bagacean, 2020), as well as role-playing (McVey et al., 1989); (6) reflective practice, using patient narratives in various formats like videos or literature (Miller, 2015; Sweeney, 2018; Lancaster et al., 2002; DasGupta & Charron, 2004; Adamson et al., 2018); and (7) psychotherapy-based methods such as mindfulness (Block-Lerner, 2007; Gur & Yilmaz, 2020; Winning, 2015), the Balint method and group discussions (Balint, 1957; Cataldo, 2005) (for the full review, see Hojat, 2009 and Winter et al., 2022). Additionally, perspective-taking (Decety, 2005) and exposure to role models (Wright, 1997) are employed for empathy development. Some workshops implemented a mix of these methods (e.g., Kuhnley, 2023). Recently, there has been exploration into the use of virtual reality technology (Halan et al., 2015; Kleinsmith et al., 2015; Schutte & Stilinovic, 2017; Stavroulia et al., 2018; Bertrand et al., 2018; Amini et al., 2021; Riches et al., 2022) and video games (Kral et al., 2018; Pallavicini et al., 2020; Ohrt et al., 2009) for empathy training.

d. Trainings on Interpersonal Communication Skills

Improving the communication skills of the service providers is considered to be an effective way to enhance client-employee interaction in various domains, including healthcare services (Mason et al., 1988; Evans et al., 1991; Greco et al., 1998; Roter et al., 1998; Back et al., 2007; Bonvicini et al., 2009), education (Xu et al., 2018), hospitality (Garavan, 1997) and IT services (Hynes, 2012). Similar to empathy training, several methods are used to practice communication skills, such as role-playing and actual or simulated interactions with clients (Bank et al., 2021; Harnof et al., 2013), group discussions, and video feedback. Some of the less common methods include lectures, tutorials, workshops/seminars, and interactive videos (Hargie et al., 2010).

1.4. MOOD AND MOOD REGULATION IN DESIGN RESEARCH

1.4.1. Mood in Design Research

Over the last twenty years, our understanding of user emotions has expanded through studies conducted by researchers such as Desmet, (2002), Fokkinga and Desmet (2013), Hassenzahl et al (2013), Norman (2004), Ozkaramanli (2017) and Yoon (2018). Driven by the recognition that the challenges and opportunities in mood-focused design differ from those in emotion-driven design, mood has become an important topic in interaction design (Desmet, 2015). Recognizing the substantial impact of mood on consumer behavior (while purchasing and evaluating products and services, Maier, 2012), user behavior (products they select to interact with, Djamasbi & Strong, 2008; how they interact with products and services, Wensveen, Overbeeke, Djajadiningrat, 2002; the interaction options they explore, Venkatesh & Speier, 1999; the type of information they process during the interaction; Zhang & Jansen, 2009), and on one's subjective well-being (Diener et al., 1994), Desmet initiated extensive mood-focused design research. This endeavor included providing a clear distinction between mood and emotion (Desmet, 2015) and introducing a tool for measuring user moods called Pick-a-Mood (Desmet, Vastenburger & Romero, 2016). Moreover, Desmet's research (2015) explored mood-regulation activities, unveiling new design possibilities in this realm. To address the lack of a nuanced understanding of moods in the design field, Xue and his colleagues (2020) developed a typology of twenty mood states with a detailed description including six components for each mood: one's subjective feelings, perception, reaction, tendency, liking and disliking. In addition, Desmet and his colleagues (2019) explored how users tend to think and behave in specific moods (the thought/action tendencies). For example, one tends to see the good, be kind, move calmly when in a peaceful mood. These thought/action tendencies provide insights into users' mood states, allowing designers to incorporate considerations of user mood into their design intentions. This exploration demonstrated the potential for redesigning processes, like check-in procedures, to cater to the needs of individuals in various moods, such as anxious (who tend to be impatient, pessimistic) or cheerful (who tend to be open to communication, optimistic) passengers. These investigations provide the foundation for this thesis.

1.4.2. Design Examples on Mood Regulation

Whether originating from fashion or service design, designers across disciplines have long been fascinated by the concept of mood, and there has been an increase in mood-focused design experiments (Desmet, 2015). This trend is further propelled by the integration of advanced technologies such as wearable technologies, virtual reality (VR) and artificial intelligence (AI), which have catalyzed the development of mood-influencing designs. These experiments aim to explore dynamic ways of measuring, expressing, and adapting to and

possibly influencing users' moods. To offer an overview, a selection of design intervention examples will be presented. These examples underscore the support for understanding mood, mood regulation (for the full review, see Desmet, 2015) and interpersonal mood regulation.

a. Design that supports understanding of mood

The spectrum of research and design examples aimed at understanding user mood is extensive. Some examples of mood measurement include wearable wellness trackers like *Feel*, keyboards, mice and office chairs that infer mood from user behavior (Hernandez et al., 2014; Sun et al., 2014; D'mello & Grasser, 2009), systems interpreting facial and voice expressions (Cohn & De la Torre, 2015), as well as self-reporting mood tracking apps like *MoodFit*, *WorryWatch*, *Daylio*, and *CompanyMood*. In addition, some examples such as *MoodWear*, *AffectAura* and *MoodWings* visually present users with their mood (Stylios & Yang, 2013; McDuff et al., 2013; MacLean et al., 2013). These designs aim to increase users' awareness of their emotional states, allowing them to better understand and manage their moods. Interventions on workspaces and furniture are available that match or adapt to users' moods by gathering data from the human body to dynamically adjust environmental conditions, aiming to enhance productivity and interpersonal relationships (e.g., *Textile Mirror*, a wall panel that displays occupants' mood shifts in real-time, Davis et al., 2013).

b. Design that supports affect/mood regulation

Research and design examples that nudge people to regulate their mood are also gaining popularity. Examples include ambient interiors or virtual environments to actively influence users' moods (Baños et al., 2016, 2012); interactive product design such as an "intelligent pen" that adjusts the interaction style to influence mood (Alonso et al., 2008) or *Prana* (Spierings, 2021), a lamp that guides users through meditation; healthcare robots to actively improve patient mood such as *Paro* (NIAIST); mobile applications such as *Moodkit*, *Headspace* or *Calm* that support users in managing their moods; wearables, such as *MUSE Headband*, that help users regulate moods. Also, Virtual Reality, Augmented Reality and video games (see the review of Diniz Bernardo et al., 2021) are now being used to help people regulate their affective states.

c. Design that supports interpersonal mood regulation

Examples that support interpersonal mood regulation are quite limited compared to the mood-measuring and mood-regulating examples. Some examples that enable the expression of mood also support effective social interaction and help develop social-emotional intelligence skills (El Kaliouby et al., 2006) such as *Mood Map* (Fessel et al., 2012; Rivera-Pelayo et al., 2017) an app that allows users to track their own and team members' moods. Another example is *Mobi Mood* (Church, Hoggan & Oliver, 2010), a mobile

app that allows friends to share their moods with each other. Text messaging service *eMoto* allows users to express their mood while texting with their colleagues (Fagerberg, 2004). Recording and monitoring tools such as *MoodMonitor* enable patients to share their moods with their therapists so that the therapist can make adjustments to their treatment plans. Although these examples are helpful for imagining how mood might be integrated into interpersonal communication, they do not go a step further to actively regulate mood in interpersonal interactions. One available example that nudges people to regulate the other's mood is *Classmood*; a tool that helps teachers create a mood map of the students in class and provides teachers with mood-regulating activities to change the mood of the classroom (Beardsley et al., 2019). Figure 1.5 shows some of these examples. While these examples enable self-expression and support mood-management and social interactions, they do not specifically address interpersonal affect regulation.



Figure 1.5. *eMoto*, image from Fagerberg, 2004 (left); *Mobi Mood*, image from Church, Hoggan & Oliver, 2010 (middle); *ClassMood App*, screenshot from the video *Spotlighters, ClassMood App* (BOON Factory, 2020) (right).

1.5. POTENTIAL AREAS FOR EXPLORING MOOD-SENSITIVE INTERACTIONS

The central challenge in this thesis revolves around how design can effectively support service providers, especially given the current limitations in accurately identifying or describing strategies to monitor and change moods. Although there is a wealth of literature on affect regulation, interpersonal affect regulation has only recently emerged in the field of psychology. Most of this research elucidates the underlying motivations of interpersonal affect regulation, its effects, and the potential for classification. Only a few studies have pointed out that training on such strategies might be useful for service providers (e.g., Gardner, 1985; Martínez-Íñigo, Mercado, Totterdell, 2015; Niven et al., 2012).

1.5.1 Contributions to Organizational Psychology

Developing an in-depth understanding of Interpersonal Mood Regulation

One significant gap lies in the current level of understanding of Interpersonal Mood Regulation strategies. While existing classifications and descriptions in psychology provide a comprehensive overview of Interpersonal Affect Regulation strategies (Niven, Totterdell & Holman, 2009a), there are several notable limitations. First, these classifications often encompass only emotions or a combination of emotions and moods, rather than focusing on moods. Second, the technical language used in describing the strategies might create obstacles to the use by service providers. Moreover, these existing strategies often lack contextualization, limiting their practical applicability. Therefore, there is a need to explore strategies specifically utilized by *service providers* to manage clients' *moods*. Developing a nuanced understanding of Interpersonal Mood Regulation strategies (IMR) can make a relevant contribution to the development of the Emotional Intelligence (EI) of service providers.

Developing Interpersonal Mood Regulation training materials

There have been efforts in research and training aimed at improving the ability to effectively manage one's own affect (e.g., Totterdell & Parkinson, 1999) as well as improving empathy and communication skills (e.g., Hojat, 2009) to enhance service encounters and overall well-being. However, we only found a handful of research focusing specifically on *training* for interpersonal affect regulation. One recent example is conducted in Uruguayan prisons (Martínez-Íñigo & Crego, 2017). This presents an opportunity to develop materials specifically addressing interpersonal mood regulation. These materials could be incorporated into EI training programs, supporting service providers in understanding and navigating interpersonal mood regulation.

1.5.2. Contributions to Design Research

Introducing Interpersonal Affect Regulation into design research

Recent studies have contributed to our understanding of how the knowledge of mood can be integrated into design processes (e.g., Desmet, 2015). However, interpersonal affect regulation has not yet been studied in design research. Since the use of strategies in response to others' moods is diverse and complex, there is a need for a fine-grained description. Integrating knowledge about interpersonal affect regulation into the expanding field of mood-focused design research could be beneficial. This integration holds the potential to enrich knowledge and provide valuable insights for practitioners and consultants in the domains of service design, experience design, and emotion-driven design.

Introducing tangible materials for communicating Interpersonal Mood Regulating strategies

Within psychology, interpersonal affect regulation strategies are typically conveyed through verbal means (Niven, Totterdell & Holman, 2009a), often neglecting other forms of media. In design research, various materials like images, videos or cartoons are employed to communicate affective experiences such as negative emotions, positive emotions, and moods (Yoon, 2018; Xue, Desmet & Fokkinga, 2020). These endeavors primarily focus on intrapersonal aspects of affect. Currently, design interventions that embody interpersonal affect regulation strategies in an informative manner are lacking. As discussed above, despite the introduction of numerous mood-focused design interventions, none have been specifically directed at supporting interpersonal affect regulation through design. Therefore, we see a promising avenue for the development of engaging material that communicates interpersonal affect regulation strategies.

1.6. PROJECT OBJECTIVES AND RESEARCH APPROACH

1.6.1. Project Objectives

The research in this thesis is based on the premise that service providers can enhance their effectiveness in client interactions by acquiring a detailed understanding of IMR strategies and effectively applying this knowledge. Building upon this premise, the current research endeavors to explore *how service providers can be assisted in incorporating interpersonal mood regulation (IMR) strategies during service encounters.*

To achieve this overall aim, four interconnected and sequential research questions have been addressed:

1. What is the current role of mood in service encounters?
2. What IMR strategies are currently used by service providers during service encounters in response to client's moods?
3. How can IMR strategies be facilitated by means of training tools for service providers?
4. What are the strengths and limitations of the developed materials to facilitate IMR?

This research contributes to the fields of experience design, service design, and organizational psychology. It sheds light on the value of incorporating Interpersonal Mood Regulation strategies into service provider-client interactions and explores ways for fostering interpersonal mood regulation strategies among service providers. Moreover, the research yielded a practical toolkit that service providers can utilize for training purposes. These concrete tools can also serve as a starting point for designers and researchers interested in promoting IMR strategies within service encounters.

Gardner (1985) proposes that service companies can enhance their performance by assisting service providers in three key areas: understanding and interpreting client moods, managing their own feelings in interactions, and developing effective interaction strategies tailored to different customer moods. Martínez-Íñigo, Mercado, and Totterdell (2015) emphasize the importance of equipping health professionals with emotion regulation skills by incorporating emotion regulation and interpersonal affect regulation into professional training programs to maintain their mental well-being and deliver quality care, considering the impact of client feedback on service provider well-being. Similarly, Niven et al. (2012) suggest integrating self-monitoring of interpersonal affect regulation into daily routines, particularly in environments where such regulation is common and service providers face challenges in well-being, to support individuals in self-regulating their behavior and complement therapeutic efforts. The interventions developed in this thesis aim to address these recommendations, highlighting the importance of assisting service providers in managing interpersonal affect regulation.

1.6.2. Research Approach

Table 1.5 provides a comprehensive overview of the thesis structure, research project setup, and primary outcomes. The thesis encompasses six studies (studies 1 to 6) employing a combination of qualitative and quantitative methods. First, an exploratory literature review was conducted to understand the role of mood in interpersonal communication and in services. Subsequently, an interview study explored the involvement of mood and mood regulation strategies in service encounters (research questions 1 and 2). These interviews aimed to identify the moods experienced, the mood regulation strategies employed by service providers in their work, the potential influence of products in context, and the challenges encountered when regulating both their own mood and the mood of clients. The research then progressed to explore tools for facilitating Interpersonal Mood Regulation strategies: a set of cards, videos, and virtual characters (research question 3). Various methods have been used in the development process, including Multisensory Design, Brainstorming sessions with actors and designers, and Bodystorming. Next, an online survey examined the validity of the generated materials. For two of the developed tools, implementation workshops were conducted with service providers to examine the usage, strengths, limitations, and usefulness of the developed tools in supporting service providers' understanding of the interpersonal mood regulation strategies (research question 4).

Table 1.5. Overview of the thesis content

Chapter	Research Questions	Sub-Questions	Study	Outcomes
1 Thesis Introduction			Exploratory literature study on mood and mood regulation in interpersonal communication	Theoretical foundation for the phenomenon of mood in interpersonal communication
2 The Eye Inward and the Eye Outward: Introducing a Framework for Mood-Sensitive Service Encounters	<p>Research Question 1 What is the current role of mood in service encounters?</p> <p>Research Question 2 What IMR strategies are currently used by service providers during service encounters in response to client's moods?</p>	<p>Sub-Questions What moods do service providers experience at work? How do they regulate their mood? Are they able to detect the mood of the client? If so, how? Which interpersonal mood regulation strategies do they use? Are any products involved? What are the challenges faced by service providers?</p>	<p>Study 1: Phenomenological study to explore the role of mood in service encounters</p>	<p>Mood-Sensitive Encounters Framework Insights on: Experienced moods Applied mood regulation strategies Mood clues of clients Typology of interpersonal mood regulation strategies Products playing role</p>

Table 1.5. (Continued)

Chapter	Research Questions	Sub-Questions	Study	Outcomes
3 Flying Kites and Fighting Rhinoceros: Visualizing Nine Interpersonal Mood Regulation Strategies through Cards	Research Question 3	Sub- Questions What are the already existing interpersonal affect regulation strategies? How can we physicalize the nine interpersonal mood regulation strategies? Is it possible to convey them through visual representation?	Literature review of interpersonal affect regulation strategies Study 2: Development and validation of visual representations that depict the nine interpersonal mood regulation strategies Study 3: Exploration of the card set and usage scenarios	Nuanced descriptions of the of interpersonal mood regulation strategies Validated illustrations and a card set Card set instructions Insights about the usefulness of the cards and future usage opportunities
4 Watch, Act & Discover: Video Depictions of Nine Interpersonal Mood Regulation Strategies	How can IMR strategies be facilitated by means of training tools for service providers? Research Question 4 What are the strengths and limitations of the materials to facilitate interpersonal mood regulation?	Sub- Questions How can we demonstrate the bodily expressions of the interpersonal mood regulation strategies? Is it possible to convey them through enactment and videos?	Study 4: Development and validation of videos that represent nine interpersonal mood regulation strategies Study 5: Implementation of the videos into a training tool	A set of validated videos Instructions for the role-playing session Insights about usefulness of the videos and their future usage opportunities
5 Shaking, Floating, or Bursting: Non-Figurative Interactive Objects Depicting Nine Interpersonal Mood Regulation		Sub- Questions How can we support service providers in engaging with the nine strategies? Is it possible to communicate interpersonal mood regulation strategies in a non-figurative and interactive way through characters?	Study 6: Development and validation of character animations that represent nine interpersonal mood regulation strategies	A set of validated interactive characters

Table 1.5. (Continued)

Chapter	Research Questions	Sub-Questions	Study	Outcomes
6				
General Discussion				

This PhD thesis adopted a diverse range of research and design methods to investigate interpersonal mood regulation strategies in service encounters. Examples are literature reviews, questionnaire studies, a phenomenological inquiry, workshop-based inquiries, observations, and interviews. In addition, “research through design” approaches were used for the development of IMR tools, which aim to generate and communicate knowledge through designerly activities, skills, and tools (Stappers & Giaccardi, 2017).

The project has yielded valuable insights into service providers’ mood experience and management. It has illuminated how they adapt their interactions to accommodate the mood of their clients as well as how interpersonal mood regulation strategies can be facilitated. These insights have been encapsulated within the resulting training tools, each of which offers distinct approaches for conveying the characteristics of interpersonal mood regulation strategies. The developed tools have been implemented in multiple workshops conducted within an educational setting (studies 3 and 5).

2

The Eye Inward and the Eye Outward: Introducing a Framework for Mood-Sensitive Service Encounters

Keywords

- Mood sensitivity
- Service encounters
- Interaction style
- Experience sampling
- Mood regulation

Studies

- Study 1: A phenomenological study to explore the role of mood in service encounters

Chapter 2 consists of a paper publication that has been included as an integral part of the thesis:

Uslu, P. E., Desmet, P. M., & Schifferstein, H. N. (2022). The Eye Inward and the Eye Outward: Introducing a Framework for Mood-Sensitive Service Encounters. *She Ji: The Journal of Design, Economics, and Innovation*, 8(1), 118-146.

For inclusion in this thesis, the paper has been revised on two aspects. First, paragraph numbering has been adjusted. Second, the list of references has been integrated into the comprehensive reference list.

The paper focuses on research question 1 and 2 of the PhD project. It introduces the concept of mood sensitivity in service encounters, emphasizing the importance of service agents adapting their interaction style based on the client's mood. An experience sampling study involving eleven service providers from various fields identified four key components of mood sensitivity: perceiving the client's mood, managing the client's mood, recognizing one's own mood, and regulating one's mood. The proposed framework integrates these components and suggests opportunities for developing tools and training methods to enhance service providers' mood sensitivity.

THE EYE INWARD AND THE EYE OUTWARD: INTRODUCING A FRAMEWORK FOR MOOD-SENSITIVE SERVICE ENCOUNTERS

Pelin Esnaf Uslu

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Hendrik N. J. Schifferstein

2

ABSTRACT

This article introduces the concept of mood sensitivity: a service agent's ability to detect mood during service encounters and customize their interaction style accordingly, with the purpose of improving service encounters as a whole. We report on an experience sampling study that explored the role that mood plays in service provision. Eleven service providers from various fields (education, healthcare, government) participated. The study yielded four general components of service encounter mood sensitivity. The first two represent "the eye outward": (1) being perceptive of the client's mood and (2) being able to manage the client's mood by strategically adjusting one's interaction style. The other two represent "the eye inward": (3) being perceptive of one's own mood and (4) being able to regulate one's mood to protect personal well-being and avoid negatively impacting an encounter. Our framework of mood sensitivity during service encounters integrates these four components. For each component, opportunities are proposed for the development of tools, training methods, and design interventions that can support service providers seeking to develop their mood sensitivity.

Keywords

Mood sensitivity; Service encounters; Emotional intelligence; Design; Empathy.

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Highlights

- A mood-sensitive service encounter consists of four components.
- Service employees showed a variety of mood sensitivity.
- Every workplace has its own subset of moods and interpersonal mood regulation strategies.
- Service providers use at least nine interpersonal mood regulation strategies during service encounters.
- The proposed framework provides directions to design for mood sensitive-service encounters.

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2.1. INTRODUCTION

One of the most important determinants of customer experience and loyalty are the interactions customers have with frontline service providers.¹ The customer's mood plays a central role in these interactions, because it has a direct influence on their assessment of the service provider's behavior and performance.² Service providers who are sensitive to customers' moods, and are able to adapt their behavior accordingly, can optimize interactions with customers and, thereby, improve customers' overall attitude towards the persons providing the services³—an experience otherwise known as customer satisfaction. More effective service encounters may also help build the provider's self-esteem and contribute to their well-being—engendering a long-term accumulated effect on their general health, happiness, and prosperity. Hence, increasing the employees' mood sensitivity and enabling them to use that capacity to optimize their client interactions can contribute to the organization by enhancing not only customer satisfaction and loyalty, but also employees' well-being.

Moods are global and diffuse feeling states exhibiting considerable duration, gradual onset, and weak intensity—often without a single cause. Like emotion, mood is an affective phenomenon, but it differs in the sense that emotions are targeted and specific, have a shorter duration, come on rapidly, are of strong intensity, and usually have a single identifiable cause.⁴ Due to its diffuse character, a person's mood can be more difficult to sense than their emotions. Nonetheless, in our view, the ability to perceive short term emotional responses and more long lasting mood swings are related—and both contribute to people's emotional intelligence (EI).

Moods may influence a person's evaluations, interpretations, and concerns,⁵ along with how and what they communicate during a social interaction.⁶ Moods are thus a moderating factor during service experiences: while a particular service interaction might leave a person in a bad mood dissatisfied, a person in a good mood may be left with a feeling of

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- 1 Leonieke G. Zomerdijk and Christopher A. Voss, "Service Design for Experience-Centric Services," *Journal of Service Research* 13, no. 1 (2010): 67, 75, DOI: <https://doi.org/10.1177/1094670509351960>;
 - 2 Veronica Liljander and Jan Mattsson, "Impact of Customer Preconsumption Mood on the Evaluation of Employee Behavior in Service Encounters," *Psychology & Marketing* 19, no. 10 (2002): 842–45, DOI: <https://doi.org/10.1002/mar.10040>.
 - 3 Ove C. Hansemark and Marie Albinsson, "Customer Satisfaction and Retention: The Experiences of Individual Employees," *Managing Service Quality: An International Journal* 14, no. 1 (2004): 40, DOI: <https://doi.org/10.1108/09604520410513668>.
 - 4 Pieter M. A. Desmet, "Design for Mood: Twenty Activity-Based Opportunities to Design for Mood Regulation," *International Journal of Design* 9, no. 2 (2015): 8, available at <http://www.ijdesign.org/index.php/IJDesign/article/view/2167>.
 - 5 Brian Parkinson et al., *Changing Moods: The Psychology of Mood and Mood Regulation* (London: Longman, 1996), 10, 216.
 - 6 Joseph P. Forgas, "Feeling and Doing: Affective Influences on Interpersonal Behavior," *Psychological Inquiry* 13, no. 1 (2002): 1, DOI: https://doi.org/10.1207/S15327965PLI1301_01.

satisfaction. Customer mood also influences purchase behavior⁷ and customer perception of a business' overall performance.⁸ Even a customer's post-encounter mood has an impact on their overall customer service evaluation.⁹ These influences can be observed in all kinds of service encounters, ranging from high contact services (including medical or other professional services) to brief, more mundane service encounters (such as checking in at a hotel or buying a ticket at a train station).

The mood of frontline personnel¹⁰ and the way service providers deliver a service¹¹ also has an impact on the customer's mood—a positive interaction inspires a positive mood in the customer. This positive interaction is important for the service provider's well-being too, given that service providers may experience stress due to the nature of their job and the emotional labor it entails.¹²

Many factors influence service providers' moods in the workplace—there are job-related situational factors (events, work activities, job demands, and physical and social environment), personal characteristics (trait affectivity, body clock, emotional regulation), and evaluative judgments (social comparison, injustice, goal progress) that all may play a part.¹³ Think of employees who need to deal with numerous customers—and those customers' moods—in one day, but have no time to regulate their own transient moods, nor do they enjoy a social and physical environment that supports them. An employee's negative mood might influence their motivation levels, decrease their job performance and willingness to help, and even cause absenteeism¹⁴—all of which might negatively impact their well-being. As a result, their workplace communications with colleagues and clients would likely suffer. Since having positive relationships contributes to the psychological well-being of a person,¹⁵ the employee's mood must also be considered.

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- 7 Elaine Sherman, Anil Mathur, and Ruth Belk Smith, "Store Environment and Consumer Purchase Behavior: Mediating Role of Consumer Emotions," *Psychology & Marketing* 14, no. 4 (1997): 373, DOI: [https://doi.org/10.1002/\(SICI\)1520-6793\(199707\)14:4<361::AID-MAR4>3.0.CO;2-7](https://doi.org/10.1002/(SICI)1520-6793(199707)14:4<361::AID-MAR4>3.0.CO;2-7).
 - 8 Patricia A. Knowles, Stephen J. Grove, and Gregory M. Pickett, "Mood and the Service Customer: Review and Propositions," *Journal of Services Marketing* 7, no. 4 (1993): 49, DOI: <https://doi.org/10.1108/08876049310047724>.
 - 9 Anna S. Mattila and Cathy A. Enz, "The Role of Emotions in Service Encounters," *Journal of Service Research* 4, no. 4 (2002): 268–77, DOI: <https://doi.org/10.1177/1094670502004004004>.
 - 10 Alexandra Luong, "Affective Service Display and Customer Mood," *Journal of Service Research* 8, no. 2 (2005): 124, DOI: <https://doi.org/10.1177/1094670505279341>.
 - 11 William R. Swinyard, "The Effects of Salesperson Mood, Shopper Behavior, and Store Type on Customer Service," *Journal of Retailing and Consumer Services* 10, no. 6 (2003): 330–31, DOI: [https://doi.org/10.1016/S0969-6989\(02\)00037-1](https://doi.org/10.1016/S0969-6989(02)00037-1).
 - 12 Karen Pugliesi, "The Consequences of Emotional Labor: Effects on Work Stress, Job Satisfaction, and Well-Being," *Motivation and Emotion* 23 (June 1999): 150, DOI: <https://doi.org/10.1023/A:1021329112679>.
 - 13 Peter Totterdell and Karen Niven, *Workplace Moods and Emotions: A Review of Research* (Charleston, SC: Createspace Independent Publishing, 2014), 9–19.
 - 14 Arthur P. Brief and Howard M. Weiss, "Organizational Behavior: Affect in the Workplace," *Annual Review of Psychology* 53, no. 1 (2002): 292–96, DOI: <https://doi.org/10.1146/annurev.psych.53.100901.135156>.
 - 15 Carol D. Ryff and Corey Lee M. Keyes, "The Structure of Psychological Well-Being Revisited," *Journal of personality and social psychology* 69, no. 4 (1995): 719–27. DOI: <https://doi.org/10.1037/0022-3514.69.4.719>.

An important opportunity to increase customer satisfaction and employee well-being is to improve the communication between the service provider and the client by developing the provider's Emotional Intelligence (EI). EI is strengthened via four core skills: understanding emotions, perceiving emotions, managing emotions, and using emotions.¹⁶ We authors assume that similar, corresponding abilities apply to moods. Empathy—the ability to see the world through another's eyes without losing the distinction of self and other, to understand the other, and to communicate this understanding,¹⁷ is also considered as an important characteristic of emotionally intelligent behavior.¹⁸ Service providers' personal contact with each customer is an opportunity to dynamically customize their service style to the mood of that customer. An employee with high EI is not only more liable to read a customer's mood accurately, they are more effective at communicating. Adapting their communication style improves the quality and effectiveness of their interpersonal communications.¹⁹ "Interpersonal" in the service context means the entire process of exchanging information between customer and service provider, verbally and nonverbally,²⁰ during the service encounter. Research has shown that when customization is performed effectively, it can significantly enhance customer satisfaction.²¹ This may then lead to improved service agent well-being over time, since positive relationships with others contribute to one's own well-being.²² To illustrate: if a health professional is having a treatment-related conversation with a patient, the tone of the conversation might be modulated according to whether the patient is in a gloomy mood, or a cheerful mood, or a stressed mood. Service delivery can be customized in terms of content (what information is provided, and what options are offered, for example) and style (tone of voice, pace of response, and so on). Consumer researchers have suggested that service providers might improve their communication with their clients if, among other things, they understand better how to (1) interpret a client's mood, (2) handle their own feelings and the interactions between their moods and those of the customer, and (3) develop a repertoire of interaction strategies and tactics appropriate to customers with different moods.²³

16 John D. Mayer, David R. Caruso, and Peter Salovey, "Emotional Intelligence Meets Traditional Standards for an Intelligence," *Intelligence* 27, no. 4 (1999): 269, 273, DOI: [https://doi.org/10.1016/S0160-2896\(99\)00016-1](https://doi.org/10.1016/S0160-2896(99)00016-1).

17 Carl R. Rogers, "Empathic: An Unappreciated Way of Being," *The Counseling Psychologist* 5, no. 2 (1975): 3–5, DOI: <https://doi.org/10.1177/001100007500500202>.

18 Peter Salovey and John D. Mayer, "Emotional Intelligence," *Imagination, Cognition, and Personality* 9, no. 3 (1990): 194, DOI: <https://doi.org/10.2190/DUGG-P24E-52WK-6CDG>.

19 Jennifer S. Mueller and Jared R. Curhan, "Emotional Intelligence and Counterpart Mood Induction in a Negotiation," *International Journal of Conflict Management* 17, no. 2 (2006): 122–23, DOI: <https://doi.org/10.1108/10444060610736602>.

20 Joseph A. DeVito, *The Interpersonal Communication Book*, 14th ed. (Essex, UK: Pearson Education Limited, 2016), 26.

21 Luong, "Affective Service Display," 127.

22 Ryff and Keyes, "The Structure of Psychological Well-Being Revisited."

23 Meryl Paula Gardner, "Mood States and Consumer Behavior: A Critical Review," *Journal of Consumer Research* 12, no. 3 (1985): 291–92, DOI: <https://doi.org/10.1086/208516>.

Having the ability to detect and interpret the state of a customer's mood can provide frontline personnel with helpful cues for customized service delivery. Being more emotionally intelligent might also help them identify their own moods and effectively regulate them, which would then positively contribute to interpersonal communications. Eventually, increased EI may help them maintain their personal affective well-being and alleviate the negative effects of emotional labor,²⁴ which, over time, would also likely contribute to customer satisfaction. Figure 1 shows the relationships between these concepts.

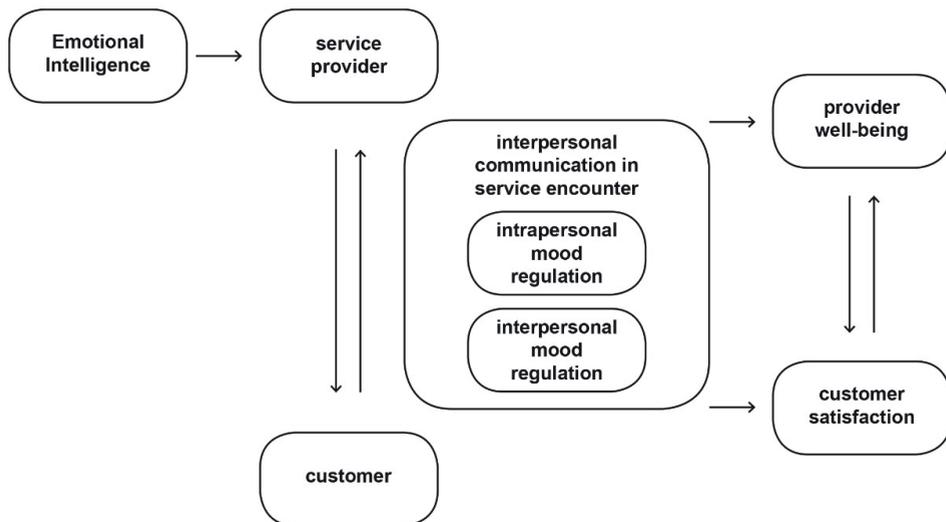


Figure 2.1. The relationships between EI, interpersonal communication, provider well-being, and customer satisfaction. © 2022 Pelin Esnaf Uslu, Pieter M.A. Desmet, and Hendrik N.J. Schifferstein.

There is ample literature on the causes, consequences, and impacts of mood. What is interesting here is the regulation of mood *within the individual*, and this *during the course of interpersonal communication*. People have a wide diversity of mood regulation strategies and these are intertwined with their daily activities.²⁵ For example, a person may go for a walk to get a breath of fresh air, read a book to unwind, or simply purchase an indulgent cake as a personal reward. Such mood regulation is also seen in the context of social interactions when a person deliberately attempts to influence how the other person feels. Karen Niven and her colleagues²⁶ found eleven commonly used strategies that can either

24 JungHoon (Jay) Lee and Chihyung Ok, "Reducing Burnout and Enhancing Job Satisfaction: Critical Role of Hotel Employees' Emotional Intelligence and Emotional Labor," *International Journal of Hospitality Management* 31, no. 4 (2012): 1108, DOI: <https://doi.org/10.1016/j.ijhm.2012.01.007>.

25 Parkinson et al., *Changing Moods*, 149.

26 Karen Niven, Peter Totterdell, and David Holman, "A Classification of Controlled Interpersonal Affect Regulation Strategies," *Emotion* 9, no. 4 (2009): 507, DOI: <https://doi.org/10.1037/a0015962>.

improve or worsen another's affect. They also suggest that some strategies may be more favorable in specific contexts than others. Indeed, not all of the above strategies would be suitable in the context of a service encounter. For example, in most cases, a service provider is unlikely to reject the client's feelings by being confrontational, for example by insulting, being rude, or belittling them. Although a handful of papers explore interpersonal affect regulation in the workplace²⁷ and in service encounters²⁸ interpersonal *mood* regulation strategies that are used by *service providers* to deal with the clients' *moods* are yet to be explored. This investigation can increase the knowledge to inform practitioners and consultants in the areas of service design, experience design and emotion-driven design. Although design research and explorations focusing on consumer moods have recently been increasing,²⁹ the interpersonal aspect of mood has not yet been explored in the field of design. Therefore, the current paper aims to increase our understanding of how mood is experienced and regulated in service encounters.

In this paper, we introduce a concept of mood sensitivity that brings multiple key concepts together³⁰ to represent service agents' ability to detect and manage both their own and the clients' moods during service encounters. Analogous to EI, which entails both self and other,³¹ we define mood sensitivity as the ability of a person to be aware of their own mood and to regulate it, and also the ability to recognize the other person's mood and the ability to influence it. We expect that applying the notion of mood sensitivity to design

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- 27 Michele Williams and Kyle J. Emich, "The Experience of Failed Humor: Implications for Interpersonal Affect Regulation," *Journal of Business and Psychology* 29, no. 4 (2014): 651–68, DOI: <https://doi.org/10.1007/s10869-014-9370-9>; David Holman and Karen Niven, "Does Interpersonal Affect Regulation Influence Others' Task Performance? The Mediating Role of Positive Mood," *European Journal of Work and Organizational Psychology* 28, no. 6 (2019): 820–30, DOI: <https://doi.org/10.1080/1359432X.2019.1666105>.
- 28 David Martínez-Íñigo, Giulia Lara Poerio, and Peter Totterdell, "The Association between Controlled Interpersonal Affect Regulation and Resource Depletion," *Applied Psychology: Health and Well-Being* 5, no. 2 (2013): 248–69, DOI: <https://doi.org/10.1111/aphw.12009>; David Martínez-Íñigo, Francisco Mercado, and Peter Totterdell, "Using Interpersonal Affect Regulation in Simulated Healthcare Consultations: An Experimental Investigation of Self-Control Resource Depletion," *Frontiers in Psychology* 6 (September 2015): article no. 1485, 1–14, DOI: <https://doi.org/10.3389/fpsyg.2015.01485>; David Martínez-Íñigo, Consuelo Bermejo-Pablos, and Peter Totterdell, "The Boomerang Effect: How Nurses' Regulation of Patients' Affect Associates with Their Own Emotional Exhaustion and Affective Experiences," *International Journal of Stress Management* 25, no. 1 (2018): 1–13, DOI: <https://doi.org/10.1037/str0000039>; Karen Niven, David Holman, and Peter Totterdell, "How to Win Friendship and Trust by Influencing People's Feelings: An Investigation of Interpersonal Affect Regulation and the Quality of Relationships," *Human Relations* 65, no. 6 (2012): 777–805, DOI: <https://doi.org/10.1177/0018726712439909>.
- 29 Desmet, "Design for Mood"; Pieter M. A. Desmet, Haian Xue, and Steven F. Fokkinga, "The Same Person Is Never the Same: Introducing Mood-Stimulated Thought/Action Tendencies for User-Centered Design," *She Ji: The Journal of Design, Economics, and Innovation* 5, no. 3 (2019): 179, 81, DOI: <https://doi.org/10.1016/j.sheji.2019.07.001>; Haian Xue, Pieter M. A. Desmet, and Steven F. Fokkinga, "Mood Granularity for Design: Introducing a Holistic Typology of 20 Mood States," *International Journal of Design* 14, no. 1 (2020): 2, 12, available at <http://www.ijdesign.org/index.php/IJDesign/article/view/3578/891>.
- 30 Xue et al., "Mood Granularity for Design," 2; William N. Morris and Nora P. Reilly, "Toward the Self-Regulation of Mood: Theory and Research," *Motivation and Emotion* 11, no. 3 (1987): 223–25, DOI: <https://doi.org/10.1007/BF01001412>; Niven et al., "A Classification of Controlled Interpersonal Affect Regulation Strategies," 498.
- 31 Keri A. Pekaar et al., "Self-and Other-Focused Emotional Intelligence: Development and Validation of the Rotterdam Emotional Intelligence Scale (Reis)," *Personality and Individual Differences* 120 (January 2018): 223, DOI: <https://doi.org/10.1016/j.paid.2017.08.045>; Salovey and Mayer, "Emotional Intelligence," 185.

interventions in the context of service encounters would support communication between customers and service providers, consequentially contributing to customer satisfaction, and in the long term to the well-being of the service agent.

We report on a study that was designed (a) to explore how mood is experienced and managed by service providers in service encounters, and this so as (b) to identify and define opportunities and directions for supporting service designers, service researchers, companies and service providers in facilitating mood sensitivity with an overall goal of improving the communication in service encounters. We used the experience sampling method³² to explore; (1) whether service providers are perceptive to their own mood states and if so, what moods they experience; (2) how service providers regulate their own moods, and which strategies they use; (3) whether service providers recognize their clients' mood states, if so through which cues, (4) what strategies service providers use to accommodate for their clients' moods and respond accordingly; and finally, (5) whether there are any particular products that play a role in this process.

Our study results yielded several insights on how mood is experienced and managed by service providers; each insight has been classified under one of four components of mood sensitivity. We discuss directions for the development of specialized tools or design interventions relative to each component that might be used by frontline personnel to develop their mood sensitivity. This framework could be useful to researchers comparing and integrating research findings, developing a design intervention, or positioning future research in service design, affect-driven design and experience design.

2.2. METHOD

2.2.1. Participants

We interviewed eleven service agents ranging in experience from 1 to 30 years (Table 2.1). Participants were recruited in the Netherlands by convenience sampling from the authors' professional networks. Convenience sampling was used because the study required the participation of professionals (like medical staff) willing to invest three hours of their time. They represented three main fields of occupation to ensure variety in the data: healthcare ($N = 3$), education ($N = 4$), and government ($N = 4$). The study focused on healthcare providers with patients, teachers with students, and government employees with citizens. When choosing the domains, we considered the duration, proximity, and frequency of

32 Mihaly Csikszentmihalyi and Reed Larson, "Validity and Reliability of the Experience-Sampling Method," in *Flow and the Foundations of Positive Psychology: The Collected Works of Mihaly Csikszentmihalyi* (Dordrecht, NL: Springer, 2014), 35–54, DOI: https://doi.org/10.1007/978-94-017-9088-8_3.

their encounters and the sensitivity of the information involved. Our primary goal was to recruit participants who were having medium to long (from ten minutes to an hour), face-to-face interactions with their clients. Since we wanted to maintain variety, we looked into different sectors that involved multiple types of interactions, such as intimate and superficial, one time only or frequent visits. All participants had at least one year of work experience and spoke English well. Participants volunteered to participate and received a gift voucher they could either use directly or donate to a selected charity.

Table 2.1. Overview of the Participants Field and Years of Experience.

Fields	Participant Number	Field of Expertise	Years of Experience
Educators	E00	Mentor	2
	E01	Assistant Professor	27
	E02	Assistant Professor	11
	E03	Lecturer	5
Government Employees	GE01	Officer at Municipality	2.5
	GE02	Social Worker at Municipality	20
	GE03	Officer at Municipality	1.5
	GE04	Social Worker at Municipality	4
Healthcare Professionals	HP01	Intern Family Doctor	5
	HP02	Dentist	4
	HP03	Family Doctor	30

2.2.2. Materials

Experience sampling, or ecological momentary assessment, is a research methodology specifically suitable for obtaining in-depth insights on everyday experiences.³³ To collect experiences on how the service providers managed their moods and their clients' moods, we gave five identical diaries to participants to use to report anecdotal experiences. These reports took the form of event-contingent experience sampling, which requires participants to report on their experiences whenever a pre-specified event occurs. We opted to use diaries in physical form for practical reasons; they could be carried to the office easily and could serve as a physical reminder to note down anecdotes. Our aim to create a typology of interpersonal affect regulation strategies depended on capturing anecdotal evidence in the moment rather than retrospectively.

To provide participants with a lexicon of possible mood language, we provided them with Haian Xue and colleagues' typology³⁴ of 20 moods³⁵ (Table 2.2) and the mood-related tendencies.³⁶ The typology includes detailed descriptions, images, and examples of each mood. To help participants report on the activities they engaged in to regulate their own moods, we provided them with a broad overview of fifteen common mood regulation strategies,³⁷ including two or three examples of each one (see Table A1 in Appendix A).

Table 2.2. The typology of 20 moods used in this study. Source: Pieter M. A. Desmet, Haian Xue, and Steven F. Fokkinga, *20 Moods: A Holistic Typology of Human Mood States* (Delft: Delft University of Technology, 2020), last modified December 13, 2021, available at <https://research.tudelft.nl/en/publications/twenty-moods-holistic-typology-of-human-mood-states>.

	Moods
Negative	<ul style="list-style-type: none"> ● Miserable ● Anxious ● Lethargic ● Gloomy ● Grumpy ● Stressed ● Agitated
Positive	<ul style="list-style-type: none"> ● Relaxed ● Peaceful ● Cheerful ● Productive ● Vigorous ● Amiable ● Dreamy ● Giggly ● Jubilant
Ambiguous	<ul style="list-style-type: none"> ● Sentimental ● Boisterous ● Rebellious ● Serious

2.2.3. Procedure

The study consisted of three steps: (1) a sensitization meeting, (2) diary reporting, and (3) an in-depth interview. Participants completed the steps of the study by spending three

34 Pieter M. A. Desmet, Haian Xue, and Steven F. Fokkinga, *20 Moods: A Holistic Typology of Human Mood States* (Delft: Delft University of Technology, 2020), last modified December 13, 2021, available at <https://research.tudelft.nl/en/publications/twenty-moods-holistic-typology-of-human-mood-states>.

35 Xue et al., "Mood Granularity for Design."

36 Desmet et al., "The Same Person is Never the Same," 173.

37 Desmet, "Design for Mood," 9.

to four hours individually, spread over two to three weeks. The whole period of data collection took 2.5 months.

Step 1—sensitization meeting: During a 30-minute sensitization meeting participants were first briefed about the study, informed about the mood phenomenon (and how it differs from emotion), and introduced to the tools used in the study. They were asked how they felt at that particular moment and selected one mood from the 20-moods booklet. Subsequently, they recalled and shared a past experience when they noticed their client's mood and adjusted their communication to the clients' mood. We used these recollections to feed a discussion about how the different parts of the diary should be filled in, and clarified possible misunderstandings regarding the mood phenomenon. Participants were explained how to report in the diary. They would be recording instances where they changed the way they communicated in response to their client's moods. They would record the details of the encounter following the diary guidelines, preferably immediately after the encounter has taken place. We asked that they report at least two encounters per day and encouraged them to report a third if they wished. We then gave them a package containing the five mood diaries—one for each day, each including the template overview with fifteen mood regulation strategies—a copy of the 20-moods booklet, and an informed consent form.

Step 2—data collection through diary reporting: The participants reported one to three anecdotes per day for five days. For each anecdote, they described their own mood, the client's mood (as interpreted by them), the context, and the verbal and nonverbal cues they had observed to interpret the client's mood. They were then encouraged to provide details about how they changed the way they communicate in response to the client's mood. Finally, they described whether they did something to change their own mood before or after the client encounter. To describe their activities, they were to select one or more out of fifteen mood regulation strategies. The diary and an example report is given in Appendix A.

Step 3—data collection through in-depth interviews: Once the participants completed reporting in their diaries, we arranged in-depth interview meetings with each participant. During the post-diary interviews, we discussed the anecdotes reported in the diaries and the communication strategies participants used to customize their services, to explore their mood-related experiences in depth. We asked each participant to reflect on the experience of noticing their moods and interpreting the clients' moods. We talked about whether they used a specific strategy to respond to the client's mood and regulate their own, and asked whether their surroundings or the products they may have been using played a role in any way. In the final portion of the meeting, we introduced the notion

of mood sensitivity. We asked them each to reflect on what it was to be mood-sensitive during a service encounter, whether they had faced any difficulty, and what they would expect to learn if they were to receive training on moods. These in-depth interviews each lasted about 1.5 hours; they were audio recorded and transcribed afterwards.

2.2.4. Data Analysis

The interview transcriptions and anecdotes were digitized after diary collection. The diary data and the transcribed interviews were analyzed using thematic analysis.³⁸ The goal was to identify patterns across the dataset, describe and interpret them, and “provide a theoretically informed interpretation of them.”³⁹ When coding, we used the reflexive approach by following the six phases of reflexive thematic analysis: (1) familiarization; (2) coding; (3), generating initial themes; (4) reviewing and developing themes; (5) refining, defining, and naming the themes; and (6) doing a write-up. Data processing was both deductive and inductive, because we already had clear interview questions, yet we aimed to identify the patterns and themes within each topic.

We began by familiarizing ourselves with the transcriptions. We read and then color-coded them based on the questions in the diaries and the interviews. This process resulted in eight different answer groups: (1) noticing own moods and mood changes, (2) mood regulation strategies, (3) noticing client mood, (4) communication adjustment, (5) the role of products, (6) problems and difficulties, (7) thoughts on being mood-sensitive, and (8) general insights. For example, all the text concerning the topic of “noticing client mood” was highlighted in yellow in the transcripts and digitized diary files. Then, codes were created to tease out patterns and themes in the data. For instance, we coded the following sentence as “eye contact”: “I think again, I remember the eyes ... that gave me the impression of the mood ...” We then grouped the initial codes into subthemes. For example, we gathered the codes “facial expression,” “eye contact,” “gaze,” and “skin tone” into a subtheme which we named “face.” After that, we gathered the subthemes into themes. For instance, we grouped the subtheme “face” along with five other subthemes under the “observable mood signs” theme (see Appendix B). We continued the process by reviewing the themes and refining them. We initially created 92 codes distributed across 12 themes and 8 main categories. We finally used the ingredients of six categories when reporting the results by relating them to the research questions and literature. Appendix B gives an overview of these six categories, the final 57 codes, and 10 themes related to our findings.

38 Virginia Braun and Victoria Clarke, “Using Thematic Analysis in Psychology,” *Qualitative Research in Psychology* 3, no. 2 (2006): 86–94, DOI: <https://doi.org/10.1191/1478088706QP0630A>.

39 Virginia Braun and Victoria Clarke, “Can I Use Ta? Should I Use Ta? Should I Not Use Ta? Comparing Reflexive Thematic Analysis and Other Pattern-Based Qualitative Analytic Approaches,” *Counselling and Psychotherapy Research* 21, no. 1 (2021): 43, DOI: <https://doi.org/10.1002/capr.12360>.

2.3. RESULTS

The experience sampling procedure resulted in 116 anecdotes. During data analysis, four main domains of knowledge emerged within the overall topic of mood sensitivity in professional interactions. Together, these domains combine into a basic framework of mood sensitive interactions (see Figure 2). The framework includes a portion that is self-focused, which we refer to as the “eye inward,” consisting of (A) noticing one’s mood and (B) regulating one’s mood. In addition, there is a client-focused part, which we refer to as the “eye outward,” consisting of (C) interpreting the client’s mood and (D) adjusting one’s regulation strategy. Both the inward (self-focused) and the outward (other-focused) eye come with noticing and with regulating mood in an ongoing cyclic process, restarting with each new client. The bi-directional arrows in Figure 1 show that the process is reciprocal and iterative—the service providers attempt to regulate their moods once they notice it and feel the need to adapt it. The same applies when they notice a client’s mood. Either during or after the encounter, they repeat the same process. Below, we use the four components of the framework to structure the results section.

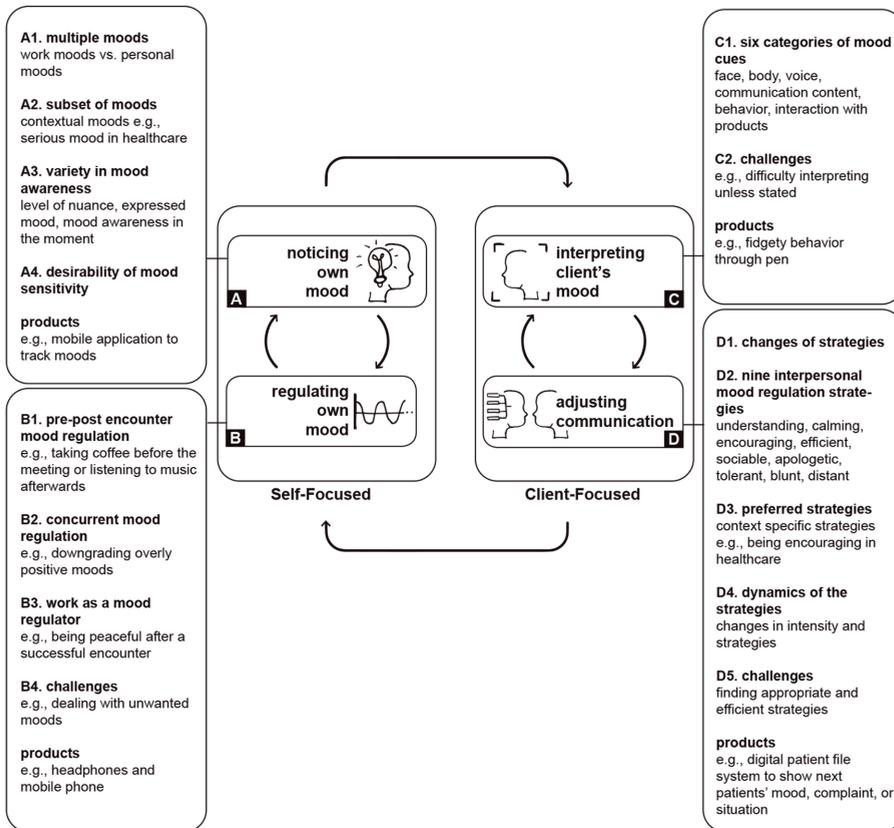


Figure 2.2. Framework of Mood Sensitive Interaction. © 2022 Pelin Esnaf Uslu.

2.3.1. The Framework of Mood-Sensitive Interaction

A. Noticing Own Moods at Work

Insight A1: Multiple Moods

The participants mentioned that they can have *more than one mood at the same time*. When they were at work, they tended to distinguish between private moods and work-related ones. Their work moods differed from the moods they experienced outside of their work environments. The service providers gave three reasons for distinguishing parallel moods: (1) to protect themselves from the clients' moods or from unpleasant interactions, (2) to protect the clients from their own mood, and (3) to maintain a professional attitude appropriate to the work environment. This insight suggests that service providers tend to adapt themselves to a work-related mood during professional encounters.

“GE04: It is kind of funny because it is not the same as when I am working... Yes, this is my working mood, and when I leave, I can leave it behind and just go to my regular mood.”

Insight A2: Subset of Moods at Work

The service providers experienced some moods more frequently than others: their profession appears to come with a *subset of moods*. Moreover, they mentioned that some moods are not suitable for their work environment. One participant mentioned generally being in a serious mood, but also experiencing some other moods from time to time. Frequently reported work moods were serious, productive, amiable, cheerful, peaceful, and relaxed. Moods that were reported only occasionally were anxious, miserable, gloomy, lethargic, stressed, agitated, grumpy, and sentimental. Boisterous was reported only once and giggly was not reported at all. Three reasons why some moods are experienced more often at work than others were mentioned: (1) the job requires a certain mood, (2) the mood of the client and the purpose of their visit requires a certain mood, and (3) the context (space) sets or induces a certain mood.

“HP03: I always try to go back to serious mood which is our basic mood that we try to be in at work.”

Insight A3: Variety in Mood Sensitivity

Although all participants reported at least some moods, the results showed a *variety in their individual ability to notice their mood*. This variety manifested itself in three ways. First, it manifested in the level of nuance in how participants reported their moods. Some were able to provide detailed reports, while others only used a handful of words. In addition, some participants mentioned that they found it difficult to grasp and report their mood due to the ephemeral nature of mood states and that they are not always consciously aware of their own moods. Second, we observed that participants varied in their awareness of what mood they conveyed to their clients through verbal and nonverbal cues and how their own mood influenced their own behavior. Third, several participants reported that they were not aware of their mood in the moment of interaction, but that they became aware afterwards, when reflecting on it.

Insight A4: Desirability of Mood Sensitivity

One participant mentioned that they did *not always want to know their mood*, especially when it was inappropriate for the specific context. Although only one participant mentioned this, we find it insightful that being conscious of one's own mood might not always be appreciated.

B. Regulating Own Mood

Insight B1: Pre- and Post-Interaction Mood Regulation

The majority of participants reported that they *applied strategies to regulate their moods*. Some participants specifically applied mood regulation strategies to prepare for certain encounters if they had prior knowledge about the encounter or client. They stated that knowing what the meeting would be about helped them to prepare themselves. Most participants reported that they also tried to regulate their moods after a given client encounter. Two participants mentioned doing this after work, for example, by having dinner with family or going out for a picnic with colleagues and enjoying the nice weather.

“GE04: I know these conversations ask a lot from me—energy-wise. They are very chaotic. I walked there so I could have a moment of peace and calmness. When I came back to the office, I took 30 minutes to do nothing and just talked to my colleagues a bit.”

Insight B2: Concurrent Mood Regulation

Some participants indicated that they *regulated their mood during an interaction*. One participant adapted to the client’s relaxed mood by downgrading her own jubilant mood. Another uplifted her lethargic mood to adapt to an amiable patient. Some participants reported that they tried to shield themselves from the moods of their clients, for example by withdrawing from the conversation by decreasing the number of words they used or explicitly stating that they could not help the client anymore.

Insight B3: Using Work Itself as a Mood Regulating Strategy

Going to work and seeing clients were mentioned as influencing factors on participants’ moods, either in a positive or negative manner. One of the participants mentioned that work helped them forget about their personal mood for a while. Other participants mentioned that client encounters could affect their mood momentarily in a positive way. In contrast, we observed that work activities might also influence the service providers’ moods negatively, such as feeling agitated after a very tiring patient treatment.

Insight B4: Challenges to Mood Regulation

Participants reported experiencing two main *difficulties related to mood regulation*. First, they expressed having difficulty dealing with unwanted moods. Some participants mentioned that it could sometimes be difficult to switch from an unwanted mood to an “ideal” (work-appropriate) mood that would suit the encounter. Second, due to the limited amount of time they spent at the workplace, they sometimes found it difficult to find the time and opportunity to regulate their moods.

“E02: If I am annoyed, I might not be receptive to changing anything, which is a pity... Because I wish I could turn [the annoyed feeling] off, but I’m blocked ... it’s in the way we are communicating.”

C. Noticing Client Mood

Insight C1: Six Categories of Mood Cues

When noticing their clients’ moods, some participants mentioned that they usually did not pay specific attention to the outward signs of their clients’ moods—they interpreted the moods intuitively. However, when asked to report the verbal and nonverbal cues they used to interpret their clients’ moods, they mentioned several, with each participant paying attention to a different set of cues. We identified six categories of cues: The client’s (1) *face*, including facial expression, eyes, gaze and skin color; (2) *body*, including bodily movements, body posture, hand gestures, and breathing; (3) *voice*, including tone of voice, pitch, and tempo; (4) *communication content*, including the feelings and situations the clients verbally mentioned; (5) *behavior*, including their reactions, action tendencies, and interactions with other people, especially people accompanying the clients; and (6) *interaction with products* in terms of which products are being used, and how. These combined indications helped the participants form a general impression about their clients’ moods.

Insight C2: Challenges to Interpreting Client Mood

The participants mentioned that they were often *uncertain when interpreting their clients’ moods* and that they usually did it intuitively. To them, it was difficult to interpret their clients’ moods because the clients did not openly display their moods or otherwise express their feelings. Some participants had difficulty linking specific cues to their clients’ moods. In fact, participants were more confident about their interpretations of their clients’ moods when the clients explicitly stated their feelings and their situation. It also helped when the participants were acquainted with a client, knew their background story and their general attitude. One participant found it difficult and tiresome to be constantly attentive to other people’s cues.

“HP02: There might still be something underneath that they aren’t showing/telling. Sometimes it’s clear, but sometimes it’s difficult to see what the patient’s mood is.”

D. Adjusting Communication

Insight D1: Change of interpersonal mood regulation strategies

Participants usually *changed the way they communicated* in response to the moods of their clients. In most cases, this change was an intuitive act, whereas in other cases it was done consciously. One participant found it difficult to pinpoint exactly how their nonverbal behavior changed.

Insight D2: Nine Interpersonal Mood-Regulation Strategies

We found nine *interpersonal mood-regulation strategies* used in different situations. We named these (1) understanding, (2) calming, (3) encouraging, (4) sociable, (5) apologetic, (6) efficient, (7) tolerant, (8) blunt, and (9) distant. Short descriptions are given for each interpersonal mood-regulation strategy in Appendix C. We found that most participants were listening attentively to their clients at the beginning of an encounter. Then, if they believed it to be necessary or appropriate, they adjusted their strategies.

Insight D3: Preferred Set of Strategies

Participants used certain strategies *more frequently* than others. They often used a strategy that they found suitable for their job generally that they would adapt depending on the encounter. One participant mentioned imagining the strategies as personas and employing different personas with each encounter. This suggests that each participant preferred specific strategies, and that some interpersonal mood-regulation strategies were found more convenient than others in specific environments.

“HP01: I always try to be friendly and reassuring, which, most of the time, helps the patients.”

Insight D4: Dynamics of Interpersonal Mood-Regulation Strategies

Although participants may have begun using one strategy, they tended to *adapt it during the interaction episode* multiple times, depending on how the encounter developed. Some participants used multiple strategies per encounter. One participant explained a situation in which she changed the intensity of her strategy, including how she switched from being apologetic to friendly. Apparently, adjusting strategies is a dynamic process that can involve changes in strategy and intensity level. One participant added that their service is a long-term process that includes different phases. For that reason, their strategies evolve depending on the different phases. For example, when getting to know their client, they might start out by being calming and encouraging, whereas towards the end, they become efficient. This indicates that strategy election and use may also depend on the progression of a service as a whole.

Insight D5: Difficulty Identifying Appropriate Strategies

Some participants mentioned having *difficulty finding and choosing the appropriate strategy* in some cases. For example, while one participant preferred using a friendly strategy, they also believed that this strategy was not always in the best interest of their students. They added that sometimes they needed to give direct feedback in order to help the student switch from a low energy mood to a high energy mood, and that finding the best strategy was not always easy.

“E00: It’s sometimes difficult for me. I think I tend to be overly positive and I realize that it is not necessarily in the students’ best interest.... Sometimes you need to make people feel anxious otherwise supervision would be incredibly easy.”

2.3.2. Use of Products During Mood-Sensitive Interactions

Products Can Support Each Component

When the participants were asked to reflect on the products or other objects they had around to assist them during client encounters, they mentioned products and factors related to each component of our framework. These products varied from a provider’s smartphone (self regulating mood through social media), to a student’s pen (fidgeting with it revealed their mood to an educator), to a digitized set of nurses’ notes (signaling patient mood state to attending doctors), to the encouraging and sensitive way a surgery tool was utilized during a dental procedure. More examples can be found in Appendices D and E.

Three Different Product Functions

We saw that these products were used for three different mood-related purposes: (1) to indicate or help detect mood, as in the case of the mood tracker application; (2) to regulate, induce, or influence mood, as in the case of a rewarding coffee and dessert; and (3) to support communication, such as the computer screen that supported the doctor’s explanation to the patient. (See Appendix D for an overview of products).

Products Deliberately Designed for Mood Sensitive Encounters

Although a variety of products played a role across the different components of our model and fulfilled different functions, none of the products mentioned were deliberately designed for these specific functions except for the mood tracker application. For instance, the student fidgeting with a pen helped the educator to catch a glimpse of the student’s anxiety, even though the pen was not designed for that purpose. This and other examples show that products or environmental factors can coincidentally support mood sensitivity during service encounters.

2.4. DISCUSSION

2.4.1. Mood Sensitivity in Service Encounters

Improving mood sensitivity may be an interesting practice for service professionals to cultivate, because observing and respecting one another’s moods can improve communication and, thereby, contribute to the quality of relationships among their clients and colleagues. In our study, we found that mood sensitivity in the context of service encounters involves the mood of the service provider as much as the mood of the client.

Mood sensitivity is something of a double-edged sword, in the sense that heightened sensitivity may involve a certain degree of risk—especially if one does not develop the eye inward in parallel to developing the eye outward. This suggests that enhancing mood sensitivity should focus on developing the eye inward and the eye outward. This article introduces a framework consisting of four components of mood sensitivity in service encounters. Beyond this theory, it has pragmatic value—after unpacking what appears to be a holistic phenomenon of mood sensitivity, we offer four avenues to approach designing for each component in our tentative framework. In this section, we will first unpack our findings relative to the framework, then follow with a discussion of its limitations and practical implications.

Noticing Own Mood

Our results showed that participants often experienced difficulty detecting their moods and how their moods influenced their behavior during client encounters. This finding aligns with research that indicates that since moods are pervasive, global, and diffuse feelings, they are not always at the forefront of our experience.⁴⁰

Participants tended to have “parallel moods” during professional encounters at work: a private versus a (usually different) professional mood.⁴¹ Apparently, jobs can require specific moods, such as being in a serious and peaceful mood as a doctor. Indeed, research indicates that service workers adapt their affective state to the organization’s goals.⁴² In addition, we observed that service agents’ moods were often influenced by specific client encounters. This is in line with findings showing that along with the characteristics of an employee and their evaluative judgments, the characteristics of the work environment such as the events happening at work and the social interactions it involves—client encounters, in this case—influence the momentary mood of the employee.⁴³ Apparently, moods shift dynamically at work; employees experience different kinds of moods such as personal moods, typical work moods, and momentary moods.

Mood Regulation in Service Contexts

We found that participants often applied mood regulation strategies without being aware that they were doing so. As these adaptations are intertwined with daily routines, they are often hard to distinguish.⁴⁴ The interviews showed that participants not only engaged in

40 Morris and Reilly, “Toward the Self-Regulation of Mood,” 219–22; Parkinson et al., *Changing Moods*, 1–2.

41 Achim Stephan, “Moods in Layers,” *Philosophia* 45, no. 4 (2017): 1490–92, DOI: <https://doi.org/10.1007/s11406-017-9841-0>.

42 Arlie Russell Hochschild, “Emotion Work, Feeling Rules, and Social Structure,” *American Journal of Sociology* 85, no. 3 (1979): 569–70, DOI: <https://doi.org/10.1086/227049>.

43 Totterdell and Niven, *Workplace Moods and Emotions*, 12–13.

44 Randy J. Larsen, “Toward a Science of Mood Regulation,” *Psychological Inquiry* 11, no. 3 (2000): 131, DOI: https://doi.org/10.1207/S15327965PLI1103_01.

different mood regulating activities *before and after* specific encounters, they also did so *during* the encounters and *at the start or the end of their workdays* as a means of transition. Indeed, people tend to regulate mood prior to and during social interactions.⁴⁵

Interpreting Client Mood

We found six categories of cues that helped participants interpret their clients' moods: (1) face, (2) body, (3) voice, (4) communication content, (5) behavior/interaction with others, and (6) via interactions with products. Previously, Nale Lehmann-Willenbrock and her colleagues⁴⁶ have used face, body, and posture as mood cues in their group mood observation tool. Similar to what we found, Randy Larsen⁴⁷ has indicated elsewhere that mood is usually reflected by a person's body, postural changes, gait, gesture, tone of voice, and speech tempo. Our sixth cue, the way in which people interacted with products, add to these. Examples include fidgeting with a pen or the way a person interacts with a door knob when entering the room. We suggest that all six categories might be used to sensitize frontline personnel to the cues relevant to and indicating a client's mood. The categories might also be used as a basis for developing tangible interventions designed to help the service providers interpret client mood by taking their facial expression, tone of voice, movement, body posture, and content of speech into consideration.

Adjusting Interpersonal Mood Regulation Strategies

Our results show that participants dynamically change their interpersonal mood-regulation strategies and the intensity of the applied strategy throughout a given encounter. Existing research indicates that people indeed tend to accommodate their communication during interactions⁴⁸ and try to influence the other persons' mood while communicating.⁴⁹ In line with previous research, we have identified nine interpersonal mood-regulation strategies. These strategies showed similarity with the eleven strategies given by Niven and colleagues.⁵⁰ However, we only observed a subset of these, due to the professional contexts of our participants' interactions, which limited the range of strategies they exhibited. Five of our strategies—understanding, encouraging, efficient, tolerant, and

45 Ralph Erber, Daniel M. Wegner, and Nicole Therriault, "On Being Cool and Collected: Mood Regulation in Anticipation of Social Interaction," *Journal of Personality and Social Psychology* 70, no. 4 (1996): 764–65, DOI: <https://doi.org/10.1037/0022-3514.70.4.757>; Jeffrey R. Huntsinger et al., "Contagion without Contact: Anticipatory Mood Matching in Response to Affiliative Motivation," *Personality and Social Psychology Bulletin* 35, no. 7 (2009): 919–21, DOI: <https://doi.org/10.1177/0146167209335299>.

46 Nale Lehmann-Willenbrock et al., "Verbal Interaction Sequences and Group Mood: Exploring the Role of Team Planning Communication," *Small Group Research* 42, no. 6 (2011): 661, DOI: <https://doi.org/10.1177/1046496411398397>.

47 Larsen, "Toward a Science of Mood Regulation," 130.

48 Howard Giles, "Communication Accommodation Theory," in *The International Encyclopedia of Communication Theory and Philosophy*, ed. Klaus Bruhn Jensen et al. (Hoboken, NJ: Wiley, 2016), DOI: <https://doi.org/10.1002/9781118766804.wbiect056>.

49 Niven et al., "A Classification of Controlled Interpersonal Affect Regulation Strategies,"

50 *Ibid.*, 507.

distant—match the strategies given in these authors' existing classification. One of our strategies, blunt, showed similarity to these authors' "negative affective engagement" and "negative behavioral engagement" strategies. The other three strategies we describe showed some minor differences to Niven et al.'s set due to the specific context and roles we observed. For example, our sociable and their "humor" strategy both entail making jokes, but our sociable strategy has a more general description. Similarly, our calming strategy has a more general description than their "distraction." As for the apologetic strategy, we observed a resemblance to their strategy "valuing" as it includes acts such as showing care to the client. However, our apologetic strategy is specifically used for moments of recovery.

The strategies we have identified in this study may be useful when developing materials to help service providers improve their services. This can be done, for example, for raising awareness about the dynamics of service providers' personal strategies, broadening their repertoire, including how and when to use them. Some product service platforms help authors detect and adjust the tone of their writing, for instance.⁵¹ Personal strategies may also be used to improve service provision more generally, especially when designing interventions that support these strategies, or enable users to express them or adapt to them. For example, in dental practice, virtual skylights above the chair are being used to alleviate patient stress. A whole room can be designed in a way that initially detects the service provider's calming strategy and then adapts to it by, for instance, offering calming and distracting images or different lighting.

Our insights were based on data collected from eleven participants including five ($N = 5$) novice service providers whose experience was between one and five years ($M = 2.8$), and six ($N = 6$) experienced service providers with between five and thirty years under their belts ($M = 16.3$). We found that both groups were encountering similar issues. Therefore, we believe that involving both novice and experienced participants helped us explore the current situation from both perspectives and showed us that both groups were experiencing similar issues. For that reason, including both groups enriched our analyses and provided us with a broader view on the issues at hand than investigating a single group would have given us.

2.4.2. Limitations

Since our aim was to understand the phenomenon from the service provider's point of view, the current study did not include the client's perspective. Some participants mentioned that their interpretations needed validation from the client. In future research, a dyadic

51 "Grammarly Tone Detector," Grammarly, last modified December 13, 2021, <https://www.grammarly.com/tone>.

study design may help increase our understanding of both perspectives and to what extent the perceptions of the clients and the providers match up.

The present study focused mostly on high contact services in government offices, universities, private practices, and hospitals. The results are likely to apply to other high-contact service encounter professions such as hairdressing, restaurant service, and the hotel industry. However, it would be interesting to see to what extent the framework provided applies to low contact services—where contact only occurs occasionally— or even automated services, such as ATM machines, digital applications, or websites. Technology-based service encounters are increasing faster than ever, especially after the outbreak of the Covid-19 pandemic, and future research might explore the usefulness and implications of the framework for these services.

The current study focused on the interaction between service agents and their clients, because these are considered core interactions that influence client satisfaction and employee well-being. However, we found that social interactions with others played an important role for the service agents when regulating mood at work. Therefore, there is potential to explore mood and mood regulation in other types of social interactions as well, such as interactions with fellow colleagues or managers. Future studies can explore the interactions between different roles using the current framework.

Although the framework aims to improve service provider well-being, implementing it in the service sector may also lead to unintended consequences. Firstly, as mentioned by one of the participants, being constantly aware of one's own and others' moods, and actively trying to influence them, can be exhausting. Secondly, the framework may even be applied in ways that increase work pressure, for example by integrating it in employee review meetings. For this reason, the framework is neither intended nor created to be used as an evaluative instrument, but instead as a means for competence development. Development-focused interventions need therefore to be carefully developed to minimize the chances of undesirable countereffects.

2.4.3. Implications of the Framework for Improving Services

Improving Employee Well-being and Customer Satisfaction

Having a positive relationship with others contributes to a person's well-being.⁵² We foresee that the framework we present could be used to increase employee awareness of mood

52 Carol D. Ryff and Corey Lee M. Keyes, "The Structure of Psychological Well-Being Revisited," *Journal of Personality and Social Psychology* 69, no. 4 (1995): 719–727, DOI: <https://doi.org/10.1037/0022-3514.69.4.719>.

as a part of EI training.⁵³ Training materials exist to develop the capability to (1) effectively manage affect for an improved affective well-being,⁵⁴ and (2) improve communication skills in the interest of improving service encounters on the whole.⁵⁵ The current framework might be implemented in employee training—for instance by providing employees with the structure of the mood regulation process, and providing practice selecting and deploying different interpersonal mood regulation strategies through methods such as role playing, group discussions, reflective writing, and interactive games. Furthermore, the framework can be used to design interventions and materials that can further support these processes. With this type of support, employees would likely become better at noticing and managing own moods, could learn to display more empathy, and would be able to make sense of why a client might be behaving in the way they are. Also, employees would not only improve their communication with their clients and their colleagues, they might also extend this knowledge to their personal relationships. Furthermore, training could lead to improved client satisfaction, since improved workplace well-being leads to heightened work performance and increased customer satisfaction.⁵⁶

Improving Service Organizations

Since a person's mood can affect managerial decisions,⁵⁷ we foresee that our framework can serve a purpose in helping managers become aware of the effects of mood and better shape their company culture. Also, for managers to become more mood-sensitive in terms of staff interaction. In addition, human resource managers can use their mood sensitivity when scheduling meetings; arranging yearly and weekly planning sessions and company events; or when organizing shifts.

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- 53 Salovey and Mayer, "Emotional Intelligence"; Marc A. Brackett, Susan E. Rivers, and Peter Salovey, "Emotional Intelligence: Implications for Personal, Social, Academic, and Workplace Success," *Social and Personality Psychology Compass* 5, no. 1 (2011): 97–99, DOI: <https://doi.org/10.1111/j.1751-9004.2010.00334.x>.
- 54 Matthias Berking, Caroline Meier, and Peggilee Wupperman, "Enhancing Emotion-Regulation Skills in Police Officers: Results of a Pilot Controlled Study," *Behavior Therapy* 41, no. 3 (2010): 329–39, DOI: <https://doi.org/10.1016/j.beth.2009.08.001>; Matthias Berking and Jeanine Schwarz, "Affect Regulation Training," *Handbook of Emotion Regulation*, ed. James J. Gross (New York: Guilford Press, 2014), 67–202; Lindsay Schaefer, "Emotional Labor Training: The Effect of Deep Level Acting Training on Nursing Anesthetist Students" (master's thesis, Southern Illinois University at Edwardsville, 2019), <https://www.proquest.com/docview/2303891065>.
- 55 Ivan Bank et al., "Fifteen Simulated Patient Working Formats to Use in Communication Skills Training: Report of a Survey," *Medical Teacher* 43, no. 12 (2021): 1391–97, DOI: <https://doi.org/10.1080/0142159X.2021.1948522>; "Disney's Approach to Quality Service," *Disney Institute*, accessed January 20, 2022, <https://www.disneyinstitute.com/disneys-approach-quality-service/>; MCL Education, "Customer Service Training Modules," *Mayo Clinic Laboratories*, last modified September 14, 2020, <https://news.mayocliniclabs.com/2020/09/14/customer-service-training-modules/#training-modules>.
- 56 Sally Kernbach and Nicola S. Schutte, "The Impact of Service Provider Emotional Intelligence on Customer Satisfaction," *Journal of Services Marketing* 19, no. 7 (2005): 438–44, DOI: <https://doi.org/10.1108/08876040510625945>.
- 57 Steve Williams and Yvonne Wong Wee Voon, "The Effects of Mood on Managerial Risk Perceptions: Exploring Affect and the Dimensions of Risk," *The Journal of Social Psychology* 139, no. 3 (1999): 281–85, DOI: <https://doi.org/10.1080/00224549909598384>.

Avenues for Future Research and Design

Our framework opens up avenues towards new ways of designing for mood sensitive services. The framework shows that beyond the eye inward and the eye outward, there is another perspective to the story. The upper part of the framework, consisting of (A) noticing own mood and (C) interpreting client mood, represents the intention of “being mood-aware.” The bottom part, including (B) regulating own mood and (d) adjusting interpersonal mood-regulation strategies, illustrates the intention of “responding to mood in a meaningful way.” In the market, a wide range of initiatives are available that seek to create awareness by measuring mood with wearable sensors, natural-contact sensors, or non-contact sensors. Applications such as MoodMeter, MoodPrism, Daylio, Celpax, and Company Mood give users a chance to track and log their moods. Products including wearable devices, garments, and furniture help users become aware of their own moods by adapting to and expressing the user’s mood.⁵⁸

However, looking at the bottom part of our framework, which addresses actively responding to personal mood and another’s mood in a meaningful way, the examples are yet to be developed. Some applications, such as MoodKit, allow the user to log mood and additionally suggest mood regulation activities. Wearables such as the MUSE Headband aim to help users regulate mood with different exercises (e.g., mindfulness exercises). Therapeutic robots such as Paro⁵⁹ nurture a positive mood in patients. To adjust service style to a client’s mood, an inspiring example is ClassMood,⁶⁰ a tool that helps teachers create a mood map of the students in class and provides teachers with mood regulating activities that might be facilitated in the classroom. Another example can be found in recording and monitoring tools such as MoodMonitor, which enables patients to share their moods with their therapists so that the therapist can make adjustments to their treatment plans.

Although these examples are helpful in demonstrating how mood can be addressed, we propose that designing for mood-sensitive services can benefit from a more systematic approach. We suggest that the mood-sensitive interactions framework provides an entry point for this kind of systematic approach. To illustrate, let us imagine a mood sensitivity application that can help service providers to become aware of their own mood and interpret the client’s mood better. For example, interactive demonstration videos can be created together with artists and actors demonstrating the mood typology⁶¹ along with

58 Desmet, “Design for Mood,” 3–5.

59 PARO, “PARO Therapeutic Robot,” accessed February 5, 2022, <http://www.parorobots.com>.

60 Marc Beardsley et al., “Classmood App: A Classroom Orchestration Tool for Identifying and Influencing Student Moods,” in *Transforming Learning with Meaningful Technologies: 14th European Conference on Technology Enhanced Learning, EC-TEL 2019, Delft, The Netherlands, September 16–19, 2019, Proceedings*, ed. Maren Scheffel (Cham: Springer, 2019), 724–25, DOI: https://doi.org/10.1007/978-3-030-29736-7_75.

61 Desmet et al., “20 Moods.”

relevant action tendencies,⁶² so that service providers can learn and practice moods by role playing. Also, the six mood cues found in this study might be introduced along with a set of probing questions that could be included in the encounter script to help service providers understand client moods. To help service providers tackle their unwanted moods, a virtual recreation area could be designed that enables them to engage in mood regulation strategies. Due to their busy schedules, it is often difficult for service providers to engage in these activities and also hard to get a glimpse of ones' own mood regulation routines. A virtual recreation area can encourage them to take some time for themselves. The mood sensitivity application could also offer suggestions for strategies that have been applied or otherwise successfully deployed by other service providers from around the world. The application could offer potential interpersonal mood-regulation strategies that apply to the specific encounter at hand, once the service providers log their own mood and their clients' mood data. This example illustrates how the present framework can pave the way toward mood-sensitive encounters.

This article has explored the role of mood and how it is experienced in service encounters with the overall goal of improving communication between service providers and clients. Its main contribution is an overview of strategies to respond to the client's mood in a way that brings the encounter to a healthy conclusion, and a group of insights under the framework that suggest opportunities to develop tools, methods, and design interventions that can support service providers seeking to develop mood sensitivity. Future case studies will explore whether and how our framework can contribute to designing for mood-sensitive interactions.

62 Desmet et al., "The Same Person Is Never the Same," 173–76.

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DECLARATION OF INTERESTS

There are no conflicts of interest involved in this article.

3

Flying Kites and Fighting Rhinoceros: Visualizing Nine Interpersonal Mood Regulation Strategies through Cards

Keywords

- Mood regulation
- Service encounters
- Emotional intelligence
- Training tool
- Card set

Studies

- Study 2: Development and Validation of Visual Representations that Depict the Nine Interpersonal Mood Regulation Strategies
- Study 3: Exploration of the Card Set & Usage Scenarios

3.1. INTRODUCTION

Imagine you are a doctor and you just arrived at your clinic. You feel peaceful and grab a cup of coffee to start your day energetically. Your first patient walks in, and you sense that she may be a bit anxious. This impression is confirmed when she starts telling her story. In response, you adjust your tone of voice—you slow down the conversation pace and you take an accepting expression. You are being *understanding*. After the consultation, you do a quick stretch and get some water to refresh. Then, you call in your next patient.

This anecdote presents an example of a mood-sensitive service encounter. By mood sensitivity, we mean the service agent's ability to accommodate their client's mood while also handling their own mood. It includes having an awareness of the client's mood and the ability to deal with their mood by adjusting the way they communicate. It also includes an awareness of, and ability to deal with, the service agent's own mood, so they can minimize a potential negative impact of the client's mood on their own well-being (Chapter 2: Esnaf Uslu, Desmet, & Schifferstein, 2022).

Deliberate attempts to influence the moods and emotions of the people we interact with, often referred to as interpersonal affect regulation, contribute to communication that is effective and gratifying. Research shows that in the context of work, an employee's attempts to change the other person's affect can have an impact on their own well-being and on the achievement of organizational goals, especially for organizations providing services. For example, a worker's interpersonal affect regulation influences the quality of their relationships at work which relates to their well-being (Niven et al., 2012; Martínez-Íñigo et al., 2013); when a service provider improves a client mood, their own well-being is positively influenced (Martínez-Íñigo et al., 2015). It is also relevant to organizational goals: improving or managing client mood positively influences customer satisfaction and loyalty (Niven et al., 2013). In this regard, it can be advantageous for both service providers and designers to have developed mood sensitivity, especially to learn the strategies that can be used to effectively regulate the client mood. We see at least three advantages for service providers: it can help them to (1) identify their own strategies and the appropriate strategies for their work environment, (2) expand their strategy repertoire and (3) find the suitable strategy for the specific situation. For designers, having a developed mood sensitivity and learning these strategies can be of use when designing for mood-sensitive service encounters. (e.g., designing spaces or tangible/digital products that support the interaction between the service employee and the service client or designing training materials to improve emotional intelligence and facilitate mood sensitivity in service encounters).

Although the value of interpersonal affect regulation is mentioned quite frequently in organizational psychology and marketing research, currently little to no attention has been paid in design research to this topic and its practical implications. There is a handful of work that supports a better understanding of positive and negative emotions as well as typologies of moods and mood regulation strategies both in the academic field (Yoon, 2018; Xue et al., 2019; Fokkinga, 2017; Desmet, 2015) and in commercially available applications such as MoodApp and Daylio. Compared to emotions, moods and intrapersonal mood regulation, interpersonal affect regulation remains relatively understudied. Considering the pervasive and abstract nature of interpersonal affect regulation, along with the lack of available knowledge on facilitating it, the current study aimed to develop a tool that embodies interpersonal mood regulation strategies used in service encounters.

In the last 10 years, the topic of interpersonal affect regulation has gained popularity. Niven and her colleagues (2009) suggest that there are at least eleven interpersonal affect regulation strategies, and a person's motive to use these might be to either improve or to worsen the other person's affect. Our previous research explored the strategies used by service providers during service encounters to deal with client moods and found nine interpersonal mood regulation strategies that service providers use to accommodate their clients' moods (Chapter 2: Esnaf Uslu, Desmet & Schifferstein, 2022). We labeled these strategies: understanding, calming, encouraging, sociable, apologetic, efficient, tolerant, blunt and distant. Table 3.1 gives a brief description of these strategies.

Table 3.1. Typology of 9 interpersonal mood regulation strategies used in service encounters to accommodate for the client mood (Chapter 2: Esnaf Uslu, Desmet & Schifferstein, 2022)

Interpersonal Mood Regulation Strategy name given by the authors	Short Explanation
Understanding	The service provider is fully focused on the client's words and nonverbal cues. She/he allows the client to take their time telling his/her situation.. The aim is to show the client that they are being understood.
Calming	The service provider is calm and relaxed. She/he shows this to the client so the client can relax as well. The aim is to put the client at ease.
Encouraging	The service provider understands the situation and is willing to help and alleviate the negative mood of the client. She/he comforts the client by giving reassurance. The aim is to reassure the client that everything will be alright.

Table 3.1. (Continued)

Interpersonal Mood Regulation Strategy name given by the authors	Short Explanation
Sociable	The service provider is friendly, easy-going and open to communication. She/he shows willingness to help and has a genuine interest in engaging a decent conversation with the client.
Apologetic	The service provider acknowledges the situation and expresses apologies. She/he is ready to accept the mistakes and to make a real effort to fix the issue.
Efficient	The service provider conveys her/his message as effectively, objectively, and productively as possible. She/he gives advice and focuses mostly on the important facts. The aim is to efficiently solve the situation at hand.
Tolerating	The service provider is as tolerant and patient as possible. She/he follows the lead and tries to fix the situation at hand. Her/his motivation is not very high, the tension starts to build and she/he is feeling slightly agitated yet trying to remain calm.
Blunt	The service provider is direct and frank. She/he intervenes in the situation to fix the problem at hand. She/he presents the reality to the client starkly and in a matter-of-fact way.
Distant	The service provider shuts down the conversation or tends to withdraw. She/he doesn't have the energy to deal with the situation or she/he wants to save energy for later.

Capturing these strategies presents a challenge as they are intertwined with our daily interactions. While the typology provides an overview, the strategies are somewhat difficult to grasp, since providing a short description is a limited way to support service providers to broaden their repertoire. For that reason, we explored how different manifestations of these interpersonal mood regulation strategies used in service encounters, such as their expressions and behavioral manifestations, can be used as a means for additional communication. We assume that effectively communicating the distinctions between these strategies can contribute to enhanced mood sensitivity in service encounters. Since abstract thought is shaped by bodily experiences (Zaltman, 1996), we propose that visualizing the bodily experiences will help with communicating the strategies. Therefore, we aimed to create rich representations of each of the strategies by providing an illustration that characterizes the behavioral manifestations of these nine strategies, the description of the related strategies and several examples of client moods which are drawn from the diary study described in Chapter 2.

For service providers, understanding interpersonal mood regulation strategies has relevance given their goal of managing the interaction with their clients and providing effective service. With this intention in mind, we asked the question “How can we physicalize the nine interpersonal mood regulation strategies?” and decided to develop a card set that can help service providers in expanding their repertoire of interpersonal mood regulation strategies: the “Interpersonal Mood Regulation Strategies Card Set”. The current chapter first reports the process of developing and evaluating the card set. Next, a workshop is reported that explored how the card set can be used for training purposes, in the context of education. Based on these ideas, applications of the card set in the service encounter context are proposed. The implications and limitations of the tool are discussed, and future research steps are proposed.

3.2. STUDY 2: DEVELOPMENT AND VALIDATION OF VISUAL REPRESENTATIONS THAT DEPICT INTERPERSONAL MOOD REGULATION STRATEGIES USED IN SERVICE ENCOUNTERS

Three steps were used to develop visual representations of the nine interpersonal mood regulation strategies: (A) creating illustrations, (B) validating the illustrations and improving the invalid illustrations and (C) re-validating the revised illustrations. This was done by a research team that consisted of the first author (PhD candidate, hereafter referred to as “the main researcher”) and two academic researchers with expertise in experience design (the two PhD supervisors).

A. Creating Visual Representations for Nine Interpersonal Mood Regulation Strategies

The goal was to generate visual representations that depict the strategies as clearly as possible. The iterative design process consisted of 8 steps:

Step 1: Making Detailed Descriptions

The first step was to develop detailed descriptions of the nine strategies. This process drew from our prior research (Chapter 2: Esnaf Uslu, Desmet & Schifferstein, 2022), Niven and her colleagues’ (2009) review of interpersonal affect regulation strategies and of related interpersonal processes, the classification they propose, and a review of papers on the topic of interpersonal affect regulation strategies, using Google Scholar. We used the terms “interpersonal affect regulation” and “interpersonal mood regulation” and restricted the timeframe to post-2009, which resulted in 608 publications. From these, we focused on English-language documents that reported strategies for regulating others’ emotions and moods. We specifically looked for the term “strategy” or “strategies”

along with “interpersonal”; “mood”; “emotion” or “affect”; “regulation”; and “management”, “improvement” or “worsening” in the titles, identifying 16 papers. We also included three papers not explicitly labeled as “interpersonal” but still investigating strategies in two-party interactions. Among these, only three proposed new interpersonal affect regulation strategies, thus forming the basis for our review (see Appendix F for the review). The created descriptions include the strategy name, the observed prototypical strategies, descriptions of non-verbal communication, and an overview of some of the potential client moods they can apply to (see Appendix G for an overview).

Step 2: Setting the Criteria

The research team formulated four criteria for the visuals. The goal was to design visuals that provide interesting and rich representations that are distinctive, realistic, relatable, perceived as coherent whole. The criteria and relevant design choices are given below.

1. **Distinctive:** In order to make a clear distinction between the strategies, each visual should depict only one strategy by showing the most recognizable feature (e.g., the supportiveness for the Encouraging)
2. **Realistic:** The visual should include a service provider and a service client interacting in an office environment.
3. **Relatable:** The visual should clearly show the facial and bodily expressions of the service provider, while the client’s face and body remain as neutral as possible to give the audience the opportunity to freely imagine and interpret the situation.
4. **Rich:** The visual should include objects and scenery that contribute to communicating the strategy.

Step 3: Multisensory Design for Objects and Scenery

We assumed that showing symbols would help people identify the specific strategy. Since we aimed to create visuals that provide rich representations, we performed a conceptual and sensory exploration for each strategy by following the sensory exploration procedure developed by Schifferstein (2011). This was done by the following steps: (1) selecting target expression, (2) conceptual exploration, (3) sensory exploration and (4) sensory analysis.

For instance, we aimed to express “friendliness and joy” for the Sociable strategy. We explored the concept by searching for the definitions and writing down associations that come to mind. Then we collected materials that evoked the expression for different sensory modalities. In this step, we asked questions like “How does this target expression feel, sound, smell, and look?”, “Which edible good would it be?”, “Which product would represent it the best?”. By answering these questions and collecting relevant images, a sensory exploration collage was created for each of the strategies.

Step 4: Bodystorming for Bodily and Facial Expressions

The strategies were enacted and videotaped by the main researcher and an illustrator by using the bodystorming method (Schleicher et al., 2010). This allowed the illustrator to pay close attention to decisions, interactive experiences, and emotional responses. They used props such as pens and paper to simulate the interactions with objects that are likely to be found in a professional context. These creative sessions also helped to explore and decide on the setting and components of the visual representations (e.g., shooting angle, objects involved). The best-representing moments were captured through screenshots, which were discussed amongst the research team.

Step 5: First Draft Creation & Research Team Discussion

Multisensory maps of the strategies and the selected screenshots showing the bodily and facial expressions were shared with the illustrator, who created the first version of the set of nine visuals. These draft visuals were discussed with the research team, resulting in a list of improvement points.

Step 6: Collection of Additional Images for Bodily and Facial Expressions

In order to improve the bodily representations for the strategies, the research team collected photographs that depict the strategy based on the descriptions of the strategies using online imagery databases (e.g., Pexels, Pixabay, Google Images, and Shutterstock). When searching for images, the research team used the word associated with the strategy and synonyms, such as supportive, motivation, cheering, reassuring, invigorating, caring, and kind for the encouraging strategy. For each strategy, 2-4 additional images were collected. These images were used to make a final decision on body posture and hand gestures.

Step 7: Second Draft Creation & Research Team Discussion

The additional images were shared with the illustrator, who then created the second version of the nine visuals. These visuals were again discussed with the research team and additional improvement points were listed for a final design iteration.

Step 8: Final Design

Figure 3.1 shows the final version of the visual for the strategy “Sociable” together with the components of each visual. At the center, there is a client and a service provider engaged in a conversation. The mood regulation strategy is communicated with facial and bodily expressions. In addition, several props and other elements provide additional information, such as the picture on the wall, the view from the window, and objects on the table.



Figure 3.1. The visual representation developed for the strategy “the Sociable” and its ingredients.

B. Validation of the Visual Representations

The goal of this validation study was to assess whether the developed images clearly depicted the interpersonal mood regulation strategies. The two main research questions were: (1) How accurately can potential users describe the images? and (2) How accurately can potential users label the images using the given strategy names and their short descriptions?

Participants

The sample of 27 participants (14 female) with ages ranging between 22 and 61 years old (mean=38) consisted of researchers (N=6), educators (N=9), design practitioners (N=7), students (N=4) and engineers (N=1). They were recruited through the author’s network. As an incentive to participate, participants were offered the printed version of the card set when the design was completed.

Procedure

The study was conducted via an online questionnaire through Qualtrics, which took about 20 minutes to complete. Following some general information, participants were first asked to look at a given image and to freely describe the strategy used by the service provider in a few sentences using their own words. This question was asked for each of the nine images on separate pages. With these open-ended descriptions of the strategies, we aimed to understand peoples’ first impressions of the images and gain insight into

the misinterpretations. Second, the participants were asked to read the names and the short descriptions of the strategies and then to label the images with the given names and descriptions. This question was repeated nine times on separate pages for each of the images. Finally, the participants were asked to indicate whether they encountered any difficulties or confusion when choosing a name for the images through a yes or no question and were asked to explain the cause of confusion.

Results

Analyzing the Descriptions

Respondents' descriptions varied from lengthy (a couple of sentences) to concise (one or several words). Descriptions were analyzed and coded to find repeating and similar words and meanings. Similar descriptions such as "good listener", "listening intently", "listening clearly", and "active listening" were clustered as "Listening". Online dictionaries (such as Merriam-Webster) were used to check for synonyms. For example, "empathetic", "compassionate", and "sympathetic" were grouped under the word "Sympathetic". This list was discussed and revised with the research team and another academic researcher (another PhD Candidate) with expertise in experience design. Table 3.2 shows the most frequently used words for each image and the number of participants who used these words. The results show that the most frequently used words more or less described the intended strategy. Only for the image of the Understanding strategy, "bored" and "tired" descriptions were also used. This indicates that the image created additional associations.

Table 3.2. Overview of the most frequently used words to describe each of the strategy images for the first validation study.

Names of the Images	Five Most Frequently Used Words (N=27)
The Understanding	Interested (51.9%), Listening (48.1%), Attentive (29.6%), Bored (18.5%), Tired (14.8%)
The Calming	Calm (33.3%), Listening (33.3%), Friendly (22.2%), Patient (22.2%), Relaxed (22.2%)
The Encouraging	Supportive (25.9%), Collaborative (22.2%), Friendly (18.5%), Relating (14.8%), Open (14.8%)
The Sociable	Friendly (37%), Happy (29.6%), Open (25.9%), Optimistic (22.2%), Cheerful (18.5%)
The Apologetic	Pleading (37%), Sad (18.5%), Concerned (18.5%), Seeking resolution/mediator (11.1%), Understanding (11.1%)
The Efficient	Active (18.5%), Productive (14.8%), Determined (14.8%), Open (14.8%), Confident (11.1%)
The Tolerating	Bored (29.6%), At the limit/reaching one's limit/stretched (22.2%), Tired (22.2%), Annoyed (18.5%), Tense (14.8%)

Table 3.2. (Continued)

Names of the Images	Five Most Frequently Used Words (N=27)
The Blunt	Bossy (44.4%), Serious (14.8%), Lecturing (14.8%), Guiding (11.1%), Warning (11.1%)
The Distant	Closed (29.6%), Distant (29.6%), Uninterested (25.9%), Passive (14.8%), Thinking/pensive (14.8%)

Analyzing the Labels

Figure 3.2 shows the percentages of the existing labels that were chosen for the nine images. It shows that the proportion of correct labeling was above 50% in all cases, except for the image representing the Encouraging strategy (33.3%), which was confused with Sociable, Understanding, Calming and Apologetic. Also, the image representing the Understanding strategy had a relatively low hit rate (59.3%) and was confused with Distant, Tolerating, Sociable and Encouraging.

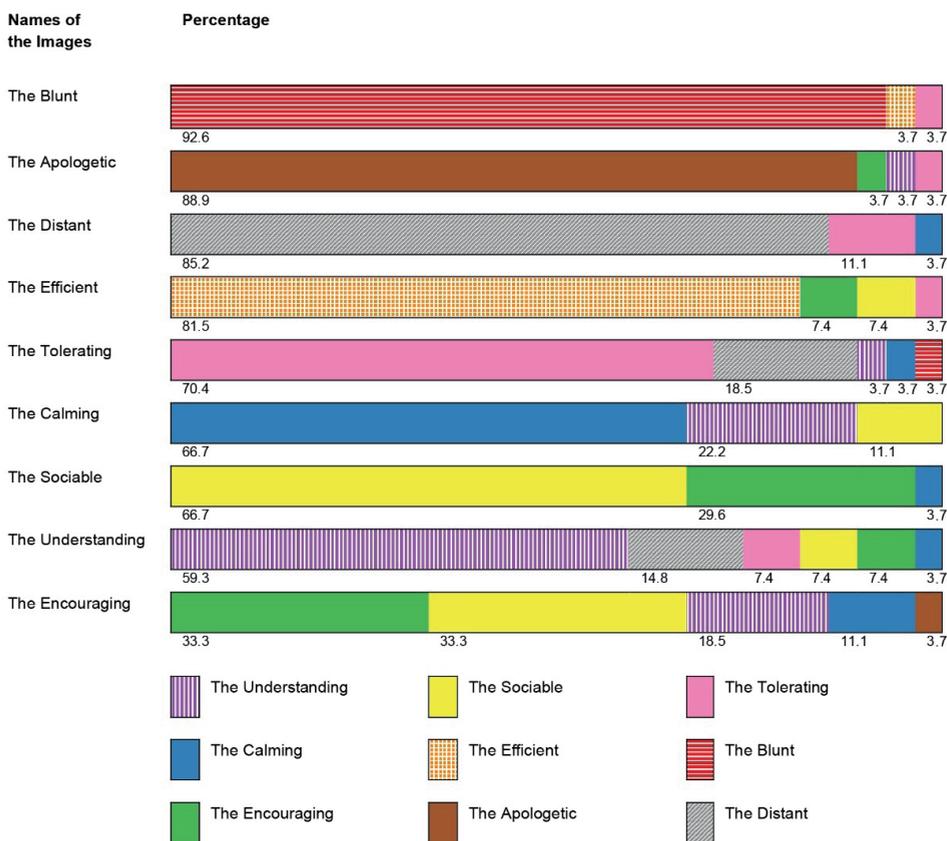


Figure 3.2 Proportion of labeling of the images for the nine interpersonal mood regulation strategies

Conclusion

The results indicate that most images were well-understood. The following images were sufficiently clear: Blunt, Apologetic, Distant, Tolerating, Calming and Sociable. However, results also indicated that the images representing the Encouraging and the Understanding strategies were not sufficiently clear. Insights drawn from the results were used to formulate ideas to revise these images. First, we observed that the image for understanding was interpreted as "bored" or "tired". Although very few, some participants used the words "skeptical" and "judgmental". Also, in the labeling task, it was confused with five other strategies. Second, the image for the Encouraging strategy was confused with four other strategies, which suggested that there is a need for a better distinction. Also, some participants described the service provider as "patronizing" or "resisting". In addition, results indicated opportunities to improve the image that represents the Efficient strategy because participants commented that the customer looked angry with clenched fists in the first image.

Image Revision

For the Encouraging and Understanding strategies, two or three images were collected from online imagery databases and discussed within the research team. For the image of the Understanding strategy, the body posture of the service provider was straightened and a pen and a notebook were held in his/her hand to show that she/he was an active listener. The facial expression was made more serious to avoid being "bored", "tired", or "uninterested". Distracting objects such as glasses and books were removed from the scene. For the image of the Encouraging strategy, the facial expression of the service employee was changed to a softer, more sincere and supportive expression. The body of the service provider was leaned more forward with a slight head-tilt, one palm was drawn facing up and reaching out to the client to show cooperation. Finally, the image of the Efficient strategy was also changed. To correct the angry look and clenched fists, the customer's hands were revised. In addition, a pen was placed in the hand of the service employee to express efficiency and the large pile of papers was replaced with a smaller pile. Figure 3.3 shows the revised version of the images.

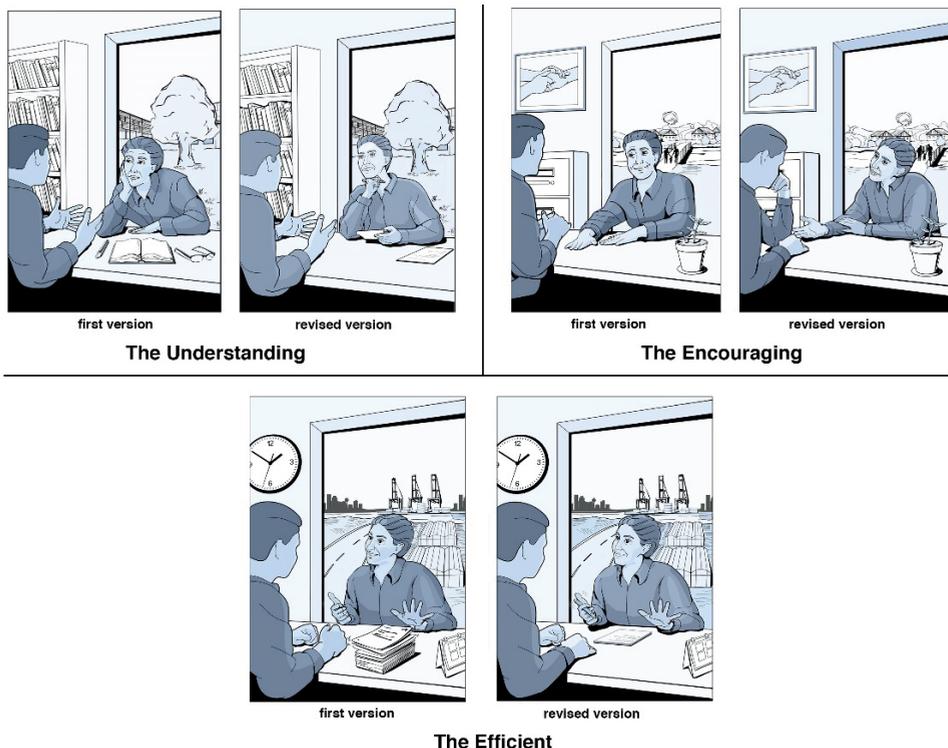


Figure 3.3. Three revised images (right) with their earlier versions (left)

C. Re-validating the Improved Set

Participants & Procedure

The revised set of nine images was validated using the same procedure as in the first validation study with 30 participants (16 female, 2 non-binary). The ages ranged between 21 and 76 years old (mean=42). The sample consisted of educators (N=11), information technologists (N=2), self-employed workers (N=7), office workers (N=5), healthcare providers (N=2), a content specialist (N=1), a curriculum writer (N=1) and a higher-education administrator (N=1). The participants were recruited through Mechanical Turk and were paid 1.00\$ for their participation. When selecting the participants, we chose to recruit participants from the United States who had completed at least a thousand "HITs" and who had an overall approving rating of 98% on the platform.

Data Analysis and Results

Analyzing the Descriptions

The same procedure was followed as in the first validation study. Table 3.3 shows the most frequently used words and how many participants used these words. Similar to the first

validation, the second validation results indicate that the most frequently used words describe the intended strategy. In addition, results indicate that the misunderstandings regarding the Understanding strategy were somewhat resolved after the revision.

Table 3.3. Overview of the most frequently used words to describe each of the strategy images for the second validation study.

Names of the Images	Five Most Frequently Used Words (N=29)
The Understanding	Listening (48.3%), Interested, Engaged (31.0%), Thinking/Pensive (20.7%), Attentive (17.2%), Inquisitive (13.8%)
The Calming	Calm (27.6%), Happy (24.1%), Listening (24.1%), Friendly (17.2%), Relaxed (17.2%)
The Encouraging	Sympathetic (34.5%), Friendly (24.1%), Helpful (20.64%), Kind (17.2%), Supportive (17.2%)
The Sociable	Friendly (41.4%), Happy (41.4%), Enjoyable (17.2%), Open (17.2%), Welcoming (13.8%)
The Apologetic	Pleading (31.0%), Sympathetic (27.6%), Sad (13.8%), Apologetic (10.3%), Concerned (10.3%)
The Efficient	Guiding (27.6%), Active (17.2%), Listening (13.8%), Enthusiastic (13.8%), Helpful (6.9%)
The Tolerating	Bored (27.6%), Uninterested (24.1%), Stretched (17.2%), Annoyed (13.8%), Frustrated (10.3%)
The Blunt	Bossy (27.6%), Aggressive (17.2%), Lecturing (13.8%), Persuasive (13.8%), Reprimanding (10.3%)
The Distant	Closed (31.0%), Unwilling to communicate (13.8%), Distant (13.8%), Uncooperative (13.8%), Reserved (10.3%)

Analyzing the Labels

The labeling results show that the proportion of correct labeling remained almost the same and was above 50% in most cases (Figure 3.4), except for the images representing the Understanding (48.3%), Encouraging (34.5%) and Efficient (24.1%) strategies. These were all images that had been revised. Despite the decreased hit rate for Understanding, only one respondent labeled it as distant. This could indicate that the revisions were helpful in removing the "bored", "tired", and "uninterested" expression. Also, the hit rate for the Efficient image was considerably lower than in the previous study and was confused with several other strategies.

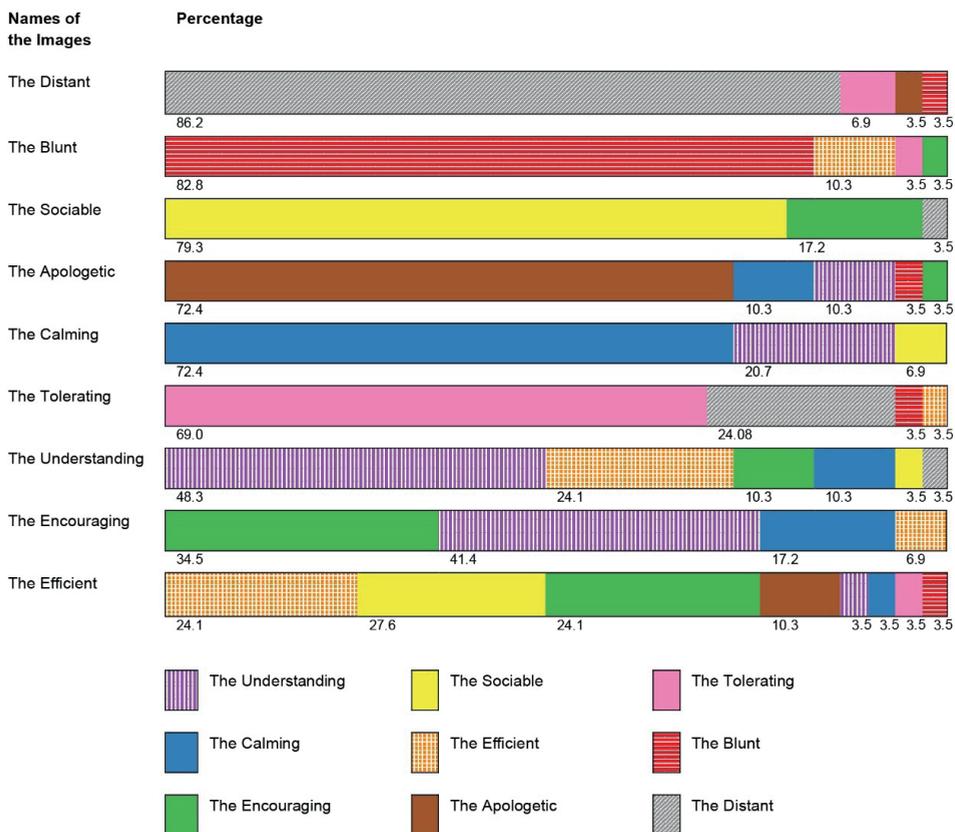


Figure 3.4. Proportion of labeling of the images for the nine interpersonal mood regulation strategies

Discussion: What did we learn? What was interesting?

In the second validation study, we investigated the labeling for the nine images with a different sample of respondents. We found that the following six distinctively represent the intended strategy: Distant, Blunt, Sociable, Apologetic, Calming, Tolerating and Understanding. For the three images that were modified after the first validation study we found correct labels in less than 50% of the responses, which was lower than in the first validation. Yet, the open descriptions indicated that participants were still able to identify the strategy with closely related words (see Figure 3.4). It is possible that the labeling of the images did not improve, because the exaggeration level of the expressions was lower in the second round. Alternatively, the differences in respondent samples may account for some of the difference. Unlike the first validation, which involved participants from the authors’ network, the second validation recruited US citizens to complete questionnaires for additional income. The difference in environment and motivation may have contributed to the observed variations.

Images representing Understanding (48.3%), Encouraging (34.5%) and Efficient (24.1%) had the lowest hit rates in Study 2. Understanding was labeled as Efficient, Encouraging, Calming, Sociable, and Distant. Encouraging was labeled as Understanding, Calming and Efficient, while Efficient was labeled as Sociable, Apologetic, Understanding, Calming, Tolerating, and Blunt. This indicated that there is still room for improvement that may increase the validity of the developed images especially for Understanding and Encouraging. As regards the Efficient image, we decided to use the first version image for this strategy in the following steps because the hit rate was considerably lower than in the previous study and was confused with several other strategies.

In both validation studies, we observed that confusion mostly occurred among positive strategies (e.g., confusing Understanding with Calming) and similarly among negative strategies (e.g., confusing Blunt with Tolerating). This may indicate that the respondents were able to distinguish between negative and positive and that the images were conveying the valence as intended. In addition, positive strategy images were confused more with each other compared to the negative strategies. Negative strategy images were easier to pinpoint compared to the positive strategy images. This finding is in line with research that has shown that negative events and emotions are more salient compared to positive emotions. (Baumeister, 2001). In addition, we investigated more positive than negative strategies, which is also likely to make perceived differences smaller between positive than negative strategies. Another finding was that respondents provided elaborate and narrative explanations for the images in both studies. Future studies can explore different forms of narratives to contribute to the understanding of these strategies. Also, the details and elements beyond the facial expression, such as objects and scenery to symbolize the strategy contributed to the interpretation of the strategies.

Although both validation studies showed room for improvement in certain images (Understanding and Encouraging), we opted to proceed with the current set (Figure 3.5). We propose that the low hit rate for these images is not a significant concern, as our intention is to use them in conjunction with labels, quotes and descriptions.

3.3. STUDY 3: EXPLORATION OF THE CARD SET & USAGE SCENARIOS

The visuals and descriptions from Study 2 were used to create a card set intended for professional applications. A subsequent study was conducted to explore the use, design, and content. Two workshops were conducted with educators in several envisioned scenarios. We

collected feedback on (1) the card set's usability, (2) its value for professional situations and (3) ideas for supporting mood-sensitive interactions other than the suggested scenarios.

Participants

Seven educators (6 female) with ages ranging between 28 and 45 years old (mean=32) were recruited with a minimum of two years of teaching experience from Delft University of Technology. Participants were offered a 25 euro gift voucher for their participation along with the digital or printed version of the Interpersonal Mood Regulation Strategy Card Set.

Materials

The verbal labels of the strategies, the images, related client moods, strategies and physical bodily manifestations were brought together in a set of cards. The front of each card showed the illustration, the verbal label and a representative quote, which was inspired by the elaborate descriptions of the validation study respondents, while the back showed examples of client moods, descriptions of the strategies, and related body language and voice characteristics (Figures 3.5, 3.6a, 3.6b, 3.6c, and 3.7a). The card set is designed for service providers as a tool to explore or practice the nuances of these strategies.



Figure 3.5. Overview of the nine interpersonal mood regulation strategy cards (front side)

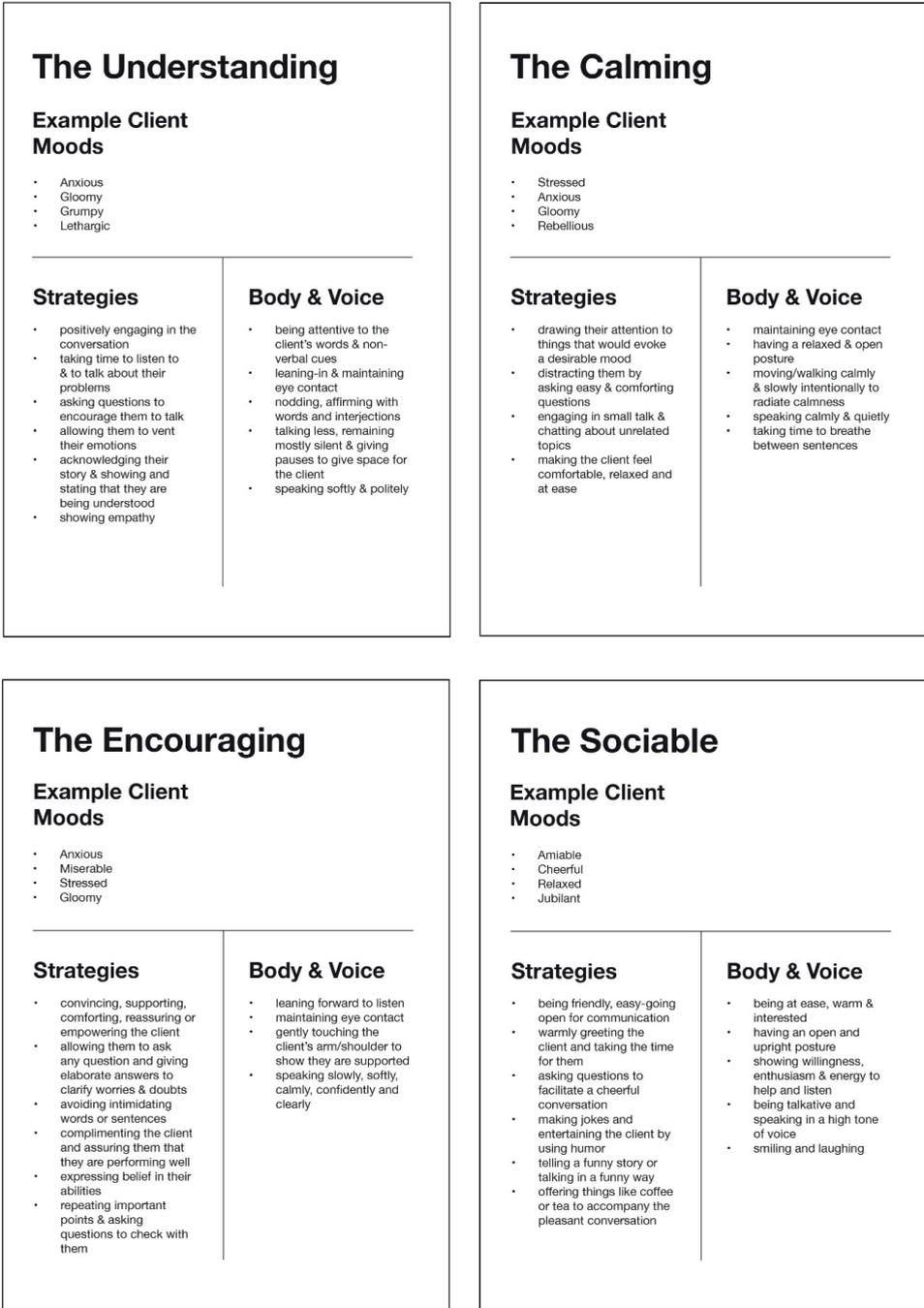


Figure 3.6a. Overview of the nine interpersonal mood regulation strategy cards (back side): The Understanding, The Calming, The Encouraging, and The Sociable.

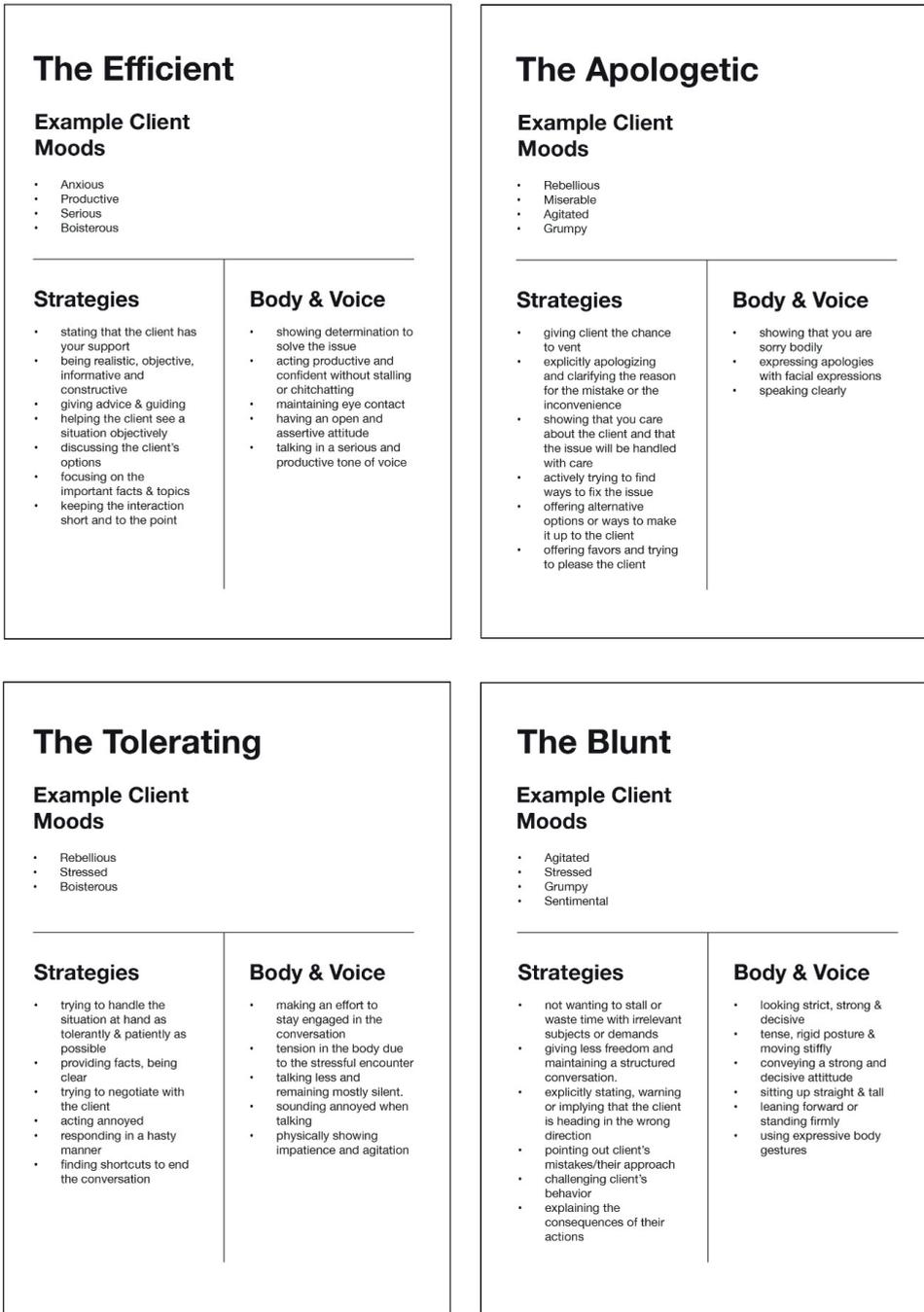


Figure 3.6b. Overview of the nine interpersonal mood regulation strategy cards (back side): The Efficient, The Apologetic, The Blunt, and The Tolerating.

The Distant

Example Client Moods

- Serious
- Rebellious
- Vigorous
- Agitated

<p>Strategies</p> <ul style="list-style-type: none"> • wanting to save energy by shutting down the conversation mentally and/or verbally • refusing to talk to the client & remaining silent • not replying the client or dodging client's questions • stalling to gain some time • explicitly stating that you are not able to help 	<p>Body & Voice</p> <ul style="list-style-type: none"> • pulling back by creating distance with the client • crossing arms and displaying a closed posture • physically turning or walking away • talking less • using short & brief sentences
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Figure 3.6c. Overview of the nine interpersonal mood regulation strategy cards (back side): The Distant

In addition to the nine interpersonal mood regulation strategy cards, we provided an overview sheet with 20 moods (Xue, Desmet & Fokkinga, 2020) and instructions for three usage contexts: individual use, use with a partner, or in a group (see Figure 3.7 b and c) which we named as three Guiding Cards.

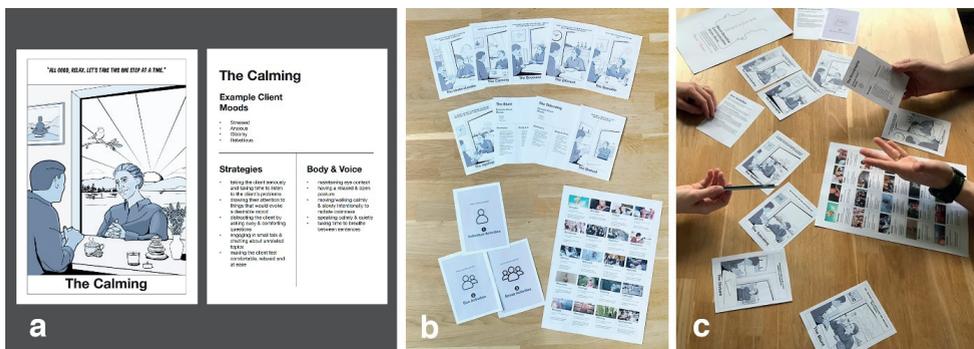


Figure 3.7. Interpersonal mood regulation strategy card set; (a) the Calming (front and back), (b) content of the whole set and (c) the cards in use.

Procedure

Both workshop sessions were conducted online in groups of three or four and took about 2.5 hours. The sessions consisted of three main parts: (1) Introduction, (2) Exploration of Cards & Usage Scenarios, and (3) Discussion.

The sessions began with a small introduction to moods. First, the difference between moods and emotions was explained. Then, the 20 moods sheet was shown to the participants. As a warm-up, participants were asked to briefly share their mood for that day with the group. Then, the definition of “interpersonal mood regulation strategy” was given, the tool was presented and the goal of the card set was briefly explained. Finally, the goal and the agenda of the workshop were presented.

For the second part, the tool was shared on an online platform. They were asked to go through the nine strategy cards and give their first impressions for the first fifteen minutes. They were encouraged to make their remarks verbally and write them on digital post-its. Then, they read the individual activities card (see Figure 3.8) and chose and applied at least one activity from the suggested activities.

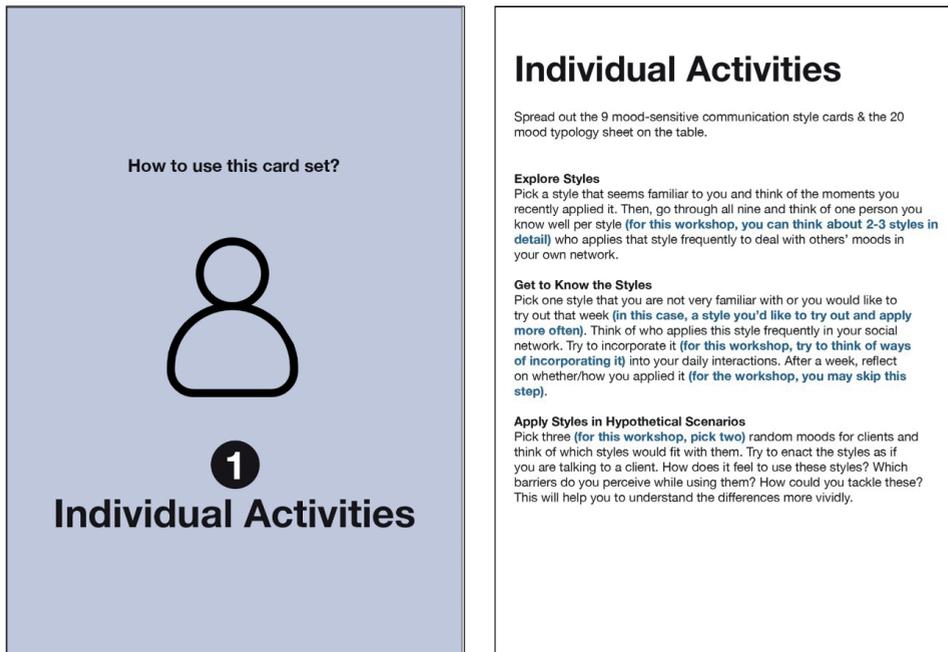


Figure 3.8. One of the three Guiding Cards; (1) individual activities card showing front (left) and back (right)

After doing the individual activity, they had a short discussion about how the activity went. The same procedure was then applied for the group activities and duo activities (see all three usage scenario cards in Appendix H). For each activity, they were given approximately 30 minutes.

The subsequent plenary discussion was guided by three main questions, addressing (1) usability of the cards (Do you understand the card set? Is there anything you would like to improve or change?) and the activities performed (What do you think of the activities? Are there any additional activity ideas you can think of?), (2) the usefulness and the value (What could be the value of using such card set for you as educators or service providers?) and (3) additional usage opportunities (How do you think this set can be used? In which context? How would you expect to use it if it were a training tool?)

Results

The audio recordings of the sessions were fully transcribed and the transcriptions were then analyzed and coded. Since we aimed to collect feedback on the usability, usefulness and additional usage opportunities for the cards, transcription data was first labeled according to three main categories: (1) usability of the cards and the activities (2) usefulness and value of the cards and (3) additional usage opportunities. Then, the data was coded to find the opinions and feedback of the participants. For example, the sentence “I found the quotes very useful. The quotes on top of the drawings...” was coded as “quotes” or “It’s like I see the drawing, I read the quote and I immediately get an idea.” was coded as “visuals” and “quotes”. Finally, these codes were clustered under different themes. For instance, codes such as “visuals”, “layout” and “quotes” were clustered under the theme “Look & Layout” (see Appendix I) The results are reported under the above-mentioned three main categories.

A. Usability of the Cards and Activities: Issues, Challenges, Limitations, and Improvement Points

Usability of the Cards

One of the most frequently mentioned issue was the complexity of the language and the lack of clarity of the instructions given in the guiding cards, which confused the participants about how to proceed when applying them. Due to the complexity, some participants mentioned the need for a facilitator. Another issue was that the purpose of the card set was not clear. In addition, the client moods given on the back of the strategy cards were found to be misleading. Participants doubted whether these were given as a simplistic representation of reality or as a prescription.

Regarding the layout of the nine strategy cards, the images and quotes on the front side were found clear, helpful and intuitive. However, some participants mentioned that they did not read the descriptions thoroughly at first glance but read them later when applying the activities. The back side of the cards was also found clear, which enabled participants to apply the strategies at a glance without effort. Participants mentioned mostly focusing on the strategies and regarded the “voice and body” section as “complementary” information.

Usability of the Individual, Duo and Group Activities

The activities were found fun and inspiring in general. However, the activities given in three Guiding Cards (individual, duo, and group activities) were thought to be overlapping. Among all, the group activity card was found to be the most overwhelming. Still, together with the cards, they sparked long discussions and participants had the opportunity to reflect on many different topics. Some of these topics that emerged during the activities were: impact of moods on social interaction and vice versa, impact of using certain strategies on own moods, difficulties managing own moods before managing others, dynamics of the interpersonal mood regulation strategies, the need for self-awareness and empathy, frequently used strategies in education settings, the unusual strategies for the student-teacher interactions, difficulties applying the strategies both in-person and in online meetings, difficulties conveying the strategies correctly, difficulties selecting appropriate strategies, influencing factors on one’s strategy selection, impact/effectiveness of the strategies on the students’ moods, strategies used in mundane and professional interactions, intention and motives of using strategies etc. With the given activities, they were able to reflect on their own frequently used strategies and behavior and on how well they were able to apply them – especially the strategies they were unfamiliar with. They were also able to reflect on a single strategy and explore it deeper. That said, almost all participants mentioned that putting the strategies into practice through enactment helped them to grasp them better. Also, the discussions at the end of each activity were found to be useful.

B. Usefulness & Value of the Cards

In general, facilitating mood-sensitivity in student interactions was found to be a valuable perspective as it can promote self-awareness, nudge service providers to learn new strategies and support relationships with others. Participants found the cards useful for the service providers to become aware of the moods of the clients and the strategies that can be used. The visualizations and the cards helped them to discuss and imagine possible ways of implementing the strategies, provided them with options, allowed them to delve deeply into a single strategy and to practice them. Overall, the card set was described as having potential to aid communication with clients, colleagues and stakeholders, and in facilitating mood-sensitive interactions.

C. Additional Usage Opportunities

Almost all participants indicated that the tool can potentially be used as a training tool for service providers. In the context of education, it was found suitable for a course related to coaching. It was stated that not only educators could benefit from the use of the cards but students can also be trained. Especially within the scope of autonomous learning, students can be encouraged to develop their communication skills with their educators and be equipped for their future clients and stakeholders.

Another idea was that the tool could facilitate a discussion between clients and service providers and serve as an empathy tool or a co-creation tool. It could create a common ground and help both sides better understand each other's needs and to co-design mood-sensitive encounters. Related to that, one participant mentioned that it could be used as a measurement tool to serve as part of a customer satisfaction questionnaire to measure how the encounter was perceived by the customer and to measure the effectiveness of the applied strategies.

In addition, participants pointed out that the cards can serve as a reflection tool for the service providers which could enable them to reflect and realize which strategies they used after a certain encounter and could possibly nudge them to think how they could perform better.

In fact, one participant indicated that they would like to see the strategies as a reminder during the interactions and use it as a trigger to apply them more consciously.

Finally, there were some usage opportunity ideas that were not related to the service context, for example using the cards to facilitate conversation between romantic couples, or as a game amongst by a group of friends, or as a supportive tool for people who are having difficulties recognizing others the moods of and using appropriate strategies such as people with ASD (autism spectrum disorder).

Discussion and Limitations for the Card Set Workshop

The two workshops with educators provided us with insights about the usability of the cards and activities, usefulness of the cards, and the additional usage opportunities. The card set helped the participants to discuss a variety of topics related to mood and mood regulation and raised many inspiring questions. Seeing only the cards already triggered a very rich discussion, yielded many interesting insights and helped participants to reflect. Although, a few points needed improvement based on the issues that occurred in the workshop. First, to overcome the confusion caused by the complexity of the language and unclear instructions given in the guiding cards, the instructions are simplified and

the layout is improved. Second, the purpose of the card set is clarified by highlighting the goal and usage opportunities in the introduction page of the card set. Third, to prevent the confusion that the example client moods created on the back of the cards, we have highlighted that these are only some of the examples to prevent them from seeming like a prescription. In addition, since the group activity card was found to be the most confusing and overwhelming, we aimed to solve this problem by simplifying and clarifying the steps given in the activities. The complete card set can be found online in a downloadable file titled "Interpersonal Mood Regulation Strategies Card Set" on <https://doi.org/10.5281/zenodo.13330788>. Still, the guidance given through the three guiding cards was open enough to enable a conversation and structured enough to give an idea of how they could be used.

The card set was found to be useful tool to increase self-awareness and to learn and practice the strategies for a better communication. As additional meaningful usage opportunities, participants mentioned that the cards can be used in many ways, for example, as a training tool for service providers and students, as a support/reminder tool or a reflection tool for service providers to be used either before, during or after the encounter, and as an empathy tool or a co-creation tool to initiate a discussion with the clients. In addition, participants mentioned other potential user groups for the card set such as a group of friends, romantic couples or people with ASD. These suggest that the tool can be useful not only to help the service providers become aware of these strategies but also to support them and even to support other user groups to actively create mood-sensitive encounters.

However, there are three limitations with this study: (1) the workshops were online, so the interactions were not face to face, (2) the time was limited to try out all the activities given in usage scenarios and (3) the participants were consisted solely of educators. For future studies, different contexts need to be explored and elaborate in-person workshops can be conducted to see the full potential of the cards.

3.4. CONCLUSION AND DISCUSSION

In this chapter, we have reported the development and validation of an "Interpersonal Mood Regulation Strategies Card Set". The detailed descriptions included in this chapter served as a core structure, helping to provide an overview of the strategies and to compare them. The developed images served as a first design attempt to design with these nine interpersonal mood regulation strategies. The card set can be used to obtain in-depth information about the strategies and to create design interventions in future studies. Since narratives helped participants to understand the strategies better and enactment was

found to be a powerful method to grasp the strategies, for future research, it is worthwhile exploring the narratives and enactment to support the understanding of these strategies. In future research, the tool will be refined and alternative tools and techniques to embody the strategies will be explored.

4

Watch, Act, and Discover: Video Depictions of Nine Interpersonal Mood Regulation Strategies

Keywords

- Mood regulation
- Service encounters
- Training tool
- Enactment/role-playing
- Embodiment

Studies

- Study 4: Development and Validation of Videos that Represent Nine Interpersonal Mood Regulation Strategies
- Study 5: Implementation of the Videos into a Role-Playing Workshop

4.1. INTRODUCTION

This chapter focuses on interpersonal mood regulation strategies used by service providers in service encounters and tries to embody the strategies in human-human interactions, with the aim of supporting service providers who want to improve their interpersonal skills. During service encounters, service providers may apply a myriad of strategies to accommodate the client's mood or to regulate their own mood. For example, a service provider could try to lift their client's spirit, attempt to calm an agitated client, or perhaps make a lethargic client feel productive. Chapter 2 reported nine different strategies used in service encounters as a response to the client's mood such as being Understanding, Efficient, or Blunt (Esnaf Uslu, Desmet & Schifferstein, 2022). These scenarios that either improve or worsen the client's mood are characterized by a variety of behaviors and strategies. For instance, while being Sociable, a service provider can make jokes and appear joyful, whereas while being Blunt, a provider can cut the other person off and appear strict.

Communicating these strategies is challenging because they are emergent, embodied, and dynamic. As a consequence, they cannot be adequately captured and understood solely with verbal descriptions (Zaltman, 1996). Chapter 3 reported the development of a set of images that visualize the strategies. Yet, images miss the dynamic quality of the strategies. Therefore, to explore their embodied and dynamic nature, the current chapter focuses on the question "How can we bring the nine interpersonal mood-regulation strategies to life through acting?"

Acting or role-playing is a powerful method for learning because it engages learners in active participation, allowing them to embody different perspectives, experiences, and scenarios. Different forms of acting, including theatrical performances, role-playing (Shapiro, 2003; Dow et al., 2007; Reilly et al., 2012; Bodenhorn, 2005; Eisenberg, Rosenthal & Schlusssel, 2015) and simulated encounters (Shao et al., 2018; Bagacean, 2020; Bank et al., 2021), are commonly used in training programs. Additionally, videos serve various functions in training sessions, such as presenting patient narratives to facilitate reflection (Miller, 2015; Sweeney, 2018), promoting self-reflection or exchanging feedback (Lobchuk et al., 2016). Our intention is to explore how interpersonal mood regulation strategies can distinctively be expressed through acting. We chose to use "acting" to embody the strategies in a dynamic, realistic, understandable, and relatable way. We specifically look into the strategies used, body posture and the tone of voice. To be more precise, we explored if, for instance, the qualities of the Calming strategy are expressed differently than Encouraging or Understanding. We envision that these embodied representations could be used as a tool to help service providers learn and practice these strategies. In addition, we propose that these representations can be useful for design in three ways. First, video representations

can help designers understand the interaction qualities inherent to interpersonal mood regulation strategies. This understanding is important for designing products, services, or environments that aim to influence users' mood states through interaction. Second, these representations can serve as a tool to explore users' preferences and expectations for interaction styles. Lastly, they can be a source of inspiration for designers seeking to incorporate interpersonal mood regulation strategies into service encounters.

The chapter reports the development of a set of videos that represent nine interpersonal mood regulation strategies in human-human interaction. Subsequently, the videos were used as training material in a role-playing workshop that tested whether people could recognize and apply different interpersonal mood regulation strategies. The purpose of these videos is to enable service providers to increase their ability to identify and distinguish the interpersonal mood regulation strategies and apply them through role-playing.

The chapter is comprised of three parts. The first part explains the development of the videos, including the criteria used to evaluate the quality of the videos. The second part describes the validation study which explored the clarity of the videos. The third part reports the results of a role-playing workshop in which service providers used and evaluated the videos. We conclude with a discussion of limitations, improvement points for the videos and the workshop procedure.

4.2. STUDY 4: DEVELOPMENT AND VALIDATION OF VIDEOS THAT REPRESENT NINE INTERPERSONAL MOOD REGULATION STRATEGIES

The detailed descriptions for each of the nine strategies that had been created in Chapter 3 were used to develop the video representations of the nine interpersonal mood regulation strategies, which were subsequently validated.

A. Creating Videos for Nine Interpersonal Mood Regulation Strategies

The goal was to generate video representations that embody the strategies as clearly as possible. This process consisted of four steps; (1) setting the criteria, (2) sharing the descriptions with actors, (3) generating and discussing scenarios and (4) creating video-clips.

Step 1: Setting the Criteria

Similar to the criteria list created for the card set visuals (Chapter 3), a list of criteria was created to guide the video development:

1. **Distinctive:** In order to make a clear distinction between the strategies, each video should depict only one strategy by showing the most distinctive sub-strategies (e.g., highlighting the calmness for the Calming and careful listening and acknowledgement for Understanding to distinguish them)
2. **Realistic:** The videos should include a service provider and a service client in interacting in an office environment.
3. **Relatable:** The videos should clearly show the facial and bodily expressions of the service provider, while the client's face, body and script remain as neutral as possible to give the audience the opportunity to freely imagine and interpret the situation. All the conversations should be generic, which gives the opportunity to imagine the strategy in a wide range of contexts.
4. **Manageable:** Each video should take approximately 30-60 seconds to keep the audience engaged.
5. **Simple:** The clothes of the service provider and the client and the office environment should be neutral in order to minimize distractions.

Step 2: Sharing Descriptions with Actors

For the enactment of the strategies, two actors were contacted through the authors' professional network. These actors had over 10 years of experience in improvisation and teaching. During the first meeting, the phenomenon of interpersonal mood regulation was explained, and the nine strategies were introduced. After the first meeting, the detailed descriptions along with anecdotes were shared with them. During the second meeting, their questions were answered and any misunderstandings were clarified. They then proposed a one-page script for each of the strategies that depicts an interaction between a service provider and a service client.

Step 3: Generating & Discussing Scenarios and Scripts

Each script depicted a different interaction between a service provider and a service client. These scripts were discussed with the research team and the improvement points were discussed.

Step 4: Performing & Creating the Video-Clips

The scripts were finalized and the videos were shot based on these scripts (See Figure 4.1). The final videos can be found on <https://doi.org/10.5281/zenodo.13319379>.



Figure 4.1. Picture from the production scene where two improvisation actors were acting

B. Validating the Videos

The aim of this validation study was to explore whether the developed videos clearly represented the interpersonal mood regulation strategies. The two main research questions were (1) How accurately are the videos described by the potential users? and (2) How accurately are the videos currently labeled by the given strategy names and their short descriptions?

Participants

Thirty-two respondents from the US (15 female, 1 unknown) with ages ranging between 28 and 69 years old (mean=48.6) working in various fields were recruited through the Prolific website and paid 3.20 GBP for their participation.

Procedure

An online survey lasting approximately 30 minutes was conducted through Qualtrics. After some general information, demographic questions and an audio and visual check, the respondents were asked to watch the first video and freely explain in a few words the way the service provider communicated. To support the respondents, they were

given a sentence completion prompt: “The service provider seems to communicate in a _____ way.” The same question was asked on separate pages for each of the nine videos. The videos were presented in random order. Respondents were not allowed to proceed to the next page before 50 seconds had expired, which is an approximate number for the duration of the videos. For the second part of the questionnaire, respondents were asked to read the names of the nine strategies, along with brief explanations. This was followed by another round of questions, this time asking participants to watch the videos and choose the most appropriate name and description for each. This question was again asked in random order on separate pages for each of the videos. There was no time limit for this set of questions. On the last page of the survey, the correct answers were given for all 9 videos. They were then asked if they had had any difficulties in labeling the videos with an open question.

Data Analysis and Results

Analyzing the Descriptions

The descriptions were mostly short and to the point. To find repeating and similar words and intentions, the descriptions were analyzed and coded. Similar word clusters were gathered under the same group of words by using online dictionaries such as Merriam-Webster, The Saurus, Oxford Dictionary and Cambridge Dictionary. For example, “supportive”, “encouraging” and “motivational” were clustered under the group “Supportive”. The coding list (see Appendix J) was based on the previously constructed list in Chapter 3. Table 4.1 shows the most frequently used words for each of the videos and the number of respondents who used these words.

The results show that the most frequently used words generally align with the intended strategy. For most of the videos, respondents used the exact word or a synonym of the label in their descriptions, with the exception of Tolerating and Blunt. Nonetheless, all descriptive words given for Tolerating were consistent with the strategy’s description. In addition, some words were used for different strategies than we intended. For example, although the word “supportive” is included in our definition of the Encouraging strategy, respondents used it to describe the Understanding strategy video. Similarly, while “friendly” primarily describes the Sociable strategy, it was also used to describe the Calming and Encouraging strategy videos.

Table 4.1. Overview of the most frequently used words to describe each of the strategy videos.

Name of the Video	Five Most Frequently Used Words (N=32)
The Understanding	Understanding (40.6%), Listening (25.0%), Supportive (25.0%), Sympathetic (25.0%), Patient (18.8%)
The Calming	Friendly (59.4%), Calming (15.6%), Polite (12.5%), Relaxed (9.4%), Helpful (9.4%),
The Encouraging	Supportive (68.8%), Reassuring (56.3%), Helpful (28.1%), Positive (25.0%), Friendly (12.5%)
The Sociable	Friendly (71.9%), Cheerful (18.8%), Welcoming (15.6%), Gregarious (15.6%), Personal (12.5%)
The Apologetic	Apologetic (59.4%), Helpful (28.1%), Sympathetic (28.1%), Sincere (15.6%), Cooperative (12.5%)
The Efficient	Direct (37.5%), Professional (15.6%), Serious (15.6%), Efficient (12.5%), Result-Driven (12.5%)
The Tolerating	Tense (25.0%), Frustrated (21.9%), Impatient (12.5%), Stressed (12.5%), Annoyed (12.5%),
The Blunt	Aggressive (34.4%), Rude (28.1%), Dominant (28.1%), Harsh/Strict (28.1%), Assertive (21.9%)
The Distant	Distant (43.8%), Unhelpful (25.0%), Closed (18.8%), Unwilling to communicate (12.5%), Uncooperative (9.4%)

Analyzing the Labels

Figure 4.2 shows the percentages of the labels that were chosen for the nine videos. The proportion of correct labeling was above 50% in all cases, except for the video representing the Calming strategy (50.0%), which was often labeled as Sociable (40.6%).

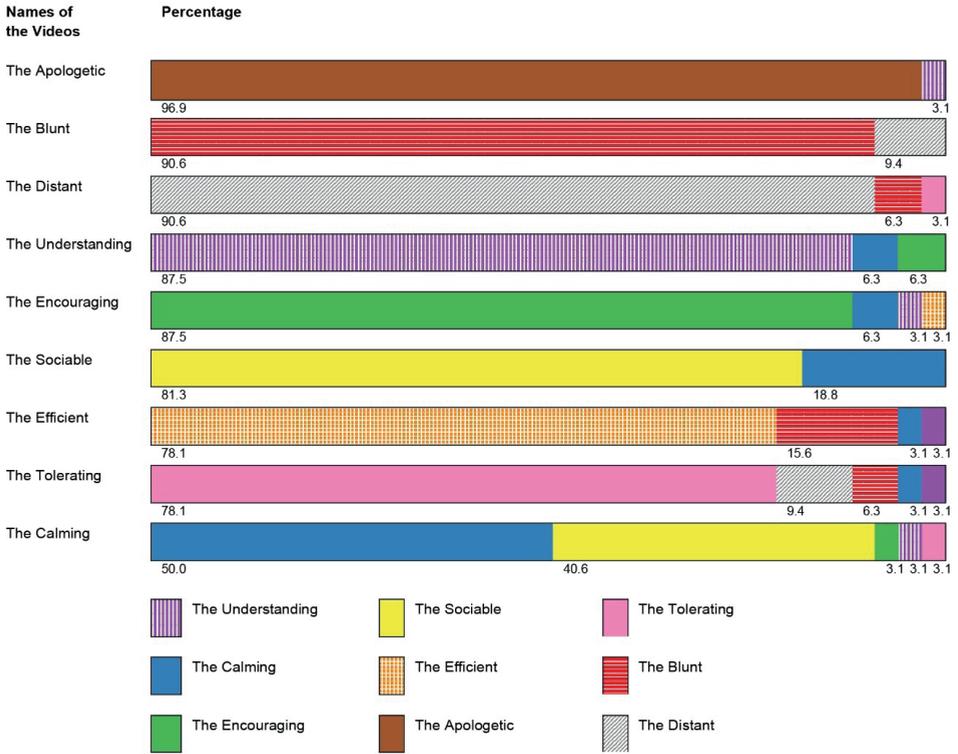


Figure 4.2. Proportion of labeling of the videos for the nine interpersonal mood regulation strategies

Discussion

In this study, we developed representations of the 9 interpersonal mood regulation strategies in human-human interaction through acting. During the development process, the shared examples enabled the actors to think about and internalize these strategies. As a result of iteratively developing the scripts, actors were able to produce videos that clearly represented the different strategies.

The results of the validation study indicate that almost all videos were clearly understood, particularly those depicting the Apologetic, Blunt, Distant, Understanding and Encouraging strategies, which received hit rates exceeding 85%. However, both the free-description analysis and the labeling analysis indicated that the video representing the Calming strategy was often confused with the Sociable strategy. This may indicate that these videos better require differentiation. Another reason could be that the descriptions of these strategies were not distinctive and, therefore, the descriptions might need revision to refine the difference between the two strategies. Nevertheless, the overall assessment deems the videos satisfactory for present purposes.

In contrast to the images created for the card set (Chapter 3), the videos have a higher hit rate and lower labeling confusion except for Calming (72 to 40). For example, in the image study, the Understanding, Encouraging, and Efficient images had the lowest hit rates, while the videos for these strategies had higher hit rates and were less likely to be confused with other strategies. This indicates that the videos performed better than the images in conveying the strategies.

4.3. STUDY 5: IMPLEMENTATION OF THE VIDEOS INTO A TRAINING TOOL

The nine videos were designed as a training tool for use in professional situations, aiming to enable service providers to increase their ability to identify and distinguish the interpersonal mood regulation strategies and apply them through role-playing exercises. Three workshops were organized involving educators to explore how service providers could use the videos. Through these workshops, we collected feedback on (1) the usability, (2) the value for professional situations and (3) additional meaningful usage opportunities of the videos as training materials. Based on this feedback, recommendations were formulated to improve the material, procedure, and application of the training tool.

Participants

The workshops were conducted with twelve educators from Delft University of Technology (6 female) with ages ranging from 27 to 51 years (mean=35), and a minimum of two years of teaching experience. The group included participants from diverse nationalities, including Dutch (2), Irish, Chinese (3), German, Slovenian, Russian, Australian, Mexican, and Turkish. Recruitment was facilitated through the authors' professional network, and participants were offered a 50-euros gift voucher as compensation for their participation.

Materials

Besides the nine interpersonal mood regulation strategy video set, the workshop materials included components from the Interpersonal Mood Regulation Strategy Card Set (see Chapter 3). These components were a sheet with 20 different moods (adapted from Xue, Desmet & Fokkinga, 2020) and nine descriptions of interpersonal mood regulation strategies consisting of the verbal labels and the descriptions of the strategies, together with examples of relevant client moods (see Figure 4.3) excluding the quotes and the illustrations.

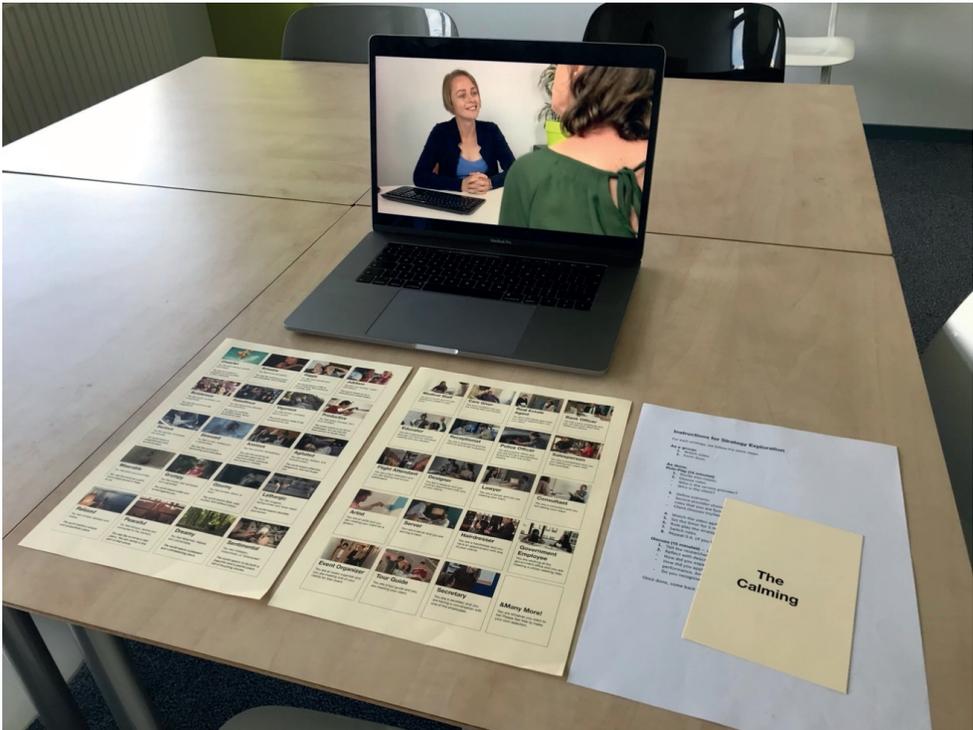


Figure 4.3. Materials used for the workshop; (1) interpersonal mood regulation strategy videos shown on screen, (2) 20 mood sheet, (3) 9 interpersonal mood regulation strategy descriptions, (4) 20 context sheet, (5) workshop instructions

Participants were also provided with a context sheet that included 20 distinct service contexts, including roles like medical staff, educator and consultant, as a source of inspiration when choosing scenarios to act out during the role-playing sessions. In addition, they received an instruction sheet outlining the various steps of the workshop (see Appendix K for the workshop materials).

Procedure

The workshop sessions took place at the faculty of Industrial Design Engineering of Delft University of Technology. They were conducted in groups of four and took about three hours. The sessions consisted of three main parts: (1) Introduction and Warm-Up, (2) Exploration of Strategies & Role-playing and (3) Plenary discussion (see workshop guideline in Appendix L)

The participants were first briefly introduced to moods, and the difference between moods and emotions was explained. Then, they were informed about interpersonal mood regulation and received a brief introduction to the nine strategies. As a warm-up,

participants were shown the 20 mood sheet and were asked to indicate their mood at that moment. To prepare the participants for the role-playing workshop, participants were asked to stand up, start walking around the tables, and express through their body and face four different moods in sequence while walking: cheerful, agitated, miserable, and peaceful.

In the second and main part of the workshop, the participants explored three different strategies for interpersonal mood regulation, two positive and one negative. The first two strategies were chosen by the researcher beforehand and the last one was left to the choice of the participants. As a group, they watched one of the preselected strategy videos. Next, participants paired up in duos and determined a hypothetical scenario using the provided mood sheet, drawing inspiration from the 20 context sheet. They revisited the video as needed, engaged in a five-minute role-play of the chosen strategy, switched roles, and repeated the same steps. For the discussion, partners were given the description cards and asked to reflect on their role-playing experience by answering probing questions (How did you experience this strategy as a service provider and the client? How did you apply it? Check the description and reflect on your partner's performance). The same procedure was followed for the two other strategies. Each strategy exploration cycle took approximately 30 minutes.

The plenary discussion was guided by four main questions, addressing (1) overall impressions and key take aways from the workshop, (2) the usability of and experience with the videos, the role-playing session and workshop format, and general questions about what they found confusing/difficult/(un)pleasant/interesting or what they would like to change, (3) the usefulness and the value of the videos and (4) additional opportunities for meaningful use.

Results

The audio recordings of the sessions were transcribed, analyzed and coded. We labeled our data based on three main categories: (1) usability of the videos, the role-playing and the printed materials, (2) usefulness and value of the videos and (3) additional usage opportunities (see Appendix M for the coding scheme).

A. Usability of the Videos, Role-Playing and Printed Materials: Issues, Challenges, Limitations & Improvement Points

Usability of the Videos

The videos evoked curiosity, sparking memories and discussions, with participants finding them straightforward and easy to understand. They triggered immediate reactions and comments, both from the perspective of the person applying the strategy and the one receiving it. The duration was found optimal and allowed participants to use key information

for role-playing. Overall, the videos were seen as intuitive and helpful in quickly and clearly conveying strategy essence. Participants could evaluate their performance swiftly after role-playing and easily identify the strategies from the description cards. Participants mentioned that the generic content helped them to focus on interactions, while the extreme scenarios made strategies clear and distinct.

Participant quote: "They are holistic representations of the strategies that vividly communicate the strategies in a concrete way, so that little effort of the audience needed to understand the essence of each strategy."

Besides these positive findings, some limitations were also reported. For some of the videos, there were minor misunderstandings or confusions about the content conveyed. For example, despite the fact that the strategy for Sociable was well applied in the role-playing sessions, we observed that one of the sub-strategies (using humor and making jokes) was not at all recognized by the participants and was not applied. Similarly, during the role-playing sessions for the Calming strategy, one of the sub-strategies (distracting the client) was not recognized. These sub-strategies were only recognized when the description cards were given. Moreover, the Tolerating strategy caused confusion due to its name as the video content did not match the meaning of the word "tolerating". Also, some participants found the videos to be somewhat artificial, extreme and exaggerated, and some found the videos to be too abstract, out of context and general, which hindered participants in imagining a specific situation the strategy might be used for.

Usability of Role-Playing

Participants found role-playing intriguing and insightful, stimulating new thoughts and applications of information. Some preferred familiar contexts like education, while others enjoyed exploring new scenarios. Participants indicated that drawing from personal experiences made role-playing easier. The duration was found manageable and partner rotation was appreciated. Participants enjoyed freely creating scenarios and exploring different mood-strategy combinations. During role-playing, participants unknowingly incorporated additional strategies. We observed that they empathized with the target. Also, participants exchanged experiences and tips, and learned from each other. Discussions strengthened their understanding, leading to collaborative re-definitions of strategies. Role-playing helped externalize hidden knowledge, leading to nuanced distinctions between strategies by the workshop's end.

Participant quote: "Enactment or role playing helped me to first act some of the tacit knowledge out (how to interact others in negative moods) and then explicate the knowledge by matching/mismatching the items presented on the strategy card. We all know implicitly something about how to regulate interpersonally, in personal and professional lives. Role play allowed this hidden knowledge to be under an explicit examination."

There were also some issues around the role-playing activity. Some participants found it difficult to create a realistic backstory for the hypothetical scenario when an unfamiliar context was chosen. Overall, it was a challenge to simultaneously concentrate on the scenario creation, service role immersion and the implementation of the strategy. Some of them mentioned that it took some time for them to feel comfortable and to immerse themselves in the activity of role-playing.

Usability of Printed Materials (20 Mood Sheet, 20 Context Sheet, Instruction Sheet & Description Cards)

The 20 Context Sheet and 20 Mood Sheet facilitated decision-making for the hypothetical scenarios and encouraged playful exploration. Participants found the 20 Mood Sheet helpful for understanding each mood. Description Cards provided after role-playing allowed for self and peer evaluation, serving as a checklist. Discussing the parts of their performance that were not in line with the Description Cards was thought to be an effective learning opportunity. The Description Cards helped the video content to be understood more in depth, especially when some of the sub-strategies were overlooked when watching the videos. Description Cards also helped participants identify sub-strategies from the videos during discussions. The instruction sheet outlined the general procedure for participants.

Although the 20 Mood sheet was found to be helpful, one participant found the vocabulary to be complex. For the Description Cards, some participants found it confusing to receive them after the role play and preferred to receive them along with the videos before the role-playing sessions, whereas other participants indicated that this would confuse them and hinder them from role-playing freely. As a general remark, one participant was not entirely sure about the goal of the workshop, if it was through enactment (a) trying to internalize the knowledge or (b) externalizing new insights that were already known.

B. Usefulness and Value of the Videos

Videos were found to be useful as they were communicating the strategies in a concrete and intuitive way requiring little effort from the audience. Participants described the videos as a useful example of the strategies in operation, a helpful starting point and a useful demonstration tool to prepare the participants for the role-playing session. Also,

the videos were found to be a valuable tool that gives providers the opportunity to (1) reflect on moods in the context of interpersonal communication, (2) acknowledge the repertoire of strategies that can be used for different situations, (3) understand and elaborately discuss the strategies, (4) critically reflect on their own strategies and how they are personally applied and (5) discover strategies that one is familiar/unfamiliar with and their personal struggles when applying the sub-strategies. Moreover, when coupled with the role-playing sessions they were found valuable to (6) develop new skills by testing in a safe environment without real-life consequences and hierarchical concerns and to (7) learn from fellow colleagues and exchange knowledge. They were also found to be a useful tool for clients to empathize better with service providers and build up a better connection and understanding.

Takeaways & Topics that Emerged During Discussions

When asked about their key take-aways from the workshop, participants listed several points in addition to the above-mentioned values. Participants indicated that the videos increased their awareness of the three explored strategies and made the intuitive act become conscious.

Some noticed that, contrary to what is often thought and applied, there is not a single way to deal with the other person's mood, but there are multiple ways and the seemingly ineffective strategies such as Blunt can also be useful. Related to this, they realized that one not only uses a single strategy, but always a combination of strategies and the flow is very dynamic and natural. They realized that some of the moods are experienced more than others in the education context (e.g., Stressed, Anxious) and that therefore some strategies, such as Understand and Efficient, can be used more often.

Finally, based on our observations and through verbal statements of our participants, additional sub-strategies were generated that could potentially be added to the list such as "paraphrasing, active listening, showing empathy" for the Understanding strategy.

Discussion for the Videos & Role-Playing Workshop

The three workshops with educators allowed us to collect insights on the usability, usefulness and additional usage opportunities of the videos and the role-playing session procedure. The videos helped the participants to understand the strategies in a quick and intuitive way which made it possible for the participants to engage easily in role-playing. The role-playing sessions enabled participants to put this new knowledge into practice and not only helped participants explore a single strategy but also served as a starting point to discover other strategies. Together with the peer and group discussions, the understanding of the strategies was strengthened. Hence, the printed materials guided

participants and helped them create scenarios and discuss the strategies in detail. However, some issues were raised in the workshop. Based on the problems and the suggestions of the participants, we formulated a list of recommendations for the next iterations of the workshop.

Recommendations for Videos

First, some of the sub-strategies were not clearly observed in the videos, such as Sociable and Calming. To tackle this issue, videos can be revisited to ensure that all sub-strategies are clearly represented. Second, there was a misunderstanding caused by the video for the Tolerating strategy. Since the name of the strategy raised many questions and caused confusion, we suggest reconsidering the name and finding a more suitable and clear word for the strategy such as hasty or impatient. Third, as some of the participants indicated that the videos were exaggerated and that some sub-strategies might not be appropriate for every context, it might be helpful to explain to the participants that the videos are prototypical and warn them to not take them literally. Still, we recommend keeping the extremeness as most of the participants found this helpful in making the strategies clear and distinctive. Fourth, one of the issues was the lack of context in the videos and their generic content. To tackle this, participants suggested providing similar scenes or clips from famous movies that represent the strategy as they have a background story, antecedent events, etc. This way, participants could also have the opportunity to observe different scenarios, different sub-strategies in which the strategy is used and different service roles instead of only a superior and a subordinate. Lastly, some participants indicated the need for some time to digest the videos after watching them. To ensure this, a suggestion was to briefly discuss what participants observed in the video as a group before moving forward to the role-playing activity.

Recommendations for Role-Playing

For the role-playing activity, the main challenge was to create and enact clear and realistic scenarios. To help participants in setting a clear scenario, we recommend limiting the scope to a familiar job context, asking participants to bring personal anecdotes and providing them probing questions in the instructions, such as “Where does the interaction occur?”, “With whom?”, “What is the aim of this interaction?” and “What’s the other person’s mood?”.

As the role-playing requires proper tension between the two parties, we suggest to either instructing participants to come up with scenarios involving contradicting moods (e.g., a Calm service provider versus an Agitated client, or a Stressed service provider versus an Amiable client), or to limit the number of client moods. However, limiting the number of client moods and forcing the participants to choose contradictory moods could limit some of the richness and freedom. For this reason, we suggest that participants choose

the service provider's mood based on their personal stories. This way, the role-playing sessions can be more realistic.

Over Usefulness of the Videos and the Role-Playing Session

The videos were found to be a useful tool that makes the strategies concrete and easy to understand and a good demonstration tool that prepares the service providers for the role-playing session. Participants found the videos to be useful for service providers to learn about the strategies, reflect on how/whether they personally apply these strategies, discover their own strengths and weaknesses as professionals, and empathize with both their clients and their colleagues in general. Role-playing was found to be a valuable method for bringing tacit knowledge to the surface. In addition, peer discussions were described as valuable since they nudged participants to exchange ideas and tips, compare performances, observe others and learn from each other.

Over Additional Meaningful Usage Opportunities

As additional meaningful usage opportunities, participants envisioned service providers using the videos for many different opportunities, such as during a therapeutic event with their colleagues, a session to get consultation on personal cases, and a professional development workshop for both experienced and new service providers. Additional opportunities that were mentioned include using the videos as a personal training tool, a reflection tool, or an open-source inspiration tool. Participants also reflected on the usage of the videos in other contexts, such as for online services and chatbots.

Three limitations of the study should be mentioned: (1) the workshops were conducted with three pre-selected strategies (2) the time was limited for trying out all the activities given in usage scenarios and (3) the participants consisted solely of educators. For future studies, participants should be given the freedom to explore the strategies freely and the workshop should be conducted in different contexts. Also, different service provider groups could be brought together to enable them to learn from each other.

4.4. CONCLUSION AND DISCUSSION

This chapter reported the development, validation, and implementation of a set of videos representing Interpersonal Mood Regulation Strategies. Enactment was used as a method to both convey the strategies in a rich and clear way and to help service providers embody these strategies with the overall goal of improving their communications at their workplaces.

The first study outlined the development and validation of the videos. The results indicated their effectiveness in conveying the strategies, albeit with some room for improvement. In the second study, the videos were implemented in a role-playing workshop to collect feedback on usability, usefulness, and ideas on additional usage opportunities. Results indicated that the videos served as a means to support the understanding of the interpersonal mood regulation strategies, as well as helping participants to embody these strategies. Overall, the videos and role-playing sessions increased awareness of the strategies, helped participants to reveal their tacit knowledge, triggered memories and yielded a rich discussion with many sub-topics within the topic of interpersonal mood regulation. These findings suggest that the videos have the potential to inspire designers and inform the design process for interpersonal mood regulation.

In future research, we plan to refine and enhance the materials and explore alternative interventions to further embody the strategies. Additionally, we aim to investigate directions for designing interventions for interpersonal mood regulation and conduct studies focusing on the sub-topics that emerged during our exploration.

5

Shaking, Floating, or Bursting: Non-Figurative Interactive Objects Depicting Nine Interpersonal Mood Regulation Strategies

Keywords

- Mood regulation
- Service encounters
- Emotional intelligence
- Training tool
- Character design

Studies

- Study 6: Generation and validation of character animations that represent nine interpersonal mood regulation strategies

5.1. INTRODUCTION

During service encounters, service providers can employ a series of strategies to adapt to or regulate their own and their customers' moods. In Chapter 2, we introduced nine different strategies, such as being Encouraging or Distant, used by service providers in response to the customer's mood in service interactions (Esnaf Uslu, Desmet, & Schifferstein, 2022).

Two previous studies explored how these strategies could be represented visually through images (Chapter 3) and videos (Chapter 4) using human figures in a context. These materials proved to be helpful in communicating the strategies, as it is relatively easy to express affect and empathize with human figures. While these two developed materials helped communicate the interpersonal mood regulation strategies, interactivity has not yet been explored.

Some research projects aim to make affective experiences tangible through abstract and interactive representations such as Blib (Figure 5.1 left), an interactive installation that intends to express emotions (Goss & Couder Breceda, 2020); Mood Swings (Figure 5.1 middle), an affective interactive art system that recognizes and displays the expressed emotion of the interactor through color and light, (Bialoskorski, 2009); and Touch the Moods (Figure 5.1 right), a set of objects that aims to express moods through sensory modalities (Xue, Zheng & Desmet, 2023). To the best of our knowledge, currently no designs are currently available for interpersonal mood regulation strategies in a non-figurative and interactive way. Therefore, to explore the embodied and interactive nature of the strategies, we asked "Is it possible to embody the qualities of interpersonal mood regulation strategies in a non-figurative and interactive way?". We anticipate that in addition to the previously developed card set and videos, non-figurative and interactive representations can serve a purpose as intriguing and memorable training materials for service providers to learn and apply these strategies, and the insights gained from these characters can be a source of inspiration for designers who want to facilitate interpersonal mood regulation strategies in service encounters.



Figure 5.1. Bliib, image from Goss & Couder Breceda, 2020 (left); Mood Swings, image from Bialoskorski, 2009 (middle); Touch the Moods, image from Xue, Zheng, Desmet, 2023 (right)

In this chapter, we explore the potential for expressing interpersonal mood regulation strategies through abstract, non-figurative, and interactive characters. We explore if the qualities of different strategies can be distinctively translated into shape, color, speed, and movement. Arts and literature are among the diverse methods employed in training programs, providing insights into the human experience. Reflections on the arts encourage open-ended exploration and allow multiple interpretations and perspectives thus encouraging learners to explore different possibilities (Wear, 1991, cited in Potash, 2014). Moreover, viewing and interpreting art-based materials help people process experiences and thus have a positive effect on learning (Cramer et. al., 2017). By using abstract and non-figurative characters to embody strategies, we assume that users will have the freedom to make their own intuitive association and find their own meaning. We chose to make the characters interactive since engaging people actively with interactive content, for example, by using educational games, simulations, interactive multimedia, or enabling users to become active partners in an interaction can assist people more effectively in understanding complex phenomena and can support learning (Pallud, 2017). Hence, interactive media can, among many other things, have the potential to help the users become motivated (Mayer, 2014) and make the learning process more enjoyable and engaging.

In this chapter, we developed a set of non-figurative and interactive characters that visualize the role of service provider using nine different interpersonal mood regulation strategies through shape, color, speed, and movement. We describe the development of the characters, followed by a validation study that investigates the clarity of these characters. We conclude with a discussion of the limitations of our approach and suggest directions for future research.

5.2. DEVELOPMENT OF CHARACTER ANIMATIONS THAT REPRESENT NINE INTERPERSONAL MOOD REGULATION STRATEGIES

The research team was comprised of three members, including the main researcher who was a PhD candidate, and two academic researchers specialized in experience design. For developing the characters, the research team collaborated with one visual designer and one character designer. To create the characters of the nine interpersonal mood regulation strategies, the team utilized the detailed descriptions generated from their previous research (Chapter 3).

Creating Characters for Nine Interpersonal Mood Regulation Strategies

This section outlines the four-step iterative design process employed to develop and refine characters that represent each of the nine interpersonal mood regulation strategies.

Step 1: Setting the Criteria

The research team established three criteria for the characters. The aim was to create characters that are distinctive, abstract, uniform, interesting and multifaceted, while still being perceived as a coherent whole:

1. **Distinctive:** Each character should distinctly represent only one strategy, highlighting its most prominent feature.
2. **Abstract/Non-figurative:** The character should not resemble animals or humans.
3. **Uniform:** All characters should have a similar spherical shape, emphasizing their familial relationship.
4. **Rich:** The characters should incorporate symbols or elements from nature to generate specific associations among the audience.

Step 2: Proposition for Qualities of the Characters

To develop a design brief, pre-existing materials such as the card set, sensory exploration collage material (Chapter 3) and the video set (Chapter 4) were used. The descriptions developed during the card set study were the primary source for character descriptions, while a structured sensory exploration procedure (Schifferstein, 2021) was used to determine the characters' appearance. This procedure involved revisiting each strategy and selecting a target expression, conceptual exploration, sensory exploration, and sensory analysis. For example, when developing the character for the Calming strategy, we aimed to convey a sense of calmness, relaxation, distraction, and mesmerization. These keywords were extracted from the description cards and the answers were collected from the validation studies of both the video chapter and card set chapter. To explore the keywords conceptually, we looked up definitions and synonyms and noted down any relevant

associations. For sensory exploration, we gathered visual materials that symbolized or evoked the desired expression. Throughout this process, we asked questions such as "What would this character feel like, sound like, look like, and move like?", "Which animal, plant, or product would best represent it?" and "What would be the intended effect on the other?". Using the answers to these questions and appropriate imagery, a new sensory exploration collage was created for each strategy. From these sensory exploration collages, a list of qualities for color, shape, size, texture, behavior/movement and sound was proposed. Table 5.1 gives an example of the qualities for the Calming strategy (see Appendix N for the complete list of qualities).

Table 5.1. Proposition of the qualities for Calming strategy character

Name of the Character & Effect on the User	Key Words to describe the character of the strategy	Color & Shape – Size & Texture	Behavior/Movement	Sound
The Calming; makes the audience/interactor feel at ease and distracted, and also feel a bit awe and fascination	Calming Relaxing Easing Distracting Peaceful Mesmerizing	Blue/green Light purple/pink Sphere Changing opacity Soft texture (velvet, silk, cotton etc.) or Gel-like material	- Moves calmly and slowly like a panda, koala or sloth - Rotates around itself - Sways or rocks itself - Floats in the air - Makes different and unexpected movements or distracts with color/shape changes - Glows, shines or sparkles	- Zen/meditative sounds - Beach waves/water - Harp - Low pitch - Syncopated rhythm

Based on the list of proposed qualities, an initial sketch was created for each of the characters (Figure 5.2).



Figure 5.2. Initial sketches for the strategy characters

The strategy descriptions, videos, collages, and quality proposals were shared with a visual designer who specializes in 3D modeling and animation. Together with the visual designer, the strategies were examined using the bodystorming technique which combines role-playing and simulation to capture real-world experiences such as interactive experiences or emotional responses and to inspire new ideas (Schleicher et al., 2010). This method enabled the researcher and designer to consider the intricacies of speed, trajectory, and movement of the character and helped to enhance the quality list. To simulate the movement and behavior characteristics outlined for each character, objects such as ping pong balls, plastic balls, balloons, or fruit were utilized as props. These creative sessions aided in exploring and making decisions about the characters' environment or background and their movement composition, such as first showcasing their signature movement to introduce themselves before moving around a designated area. Subsequently, these movements were depicted in a demonstration video using the "Wizard of Oz" method (Dahlbäck, Jonsson, Ahrenberg, 1993). Figure 5.3 shows a still image from the demonstration video.

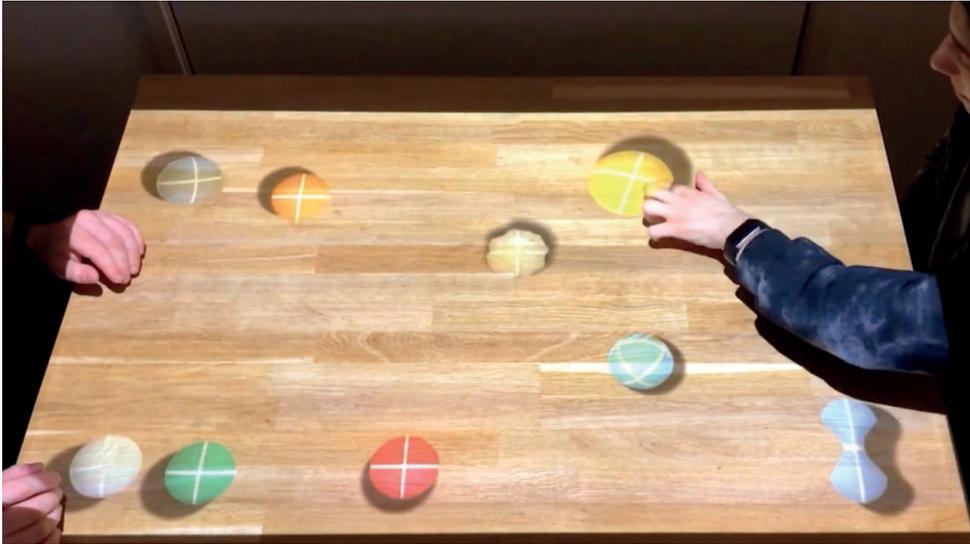


Figure 5.3. Visual designer and the researcher prototyping the behavior/movement of the characters

After creating the list of qualities (see Appendix N) and the demonstration video, the research team discussed these and decided to seek the opinion of a character designer for a second perspective on the quality list to make sure that the proposed concepts clearly represented the intended strategies. The goal was to further refine and finalize the appearance of the characters through this collaboration.

Step 3: Character Design

The characters were designed by a specialist character designer with over 10 years of experience in the field of game design. The process, which involved multiple meetings with the designer, broadly consisted of three parts: sensitization, brainstorming and sketching, and finalization.

During the first meeting, the researcher gave a brief introduction to the research project, explained the purpose of the characters, and introduced the design question. At the request of the character designer, only a portion of the materials were shared in the initial stage, which included the descriptions used in the cards, videos and the keywords describing each strategy. The illustrations and collages were omitted to prevent bias and tunnel vision. The character designer first worked independently, exploring the strategies and creating a moodboard for each strategy. In the meantime, the researcher and visual designer enriched the collage materials and the proposition of qualities. The character designer then shared their moodboards with the researcher, and all materials from both sides were merged into a single document. This document included descriptions, illustrations, videos, keywords,



Figure 5.5. Final version of the characters representing nine interpersonal mood regulation strategies.

Before developing the animation of the characters, the concepts were shared and discussed with the research team, resulting in a short list for improvement points.

Step 4: Modeling and Animating Characters and Creating the Demonstration Videos

Using the character designer's descriptions, quality list, and shortlist for improvement points, the characters were modeled in 3D software and animated. During the creation of the character movements, we considered various parameters including direction (up, down, left, or right), expansion (contraction, expansion), velocity variation (acceleration, deceleration), fluency (fluent, staggered) and corner bending (sharp, round) (Visch & Goudbeek, 2009). An animation video was created to showcase the characters' movements and reactions to the interactor. For example, the animation for the Calming character involved diagonal movement, maintaining a steady and slow speed, smooth transitions, and bouncing off corners with curved trajectories. These video drafts were shared with the research team for a final round of feedback, and the videos for each strategy character were finalized. Each video had a duration of approximately one minute. The videos can be found on <https://doi.org/10.5281/zenodo.13332931>.

Discussion of Development

In this study, we created interactive and non-figurative representations of the nine interpersonal mood regulation strategies through abstract character animations. The

character designer and the visual designer were provided with descriptive materials such as cards and videos, to help them delve into the strategies. While developing the characters, without being told, they explored their memories related to the strategies and envisioned who among their network would be the best user of each strategy and what would best symbolize the strategy. This is particularly interesting because it is related to research (Cheung, 2015) that demonstrates that people turn to specific people in their network to regulate different feelings (e.g., contacting a sibling to feel uplifted). This might mean that people attempt to reach out to different people who use strategies they consider effective depending on their mood (e.g., calling an understanding friend to vent as an attempt to alter one's gloomy mood or contacting an efficient colleague to reappraise one's anxiety). Overall, through iterative discussions, designers were able to produce characters that represented each strategy.

5.3. STUDY 6: VALIDATION OF THE CHARACTER ANIMATIONS

The purpose of this study was to test the degree to which the developed characters portray the intended interpersonal mood regulation strategies. Two research questions were addressed: (1) How accurately can people describe the characters?, and (2) How accurately can people label the characters with their strategy names and short descriptions?

Participants

A group of 39 individuals from the United States (20 females, 18 men, one unknown), aged between 22 and 64 years (mean=38.5) and working in various sectors, were recruited via Prolific. They were compensated 3.70 GBP for their participation.

Procedure

An online survey using Qualtrics was conducted which lasted approximately 30 minutes. The survey started with general information, demographic questions, and a video-player check. For the first part of the survey, the respondents were asked to watch nine character animation videos in random order. For each video they were asked to describe in a few words what the character expressed through its appearance and behavior. This was done with a sentence completion prompt: "The character seems to express _____." Each video was shown on a separate page and respondents were required to remain on the same page for at least 60 seconds before proceeding to the next page. For the second part of the survey, respondents were asked to take a minute to read the names and brief descriptions of the nine characters representing the nine strategies (see Appendix O for the descriptions). They were then asked, in random order and on separate pages, to watch each character animation video again and select the most appropriate name and

description. No time limit was set. For the last part, on a single page that allowed scrolling, the intended answers were shown for all nine animation videos. With an open question, respondents reported if they experienced any difficulties describing and labeling the given character. They did so separately for each character.

Data Analysis and Results

Analyzing the Descriptions

The short descriptions provided by the respondents were analyzed for similarities and repeated words. The online dictionaries Merriam-Webster, The Saurus, Oxford Dictionary and Cambridge Dictionary were used to group similar words together. For example, the words “calmness”, “serenity”, “tranquil” and “peaceful” were categorized under the group “Calmness”. The coding list was based on the previously constructed list in Chapter 3 and 4 (see Appendix P). Table 5.3 presents the most frequently reported words for each character animation video and the percentages of respondents who reported these words.

Table 5.3. Overview of the most frequently reported words to describe each of the character animations.

Names of the Character Animation	Frequent Words (reported by three or more participants)	Other Words (reported by two respondents)	Intended Qualities (description + designer)
The Understanding	Movement (17.9%), Calmness (17.9%)*, Interest (7.7%), Intelligence (7.7%), Transparency (7.7%), Coolness (7.7%)*, Beauty (7.7%)*,	Bright*, Smooth, Swift*, Life*, Organic, Happiness*, Fluidity, Optimistic*	Interested Attentive Acknowledging Understanding Listening Accepting /Confirmatory Empathetic
The Calming	Calmness (64.1%), Slow (23.1%), Beauty (10.3%%), Cool (7.7%), Relaxation (5.1%),	Thoughtful, Steady, Smooth, Happiness*	Calming Relaxing Easing Distracting Peaceful Mesmerizing
The Encouraging	Calmness (10.3%)*, Growth (7.7%), Guarded (7.7%)*, Constrained (7.7%)*, Connectedness (7.7%)	Development, Protectiveness*, Cohesion, Hesitant, Withdrawn*, Intelligence, Closed*	Reassuring Supportive Motivating Expressing faith Hopeful Optimistic

Table 5.3. (Continued)

Names of the Character Animation	Frequent Words (reported by three or more participants)	Other Words (reported by two respondents)	Intended Qualities (description + designer)
The Sociable	Unpredictability (15.4%), Calmness (10.3%), Interest (10.3%), Happiness (7.7%), Agitation (7.7%)* Creativity (7.7%), Chaos (7.7%)	Anger*, Fun, Confusion, Randomness, Brave, Inconsistent, Gross, Liveliness	Friendly Warm Open Cheerful/Happy Humorous/ Playful/Fun/ Pleasant
The Apologetic	Growth (33.3%), Death (10.3%), Change (7.7%), Mild/ Delicate (7.7%), Scary (7.7%), Gross (7.7%), Rebirth (7.7%), Calm (7.7%)*,	Indifference*, Anger*, Curiosity, Tense*, Annoyance*, Disturbed*, Sensitivity, Unstable	Sorry Reconciliatory Concerned Caring Pleasing Begging Sad
The Efficient	Mechanical (33.3%), Modern (17.9%), Sturdy (15.4%), Intelligence (12.8%), Active/Energetic (12.8%), Purposeful (12.8%), Fastness (12.8%), Thinking (10.3%), Busyness (7.7%)		Productive Constructive Objective Guiding Solution-oriented Rational Energetic
The Tolerating	Anger (51.3%)*, About to Explode (43.6), Fiery (10.3%)*, Danger (10.3%), Tense (7.7%), Confusion (7.7%), Chaos (7.7%), Unpredictable (7.7%), Ill-tempered (7.7%)*	Sadness *, Agitation, Frustration, Fear	Tense Agitated Impatient Hasty Enduring Snappy Stretched

Table 5.3. (Continued)

Names of the Character Animation	Frequent Words (reported by three or more participants)	Other Words (reported by two respondents)	Intended Qualities (description + designer)
The Blunt	Active/Energetic (25.6%)*, Agitation (12.8%), Anger (12.8%), Fastness (12.8%)*, Unpredictability (10.3%), Unusual (7.7%), Erratic (7.7%), Intelligence (7.7%)*,	Methodic*, Reactive, Fun*, Thinking*, Tense*, Geometric*, Neutral	Intervening Direct Frank Firm Matter-of-fact Stark Realistic? Slight anger
The Distant	Sadness (15.2%)*, Fluidity (12.8%), Change (12.8%), Darkness (10.3%)*, Cold/Indifferent (7.7%), Characterless (7.7%)*, Calmness (7.7%)*, Unpredictable (7.7%),	Evil, Confusion, Withdrawn, Anxiety*, Reactive, Mysterious, Bland	Closed Withdrawn Uncooperative Unwilling Avoiding

Highlighted qualities = incorrect/unintended qualities,
Qualities with * = qualities belonging to another strategy

The overall findings suggest that while many respondents accurately identified the intended qualities of the character videos, some discrepancies were observed. Although the reported words generally aligned with the intended characteristics, they occasionally failed to fully capture the essence of the characters. Notably, the characters representing the Encouraging, Distant, Apologetic, and Sociable strategies elicited the most incorrect descriptions. For instance, respondents associated the Encouraging character with terms like "guarded" and "constrained", indicating a misunderstanding of the intended strategy. Similarly, descriptors such as "change", "darkness", and "sadness" were erroneously linked to the Distant character, while the Apologetic character prompted associations with words like "death", "change", "scary", "gross", "indifference", or "anger". Such discrepancies highlight potential areas for refinement in character portrayal and respondent interpretation. Moreover, some words were reported to describe different strategies than intended. For example, "calmness" was reported for the Understanding, Encouraging, and Sociable strategy characters, and "interest" was primarily reported to describe the Understanding strategy, but was also reported also to describe the Sociable strategy character.

Analyzing the Labels

Figure 5.6 shows the percentages of labels chosen for the nine character animations. The correct labeling proportion was mostly below 50%. The Calming and Efficient strategies had the highest hit rates (51.3%), followed by the Distant, Sociable, Blunt and Tolerating strategies (above 30%), while the animations representing Apologetic, Understanding and Encouraging had the lowest hit rates (<25%).

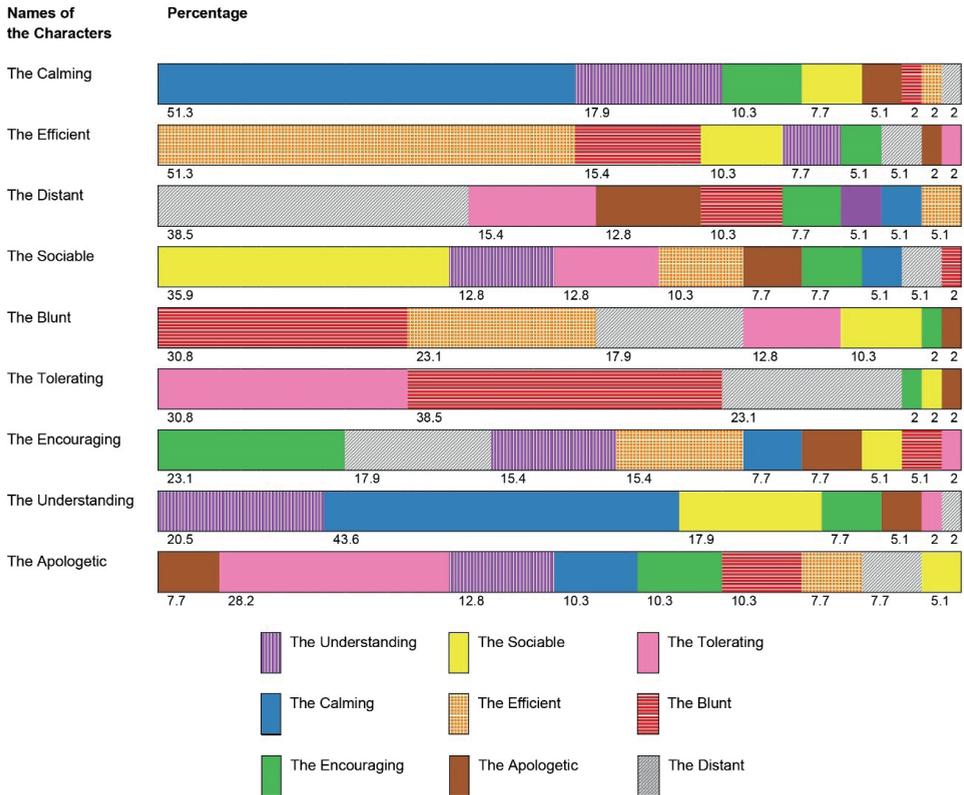


Figure 5.6. Proportion of labeling of the character animations for the nine interpersonal mood regulation strategies

Discussion of Validation

The results of the validation study showed that only two of the character animations, namely Calming and Efficient, achieved a hit rate exceeding 50%, indicating clarity in their depiction. These two characters were also described accurately in the free-description section of the questionnaire. This shows that these two characters were understood to some extent. For the other seven characters, although the free-description results were mostly acceptable, the labeling results were below 50%.

One explanation for the low hit rate could be that the characters did not represent the strategies in a clear and straightforward manner. It is possible that non-figurative and interactive characters may not provide a clear representation of the strategies.

Alternatively, the task of describing and labeling abstract visuals is inherently difficult, which might have influenced the results. Some participants found it challenging to judge the characters as if they were human, indicating that they may not communicate strategies as clearly as figurative materials. What also made it difficult is that we only have a single character per strategy, mirroring the expression of the service provider in the interaction. In the previous tasks, the interaction strategies were depicted as an interaction between two people, in which the moods and actions of both people contribute to the way they interact. In addition, the atmosphere and the interaction were partly supported by props (e.g., the decoration of the room and the objects used during the interaction in the illustrations). Also, the non-figurative character cannot use facial expressions, body positions, and hand gestures and is, thereby, quite limited in its expressive toolbox. Although the character has an expressive richness in shape, color and speed, the interpretation of such cues is more indirect and intuitive than when seeing a person who displays emotions through their face, body, or hands.

The results of this validation study suggest that the character animations exhibit a certain degree of ambiguity. Overall, compared to the previous chapters' images and videos, the characters had a considerably lower hit rate and were significantly confused with other strategies with higher percentages. This shows that the characters were not as clear as the images and the videos in communicating the strategies in a clear manner.

However, we were pleasantly surprised by the participants' ability to recognize the intended qualities. The free description answers demonstrate that participants were able to identify some character qualities with related words, even if the words used were not a perfect match (see Table 5.3). This indicates that the developed characters are rich enough to promote free association and help people find relevant connections to the strategy descriptions. As the envisioned usage scenario of the characters is to present them together with their labels, quotes, representative illustrations, descriptions, and representative videos, we suggest that the current set of characters in Figure 5.5 has potential value for training purposes. However, when using them, it is important to acknowledge that the characters are ambiguous, which implies that they cannot be regarded as unequivocal representations of the interpersonal mood regulation strategies.

5.4. CONCLUSION AND DISCUSSION

This chapter reported the creation of nine non-figurative and interactive characters that were developed to support the understanding of the nine interpersonal mood regulation strategies.

Limitations

Our aim was to investigate the feasibility of embodying the qualities of nine interpersonal mood regulation strategies in a non-figurative and interactive manner. The results of the labeling section revealed that participants were unable to consistently assign the characters with the intended label. However, the free description section surprisingly indicated that representing these qualities is possible to some extent. Nevertheless, relying solely on these characters in isolation may not guarantee a clear understanding of their intended qualities. Therefore, we recommend supplementing their usage with additional information such as labels, descriptions, and previously developed materials to enhance comprehension.

Additionally, the validation study had limitations in terms of interaction, as the interactivity of the characters was demonstrated solely through videos, and the study was conducted in an online setting. These factors could have potentially influenced how participants evaluated the characters. Therefore, it is necessary to refine, prototype, and test the characters in physical settings with service providers to gain a comprehensive understanding of their effects on potential users.

Despite these limitations, we remain optimistic about the potential of the proposed characters to support service providers' understanding of the interpersonal mood regulation strategies.

Potential Value/Implications

The characters developed were the initial artistic creations specifically designed for the nine strategies. Once revisited and tested in a physical setting, the characters can be utilized in various other ways. For instance, we suggest that they could serve as elements in an interactive educational game, as inspiration material for designers, or as research probes for design researchers to delve deeper into the strategies.

The interactive characters could also aid users in understanding how various strategies and moods interact with one another. Since interpersonal mood regulation strategies are used in response to the other person's mood, it is worth exploring their relationship with moods. For this, moods also need to be visualized in an interactive way. A student project has already taken the first step of such a visualization that was made to be used in their

empathy game for designers (Den Dekker, 2018; Desmet, Xue & Fokkinga, 2019). Inspired by this concept, interactive mood animations can be created, and as a next step, these interactive mood visualizations can be associated with strategy animation. Imagine an interactive game interface where both moods and strategy characters float on a surface. The efficient character could swiftly approach the lethargic mood ball, causing the lethargic mood ball to emit brighter and more vivid lights. This could illustrate how the lethargic mood can be influenced to become vigorous through the use of the Efficient strategy. Alternatively, the calming character may slowly approach the stressed mood ball and gradually circle around it, resulting in the stressed mood ball transforming into the calm mood after a few seconds. Similarly, the blunt character might approach the stressed mood ball briskly, circling it, and leading the stressed mood ball to become agitated. The animations might simulate the potential outcomes when different moods and strategies interact, making the concepts more tangible and easier to comprehend. This might open up new pathways for research and design. However, further research is needed to explore the usefulness and value of these characters, along with exploring additional meaningful usage opportunities.

6

General Discussion

6.1. INTRODUCTION

The goal of this thesis was to advance understanding and to develop practical tools for service providers to effectively comprehend and apply Interpersonal Mood Regulation (IMR) strategies, thereby enhancing their efficacy in client interactions. To achieve this, our inquiry was driven by the question *“How can service providers be assisted in incorporating interpersonal mood regulation strategies during service encounters?”*

Under this overarching question, the various chapters have addressed the following research questions:

1. What is the current role of mood in service encounters?
2. What IMR strategies are currently used by service providers during service encounters in response to clients' moods?
3. How can IMR strategies be facilitated by means of training tools for service providers?
4. What are the strengths and limitations of the developed materials to facilitate IMR?

Six studies were conducted to address these questions. In this final chapter, we synthesize the key findings, reflect on their implications, and discuss considerations and directions for future research.

6.2. DISCUSSION OF THE RESEARCH RESULTS

6.2.1. RQ1 & RQ2: On the Role of Mood in Service Encounters and IMR Strategies used by service providers during service encounters in response to clients' moods

We found that service providers mostly unconsciously monitor and manage their own mood as well as attend to and adapt to their clients' moods. We combined our insights into a framework of mood-sensitive encounters, which offers four pathways for designing for mood-sensitive services. The framework's components were initially informed by existing literature, but their final structure emerged from the analysis of empirical data, including interview transcriptions and diary entries. While the literature provided foundational concepts, these components were not explicitly mentioned to the participants during the interviews. Instead, the framework was shaped by the data collected in the study. The framework offers opportunities for applications in employee training and the development of interventions and materials to support these processes. Ideally, this can contribute to improved employee well-being, job performance, and client satisfaction. It also offers opportunities for organizational improvement, which benefits managers and human resources.

In this thesis, we chose to focus on a single component: (D) “adjusting communication”, which encompasses interpersonal mood regulation strategies. We focused on this aspect for three main reasons. First, communication plays a crucial role in interpersonal relationships and is fundamental to the process of mood regulation. It includes not only verbal exchanges but also nonverbal elements, such as gestures, facial expressions, and tone, which are central to interactions. Second, narrowing the focus to a single component allowed for a more in-depth exploration and analysis of how interpersonal mood regulation takes place in human-human interactions. Third, focusing on communication presented valuable opportunities for design interventions, making it a promising opportunity for future design research and design interventions.

Our research identified nine interpersonal mood regulation strategies employed by service providers in client encounters, which we labeled as Understanding, Calming, Encouraging, Efficient, Sociable, Apologetic, Tolerating, Blunt, and Distant. The strategies were result of the collected anecdotes and the descriptions of these strategies were enriched with the existing literature in Chapter 3. These strategies offer insights that can be valuable for the development of materials aimed at enhancing service providers' skills and for designing interventions to support the effective implementation of these strategies.

6.2.2. RQ3 & RQ4: On Developed Materials: How were the strategies facilitated and what are the strengths and weaknesses?

We developed three sets of materials to facilitate the nine interpersonal mood regulation strategies: images, videos, and characters. We validated them and studied their usability and usefulness. In this section, we address the key findings, with a focus on the development of training tools that will provide broader insights into the research subject and suggest potential avenues for future inquiries.

Comparison of the Materials

Labeling and Free Descriptions

In the validation studies, participants were assigned predetermined verbal labels to the various stimuli. The percentages of correct labeling are shown in Table 6.1. For most of the videos (eight out of nine) more than 50% of participants selected the correct label, with an average hit rate of 82.3% across the videos. Similarly, most of the images (seven out of nine) received a correct rate higher than 50%, with an average hit rate of 63.2%. The character animations proved to be more ambiguous, with only two receiving a correct rate higher than 50% and an average hit rate of 32.2%. These differences can be explained by the abstract nature of the characters, as well as by the fact that interaction qualities are difficult to represent with single objects.

Table 6.1. The hit rates of the three materials in labeling questions.

Names of the Strategies	Hit Rates in Labeling Questions		
	Images N = 29	Videos N = 32	Character Animations N = 39
The Understanding	48.3%	87.5%	20.5%
The Calming	72.4%	50.0%	51.3%
The Encouraging	34.5%	87.5%	23.1%
The Sociable	79.3%	81.3%	35.9%
The Apologetic	72.4%	96.9%	7.7%
The Efficient	24.1%	78.1%	51.3%
The Tolerating	69.0%	78.1%	30.8%
The Blunt	82.8%	90.6%	30.8%
The Distant	86.2%	90.6%	38.5%
Average	63.2%	82.3%	32.2%

Table 6.2 gives an overview of participants' responses to open-ended questions, where they were invited to provide descriptions of the stimuli in their own words. Consistent with the labeling task, both the videos and the images received the most correct descriptions. Even though characters were not described as accurately as the videos and the images, these descriptions generally hinted at the intended strategies. This suggests that even though not all materials, particularly the animated characters, may serve as standalone representations, all three types of stimuli were rich enough to serve as conversation starters in workshops or other settings.

Table 6.2. The hit rates of the three materials in free description questions.

Names of the Strategies	Most Frequently Used Words		
	Images	Videos	Character Animations
The Understanding	Listening (48.3%), Interested, Engaged (31.0%), Thinking/Pensive (20.7%), Attentive (17.2%), Inquisitive (13.8%)	Understanding (40.6%), Listening (25.0%), Supportive (25.0%), Sympathetic (25.0%), Patient (18.8%)	Movement (17.9%), Calmness (17.9%), Interest (7.7%), Intelligence (7.7%), Transparency (7.7%), Coolness (7.7%), Beauty (7.7%),

Table 6.2. (Continued)

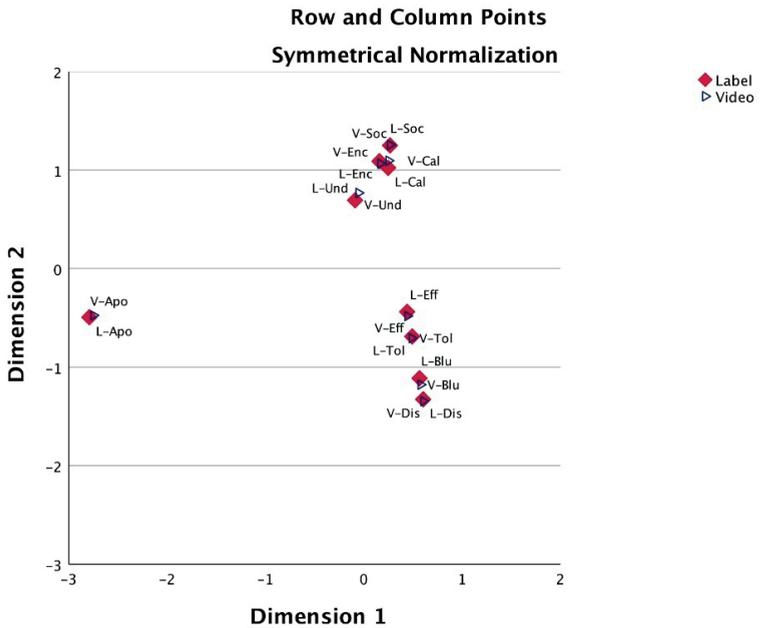
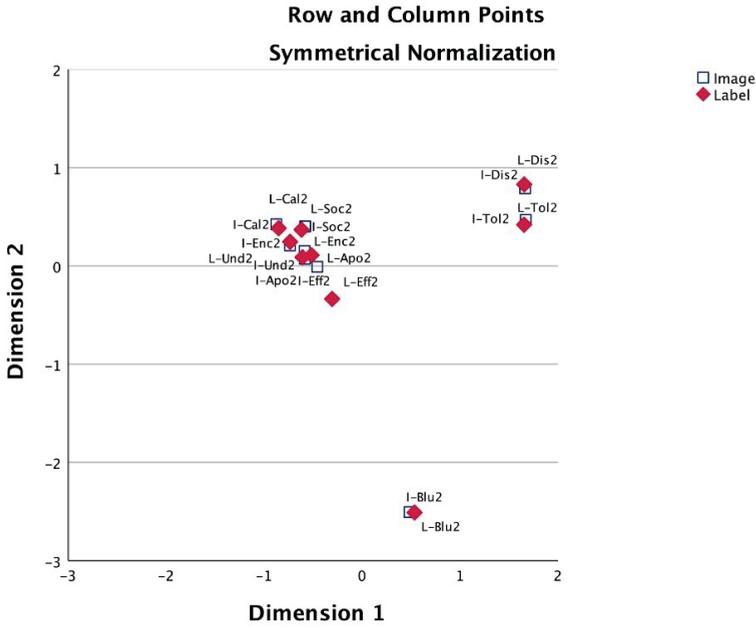
Names of the Strategies	Most Frequently Used Words		
	Images	Videos	Character Animations
The Calming	Calm (27.6%), Happy (24.1%), Listening (24.1%), Friendly (17.2%), Relaxed (17.2%)	Friendly (59.4%), Calming (15.6%), Polite (12.5%), Relaxed (9.4%), Helpful (9.4%),	Calmness (64.1%), Slow (23.1%), Beauty (10.3%), Cool (7.7%), Relaxation (5.1%),
The Encouraging	Sympathetic (34.5%), Friendly (24.1%), Helpful (20.64%), Kind (17.2%), Supportive (17.2%)	Supportive (68.8%), Reassuring (56.3%), Helpful (28.1%), Positive (25.0%), Friendly (12.5%)	Calmness (10.3%), Growth (7.7%), Guarded (7.7%), Constrained (7.7%), Connectedness (7.7%)
The Sociable	Friendly (41.4%), Happy (41.4%), Enjoyable (17.2%), Open (17.2%), Welcoming (13.8%)	Friendly (71.9%), Cheerful (18.8%), Welcoming (15.6%), Gregarious (15.6%), Personal (12.5%)	Unpredictability (15.4%), Calmness (10.3%), Interest (10.3%), Happiness (7.7%), Agitation (7.7%), Creativity (7.7%), Chaos (7.7%)
The Apologetic	Pleading (31.0%), Sympathetic (27.6%), Sad (13.8%), Apologetic (10.3%), Concerned (10.3%)	Apologetic (59.4%), Helpful (28.1%), Sympathetic (28.1%), Sincere (15.6%), Cooperative (12.5%)	Growth (33.3%), Death (10.3%), Change (7.7%), Mild/Delicate (7.7%), Scary (7.7%), Gross (7.7%), Rebirth (7.7%), Calm (7.7%),
The Efficient	Guiding (27.6%), Active (17.2%), Listening (13.8%), Enthusiastic (13.8%), Helpful (6.9%)	Direct (37.5%), Professional (15.6%), Serious (15.6%), Efficient (12.5%), Result-Driven (12.5%)	Mechanical (33.3%), Modern (17.9%), Sturdy (15.4%), Intelligence (12.8%), Active/Energetic (12.8%), Purposeful (12.8%), Fastness (12.8%), Thinking (10.3%), Busyness (7.7%)
The Tolerating	Bored (27.6%), Uninterested (24.1%), Stretched (17.2%), Annoyed (13.8%), Frustrated (10.3%)	Tense (25.0%), Frustrated (21.9%), Impatient (12.5%), Stressed (12.5%), Annoyed (12.5%),	Anger (51.3%), About to Explode (43.6), Fiery (10.3%), Danger (10.3%), Tense (7.7%), Confusion (7.7%), Chaos (7.7%), Unpredictable (7.7%), Ill-tempered (7.7%)
The Blunt	Bossy (27.6%), Aggressive (17.2%), Lecturing (13.8%), Persuasive (13.8%), Reprimanding (10.3%)	Aggressive (34.4%), Rude (28.1%), Dominant (28.1%), Harsh/Strict (28.1%), Assertive (21.9%)	Active/Energetic (25.6%), Agitation (12.8%), Anger (12.8%), Fastness (12.8%), Unpredictability (10.3%), Unusual (7.7%), Erratic (7.7%), Intelligence (7.7%)

Table 6.2. (Continued)

Names of the Strategies	Most Frequently Used Words		
	Images	Videos	Character Animations
The Distant	Closed (31.0%), Unwilling to communicate (13.8%), Distant (13.8%), Uncooperative (13.8%), Reserved (10.3%)	Distant (43.8%), Unhelpful (25.0%), Closed (18.8%), Unwilling to communicate (12.5%), Uncooperative (9.4%)	Sadness (15.2%), Fluidity (12.8%), Change (12.8%), Darkness (10.3%), Cold/Indifferent (7.7%), Characterless (7.7%), Calmness (7.7%), Unpredictable (7.7%)

Distinction of Strategies in Developed Materials

Results obtained in validation studies for images, videos, and animated characters representing different strategies indicated that some IMR strategies were more difficult to distinguish than others. To give an impression and to compare the outcomes over the three stimulus types, we performed correspondence analysis using SPSS Statistics software with two factors (symmetrical normalization). For each data set of developed materials (images, videos, characters; 9 strategies) and the corresponding labels (9 levels), we generated a two-dimensional solution. The solutions (Figure 6.1 a, b, and c) illustrate the associations between developed materials and the frequency counts of the strategy labels. The two dimensions in Figure 6.1a respectively account for 44.1% of the total inertia: 24.3% by the horizontal and 19.8% by the vertical axis. Figure 6.1b respectively accounts for 34.5% of the total inertia: 17.7% by the horizontal and 16.8% by the vertical axis. Lastly, Figure 6.1c respectively accounts for 72.4% of the total inertia: 47.8% by the horizontal and 24.6% by the vertical axis. The distances between strategy labels in the space reflect their degree of similarity: labels plotted close to each other were perceived as similar.



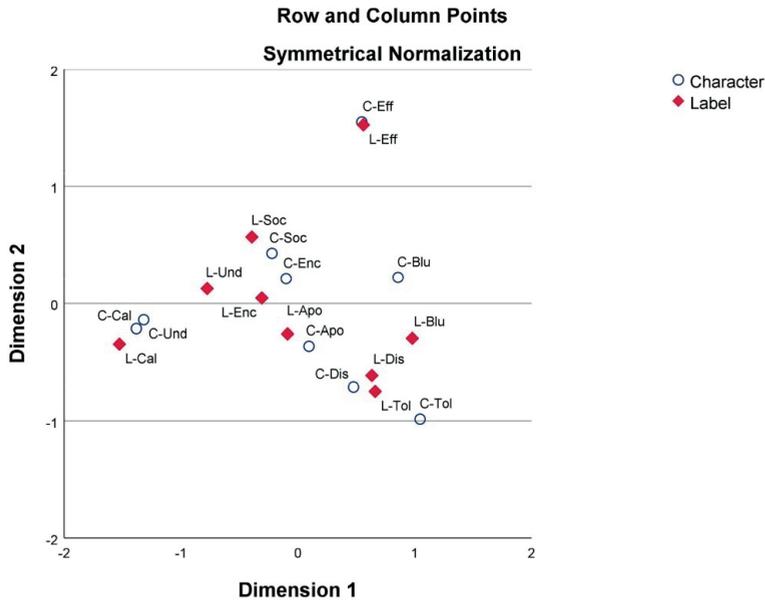


Figure 6.1. Correspondence analysis results for three developed materials. The top panel shows responses to the images, the middle panel shows responses to the videos, and the bottom panel shows responses to the character animations. Strategy labels are indicated with the letter "L" (e.g., L-Tol for Tolerating strategy). Material types are indicated by their initial letters: "C" for Character (e.g., C-Tol for Character of Tolerating), "V" for Video (e.g., V-Tol for Video of Tolerating), and "I" for Image (e.g., I-Tol for Image of Tolerating).

The correspondence analyses indicate different patterns of similarity in participants' responses to cards, videos, and character animations. However, discernible consistency emerges within sub-groupings. Particularly, strategies such as Calming, Understanding, Encouraging, and Sociable tend to cluster together, whereas Tolerating, Blunt, and Distant form a distinct sub-group. Efficient and Apologetic appear as outliers in the visualizations of videos and character animations. This finding aligns in part with the categorization proposed by Niven, Totterdell and Holman (2009a), wherein "improvement strategies" (in our case: Understanding, Calming, Encouraging, Efficient, Sociable, and Apologetic) contrast with "worsening strategies" (in our case: Tolerating, Blunt, Distant).

Variations in observed patterns and the success rate may have been influenced by how strategies were presented across the different stimulus sets. This might have influenced the emphasis on certain qualities across different materials. For example, friendliness is more prominent in the videos and images, as opposed to the character animations in which cheerfulness is more prominent. Additionally, while some strategies share similarities within one representation, they differ more noticeably in another. For example, Sociable and Calming were more similar in the videos, suggesting that the videos share some

expressive qualities (e.g., acting in a warm and friendly manner and asking questions), whereas they were more different in the character animations (e.g., through the calm and relaxed movements versus the agitated and happy movements).

Impact of Enhanced Understanding of IMR Strategies and Developed Tools on Service Encounters

The workshops reported in Chapter 3 and Chapter 4 demonstrated the potential value of the developed materials, providing service providers with a range of opportunities. Combined, the findings suggest that understanding IMR has the potential to positively influence the social interactions of service providers.

While comprehending IMR strategies proves useful in navigating relevant strategies, the current research did not investigate the influence of increased IMR understanding on customer satisfaction or employee performance. Future research can measure client satisfaction and perceived employee performance to ascertain the broader impact of IMR learning on interactions between clients and service providers. Previous studies have investigated the impact of using such strategies on clients and relationships (e.g., Niven et al., 2007; Niven et al., 2012; Martínez-Íñigo, 2021). Similarly, future studies could assess how clients perceive strategies and their consequent impact on overall service experiences. For instance, researchers could gather clients' perspectives and evaluations following encounters with a group of service providers, asking them to document instances where they believe providers attempted to influence their feelings using the identified strategies. The research could also examine how the use of strategies influences clients' moods by having them indicate their mood before and after service encounters, employing mood measures like Pick-A-Mood (Desmet, Vastenburg & Romero, 2016). Additionally, client satisfaction can be measured at the conclusion of the encounter, and these results can be compared with outcomes following IAR training utilizing the developed tools for the service provider group. In the case of prolonged interactions, such as caregiver-elderly interactions, the influence of perceived strategies on the well-being of the clients can be explored by regularly measuring their well-being.

Impact of Enhanced understanding of IMR strategies and Developed Tools on Service Provider Well-Being

The primary goal of developing the tools was to assist service providers in learning and applying Interpersonal Mood Regulation (IMR) strategies during their client interactions, including the specification and communication of these strategies. Consequently, the tool evaluations focused on their efficacy within these interactions.

Although participants found the tools to be useful, their potential impact on service providers' Emotional Intelligence (EI) remains unexplored. Future studies could explore if these tools can be utilized to train service providers in EI, subsequently elevating their EI level beyond the temporary support provided by the tools. Recent research in psychology, as cited in Chapter 1, has begun exploring interventions targeting Interpersonal Affect Regulation (IAR). For instance, Martínez-Íñigo and colleagues (2018) examined how healthcare providers' use of IAR strategies impacts their well-being during simulated consultations, proposing the integration of emotion and interpersonal affect regulation into professional training. Another study by Martínez-Íñigo and Crego (2017) focused on training prison workers in improvement strategies, revealing positive impacts on well-being and worker-inmate relationships. These findings suggest the potential for long-term interventions to improve service providers' EI, particularly other-focused EI. Considering that individuals gather experiences and adeptly apply suitable strategies as they age (Niven, 2022), it could be valuable to refine IMR tools for long-term service provider EI training and assess their longitudinal effects on job performance, relationships, and well-being.

Context Dependency of the Strategies in Developed Tools

Throughout the studies, participants emphasized the usefulness of possessing a repertoire of Interpersonal Mood Regulation (IMR) strategies, recognizing its potential to shape client interactions and improve overall service encounters. Although such knowledge and awareness of IMR strategies is seen to potentially benefit service provision, it also raises several questions. For instance, is it always advantageous for service providers to consider a wide array of strategies? Do these strategies manifest exactly as described, or are there additional, potentially overlooked, sub-strategies that could be employed? Moreover, might these sub-strategies vary based on power dynamics and contextual nuances?

During evaluations of the developed tools, some participants noted that the set of strategies and their sub-strategies should adapt to specific contexts, as not all strategies are universally applicable and there might be some overlooked sub-strategies. Participants mentioned instances where certain sub-strategies might be unsuitable or inappropriate in particular contexts. For instance, calming sub-strategies might involve distraction and sudden change of topics in a preschool setting with a child but might entail engaging in a light-hearted conversation at the onset of a student meeting. Addressing these scenarios might necessitate a tailored set of sub-strategies to be more fitting. At present, the exploration of strategies and sub-strategies of interpersonal mood regulation across various service contexts remains relatively unexplored in psychology and design research. While organizational psychology scholars propose the benefits of Interpersonal Affect Regulation (IAR) training for service providers, questions persist regarding the strategies to be taught across diverse contexts. Developing training tools that offer flexibility in adjusting

detail and appropriateness could assist service providers in effectively considering IMR strategies. Similarly, other contexts beyond service encounters can also be investigated to find different strategies beyond the ones found in the current research.

Potential Applications of Developed Tools Across Various Domains

Application in one-to-one service encounters

The IMR tools were developed with the aim of training service providers in applying strategies during one-on-one client interactions. While initially intended for this purpose, the videos also proved to be valuable in fostering empathy, aiding in a better understanding of client moods when employing a strategy, and helping imagine client expectations. Participants mentioned the potential of cards, not only as training aids but also as tools to share with clients, co-create satisfying experiences, serve as pre- or post-interaction reminders for service providers, or aid in self-reflection after encounters.

While the current research focuses on in-person human-human interactions, we envision that service provider companies can use IMR strategies in other types of service interactions, such as phone or video calls, e-mails, or online interactions. As pointed out by Howard Giles and his colleagues (2023), with the rise of interactions involving robot or machine service providers, adapting to moods could potentially enhance these interactions. For example, customer service chatbots may be able to detect mood from the tone of the client message and respond accordingly. Companies looking to streamline their service channels by deploying virtual assistants can use these strategies to handle their clients' moods with care and take their customer service to the next level.

Beyond one-to-one service encounters: Workplace interactions and design

Beyond service provider training, we envision that the tools can also serve a purpose for service organizations to heighten manager awareness of mood's impact, cultivate positive company cultures, and enhance staff interactions. Human resource managers could utilize these tools in event planning, activity selection, and managing communication tones such as in emails. Participants also suggested ideas for applying these tools in diverse settings like groups of friends, families, and individuals with autism.

In the workshops reported in Chapters 3 and 4, the nine IMR strategy cards and videos sparked lively discussions and inspired a range of design interventions spanning products, services, educational programs, and interactive installations. They were seen as collaborative and inspirational tools, enabling participants to co-create design innovations. Participants mentioned the applicability of these tools across various domains, from service design to product design and human-computer interaction.

These findings suggest that the IMR tools potentially have broader applicability in various interactions that emphasize human-centered approaches, empathy, and the mutual enhancement of well-being for all involved parties such as in workplace interactions, family interactions or product/service-user interactions. However, while expanding the service provider's repertoire of IMR strategies can be beneficial, it does not guarantee that the result will always be a satisfactory interaction. Affective experiences are subjective and people may appraise strategies differently, leading to unforeseen effects on the recipient. Therefore, it is essential to view these tools not as rigid prescriptions but rather as flexible guiding aids.

6.3. LIMITATIONS OF MATERIALS AND CURRENT STUDIES

Ethical Considerations

One may wonder if training service providers in mood-sensitive interactions is manipulative and therefore unethical. Indeed, using strategies to regulate moods in interactions raises ethical concerns surrounding the intentional influence on people's moods, impacting both immediate interactions and potentially also long-term well-being. Given that communication inherently shapes the experiences of both parties involved, it is important for service providers to carefully consider the ethical implications when employing these tools. Despite the intention to foster positive experiences, the outcomes for both clients and providers might not consistently align with this goal. Thus, we suggest that service providers actively consider moral implications during client interactions and professional engagements. Below, we discuss some key ethical issues related to using these tools for learning, along with suggestions and avenues for further exploration.

The primary motivation behind exploring IMR strategies has been to develop designs that can support other-focused emotional intelligence (EI), more specifically to enhance mood sensitivity and its potential benefits for personal well-being. However, we should acknowledge that sensitivity to moods does not always guarantee positive outcomes. Deliberate efforts to regulate someone else's mood can sometimes result in unfavorable consequences for both the individual attempting regulation and the recipient (Niven et al., 2009). Even when done with good intentions, IMR can inadvertently create a disconnect between a client's actual needs and the perceived response from the service provider. For instance, consider a teacher choosing to employ the Blunt strategy with a gloomy student. While the teacher may believe that being completely honest and critical would invigorate the student's mood, it could instead worsen the student's feelings. The student might have preferred an understanding attitude followed by efficient guidance instead. Moreover, clients may sense insincere or forced regulation, potentially leading to a loss of trust in

the service provider and the organization, thus negatively affecting overall satisfaction and reliability (Grandey, 2003). Additionally, clients might feel a loss of autonomy if they perceive their emotions are being managed or manipulated. In long-term scenarios, especially in frequent interactions like education or healthcare services, excessive regulation might hinder a client's ability to express themselves, leading to suppressed feelings and potential dependency.

Constantly using IMR strategies can negatively impact service providers too. The continuous effort to regulate moods can drain mental and cognitive resources, affecting overall performance. Failed attempts to manage another person's mood might further deplete mental resources (Martínez-Íñigo et al., 2015, 2018). These might potentially result in emotional exhaustion, increased stress levels, and in severe cases even complaints of burnout. Moreover, it could diminish empathy, making it challenging to genuinely connect with and understand clients' emotional needs, resulting in inauthentic interactions. While some flexibility in regulating others' moods can be appropriate and effective, individuals who constantly vary their strategies across different relationships – such as work, friendship, and romantic relationships – are termed as having “high spin”. Research by Niven, Macdonald and Holman (2012) reveals that these individuals tend to experience lower positive mood, higher emotional exhaustion, and fewer close relationships. In addition, the persistent pressure of managing clients' emotions could diminish job satisfaction, leading to decreased motivation and enthusiasm for the service role. Lastly, it is important to acknowledge that implementing mood regulation strategies can sometimes lead to conflicting outcomes. Take, for instance, the scenario where a service provider decides to employ an Understanding strategy to address an upset client. While this approach may enhance the client's satisfaction, it could potentially disrupt the service provider's efficiency, as it may necessitate dedicating more time to the client, potentially causing delays for other waiting clients. Navigating this balance between client satisfaction and operational efficiency and other potential conflicts demands additional effort and skillful decision-making on their part.

Training service providers in IMR strategies comes with inherent risks that can impact the well-being of both the client and the service provider. Trainings in IMR strategies should also focus on being ethical and responsible and aim to create an awareness of potential negative effects. Below, we provide some ideas on how these disadvantages of using IMR can be avoided.

For Service Providers: Encouraging Reflection

Ethical Reflection: One way to achieve this could be by incorporating recurring cycles of ethical reflection during training sessions. This involves explicit discussions on ethical

concerns, risks and preventive strategies encompassing potential behavioral and mood changes resulting from different strategies. Discussions could extend to the frequency and variation of strategies used, along with short- and long-term implications on the clients, emphasizing privacy considerations.

Reflection on well-being: Service providers could also be encouraged to reflect on their own well-being, discussing potential changes in behavior and mood due to the use of interpersonal affect improvement and worsening strategies. This reflection may encompass the frequency and variety of strategies used, as well as their short- and long-term implications on the well-being of service providers (e.g., How does it influence me when I fail/succeed at a regulation attempt?).

Genuineness: Service providers could be encouraged to discover authentic strategies or sub-strategies that resonate with sincerity. This could involve finding phrases that feel realistic and genuine, fostering a more authentic connection with clients. Additionally, providers are advised to reflect on their strategy use, opting for a personalized set of strategies and sub-strategies rather than employing a wide range since highly varying one's strategy across different social contexts is found to be maladaptive (Niven, Macdonald & Holman, 2012).

While reflective methods exist within organizational psychology and communication, no efforts have yet been made to aid service providers in understanding the impact of these strategies on well-being. There is a chance to create training tools that help both service providers and clients foresee the well-being implications of interactions together, promoting a morally responsible approach to these trainings.

For Service Clients: Transparency and Collaboration

To address potential drawbacks of using IMR, organizations could inform clients about their intentions, seek consent, encourage open communication about support preferences, and collect feedback on the encounters when a specific IMR strategy is or is not aligning with their preferences. This transparent and collaborative approach fosters a client-provider interaction that is not manipulative or patronizing, complementing the human-centered approach.

For Organizations: Supportive Approach

Another way to mitigate the possible disadvantages of using IMR strategies could be for the organizations to regularly assess service provider well-being, offer support systems like counseling and resilience-building, and create a supportive and safe team environment for sharing experiences to distribute the emotional burden. Lastly, organizations could

set realistic IMR expectations for their employees (not “smile and look overly cheerful all the time”).

Cultural Considerations

The IMR tools were tested with participants from diverse cultural backgrounds, including the Netherlands, Slovenia, Ireland, China, Türkiye, Mexico, Australia, Germany, Spain, Italy, and Chile. Even though participants were generally positive, the sub-strategies raised questions on whether they need to be reconsidered to better suit various cultural contexts. For instance, the understanding of the Blunt strategy somewhat differed between Eastern and Western cultures, leading to varied behaviors and sub-strategies. Blunt as a strategy was also found unfamiliar or unusable by some participants. Also, the validation process primarily involved participants from the U.S., raising concerns about potential variations in how different materials might be perceived in different cultural settings.

Cultural factors, as a form of conformity motive (Niven, 2016), potentially shape individuals' experiences, expressions, and regulation of emotions (Liddell & Williams, 2019). Cultural psychology focuses on how people see themselves, especially in different cultures. In Western cultures, people often think of themselves as independent, autonomous, and focused on personal goals. In contrast, in non-Western cultures, like East Asian cultures, people tend to see themselves as connected to others and concerned with harmony in the group. These cultural differences impact perceptions of what is a “good person”, the prioritization of individual well-being relative to the social group, and the use of IAR strategies. Research has shown that individuals benefit from employing intrapersonal ER strategies consistent with cultural goals and self-concept (Matsumoto et al., 2008; Ford & Mauss, 2015). We expect that culture also influences how individuals use interpersonal affect regulation strategies as both the person employing the strategy and the person receiving it, as well as the impact or effectiveness of the strategy itself. While the link between culture and intrapersonal emotion regulation has been well-studied, only a few studies have explored the cultural aspects of *interpersonal* affect regulation (IER) strategies. For instance, a recent cross-cultural study found that people from collectivistic cultures, like East Asians, find interpersonal emotion regulation strategies more helpful in reducing stress compared to people from individualistic cultures, such as Western Europeans (e.g., Liddell & Williams, 2019). However, further research is required to explore this relationship.

These insights highlight that (1) strategy use and preference may differ across cultures, (2) the effectiveness of strategies may vary and (3) sub-strategies given in the card set tool may need adjustments for each culture. Therefore, cross-cultural validation is advisable for effective use in diverse cultural contexts. Variations in interpretation and embodiment of strategies across cultures during the workshops underscore the need for culturally sensitive

Interpersonal Mood Regulation (IMR) tools, urging further research into strategies and sub-strategies used and preferred across diverse cultural contexts.

6.4. CONTRIBUTIONS OF THE RESEARCH

The contributions of this thesis encompass three broad research domains: extending our knowledge of IMR in the context of design, organizational psychology, and marketing. These contributions intersect with experience design, service design, and mood-focused design research. First, we will discuss the contributions to design research and practice. Next, we will briefly explore contributions to the other two research domains.

Contribution to Design

Research

The surge in mood-focused design has prompted heightened attention from design researchers, acknowledging the social relevance of mood in the design process. Despite the introduction of numerous intrapersonal mood-regulating interventions, there remained a gap in addressing interpersonal mood regulation. The framework introduced in this thesis contributes to design research by providing four paths toward innovative approaches in designing for mood-sensitive services. The developed materials conveying the nuances of IMR strategies, spanning verbal explanations, visual depictions, behavioral expressions and interactive animations, can contribute to design research by aiding design researchers in expanding their understanding of IMR strategies and helping them deepen their knowledge of individual strategies as service providers themselves. Also, the materials can support user-centered research explorations, for instance, in research into user preferences and to facilitate context-specific investigations.

Practice

The IMR strategies can be practically applied in user scenarios and personas to operationalize mood regulation, depicting the unique needs of users across different mood states. For instance, in an airport check-in scenario, one group might prefer clear, efficient guidance due to feelings of anxiety, aligning with the Efficient strategy, while another group in a more cheerful state might seek lighthearted conversations, resonating with the Sociable strategy. Adapting designs to accommodate these varied preferences and incorporating the strategies into designs can help with meeting diverse mood states and corresponding action tendencies (Desmet et al., 2019).

We envision that the developed materials in this thesis, initially intended for training service providers, hold potential for broader applications in design and research. They

offer opportunities for tangible design interventions; for instance, they could be utilized in brainstorming sessions to design mood-sensitive interactions. For example, in a design student's concept called "Conversation Game" (Khinvasara & Van Klaveren, 2023) spectators choose conversation responses to highlight communication dynamics. Similar concepts could leverage these materials to raise awareness about the use of interpersonal mood regulation strategies in various contexts.

Positive Design

The current research takes an initial step in designing with and for IMR strategies emphasizing mood-sensitive interactions for overall well-being. Positive psychology highlights the link between positive relationships and individuals' well-being. Effective mood regulation correlates with mental resources, enhancing the well-being of both agents and targets. Designing for a diverse range of strategies specific to different contexts could enrich the experiences of both parties. Exploring how designers can leverage IMR knowledge to create products supporting successful mood regulation during service encounters may lead to human-centered interactions that enhance users' well-being.

Contribution to Organizational Psychology

Research

The nine IMR strategies presented in this thesis enhance the understanding of Interpersonal Affect Regulation (IAR), especially building on Niven and colleagues' work. They offer context-specific insights, making them more applicable in various service environments.

A recent study delved into strategies pertinent to a particular context and period: mood regulation among boxers and coaches during the COVID-19 pandemic (Roberts & Lane, 2021). The authors found that coaches used strategies such as "autonomy supportive behaviors" (e.g., assigning workouts), "coaches' involvement" (e.g., trying to keep in touch with boxers) and "instilling structure" (e.g., setting up weekly meetings). The tools developed in this thesis could aid psychology researchers conducting similar studies by serving as supportive materials during participant engagement and facilitating data collection discussions.

Practice

The IMR strategies move away from technical jargon, enhancing practical usability for service providers. The study of Emotional Intelligence (EI) has predominantly concentrated on its impact on well-being and performance, with a focus on enhancing these areas through training in self-regulation and empathy. While some studies have begun exploring training for interpersonal affect regulation (Martínez-Íñigo & Crego, 2017), this field of research remains relatively novel and in its early stages. Therefore, we propose that the

tools created in this thesis can be of use to organizational psychology practitioners who aim to craft IMR tools and training methods. In addition, organizational practitioners can use them in their efforts to promote team development and cultural sensitivity and to support conflict resolution. Likewise, practitioners can use the materials in their consultation services when supporting organizations seeking guidance on employee well-being and positive workplace culture.

Contributions to Marketing and Consumer Research

Consumer researchers suggest that service providers can improve communication with clients by understanding client moods and managing their own moods and responses to various customer moods and preferences (Gardner, 1985). Beyond elevating the customer experience, purchase decisions and brand perception, the framework, strategies, and developed tools offer possibilities for marketing and consumer research. By observing how different strategies influence moods and subsequent behaviors, marketers can explore the impact of mood on consumer decision-making, thus refining marketing strategies. Furthermore, this research can also offer some insights guiding the tone, language, and emotional resonance of marketing communications, improving the efficacy of marketing messaging.

6.5. FUTURE RESEARCH

Theoretical Directions

Influencing Factors on Strategy Selection and Implementation

The discussions with participants indicated that there are various factors that influence their selection of IAR strategies, including personality, mood, interaction history, client and provider expectations, context, communication medium, power dynamics, relationship type, organizational objectives and culture, type of activity, gender, time of day, period, cultural aspects, age, and more. This aligns with, for instance, Parkinson, Simons and Niven's (2016) study into gender differences in interpersonal worry regulation, indicating women's heightened attunement to their partners' changing worry levels. Other studies propose age-related advantages in assessing the need for regulation among older workers (Niven, 2022). Organizational culture also plays a role in employees' strategy use (Niven, 2016). Future research could explore the relationships between these diverse factors and the choice of strategies in encounters.

Applied Directions

Alternative Ways to Communicate Strategies

Throughout this thesis, we employed images, videos, and character animations as means to communicate the IMR strategies. We propose that exploring alternative methods to express the subtleties between strategies could contribute to the development of additional tools and interventions. Narratives are often used to convey experiences (Adamson et al, 2018; Grimaldi & Fokkinga, 2013). For example, participants proposed the integration of movie clips from well-known films to contextualize strategy use. The research of Fokkinga (2015) showcased the efficacy of this approach for negative emotions.

Combining the Materials in a Single Concept

Future initiatives could explore how the images, movies, and characters developed in this thesis can be effectively combined. For instance, serious games provide a platform for users to practice skills without real-world consequences, facilitating social skill improvement. A recent example in development psychology is Emodiscovery, a serious game developed for children to improve others' emotions. The game simulates interactions with a 3D virtual character that displays emotions and first asks children to identify the emotion and then asks them to interact with the character a few times to improve his/her mood by using four possible regulation strategies that are provided (López-Pérez & Pacella, 2021). Similarly, integrating the developed materials into an interactive serious game could assist service providers in actively engaging with the nine IMR strategies, allowing them to integrate these strategies into their skill set. This game might guide users through strategy exploration in various stages, involving applying, evaluating, reapplying, and reflecting on the strategies, utilizing the videos and description cards in tandem. Once all strategies are "unlocked", users could freely interact with the interactive characters. Collaborative development of such concepts could involve service employees and other stakeholders like trainers, educators, and psychologists for comprehensive detailing and refinement.

Exploring other Parts of the Framework

Previous studies in design have touched on the relevance of EI, particularly in self-focused emotion appraisal (both encompassing emotions and moods), indicating the potential for interventions aimed at enhancing EI among designers (Yoon, 2018; Xue, 2020). The thesis builds on the significance of Emotional Intelligence (EI) in service encounters, particularly in adjusting strategies to others' emotions which corresponds to the "other-focused emotion regulation", one of the four components of EI (see Chapter 1). While we delved into this aspect for this thesis, the other components of EI also hold potential value in enhancing service providers' capabilities and benefiting designers. The research suggests that exploring other facets like self-focused emotion regulation and other-focused emotion appraisal could offer valuable design opportunities for creating conducive workspaces,

accurately interpreting client moods, and supporting service providers' emotional regulation.

6.6. CONCLUSION

This thesis delves into Interpersonal Mood Regulation (IMR) in service settings, exploring how service providers' mood sensitivity, particularly in Interpersonal Mood Regulation, can be supported. The research introduces tools that can be used in trainings aimed at aiding service providers in crafting effective communication beneficial to both clients and providers. As this project concludes, it aims to inspire and offer practical insights to design research, organizational psychology, and practitioners aspiring to create mood-focused experiences with increased sensitivity.

Thesis Summary

Imagine the following scenario: Sarah visits a government office to seek assistance with a bureaucratic process. Already feeling confused and anxious about the complex procedures, Sarah approaches a government employee for guidance. This person responds curtly, seemingly unempathetic to Sarah's confusion and showing little patience for her inquiries. Consequently, Sarah begins to feel even more anxious, struggling to navigate the process without the needed support. Meanwhile, the government employee, stressed by a high workload and pressure to meet deadlines, reacts with increasing irritation and impatience to Sarah's questions. This negative exchange spirals downward to a communication breakdown, with both parties ending up feeling stressed and dissatisfied.

This hypothetical (although perhaps recognizable) scenario illustrates the key phenomenon in this thesis: *moods experienced in interactions in service encounters*. The focus of our research is on one-to-one interactions between service agents and clients—government employee with citizen, teacher with student, healthcare provider with patient, and so on. In some cases, the moods in these encounters are positive and contribute to successful service outcomes, while in others—like in Sarah's experience—they are negative and hamper effective service outcomes.

To address this issue, the goal of this thesis is to deepen our understanding of mood in service interactions. In addition, it explores interpersonal mood regulation (IMR) in service encounters and develops tools to assist service providers in effectively incorporating IMR strategies during service encounters. Specifically, the research focused on four key questions:

1. What is the role of mood in service encounters?
2. What IMR strategies are used by the service providers in response to client's moods?
3. How can IMR strategies be facilitated through training tools for service providers?
4. What are the strengths and limitations of the developed materials to facilitate IMR?

Chapter 1: Introduction

Chapter 1 provides the background literature to contextualize the current research. It defines mood, mood regulation and interpersonal affect regulation, and provides an overview of mood in service encounters. In addition, the chapter discusses Emotional Intelligence as a training avenue, examines the role of mood in design research and outlines the project objectives.

Chapter 2: Role of Mood in Service Encounters

To answer the first two research questions, Chapter 2 delves into the role of mood in service encounters and identifies Interpersonal Mood Regulation (IMR) strategies used by service providers. We introduce the concept of "mood sensitivity" as the ability of service

agents to recognize and manage both their own and the clients' moods to enhance service interactions. We report the results of an experience sampling study with eleven service providers from various sectors (education, healthcare, government) on how mood is experienced and managed by service providers. The resulting "Framework of Mood Sensitive Interaction" comprises four components: (A) awareness of one's own mood, (B) regulation of one's own mood to safeguard personal well-being, (C) recognition of the client's mood and (D) strategic management of client's mood through interaction adjustments (Figure 1). Additionally, the chapter introduces nine IMR strategies: (1) Understanding, (2) Calming, (3) Encouraging, (4) Sociable, (5) Apologetic, (6) Efficient, (7) Tolerating, (8) Blunt and (9) Distant.

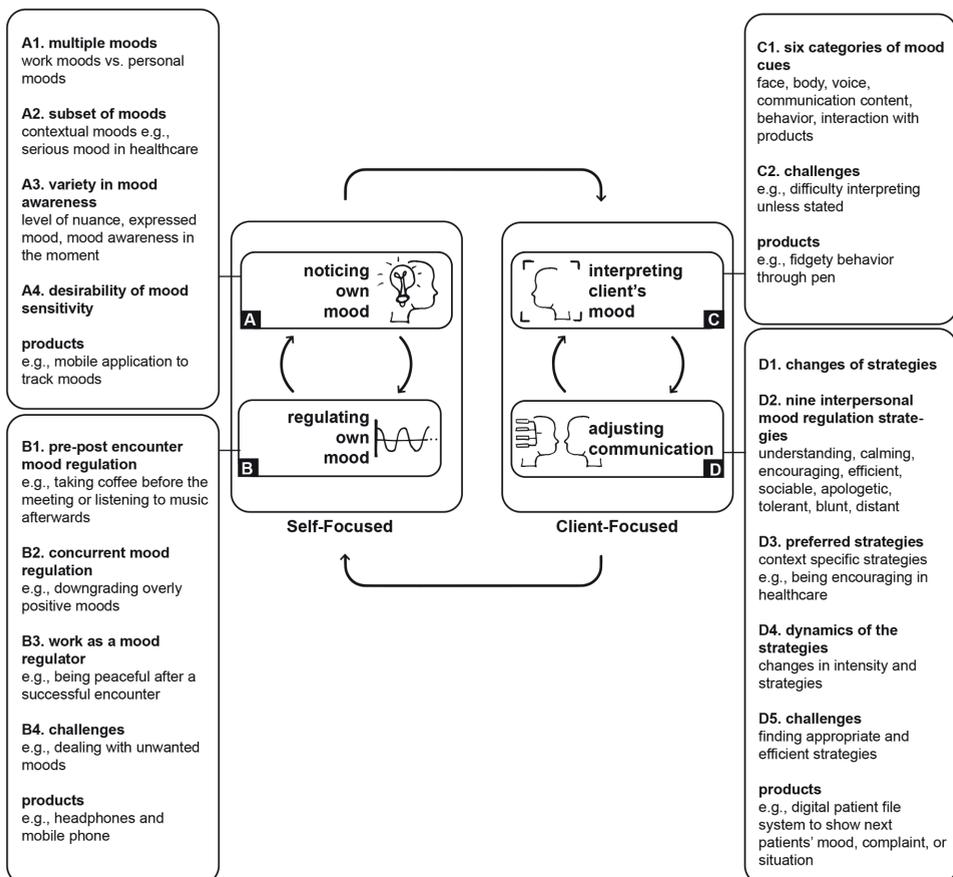


Figure 1. Framework of Mood-Sensitive Interactions

Chapters 3-4-5: Developing Training Tools

Chapters 3, 4, and 5 focus on developing training tools to facilitate IMR strategies for service providers. We developed three distinct training tools, based on cards, videos, and animated characters (Figure 2).

- **Chapter 3** focused on creating nine IMR strategy cards, each detailing a specific strategy used in interpersonal interactions. These cards included a strategy label, situational descriptions, visual depictions, and relevant quotes. The cards featured illustrations of client-service provider interactions in an office setting. After an initial online validation study with 27 participants, the images were revised and re-evaluated by 29 participants. Almost all images were found to be clear, except for those representing Understanding, Encouraging, and Efficient. The cards and the instructions were tested in a workshop, revealing that the participants found the cards, to be clear, helpful and intuitive, especially the images and the quotes. Although some activities were found to be overlapping and complex, they were described as fun and inspirational, sparking discussion and reflection.
- **Chapter 4** focused on the development of nine IMR strategy videos, depicting how these strategies are used during interactions with clients in an office setting to increase and enrich understanding. Professional actors were involved in creating these videos. A validation study was conducted through an online questionnaire with 30 participants. The videos were then tested in a workshop, accompanied by instructions for a role-playing session. While not all sub-strategies were fully demonstrated, the videos were found to convey the essence of the strategies quickly and effortlessly. Additionally, role-playing proved insightful, making intuitive actions conscious and fostering discussion, reflection, and the exchange of knowledge and experience among service providers.
- **Chapter 5** centered on developing nine character-based animations, which provided interactive and dynamic representations allowing service providers to explore IMR strategies in an engaging manner. The development process required several iterations due to the challenge of representing a complex phenomenon through a single animation with a non-figurative character. Collaborating with a visual artist and character designer, characters were crafted to embody qualities associated with each strategy. A validation study conducted through an online questionnaire involving 32 participants revealed some confusion among most characters, even though spontaneous associations generally pointed towards the intended strategy.

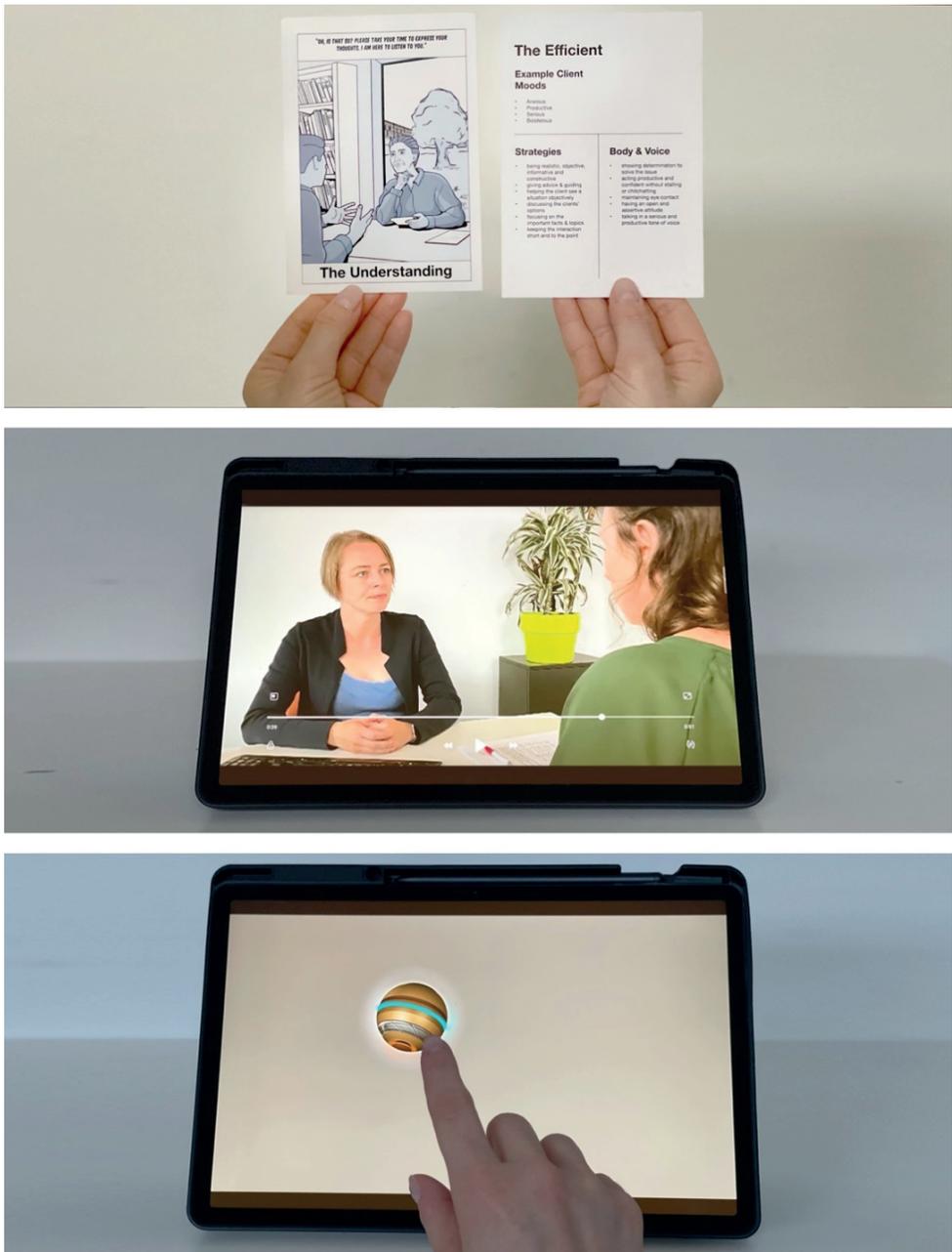


Figure 2. Three developed materials; (top: a sample of the cards, middle: a sample of the videos, bottom: a sample of the character animations)

Chapter 6: Discussion

In the final chapter, we analyze the main findings, elaborate on the new insights, and discuss avenues for future research. A comparison of the three materials revealed that over 50% of the participants correctly identified labels in most videos and images, while character animations had a lower hit rate in labeling tasks and open-ended questions. While correspondence analyses indicated distinct response patterns across cards, videos and character animations, we observed consistency in sub-groupings where strategies such as Calming, Understanding, Encouraging and Sociable tended to cluster together showing similarity with existing classifications. We discuss opportunities to explore sub-strategies in different contexts and to examine the long-term effects of using developed tools on service interactions, client satisfaction and employee wellbeing.

Furthermore, we suggest potential applications of the developed tools in one-to-one service encounters, such as empathy tools or incorporation in robot service interactions and beyond, such as inspiration tools for design interventions. We address limitations focusing on ethical and cultural considerations, proposing ways to mitigate possible negative effects of using IMR and further research on sub-strategies across different cultures.

Additionally, we discuss the contributions of the developed materials to design research, practice and positive design, offering opportunities for tangible design interventions. We also explore their impact on organizational psychology, marketing, and consumer research, serving as supportive materials for both research and practical applications. Finally, we conclude with potential future research avenues, such as investigating factors influencing strategy selection, alternative methods for conveying strategies, concepts combining materials, and exploring other aspects of the suggested framework.

Thesis

Samenvatting

Stel je het volgende scenario voor: Sarah bezoekt een overheidskantoor om hulp te zoeken bij een bureaucratisch proces. Al verward en angstig door de complexe procedures, benadert Sarah een overheidsmedewerker voor begeleiding. Deze persoon reageert kortaf, lijkt niet empathisch te zijn voor Sarah's verwarring en toont weinig geduld voor haar vragen. Het gevolg is dat Sarah zich nog angstiger begint te voelen en worstelt met het proces zonder de nodige ondersteuning. Ondertussen reageert de overheidsmedewerker, gestrest door een hoge werkdruk en deadlines, met toenemende irritatie en ongeduld op Sarah's vragen. Deze negatieve wisselwerking leidt tot een communicatiebreuk, waarbij beide partijen zich gestrest en ontevreden voelen.

Dit hypothetische (maar wellicht herkenbare) scenario illustreert het fenomeen van studie in deze scriptie: stemmingen die worden ervaren in interacties tijdens dienstverlening. Ons onderzoek richt zich op één-op-één interacties tussen dienstverleners en klanten — een overheidsmedewerker met een burger, een leraar met een student, een zorgverlener met een patiënt, enzovoorts. In sommige gevallen zijn de stemmingen in deze ontmoetingen positief en dragen ze bij aan succesvolle service-uitkomsten, terwijl ze in andere gevallen — zoals in Sarah's ervaring — negatief zijn en effectieve service-uitkomsten belemmeren.

Om dit probleem aan te pakken, is het doel van deze thesis om ons begrip van stemming in service-interacties te verdiepen. Daarnaast verkennen we interpersoonlijke stemmingsregulatie (IMR) in service-ontmoetingen en ontwikkelen we hulpmiddelen om dienstverleners te helpen IMR-strategieën effectief toe te passen tijdens service-ontmoetingen. Specifiek richtte het onderzoek zich op vier kernvragen:

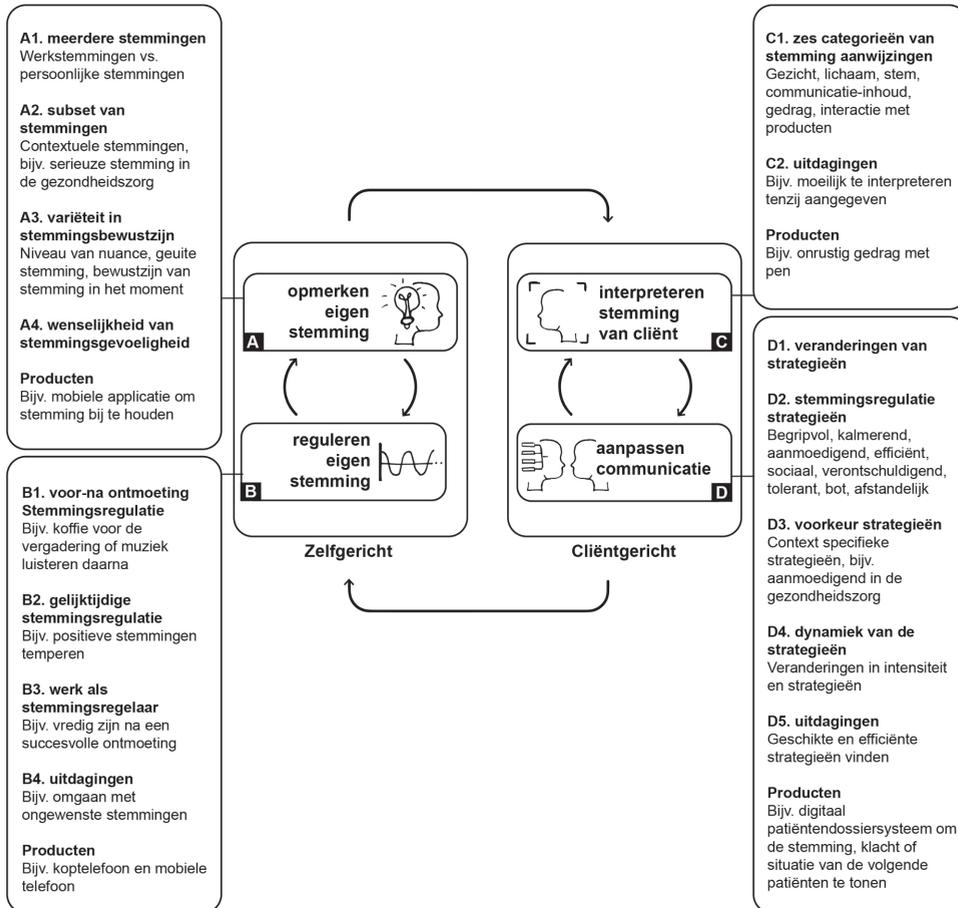
- a) Wat is de rol van stemming in service-ontmoetingen?
- b) Welke IMR-strategieën worden door dienstverleners gebruikt in reactie op de stemming van de klant?
- c) Hoe kunnen IMR-strategieën worden gefaciliteerd door middel van trainingshulpmiddelen voor dienstverleners?
- d) Wat zijn de sterke en zwakke punten van de ontwikkelde materialen om IMR te faciliteren?

Hoofdstuk 1: Inleiding

Hoofdstuk 1 biedt een overzicht van de achtergrondliteratuur om het huidige onderzoek in context te plaatsen. Het definieert stemming, stemmingsregulatie en interpersoonlijke affectregulatie, en biedt een overzicht van stemming in service-ontmoetingen. Daarnaast bespreekt het hoofdstuk emotionele intelligentie als een trainingsmogelijkheid, onderzoekt het de rol van stemming in ontwerponderzoek en geeft het een overzicht van de projectdoelstellingen.

Hoofdstuk 2: Rol van Stemming in Service-Ontmoetingen

Om de eerste twee onderzoeksvragen te beantwoorden, verdiept Hoofdstuk 2 zich in de rol van stemming in service-ontmoetingen en identificeert het Interpersoonlijke Stemningsregulatie (IMR) strategieën die door dienstverleners worden gebruikt. We introduceren het concept van "stemmingsgevoeligheid" als het vermogen van dienstverleners om zowel hun eigen stemming als die van de klant te herkennen en te reguleren om service-interacties te verbeteren. We rapporteren de resultaten van een *experience sampling* studie met elf dienstverleners uit verschillende sectoren (onderwijs, gezondheidszorg, overheid) over hoe stemming wordt ervaren en gereguleerd door dienstverleners. Het resulterende "Raamwerk van Stemmingsgevoelige Interacties" omvat vier componenten: (A) bewustzijn van de eigen stemming, (B) regulering van de eigen stemming om het eigen welzijn te waarborgen, (C) herkenning van de stemming van de klant, en (D) strategisch beheer van de stemming van de klant door middel van aanpassingen in de interactie (Figuur 1). Daarnaast introduceert het hoofdstuk negen IMR-strategieën: (1) Begripvol, (2) Kalmerend, (3) Aanmoedigend, (4) Sociaal, (5) Verontschuldiging, (6) Efficiënt, (7) Tolerant, (8) Bot, en (9) Afstandelijk.



Figuur 1. Raamwerk van Stemmingsgevoelige Interacties

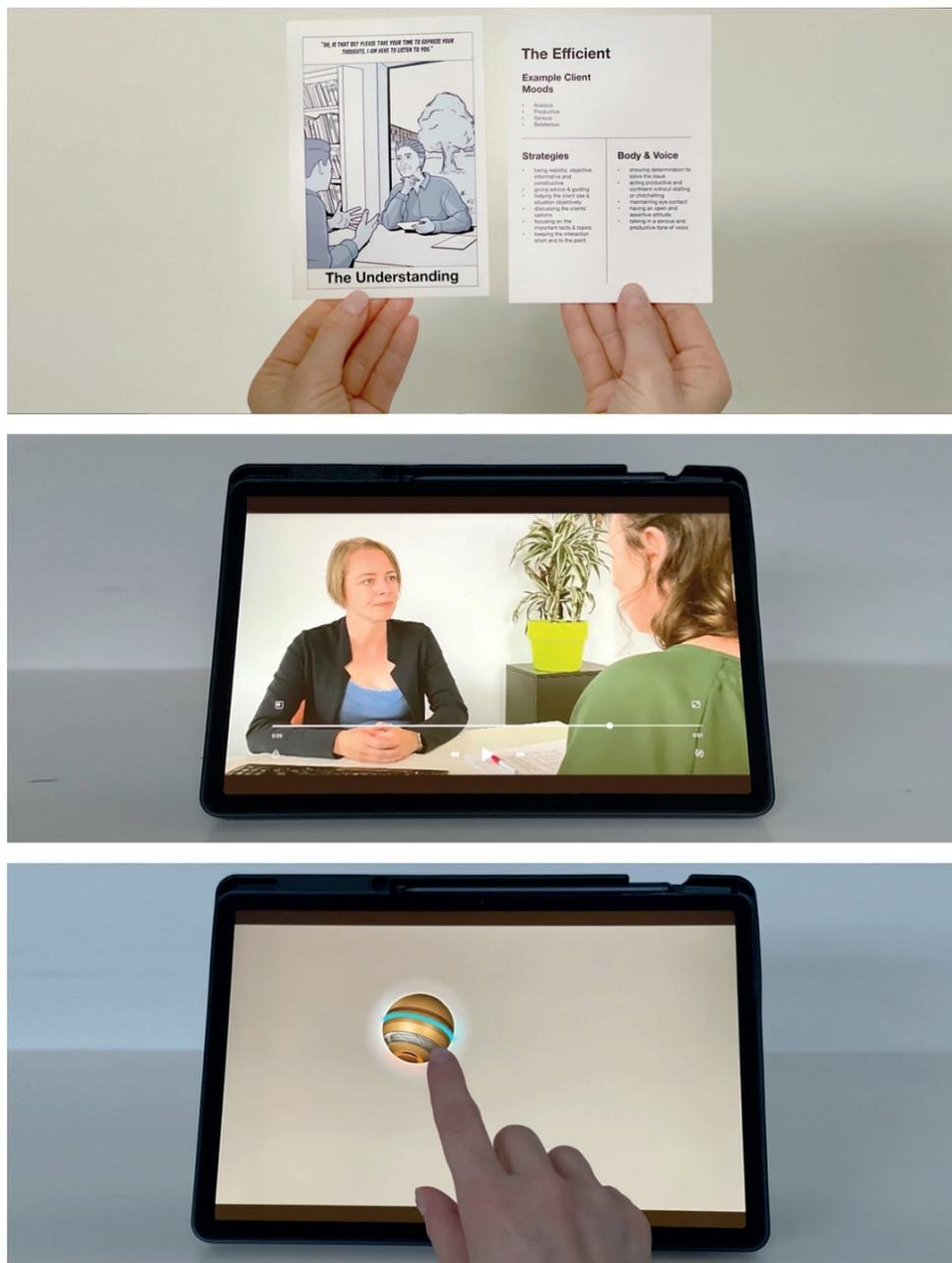
Hoofdstukken 3-4-5: Ontwikkeling van Trainingshulpmiddelen

Hoofdstukken 3, 4 en 5 richten zich op het ontwikkelen van trainingshulpmiddelen om IMR-strategieën voor dienstverleners te faciliteren. We ontwikkelden drie verschillende trainingshulpmiddelen, gebaseerd op kaarten, video's en geanimeerde karakters (Figuur 2).

- Hoofdstuk 3 richtte zich op het creëren van negen IMR-strategiekaarten, elk met een specifieke strategie die wordt gebruikt in interpersoonlijke interacties. Deze kaarten bevatten een strategielabel, situationele beschrijvingen, afbeeldingen en relevante citaten. De afbeeldingen tonen klant-dienstverlener interacties in een kantooromgeving. Na een initiële online validatiestudie met 27 deelnemers, werden de afbeeldingen herzien en opnieuw geëvalueerd door 29 deelnemers. Bijna alle afbeeldingen bleken duidelijk, behalve die voor Begripvol, Aanmoedigend en Efficiënt. De kaarten en instructies werden getest in een workshop, waaruit bleek dat de deelnemers de

kaarten, vooral de afbeeldingen en citaten, duidelijk, nuttig en intuïtief vonden. Hoewel sommige activiteiten overlappend en complex bleken, werden ze beschreven als leuk en inspirerend, wat discussie en reflectie stimuleerde.

- Hoofdstuk 4 richtte zich op de ontwikkeling van negen IMR-strategievideo's, waarin wordt getoond hoe deze strategieën worden ingezet tijdens interacties met klanten in een kantooromgeving om begrip te vergroten en te verrijken. Professionele acteurs waren betrokken bij het maken van deze video's. Een validatiestudie werd uitgevoerd via een online vragenlijst met 30 deelnemers. De video's werden vervolgens getest in een workshop, vergezeld van instructies voor een rollenspel. Hoewel niet alle sub-strategieën volledig werden getoond, bleken de video's de essentie van de strategieën snel en moeiteloos over te brengen. Bovendien bleek rollenspel inzichtelijk, doordat intuïtieve acties bewust werden gemaakt en discussie, reflectie en kennisuitwisseling tussen dienstverleners werd bevorderd.
- Hoofdstuk 5 concentreerde zich op het ontwikkelen van negen karakter-gebaseerde animaties, die interactieve en dynamische representaties boden waardoor dienstverleners IMR-strategieën op een boeiende manier konden verkennen. Het ontwikkelingsproces vereiste verschillende iteraties vanwege de uitdaging om een complex fenomeen weer te geven door middel van een enkele animatie met een niet-figuratief karakter. Samenwerkend met een visueel kunstenaar en een karakterontwerper, werden karakters ontworpen om eigenschappen te belichamen die bij elke strategie horen. Een validatiestudie, uitgevoerd via een online vragenlijst met 32 deelnemers, onthulde enige verwarring onder de meeste karakters, hoewel spontane associaties over het algemeen wezen in de richting van de bedoelde strategie.



Figuur 2. Drie ontwikkelde materialen (boven: een voorbeeld van de kaarten, midden: een voorbeeld van de video's, onder: een voorbeeld van de karakteranimaties)

Hoofdstuk 6: Discussie

In het laatste hoofdstuk analyseren we de belangrijkste bevindingen, bespreken we de nieuwe inzichten richtingen voor toekomstig onderzoek. Een vergelijking van de drie materialen onthulde dat meer dan 50% van de deelnemers labels correct identificeerde in de meeste video's en afbeeldingen, terwijl de karakteranimaties een lagere herkenningsscore hadden. Correspondentie analyses gaven verschillende responspatronen aan tussen kaarten, video's en karakteranimaties. Tegelijkertijd observeerden we consistentie in sub-groeperingen waar strategieën zoals Kalmerend, Begripvol, Aanmoedigend en Sociaal de neiging hadden om samen te clusteren, welke overeenkomsten met bestaande classificaties liet zien. We bespreken mogelijkheden om substrategieën in verschillende contexten te verkennen en om de langetermijneffecten van het gebruik van de ontwikkelde hulpmiddelen op service-interacties, klanttevredenheid en het welzijn van werknemers te onderzoeken.

Verder suggereren we potentiële toepassingen van de ontwikkelde hulpmiddelen in één-op-één service-ontmoetingen, zoals in empathietools of in robotservice-interacties, als ook in inspiratietools voor ontwerpprocessen. We benoemen beperkingen van het onderzoek en de resultaten, met een focus op ethische en culturele overwegingen, en stellen manieren voor om mogelijke negatieve effecten van het gebruik van IMR te verminderen en verder onderzoek te doen naar substrategieën in verschillende culturen.

Daarnaast bespreken we de bijdragen van de ontwikkelde materialen aan ontwerponderzoek, praktijk en *positive design*, en benoemen we mogelijkheden voor tastbare ontwerpingsrepen. We verkennen ook hun impact op organisatiepsychologie, marketing en consumentenonderzoek, waarbij ze kunnen dienen als ondersteunend materiaal voor zowel onderzoek als praktische toepassingen. Tenslotte besluiten we met potentiële toekomstige onderzoeksmogelijkheden, zoals het onderzoeken van factoren die van invloed zijn op de strategiekeuze, alternatieve methoden voor het overbrengen van strategieën, concepten die materialen combineren en het verkennen van andere aspecten van het voorgestelde raamwerk.

References

Adams, S. B., & Scott, L. D. (2018). Gray reflections: poetry as a pathway to nursing student empathy and the creation of meaning in a long-term-care clinical practicum. *Creative Nursing*, 24(1), 52-61. <https://doi.org/10.1891/1078-4535.24.1.52>

Adamson, K., Sengsavang, S., Charise, A., Wall, S., Kinross, L., & Balkaran, M. (2018). Narrative training as a method to promote nursing empathy within a pediatric rehabilitation setting. *Journal of Pediatric Nursing*, 42, e2-e9. <https://doi.org/10.1016/j.pedn.2018.06.011>

Adelmann, P. K. (1995). Emotional labor as a potential source of job stress. In S. L. Sauter & L. R. Murphy (Eds.), *Organizational risk factors for job stress* (pp. 371–381). American Psychological Association. <https://doi.org/10.1037/10173-023>

Alame, F. M. (2016). *Exploring leaders' strategies for managing negative emotions of sales people*. [Doctoral dissertation, University of Strathclyde]. Retrieved from <https://stax.strath.ac.uk/concern/theses/gq67jr29s>

Alonso, M. B., Keyson, D. V., & Hummels, C. C. M. (2008). Squeeze, rock, and roll; Can tangible interaction with affective products support stress reduction? In *Proceedings of the 2nd International Conference on Tangible and Embedded Interaction* (pp. 105–108). ACM. <https://doi.org/10.1145/1347390.1347413>

Amini, H., Gregory, M. E., Abrams, M. A., Luna, J., Roland, M., Sova, L. N., ... & Lin, E. J. D. (2021). Feasibility and usability study of a pilot immersive virtual reality-based empathy training for dental providers. *Journal of Dental Education*, 85(6), 856-865. <https://doi.org/10.1002/jdd.12566>

Ashforth, B. E., & Humphrey, R. H. (1993). Emotional labor in service roles: The influence of identity. *Academy of management review*, 18(1), 88-115. <https://doi.org/10.2307/258824>

Austin, E. J., & O'Donnell, M. M. (2013). Development and preliminary validation of a scale to assess managing the emotions of others. *Personality and Individual Differences*, 55(7), 834–839. <https://doi.org/10.1016/j.paid.2013.07.005>

Austin, E. J., Saklofske, D. H., Smith, M., & Tohver, G. (2014). Associations of the managing of the emotions of others (MEOS) scale with personality, the Dark Triad and trait EI. *Personality and Individual Differences*, 65, 8-13. <https://doi.org/10.1016/j.paid.2014.01.060>

Azizi, A., Borjali, A., & Golzari, M. (2010). The effectiveness of emotion regulation training and cognitive therapy on the emotional and additional problems of substance abusers. *Iranian Journal of Psychiatry, 5*(2), 60.

Back, A. L., Arnold, R. M., Baile, W. F., Fryer-Edwards, K. A., Alexander, S. C., Barley, G. E., ... & Tulskey, J. A. (2007). Efficacy of communication skills training for giving bad news and discussing transitions to palliative care. *Archives of internal medicine, 167*(5), 453-460. <https://doi.org/10.1001/archinte.167.5.453>

Bagacean, C., Cousin, I., Ubertini, A. H., El Yacoubi El Idrissi, M., Bordron, A., Mercadie, L., ... & Berthou, C. (2020). Simulated patient and role play methodologies for communication skills and empathy training of undergraduate medical students. *BMC medical education, 20*, 1-8. [10.1186/s12909-020-02401-0](https://doi.org/10.1186/s12909-020-02401-0)

Baker, J., & Cameron, M. (1996). The effects of the service environment on affect and consumer perception of waiting time: An integrative review and research propositions. *Journal of the Academy of Marketing Science, 24*, 338-349. <https://doi.org/10.1177/0092070396244005>

Bank, I., Rasenberg, E. M. C., Makkenze-Mangold, S. H., Nelissen, S., Van Wijngaarden, J., Lovink, A. G., & Rethans, J.-J. (2021). Fifteen simulated patient working formats to use in communication skills training: Report of a survey. *Medical Teacher, 43*(12), 1391-1397. <https://doi.org/10.1080/0142159X.2021.1948522>

Baños, R. M., Etchemendy, E., Castilla, D., García-Palacios, A., Quero, S., & Botella, C. (2012). Positive mood induction procedures for virtual environments designed for elderly people. *Interacting with Computers, 24*(3), 131-138. <https://doi.org/10.1016/j.intcom.2012.04.002>

Baños, R. M., Liaño, V., Botella, C., Alcañiz, M., Guerrero, B., & Rey, B. (2006). Changing induced moods via virtual reality. In *Persuasive Technology: First International Conference on Persuasive Technology for Human Well-Being, PERSUASIVE 2006, Eindhoven, The Netherlands, May 18-19, 2006. Proceedings 1* (Vol. 1, pp. 7-15). Springer Berlin Heidelberg. <https://doi.org/10.22667/JOWUA.2017.09.30.018>

Barak, A. (1990). Counselor training in empathy by a game procedure. *Counselor Education and Supervision, 29*(3), 170-178. <https://doi.org/10.1002/j.1556-6978.1990.tb01152.x>

Barkai, J. L., & Fine, V. O. (1982). Empathy training for lawyers and law students. *Southwestern University Law Review, 13*, 505.

- Bas-Sarmiento, P., Fernández-Gutiérrez, M., Baena-Baños, M., Corroero-Bermejo, A., Soler-Martins, P. S., & De la Torre-Moyano, S. (2020). Empathy training in health sciences: A systematic review. *Nurse Education in Practice*, 44, 102739. <https://doi.org/10.1016/j.nepr.2020.102739>
- Bauchat, J. R., Seropian, M., & Jeffries, P. R. (2016). Communication and empathy in the patient-centered care model—why simulation-based training is not optional. *Clinical Simulation in Nursing*, 12(8), 356-359. <https://doi.org/10.1016/j.ecns.2016.04.003>
- Baumeister, R. F., Bratslavsky, E., Finkenauer, C., & Vohs, K. D. (2001). Bad is stronger than good. *Review of General Psychology*, 5(4), 323–370. <https://doi.org/10.1037/1089-2680.5.4.323>
- Beardsley, M., Vujovic, M., Portero-Tresserra, M., & Hernández-Leo, D. (2019). Classmood app: A classroom orchestration tool for identifying and influencing student moods. In M. Scheffel (Ed.), *Transforming learning with meaningful technologies: 14th European conference on technology enhanced learning, EC-TEL 2019, Delft, The Netherlands, September 16–19, 2019, Proceedings* (pp. 723–726). Springer. https://doi.org/10.1007/978-3-030-29736-7_75
- Beckman, H. B., Wendland, M., Mooney, C., Krasner, M. S., Quill, T. E., Suchman, A. L., & Epstein, R. M. (2012). The impact of a program in mindful communication on primary care physicians. *Academic Medicine*, 87(6), 815-819. [10.1097/ACM.0b013e318253d3b2](https://doi.org/10.1097/ACM.0b013e318253d3b2)
- Beedie, C. J., Terry, P. C., & Lane, A. M. (2005). Distinctions between emotion and mood. *Cognition and Emotion*, 19(6), 847-878. <https://doi.org/10.1080/02699930541000057>
- Beigi, M., & Shirmohammadi, M. (2011). Effects of an emotional intelligence training program on service quality of bank branches. *Managing Service Quality: An International Journal*, 21(5), 552-567. <https://doi.org/10.1108/09604521111159825>
- Berking, M., Meier, C., & Wupperman, P. (2010). Enhancing emotion-regulation skills in police officers: Results of a pilot controlled study. *Behavior Therapy*, 41(3), 329–339. <https://doi.org/10.1016/j.beth.2009.08.001>
- Berking, M., & Schwarz, J. (2014). Affect regulation training. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 529–547). Guilford Press.
- Berking, M., & Whitley, B. (2014). *Affect regulation training: A practitioner's manual*. Springer Science + Business Media. <https://doi.org/10.1007/978-1-4939-1022-9>

- Bertrand, P., Guegan, J., Robieux, L., McCall, C. A., & Zenasni, F. (2018). Learning empathy through virtual reality: Multiple strategies for training empathy-related abilities using body ownership illusions in embodied virtual reality. *Frontiers in Robotics and AI*, 5, 26. <https://doi.org/10.3389/frobt.2018.00026>
- Bialoskorski, L. S., Westerink, J. H., & Van den Broek, E. L. (2009). Mood Swings: An affective interactive art system. In *Intelligent Technologies for Interactive Entertainment: Third International Conference, INTETAIN 2009, Amsterdam, The Netherlands, June 22-24, 2009. Proceedings 3* (pp. 181-186). Springer Berlin Heidelberg. http://dx.doi.org/10.1007/978-3-642-02315-6_17
- Bitner, M. J. (1992). Servicescapes: The impact of physical surroundings on customers and employees. *Journal of Marketing*, 56(2), 57-71. <https://doi.org/10.2307/1252042>
- Bitner, M. J. (1990). Evaluating service encounters: the effects of physical surroundings and employee responses. *Journal of Marketing*, 54(2), 69-82. <https://doi.org/10.2307/1251871>
- Bitner, M. J., Brown, S. W., & Meuter, M. L. (2000). Technology infusion in service encounters. *Journal of the Academy of Marketing Science*, 28(1), 138-149. <https://doi.org/10.1177/0092070300281013>
- Bitner, M. J., Booms, B. H., & Tetreault, M. S. (1990). The service encounter: diagnosing favorable and unfavorable incidents. *Journal of Marketing*, 54(1), 71-84. <https://doi.org/10.2307/1252174>
- Block-Lerner, J., Adair, C., Plumb, J. C., Rhatigan, D. L., & Orsillo, S. M. (2007). The case for mindfulness-based approaches in the cultivation of empathy: Does nonjudgmental, present-moment awareness increase capacity for perspective-taking and empathic concern?. *Journal of Marital and Family Therapy*, 33(4), 501-516. <https://doi.org/10.1111/j.1752-0606.2007.00034.x>
- Bodenhorn, N., & Starkey, D. (2005). Beyond role-playing: Increasing counselor empathy through theater exercises. *Journal of Creativity in Mental Health*, 1(2), 17-27. [10.1300/J456v01n02_03](https://doi.org/10.1300/J456v01n02_03)
- Bonvicini, K. A., Perlin, M. J., Bylund, C. L., Carroll, G., Rouse, R. A., & Goldstein, M. G. (2009). Impact of communication training on physician expression of empathy in patient encounters. *Patient education and counseling*, 75(1), 3-10. <https://doi.org/10.1016/j.pec.2008.09.007>

BOON Factory. (2020, July 3). Screenshot from "Spotlighters, ClassMood App." <https://youtu.be/N-lekGg3m2w>

Brackett, M. A., Rivers, S. E., & Salovey, P. (2011). Emotional intelligence: Implications for personal, social, academic, and workplace success. *Social and Personality Psychology Compass*, 5(1), 88–103. <https://doi.org/10.1111/j.1751-9004.2010.00334.x>

Bradley, G.L., McColl-Kennedy, J.R., Sparks, B.A., Jimmieson, N.L. and Zapf, D. (2010), "Chapter 9 Service encounter needs theory: A dyadic, psychosocial approach to understanding service encounters", Zerbe, W.J., Charmine E. J., H. and Neal M., A. (Ed.) *Emotions and Organizational Dynamism (Research on Emotion in Organizations, Vol. 6)*, Emerald Group Publishing Limited, Leeds, pp. 221-258. [https://doi.org/10.1108/S1746-9791\(2010\)0000006013](https://doi.org/10.1108/S1746-9791(2010)0000006013)

Brasseur, S., Grégoire, J., Bourdu, R., & Mikolajczak, M. (2013). The profile of emotional competence (PEC): Development and validation of a self-reported measure that fits dimensions of emotional competence theory. *PloS one*, 8(5), e62635. <https://doi.org/10.1371/journal.pone.0062635>

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 86–94. <https://doi.org/10.1191/1478088706qp063oa>

Braun, V., & Clarke, V. (2021). Can I use TA? Should I use TA? Should I not use TA? Comparing reflexive thematic analysis and other pattern-based qualitative analytic approaches. *Counselling and Psychotherapy Research*, 21(1), 37–47. <https://doi.org/10.1002/capr.12360>

Braun, C., & Tamminen, K. A. (2019). Coaches' interpersonal emotion regulation and the coach-athlete relationship. *Movement & Sport Sciences-Science & Motricité*, (3), 37-51. <https://doi.org/10.1051/sm/2019011>

Brief, A. P., & Weiss, H. M. (2002). Organizational behavior: Affect in the workplace. *Annual Review of Psychology*, 53(1), 279–307. <https://doi.org/10.1146/annurev.psych.53.100901.135156>

Brotheridge, C. M., & Lee, R. T. (2002). Testing a conservation of resources model of the dynamics of emotional labor. *Journal of Occupational Health Psychology*, 7(1), 57–67. <https://doi.org/10.1037/1076-8998.7.1.57>

- Brown, F. W., & Moshavi, D. (2005). Transformational leadership and emotional intelligence: A potential pathway for an increased understanding of interpersonal influence. *Journal of Organizational Behavior, 26*(7), 867-871. <https://doi.org/10.1002/job.334>
- Brunero, S., Lamont, S., & Coates, M. (2010). A review of empathy education in nursing. *Nursing inquiry, 17*(1), 65–74. <https://doi.org/10.1111/j.1440-1800.2009.00482.x>
- Buruck, G., Dörfel, D., Kugler, J., & Brom, S. S. (2016). Enhancing well-being at work: The role of emotion regulation skills as personal resources. *Journal of Occupational Health Psychology, 21*(4), 480–493. <https://doi.org/10.1037/ocp0000023>
- Butler, A. C., Chapman, J. E., Forman, E. M., & Beck, A. T. (2006). The empirical status of cognitive-behavioral therapy: A review of meta-analyses. *Clinical psychology review, 26*(1), 17-31. <https://doi.org/10.1016/j.cpr.2005.07.003>
- Campo, M., Laborde, S., Weckemann, S., & Colombus, A. (2015). Emotional intelligence training: Implications for performance and health. *Adv Psychol Res, 101*, 75-92.
- Carlson, M., Charlin, V., & Miller, N. (1988). Positive mood and helping behavior: A test of six hypotheses. *Journal of Personality and Social Psychology, 55*(2), 211–229. <https://doi.org/10.1037/0022-3514.55.2.211>
- Cataldo, K. P., Peeden, K., Geesey, M. E., & Dickerson, L. (2005). Association between Balint training and physician empathy and work satisfaction. *Fam Med, 37*(5), 328-31.
- Cramer, E. P., McLeod, D. A., Craft, M., & Agnelli, K. (2017). Using arts-based materials to explore the complexities of clinical decision-making in a social work methods course. *Social Work Education, 37*(3), 342–360. <https://doi.org/10.1080/02615479.2017.1401061>
- Cheung, E. O., Gardner, W. L., & Anderson, J. F. (2015). Emotionships: Examining People’s Emotion-Regulation Relationships and Their Consequences for Well-Being. *Social Psychological and Personality Science, 6*(4), 407–414. <https://doi.org/10.1177/1948550614564223>
- Chiew, T. M., Mathies, C., & Patterson, P. (2019). The effect of humour usage on customer’s service experiences. *Australian Journal of Management, 44*(1), 109-127. <https://doi.org/10.1177/0312896218775799>

Church, K., Hoggan, E., & Oliver, N. (2010, October). A study of mobile mood awareness and communication through MobiMood. In *Proceedings of the 6th Nordic conference on human-computer interaction: extending boundaries* (pp. 128-137). <https://doi.org/10.1145/1868914.1868933>

Clark, M. S. & Isen, A. M. (1982). Towards understanding the relationship between feeling states and social behavior. In A. H. Hastorf & A. M. Isen (Eds.), *Cognitive social psychology* (pp. 73-108). New York: Elsevier-North Holland.

Cloitre, M., Koenen, K. C., Cohen, L. R., & Han, H. (2002). Skills training in affective and interpersonal regulation followed by exposure: A phase-based treatment for PTSD related to childhood abuse. *Journal of Consulting and Clinical Psychology, 70*(5), 1067–1074. <https://doi.org/10.1037/0022-006X.70.5.1067>

Cloonan, S. (2019). *"It's part of my responsibility to help": Developing a measure of motivations for extrinsic emotion regulation* [Unpublished bachelor's thesis]. University of Richmond.

Clyne, C., & Blampied, N. M. (2004). Training in emotion regulation as a treatment for binge eating: A preliminary study. *Behaviour Change, 21*(4), 269-281. <https://doi.org/10.1375/bech.21.4.269.66105>

Cohen, N., & Ochsner, K. N. (2018). From surviving to thriving in the face of threats: the emerging science of emotion regulation training. *Current Opinion in Behavioral Sciences, 24*, 143-155. <https://doi.org/10.1016/j.cobeha.2018.08.007>

Cohn, J. F., & De la Torre, F. (2015). Automated face analysis for affective computing. In R. A. Calvo, S. K. D'Mello, J. Gratch, & A. Kappas (Eds.), *The Oxford handbook of affective computing* (pp. 131–150). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199942237.013.020>

Conger, J. A., & Kanungo, R. N. (1998). *Charismatic leadership in organizations*. Sage Publications.

Conklin, C. Z., Bradley, R., & Westen, D. (2006). Affect regulation in borderline personality disorder. *The Journal of Nervous and Mental Disease, 194*(2), 69-77. <https://doi.org/10.1097/01.nmd.0000198138.41709.4f>

Cross, R., & Parker, A. (2004). Charged up: Creating energy in organizations. *Journal of Organizational Excellence, 23*(4), 3-14. <https://doi.org/10.1002/npr.20021>

- Csikszentmihalyi, M., & Larson, R. (2014). Validity and reliability of the experience-sampling method. In M. Csikszentmihalyi (Ed.), *Flow and the foundations of positive psychology: The collected works of Mihaly Csikszentmihalyi* (pp. 35–54). Springer. https://doi.org/10.1007/978-94-017-9088-8_3
- Dahlbäck, N., Jönsson, A., & Ahrenberg, L. (1993, February). Wizard of Oz studies: why and how. In *Proceedings of the 1st international conference on Intelligent user interfaces* (pp. 193-200). <https://doi.org/10.1145/169891.169968>
- DasGupta, S., & Charon, R. (2004). Personal illness narratives: using reflective writing to teach empathy. *Academic Medicine*, 79(4), 351-356. <https://doi.org/10.1097/00001888-200404000-00013>
- Davidson, R. J. (1994). On emotion, mood, and related affective constructs. In P. Ekman & R. J. Davidson (Eds.), *The nature of emotion: Fundamental questions* (pp. 51-55). New York, NY: Oxford University Press.
- Davis, F., Roseway, A., Carroll, E., & Czerwinski, M. (2013, February). Actuating mood: design of the textile mirror. In *Proceedings of the 7th International Conference on Tangible, Embedded and Embodied interaction* (pp. 99-106). <https://doi.org/10.1145/2460625.2460640>
- Delamarre, A., Buche, C., & Lisetti, C. (2019, July). Aimer: Appraisal interpersonal model of emotion regulation, affective virtual students to support teachers training. In *Proceedings of the 19th ACM International Conference on Intelligent Virtual Agents* (pp. 182-184). <https://doi.org/10.1145/3308532.3329419>
- Debrot, A., Schoebi, D., Perrez, M., & Horn, A. B. (2013). Touch as an interpersonal emotion regulation process in couples' daily lives: The mediating role of psychological intimacy. *Personality and Social Psychology Bulletin*, 39(10), 1373-1385. <https://doi.org/10.1177/014616721349759>
- Decety, J. (2005). Perspective Taking as the Royal Avenue to Empathy. In B. F. Malle & S. D. Hodges (Eds.), *Other minds: How humans bridge the divide between self and others* (pp. 143–157). The Guilford Press.
- Den Dekker, A. (2023). *Design for Soft Fascination: Bringing the outside in* [Master's thesis, Delft University of Technology]. Retrieved from <http://resolver.tudelft.nl/uuid:ae4544d-2b94-4013-993e-4efeddbd0f59>

Desmet, P. M. A., Vastenburg, M. H., & Romero, N. (2016). Mood measurement with Pick-A-Mood: Review of current methods and design of a pictorial self-report scale. *Journal of Design Research*, 14(3), 241–279. <https://doi.org/10.1504/JDR.2016.079751>

Desmet, P. (2002). *Designing emotions*. [Doctoral dissertation, Delft University of Technology]. Retrieved from <https://studiolab.ide.tudelft.nl/studiolab/desmet/files/2011/09/thesis-designingemotions.pdf>

Desmet, Pieter M. A. "Design for Mood: Twenty Activity-Based Opportunities to Design for Mood Regulation." *International Journal of Design* 9, no. 2 (2015): 1–19. Available at <http://www.ijdesign.org/index.php/IJDesign/article/view/2167>.

Desmet, P. M. A., Xue, H., & Fokkinga, S. F. (2019). The same person is never the same: Introducing mood-stimulated thought/action tendencies for user-centered design. *She Ji: The Journal of Design, Economics, and Innovation*, 5(3), 167–187. <https://doi.org/10.1016/j.sheji.2019.07.001>

Desmet, P. M. A., Xue, H., & Fokkinga, S. F. (2020). *20 moods: A holistic typology of human mood states*. Delft University of Technology. Last modified December 13, 2021. <https://research.tudelft.nl/en/publications/twenty-moods-holistic-typology-of-human-mood-states>

DeVito, J. A. (2016). *The interpersonal communication book* (14th ed.). Essex, UK: Pearson Education Limited. (Original work published 1976)

Diener, E., Fujita, F., & Sandvik, E. (1994). What subjective well-being researchers can tell emotion researchers about affect. In *Proceedings of the 8th Conference of the International Society for Research on Emotion* (pp. 30–35).

Diniz Bernardo, P., Bains, A., Westwood, S., & Mograbi, D. C. (2021). Mood induction using virtual reality: A systematic review of recent findings. *Journal of Technology in Behavioral Science*, 6, 3–24. <https://doi.org/10.1007/s41347-020-00152-9>

Djamasbi, S., & Strong, D. M. (2008). The effect of positive mood on intention to use computerized decision aids. *Information & Management*, 45(1), 43–51.

D’Mello, S., & Graesser, A. (2009). Automatic detection of learner’s affect from gross body language. *Applied Artificial Intelligence*, 23(2), 123–150. <https://doi.org/10.1080/08839510802631745>

Dow, A. W., Leong, D., Anderson, A., Wenzel, R. P., & VCU Theater-Medicine Team (2007). Using theater to teach clinical empathy: A pilot study. *Journal of General Internal Medicine*, 22(8), 1114-1118. <https://doi.org/10.1007/s11606-007-0224-2>

Dugan, J. W., Weatherly, R. A., Girod, D. A., Barber, C. E., & Tsue, T. T. (2014). A longitudinal study of emotional intelligence training for otolaryngology residents and faculty. *JAMA Otolaryngology–Head & Neck Surgery*, 140(8), 720-726. 10.1001/jamaoto.2014.1169

Dupper, D. (2017). Strengthening empathy training programs for undergraduate social work students. *Journal of Baccalaureate Social Work*, 22(1), 31-41. <https://doi.org/10.18084/1084-7219.22.1.31>

Ekkekakis, P. (2012). Affect, mood, and emotion. In G. Tenenbaum, R. C. Eklund, & A. Kamata (Eds.), *Measurement in sport and exercise psychology* (pp. 321–332). Human Kinetics. <https://doi.org/10.5040/9781492596332.ch-028>

Ekman, P. (1994). Moods, emotions, and traits. In P. Ekman & R. J. Davidson (Eds.), *The nature of emotion, fundamental questions* (pp. 56-58). Oxford, UK: Oxford University Press

Ekman, P. (2003). *Emotions revealed: Recognizing faces and feelings to improve communication and emotional life*. Henry Holt and Company.

Eisenberg, A., Rosenthal, S., & Schlüssel, Y. R. (2015). Medicine as a performing art: What we can learn about empathic communication from theater arts. *Academic Medicine*, 90(3), 272-276. <https://doi.org/10.1097/ACM.0000000000000626>

Eisenberg, N., Fabes, R. A., Guthrie, I. K., & Reiser, M. (2000). Dispositional emotionality and regulation: their role in predicting quality of social functioning. *Journal of Personality and Social Psychology*, 78(1), 136-157. <https://doi.org/10.1037/0022-3514.78.1.136>

Erber, R., Wegner, D. M., & Theriault, N. (1996). On being cool and collected: Mood regulation in anticipation of social interaction. *Journal of Personality and Social Psychology*, 70(4), 757-766. <https://doi.org/10.1037/0022-3514.70.4.757>

Erera, P. I. (1997). Empathy training for helping professionals: Model and evaluation. *Journal of Social Work Education*, 33(2), 245-260. <https://doi.org/10.1080/10437797.1997.10778868>

Esnaf, P. (2018). Empathy as a Design Skill: Practicing Six Key Attention Points. [Master's thesis, Delft University of Technology]. Retrieved from <http://resolver.tudelft.nl/uuid:4e21c2e9-1ec0-47a1-ab18-536dc33240a3>

Evans, B. J., Stanley, R. O., Mestrovic, R., & Rose, L. (1991). Effects of communication skills training on students' diagnostic efficiency. *Medical Education*, 25(6), 517–526. <https://doi.org/10.1111/j.1365-2923.1991.tb00105.x>

Fagerberg, P., Ståhl, A., & Höök, K. (2004). eMoto: emotionally engaging interaction. *Personal and Ubiquitous Computing*, 8(5), 377–381. <https://doi.org/10.1007/s00779-004-0301-z>

Fessl, A., Rivera-Pelayo, V., Pammer, V., Braun, S. (2012). Mood Tracking in Virtual Meetings. In: Ravenscroft, A., Lindstaedt, S., Kloos, C.D., Hernández-Leo, D. (eds) 21st Century Learning for 21st Century Skills. EC-TEL 2012. Lecture Notes in Computer Science, vol 7563. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-33263-0_30

Fiedler, K., & Forgas, J. P. (1988). Affect, cognition and social behavior: New evidence and integrative attempts.

Fokkinga, S., & Desmet, P. (2012). Darker shades of joy: The role of negative emotion in rich product experiences. *Design Issues*, 28(4), 42–56. https://doi.org/10.1162/DESI_a_00174

Fokkinga, S. F., & Desmet, P. M. (2013). Ten ways to design for disgust, sadness, and other enjoyments: A design approach to enrich product experiences with negative emotions. *International Journal of Design*, 7(1). Available at <https://www.ijdesign.org/index.php/IJDesign/article/view/1180>.

Forgas, Joseph P. "Feeling and Doing: Affective Influences on Interpersonal Behavior." *Psychological Inquiry* 13, no. 1 (2002): 1–28. DOI: https://doi.org/10.1207/S15327965PLI1301_01.

Forgas, J. P. (2017). Mood effects on cognition: Affective influences on the content and process of information processing and behavior. In M. Jeon (Ed.), *Emotions and affect in human factors and human-computer interaction* (pp. 89–122). Elsevier Academic Press. <https://doi.org/10.1016/B978-0-12-801851-4.00003-3>

Forgas, J. P., & Bower, G. H. (1987). Mood effects on person-perception judgments. *Journal of Personality and Social Psychology*, 53(1), 53–60. <https://doi.org/10.1037/0022-3514.53.1.53>

Forgas, J. P., & Ciarrochi, J. (2001). On being happy and possessive: The interactive effects of mood and personality on consumer judgments. *Psychology & Marketing, 18*(3), 239-260. [https://doi.org/10.1002/1520-6793\(200103\)18:3<239::AID-MAR1007>3.0.CO;2-B](https://doi.org/10.1002/1520-6793(200103)18:3<239::AID-MAR1007>3.0.CO;2-B)

Francis, L. E. (1994). Laughter, the best mediation: Humor as emotion management in interaction. *Symbolic Interaction, 17*(2), 147-163. <https://doi.org/10.1525/si.1994.17.2.147>

Francis, L., Monahan, K., & Berger, C. (1999). A laughing matter? The uses of humor in medical interactions. *Motivation and Emotion, 23*, 155-174. <https://doi.org/10.1023/A:1021381129517>

Francis, L. E. (1997). Ideology and interpersonal emotion management: Redefining identity in two support groups. *Social Psychology Quarterly, 153*-171. <https://doi.org/10.2307/2787102>

Freemantle, A. W., Stafford, L. D., Wagstaff, C. R., & Akehurst, L. (2022). An exploration of within-dyad interpersonal emotional influence in the ambulance service. *Sport, Exercise, and Performance Psychology, 11*(4), 590-605. <https://doi.org/10.1037/spy0000310>

Freshman, B., & Rubino, L. (2002). Emotional intelligence: a core competency for health care administrators. *The Health Care Manager, 20*(4), 1-9. <https://doi.org/10.1097/00126450-200206000-00002>

Friesen, A. P., Lane, A. M., Devonport, T. J., Sellars, C. N., Stanley, D. N., & Beedie, C. J. (2013). Emotion in sport: Considering interpersonal regulation strategies. *International Review of Sport and Exercise psychology, 6*(1), 139-154. <https://doi.org/10.1080/1750984X.2012.742921>

Friesen, A. P., Lane, A. M., Devonport, T. J., & Sellars, C. (2011). A qualitative analysis of interpersonal emotion regulation in ice hockey. *Journal of Exercise, Movement, and Sport (SCAPPS refereed abstracts repository), 43*(1).

Friesen, A. P., Devonport, T. J., Sellars, C. N., & Lane, A. M. (2015). Examining interpersonal emotion regulation strategies and moderating factors in ice hockey. *Athletic Insight, 7*(2), 143-160.

Frijda, N. H. (1994). Varieties of affect: Emotions and episodes, moods, and sentiments. In P. Ekman & R. J.

Frijda, N. H. (1987). Emotion, cognitive structure, and action tendency. *Cognition and Emotion, 1*(2), 115-143.

Ford, B. Q., & Mauss, I. B. (2015). Culture and emotion regulation. *Current Opinion in Psychology*, 3, 1–5. <https://doi.org/10.1016/j.copsyc.2014.12.004>

Frost, P., & Robinson, S. (1999). The toxic handler organizational hero-and casualty. *Harvard Business Review*, 77(4), 96-185.

Furnham, A., & Milner, R. (2013). The impact of mood on customer behavior: Staff mood and environmental factors. *Journal of Retailing and Consumer Services*, 20(6), 634-641. <https://doi.org/10.1016/j.jretconser.2013.06.001>

Gallegos, F. T. (2017). *The Phenomenology of Moods: Time, Place, and Normative Grip*. [Doctoral dissertation, Georgetown University]. Retrieved from https://repository.library.georgetown.edu/bitstream/handle/10822/1044645/Gallegos_georgetown_0076D_13759.pdf?sequence=1

Gardner, M. P. (1985). Mood states and consumer behavior: A critical review. *Journal of Consumer Research*, 12(3), 281–300. <https://doi.org/10.1086/208516>

Garavan, T. N. (1997). Interpersonal skills training for quality service interactions. *Industrial and Commercial Training*, 29(3), 70-77.

Gendolla, G. H. (2000). On the impact of mood on behavior: An integrative theory and a review. *Review of General Psychology*, 4(4), 378-408. <https://doi.org/10.1037/1089-2680.4.4.3>

George, J. M. (1998). Salesperson mood at work: Implications for helping customers. *Journal of Personal Selling & Sales Management*, 18(3), 23-30.

Gianino, A., & Tronick, E. Z. (2013). The mutual regulation model: The infant's self and interactive regulation and coping and defensive capacities. In *Stress and coping across development* (pp. 47-68). Psychology Press. <https://doi.org/10.4324/9781315825489-9>

Giles, H., Edwards, A. L., & Walther, J. B. (2023). Communication accommodation theory: Past accomplishments, current trends, and future prospects. *Language Sciences*, 99, 101571. <https://doi.org/10.1016/j.langsci.2023.101571>

Giles, H. (2016). Communication accommodation theory. In K. B. Jensen, R. T. Craig, J. D. Pooley, & E. W. Rothenbuhler (Eds.), *The International Encyclopedia of Communication Theory and Philosophy* (pp. 1–7). Wiley. <https://doi.org/10.1002/9781118766804.wbiect056>

- Gobeli, D. H., Koenig, H. F., & Bechinger, I. (1998). Managing conflict in software development teams: A multilevel analysis. *Journal of Product Innovation Management: AN INTERNATIONAL PUBLICATION OF THE PRODUCT DEVELOPMENT & MANAGEMENT ASSOCIATION*, 15(5), 423-435.
- Goldstein, A. P., & Michaels, G. Y. (2021). *Empathy: Development, training, and consequences*. Routledge.
- Gorn, G. J., Goldberg, M. E., & Basu, K. (1993). Mood, awareness, and product evaluation. *Journal of Consumer Psychology*, 2(3), 237-256. [https://doi.org/10.1016/S1057-7408\(08\)80016-2](https://doi.org/10.1016/S1057-7408(08)80016-2)
- Goss, H. & Couder Bercera, I.D. (2020). *Experiencing Blib contributes to a broadening effect* (Master's research project). Delft University of Technology.
- Grandey, A. A. (1999). *The effects of emotional labor: Employee attitudes, stress and performance*. [Doctoral dissertation, Colorado State University].
- Grandey, A. A. (2000). Emotional regulation in the workplace: A new way to conceptualize emotional labor. *Journal of Occupational Health Psychology*, 5(1), 95-110. <https://doi.org/10.1037/1076-8998.5.1.95>
- Grandey, A. A. (2003). When "the show must go on": surface acting and deep acting as determinants of emotional exhaustion and peer-rated service delivery. *Academy of Management Journal*, 46(1), 86-96. <https://doi.org/10.2307/30040678>
- Grant, A. M. (2007). Enhancing coaching skills and emotional intelligence through training. *Industrial and commercial training*, 39(5), 257-266. <https://doi.org/10.1108/00197850710761945>
- Greco, M., Francis, W., Buckley, J., Brownlea, A., & McGovern, J. (1998). Real- patient evaluation of communication skills teaching for GP registrars. *Family Practice*, 15(1), 51-57. <https://doi.org/10.1093/fampra/15.1.51>
- Greenberg, L. S. (2004). Emotion-focused therapy. *Clinical Psychology & Psychotherapy*, 11(1), 3-16. <https://doi.org/10.1002/cpp.388>
- Greeno, E. J., Ting, L., Pecukonis, E., Hodorowicz, M., & Wade, K. (2017). The role of empathy in training social work students in motivational interviewing. *Social Work Education*, 36(7), 794-808. <https://doi.org/10.1080/02615479.2017.1346071>.

- Grimaldi, S., Fokkinga, S., & Ocnarescu, I. (2013, September). Narratives in design: a study of the types, applications and functions of narratives in design practice. In *Proceedings of the 6th International Conference on Designing Pleasurable Products and Interfaces* (pp. 201-210). <https://doi.org/10.1145/2513506.2513528>
- Gross, J. J. (1998). Antecedent-and response-focused emotion regulation: divergent consequences for experience, expression, and physiology. *Journal of Personality and Social Psychology, 74*(1), 224-237. <https://doi.org/10.1037/0022-3514.74.1.224>
- Gross, J. J. (1999). Emotion regulation: Past, present, future. *Cognition & emotion, 13*(5), 551-573. <https://doi.org/10.1080/026999399379186>
- Gross, J. J. (2014). Emotion regulation: Conceptual and empirical foundations. In J. J. Gross (Ed.), *Handbook of emotion regulation* (2nd ed., pp. 3–20). New York, NY: Guilford Press.
- Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology, 85*(2), 348-362. <https://doi.org/10.1037/0022-3514.85.2.348>
- Gross, J. J., & Thompson, R. (2007). Emotion regulation: Conceptual foundations. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 3–24). New York: Guilford.
- Gür, G. C., & Yilmaz, E. (2020). The effects of mindfulness-based empathy training on empathy and aged discrimination in nursing students: A randomised controlled trial. *Complementary Therapies in Clinical Practice, 39*, 101140. <https://doi.org/10.1016/j.ctcp.2020.101140>
- Guan, B., & Jepsen, D. M. (2023). Managing emotions in ongoing service relationships: new intrinsic and extrinsic emotion regulation strategies from aged care. *The International Journal of Human Resource Management, 1-31*. <https://doi.org/10.1080/09585192.2023.2211710>
- Gummerum, M., & López-Pérez, B. (2020). “You shouldn’t feel this way!” Children’s and adolescents’ interpersonal emotion regulation of victims’ and violators’ feelings after social exclusion. *Cognitive Development, 54*, 100874. <https://doi.org/10.1016/j.cogdev.2020.100874>
- Halan, S., Sia, I., Crary, M., & Lok, B. (2015). Exploring the effects of healthcare students creating virtual patients for empathy training. In W. P. Brinkman, J. Broekens, & D. Heylen (Eds.), *Intelligent Virtual Agents: 15th International Conference, IVA 2015, Delft, The*

Netherlands, August 26-28, 2015, Proceedings (Vol. 9238, pp. 239-249). Springer International Publishing. https://doi.org/10.1007/978-3-319-21996-7_24

Hansemark, Ove C., and Marie Albinsson. "Customer Satisfaction and Retention: The Experiences of Individual Employees." *Managing Service Quality: An International Journal* 14, no. 1 (2004): 40–57. DOI: <https://doi.org/10.1108/09604520410513668>.

Hargie, O., Boohan, M., McCoy, M., & Murphy, P. (2010). Current trends in communication skills training in UK schools of medicine. *Medical Teacher*, 32(5), 385-391. <https://doi.org/10.3109/01421590903394603>

Harman, B. M. (2020). *Evaluating the Impact of Humor Training on Trust Climates within Intact Workgroups* [Doctoral dissertation, Pepperdine University].

Harnof, S., Hadani, M., Ziv, A., & Berkenstadt, H. (2013). Simulation-based interpersonal communication skills training for neurosurgical residents. *The Israel Medical Association Journal: IMAJ*, 15(9), 489-492.

Hassenzahl, M., Eckoldt, K., Diefenbach, S., Laschke, M., Lenz, E., & Kim, J. (2013). Designing moments of meaning and pleasure. Experience design and happiness. *International Journal of Design*, 7(3), 21-31. Available at <http://www.ijdesign.org/index.php/IJDesign/article/view/1480/589>

Hatfield, E., Cacioppo, J. T., & Rapson, R. L. (1993). Emotional contagion. *Current Directions in Psychological Science*, 2(3), 96-100. <https://doi.org/10.1111/1467-8721.ep1077095>

Heaney, C. A., Price, R. H., & Rafferty, J. (1995). The caregiver support program: An intervention to increase employee coping resources and enhance mental health. In L. R. Murphy, J. J. Hurrell, Jr., S. L. Sauter, & G. P. Keita (Eds.), *Job stress interventions* (pp. 93–108). American Psychological Association. <https://doi.org/10.1037/10183-007>

Henry-Tillman, R., Deloney, L. A., Savidge, M., Graham, C. J., & Klimberg, V. S. (2002). The medical student as patient navigator as an approach to teaching empathy. *The American Journal of Surgery*, 183(6), 659-662. [https://doi.org/10.1016/S0002-9610\(02\)00867-X](https://doi.org/10.1016/S0002-9610(02)00867-X)

Herman, J. (2000). Reading for empathy. *Medical Hypotheses*, 54(2), 167-168. <https://doi.org/10.1054/mehy.1999.0005>

Hernandez, J., Paredes, P., Roseway, A., & Czerwinski, M. (2014, April). Under pressure: sensing stress of computer users. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 51-60). <https://doi.org/10.1145/2556288.2557165>

Heskett, J. L., Jones, T. O., Loveman, G. W., Sasser, W. E., & Schlesinger, L. A. (2008). Putting the service-profit chain to work. *Harvard Business Review*. Last modified July 10, 2023. <https://hbr.org/2008/07/putting-the-service-profit-chain-to-work>

Hochschild, A. R. (1979). Emotion work, feeling rules, and social structure. *American Journal of Sociology*, 85(3), 551–575. <https://doi.org/10.1086/227049>

Hofmann, S. G., Carpenter, J. K., & Curtiss, J. (2016). Interpersonal emotion regulation questionnaire (IERQ): Scale development and psychometric characteristics. *Cognitive Therapy and Research*, 40, 341-356. <https://doi.org/10.1007/s10608-016-9756-2>

Hojat, M. (2009). Ten approaches for enhancing empathy in health and human services cultures. *Journal of Health and Human Services administration*, 31(4), 412-450. <https://doi.org/10.1177/107937390903100403>

Holleman, W. L. (2000). The play's the thing: Using literature and drama to teach about death and dying. *Family Medicine*, 32(8), 523-524.

Holman, D., & Niven, K. (2019). Does interpersonal affect regulation influence others' task performance? The mediating role of positive mood. *European Journal of Work and Organizational Psychology*, 28(6), 820–830. <https://doi.org/10.1080/1359432X.2019.1666105>

Horn, A. B., & Maercker, A. (2016). Intra-and interpersonal emotion regulation and adjustment symptoms in couples: The role of co-brooding and co-reappraisal. *BMC Psychology*, 4, 51. <https://doi.org/10.1186/s40359-016-0159-7>

Horton, A., Holman, D., & Hebson, G. (2022). Occupational and physical therapists' use of intrapersonal and interpersonal emotion regulation strategies during patient interactions: A qualitative study. *The American Journal of Occupational Therapy*, 76(5), 7605205010. <https://doi.org/10.5014/ajot.2022.048199>

Hülshager, U. R., Lang, J. W. B., Schewe, A. F., & Zijlstra, F. R. H. (2015). When regulating emotions at work pays off: A diary and an intervention study on emotion regulation and customer tips in service jobs. *Journal of Applied Psychology*, 100(2), 263–277. <https://doi.org/10.1037/a0038229>

- Hunsinger, M., Isbell, L. M., & Clore, G. L. (2012). Sometimes happy people focus on the trees and sad people focus on the forest: Context-dependent effects of mood in impression formation. *Personality and Social Psychology Bulletin*, 38(2), 220-232. <https://doi.org/10.1177/0146167211424166>
- Hynes, G. E. (2012). Improving employees' interpersonal communication competencies: A qualitative study. *Business Communication Quarterly*, 75(4), 466-475. <https://doi.org/10.1177/10805699124589>
- Hunter, K. M., Charon, R., & Coulehan, J. L. (1995). The study of literature in medical education. *Academic Medicine: Journal of the Association of American Medical Colleges*, 70(9), 787-794.
- Huntsinger, J. R., Lun, J., Sinclair, S., & Clore, G. L. (2009). Contagion without contact: Anticipatory mood matching in response to affiliative motivation. *Personality and Social Psychology Bulletin*, 35(7), 909-922. <https://doi.org/10.1177/0146167209335299>
- Isen, A. M., & Means, B. (1983). The influence of positive affect on decision-making strategy. *Social Cognition*, 2(1), 18-31. <https://doi.org/10.1521/soco.1983.2.1.18>
- Jahoda, M. (1984). Social institutions and human needs: A comment on Fryer and Payne. *Leisure Studies*, 3(3), 297-299. <https://doi.org/10.1080/02614368400390241>
- Jitaru, M., & Turluc, M. N. (2022). The moderator role of interpersonal emotion regulation on the associations between commitment, intimacy, and couple satisfaction. *International Journal of Environmental Research and Public Health*, 19(17), 10506. <https://doi.org/10.3390/ijerph191710506>
- Jordan, P. J., Ashkanasy, N. M., & Hartel, C. E. (2002). Emotional intelligence as a moderator of emotional and behavioral reactions to job insecurity. *Academy of Management Review*, 27(3), 361-372. <https://doi.org/10.2307/4134384>
- Joseph, D. L., & Newman, D. A. (2010). Emotional intelligence: an integrative meta-analysis and cascading model. *Journal of Applied Psychology*, 95(1), 54-78. <https://doi.org/10.1037/a0017286>
- Kahn, W. A. (1993). Caring for the caregivers: Patterns of organizational caregiving. *Administrative Science Quarterly*, 38(4), 539-563. <https://doi.org/10.2307/2393336>

Kaliouby, R. E., Picard, R., & Baron-Cohen, S. (2006). Affective computing and autism. *Annals of the New York Academy of Sciences*, 1093(1), 228-248. <https://doi.org/10.1196/annals.1382.016>

Kernbach, S., & Schutte, N. S. (2005). The impact of service provider emotional intelligence on customer satisfaction. *Journal of Services Marketing*, 19(7), 438-444. <https://doi.org/10.1108/08876040510625945>

Khinvasara & Van Klaveren (2023). *Conversation Game* [Design concept]. In Dutch Design Week, Eindhoven, Netherlands. <https://ddw.nl/en/programme/11441/conversation-game-do-you-really-listen-to-others>

Kleinsmith, A., Rivera-Gutierrez, D., Finney, G., Cendan, J., & Lok, B. (2015). Understanding empathy training with virtual patients. *Computers in Human Behavior*, 52, 151-158. <https://doi.org/10.1016/j.chb.2015.05.033>

Klimecki, O. M., Leiberg, S., Ricard, M., & Singer, T. (2014). Differential pattern of functional brain plasticity after compassion and empathy training. *Social Cognitive and Affective Neuroscience*, 9(6), 873-879. <https://doi.org/10.1093/scan/nst060>

Knowles, P. A., Grove, S. J., & Pickett, G. M. (1993). Mood and the service customer: Review and propositions. *Journal of Services Marketing*, 7(4), 41-52. <https://doi.org/10.1108/08876049310047724>

Koc, E., & Boz, H. (2020). Development of hospitality and tourism employees' emotional intelligence through developing their emotion recognition abilities. *Journal of Hospitality Marketing & Management*, 29(2), 121-138. <https://doi.org/10.1080/19368623.2019.1608885>

Koch, S. C., Ostermann, T., Steinhage, A., Kende, P., Haller, K., & Chyle, F. (2015). Breaking barriers: Evaluating an arts-based emotion regulation training in prison. *The Arts in Psychotherapy*, 42, 41-49. <https://doi.org/10.1016/j.aip.2014.10.008>

Kral, T. R., Stodola, D. E., Birn, R. M., Mumford, J. A., Solis, E., Flook, L., ... & Davidson, R. J. (2018). Neural correlates of video game empathy training in adolescents: a randomized trial. *npj Science of Learning*, 3(1), 13. <https://doi.org/10.1038/s41539-018-0029-6>

Kuhnley, A. K., Nguyen, T. H., Gantt, A. C., & Hinkley, P. (2023). Creatively increasing empathy: The impacts of an online empathy workshop. *Journal of Creativity in Mental Health*, 18(1), 60-72. <https://doi.org/10.1080/15401383.2021.1936328>

- Kwon, K., & López-Pérez, B. (2022). Cheering my friends up: the unique role of interpersonal emotion regulation strategies in social competence. *Journal of Social and Personal Relationships*, 39(4), 1154-1174. <https://doi.org/10.1177/0265407521105420>
- Lam, T. C. M., Kolomitro, K., & Alamparambil, F. C. (2011). Empathy training: Methods, evaluation practices, and validity. *Journal of Multidisciplinary Evaluation*, 7(16), 162-200. <https://doi.org/10.56645/jmde.v7i16.314>
- Lancaster, T., Hart, R., & Gardner, S. (2002). Literature and medicine: evaluating a special study module using the nominal group technique. *Medical Education*, 36(11), 1071-1076. <https://doi.org/10.1046/j.1365-2923.2002.01325.x>
- Larsen, R. J. (2000). Toward a science of mood regulation. *Psychological Inquiry*, 11(3), 129-141. https://doi.org/10.1207/s15327965pli1103_01
- Lazarus, R. S. (1991). Cognition and motivation in emotion. *American Psychologist*, 46(4), 352-367. <https://doi.org/10.1037/0003-066X.46.4.352>
- LeBlanc, S., Uzun, B., Pourseied, K., & Mohiyeddini, C. (2017). Effect of an emotion regulation training program on mental well-being. *International Journal of Group Psychotherapy*, 67(1), 108-123. <http://dx.doi.org/10.1080/00207284.2016.1203585>
- Lee, J. (J.), & Ok, C. (2012). Reducing burnout and enhancing job satisfaction: Critical role of hotel employees' emotional intelligence and emotional labor. *International Journal of Hospitality Management*, 31(4), 1101-1112. <https://doi.org/10.1016/j.ijhm.2012.01.007>
- Lehmann-Willenbrock, N., Meyers, R. A., Kauffeld, S., Neining, A., & Henschel, A. (2011). Verbal interaction sequences and group mood: Exploring the role of team planning communication. *Small Group Research*, 42(6), 639-668. <https://doi.org/10.1177/1046496411398397>
- Lewig, K. A., & Dollard, M. F. (2003). Emotional dissonance, emotional exhaustion and job satisfaction in call centre workers. *European Journal of Work and Organizational Psychology*, 12(4), 366-392. <https://doi.org/10.1080/13594320344000200>
- Lewis, K. M. (2000). When leaders display emotion: How followers respond to negative emotional expression of male and female leaders. *Journal of Organizational Behavior*, 21(2), 221-234. [https://doi.org/10.1002/\(SICI\)1099-1379\(200003\)21:2<221::AID-JOB36>3.0.CO;2-0](https://doi.org/10.1002/(SICI)1099-1379(200003)21:2<221::AID-JOB36>3.0.CO;2-0)

Liddell, B. J., & Williams, E. N. (2019). Cultural differences in interpersonal emotion regulation. *Frontiers in Psychology*, 10, Article 999. <https://doi.org/10.3389/fpsyg.2019.00999>

Liljander, Veronica, and Jan Mattsson. (2002). "Impact of Customer Preconsumption Mood on the Evaluation of Employee Behavior in Service Encounters." *Psychology & Marketing*, 19(10), 837–860. <https://doi.org/10.1002/mar.10040>.

Linehan, M. M. (1993). Dialectical behavior therapy for treatment of borderline personality disorder: implications for the treatment of substance abuse. *NIDA research monograph*, 137, 201-216.

Little, L. M., Kluemper, D., Nelson, D. L., & Gooty, J. (2012). Development and validation of the interpersonal emotion management scale. *Journal of Occupational and Organizational Psychology*, 85(2), 407-420. <https://doi.org/10.1111/j.2044-8325.2011.02042.x>

Lively, K. J. (2000). Reciprocal emotion management: Working together to maintain stratification in private law firms. *Work and Occupations*, 27(1), 32-63. <https://doi.org/10.1177/0730888400027001003>

Lobchuk, M., Halas, G., West, C., Harder, N., Tursunova, Z., & Ramraj, C. (2016). Development of a novel empathy-related video-feedback intervention to improve empathic accuracy of nursing students: A pilot study. *Nurse Education Today*, 46, 86-93. <https://doi.org/10.1016/j.nedt.2016.08.034>

Locke, K. (1996). A funny thing happened! The management of consumer emotions in service encounters. *Organization Science*, 7(1), 40-59. <https://doi.org/10.1287/orsc.7.1.40>

Lopes, P. N., Brackett, M. A., Nezlek, J. B., Schütz, A., Sellin, I., & Salovey, P. (2004). Emotional intelligence and social interaction. *Personality and Social Psychology Bulletin*, 30(8), 1018-1034. <https://doi.org/10.1177/0146167204264762>

Lopes, P. N., Salovey, P., Côté, S., Beers, M., & Petty, R. E. (2005). Emotion regulation abilities and the quality of social interaction. *Emotion*, 5(1), 113-118. <https://doi.org/10.1037/1528-3542.5.1.113>

López-Pérez, B., Wilson, E. L., Dellaria, G., & Gummerum, M. (2016). Developmental differences in children's interpersonal emotion regulation. *Motivation and Emotion*, 40(5), 767-780. <https://psycnet.apa.org/doi/10.1007/s11031-016-9569-3>

- López-Pérez, B., & Pacella, D. (2021). Interpersonal emotion regulation in children: Age, gender, and cross-cultural differences using a serious game. *Emotion*, 21(1), 17-27. <https://doi.org/10.1037/emo0000690>
- Lougheed, J. P., Hollenstein, T., Lichtwarck-Aschoff, A., & Granic, I. (2015). Maternal regulation of child affect in externalizing and typically-developing children. *Journal of Family Psychology*, 29(1), 10-19. <https://doi.org/10.1037/a0038429>
- Luong, A. (2005). Affective service display and customer mood. *Journal of Service Research*, 8(2), 117–130. <https://doi.org/10.1177/1094670505279341>
- MacLean, D., Roseway, A., & Czerwinski, M. (2013, May). MoodWings: a wearable biofeedback device for real-time stress intervention. In *Proceedings of the 6th International Conference on Pervasive Technologies Related to Assistive Environments, Article No:66*, (pp. 1-8). <https://doi.org/10.1145/2504335.2504406>
- Madrid, H. P., Totterdell, P., Niven, K., & Vasquez, C. A. (2018). Investigating a process model for leader affective presence, interpersonal emotion regulation, and interpersonal behaviour in teams. *European Journal of Work and Organizational Psychology*, 27(5), 642-656. <https://doi.org/10.1080/1359432X.2018.1505719>
- Maier, E., Wilken, R., Schneider, H., & Kelemci Schneider, G. (2012). In the mood to buy? Understanding the interplay of mood regulation and congruence in an international context. *Marketing Letters*, 23, 1005-1018.
- Manstead, A. S., & Fischer, A. H. (2000). Emotion regulation in full. *Psychological Inquiry*, 188-191.
- Martens, M. L., Gagne, M., & Brown, G. (2010). Toxin handler behaviour: An initial assessment of a new measure. *Administrative Sciences Association of Canada Annual Conference, 22-25 May 2010, Saskatchewan, Canada*. Available at: https://ink.library.smu.edu.sg/lkcsb_research/2789
- Martin, L. L., & Clore, G. L. (2013). *Theories of mood and cognition: A user's guidebook*. Hoboken, NJ: Taylor and Francis.
- Martínez-Íñigo, D. (2021). The role of prison officers' regulation of inmates affect on their exposure to violent behaviours and the development of PTSD symptoms. *European Journal*

of *Psychotraumatology*, 12(1), Article 1956126. <https://doi.org/10.1080/20008198.2021.1956126>

Martínez-Íñigo, D., & Crego, A. (2017). Evaluation of a training program aiming to improve interpersonal emotion regulation strategies and occupational wellbeing in a Uruguayan Prison. *Universitas Psychologica*, 16(3), 184-198. (in Spanish). <https://dx.doi.org/10.11144/Javeriana.upsy16-3.eimc>

Martínez-Íñigo, D., Lara Poerio, G., & Totterdell, P. (2013). The association between controlled interpersonal affect regulation and resource depletion. *Applied Psychology: Health and Well-Being*, 5(2), 248–269. <https://doi.org/10.1111/aphw.12009>

Martínez-Íñigo, D., Mercado, F., & Totterdell, P. (2015). Using interpersonal affect regulation in simulated healthcare consultations: An experimental investigation of self-control resource depletion. *Frontiers in Psychology*, 6, Article 1485. <https://doi.org/10.3389/fpsyg.2015.01485>

Martínez-Íñigo, D., Bermejo-Pablos, C., & Totterdell, P. (2018). The boomerang effect: How nurses' regulation of patients' affect associates with their own emotional exhaustion and affective experiences. *International Journal of Stress Management*, 25(1), 1–13. <https://doi.org/10.1037/str0000039>

Martins, A., Ramalho, N., & Morin, E. (2010). A comprehensive meta-analysis of the relationship between emotional intelligence and health. *Personality and Individual Differences*, 49(6), 554-564. <https://doi.org/10.1016/j.paid.2010.05.029>

Mason, J. L., Barkley, S. E., Kappelman, M., M., Carter, D. E., & Beachy, W. V. (1988). Evaluation of a self-instructional method for improving doctor-patient communication. *Journal of Medical Education*, 63(8), 629-635.

Matsumoto, D., Yoo, S. H., & Nakagawa, S. (2008). Culture, emotion regulation, and adjustment. *Journal of Personality and Social Psychology*, 94(6), 925-937. <https://doi.org/10.1037/0022-3514.94.6.925>

Mattila, A. (2000). When does mood matter? An examination of two types of hospitality service encounters. *Journal of Hospitality & Leisure Marketing*, 7(3), 55-65. https://doi.org/10.1300/J150v07n03_05

Mattila, A. S., & Enz, C. A. (2002). The role of emotions in service encounters. *Journal of Service Research*, 4(4), 268–277. <https://doi.org/10.1177/1094670502004004004>

MCL Education. (2020, September 14). Customer service training modules. *Mayo Clinic Laboratories*. <https://news.mayocliniclabs.com/2020/09/14/customer-service-training-modules/#training-modules>

Mayer, J. D., Caruso, D. R., & Salovey, P. (1999). Emotional intelligence meets traditional standards for an intelligence. *Intelligence*, 27(4), 267–298. [https://doi.org/10.1016/S0160-2896\(99\)00016-1](https://doi.org/10.1016/S0160-2896(99)00016-1)

Mayer, R. E. (2014). Incorporating motivation into multimedia learning. *Learning and Instruction*, 29, 171–173. <https://doi.org/10.1016/j.learninstruc.2013.04.003>

Mayer, J. D., Salovey, P., & Caruso, D. R. (2002). Mayer-Salovey-Caruso emotional intelligence test (MSCEIT) users manual. Toronto, Ontario: Multi-Health Systems.

McDuff, D., Karlson, A., Kapoor, A., Roseway, A., & Czerwinski, M. (2012, May). AffectAura: an intelligent system for emotional memory. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 849–858). <https://doi.org/10.1145/2207676.2208525>

McVey, L. J., Davis, D. E., & Cohen, H. J. (1989). The 'Aging Game': An approach to education in geriatrics. *JAMA*, 262(11), 1507–1509. <https://doi.org/10.1001/jama.262.11.1507>

Mennin, D. S. (2004). Emotion regulation therapy for generalized anxiety disorder. *Clinical Psychology & Psychotherapy: An International Journal of Theory & Practice*, 11(1), 17–29. <https://doi.org/10.1002/cpp.389>

Mennin, D. S., & Fresco, D. M. (2014). Emotion regulation therapy. In J. J. Gross (Ed.), *Handbook of Emotion Regulation* (2nd ed., pp. 469–490). The Guilford Press.

Mikolajczak, M., Avalosse, H., Vancorenland, S., Verniest, R., Callens, M., Van Broeck, N., & Mierop, A. (2015). A nationally representative study of emotional competence and health. *Emotion*, 15(5), 653–667. <https://doi.org/10.1037/emo0000034>

Miller, S. R. (2015). Fostering informed empathy through patient-centred education about persons with disabilities. *Perspectives on Medical Education*, 4(4), 196–199. <https://doi.org/10.1007/S40037-015-0197-5>

Morris, W. N. (1992). A functional analysis of the role of mood in affective systems. In M. S. Clark (Ed.), *Review of personality and social psychology* (Vol. 13, pp. 256–293). Newbury Park, CA: Sage.

Morris, W. N., & Reilly, N. P. (1987). Toward the self-regulation of mood: Theory and research. *Motivation and Emotion*, 11(3), 215–249. <https://doi.org/10.1007/BF01001412>

Mueller, J. S., & Curhan, J. R. (2006). Emotional intelligence and counterpart mood induction in a negotiation. *International Journal of Conflict Management*, 17(2), 110–128. <https://doi.org/10.1108/10444060610736602>

Nelson, D. W. (2016). Enhancing interpersonal communication: Positive mood effects. *Social Behavior and Personality: an international journal*, 44(9), 1535–1540. <https://doi.org/10.2224/sbp.2016.44.9.1535>

Nelson, S. W., Germann, C. A., MacVane, C. Z., Bloch, R. B., Fallon, T. S., & Strout, T. D. (2018). Intern as patient: A patient experience simulation to cultivate empathy in emergency medicine residents. *Western Journal of Emergency Medicine*, 19(1), 41–48. <https://doi.org/10.5811/westjem.2017.11.35198>

Nerdrum, P. (1997). Maintenance of the effect of training in communication skills: A controlled follow-up study of level of communicated empathy. *The British Journal of Social Work*, 27(5), 705–722. <https://doi.org/10.1093/oxfordjournals.bjsw.a011261>

Nerdrum, P., & Rønnestad, M. H. (2004). Changes in therapists' conceptualization and practice of therapy following empathy training. *The Clinical Supervisor*, 22(2), 37–61. https://doi.org/10.1300/J001v22n02_04

Nils, F., & Rimé, B. (2012). Beyond the myth of venting: Social sharing modes determine the benefits of emotional disclosure. *European Journal of Social Psychology*, 42(6), 672–681. <https://doi.org/10.1002/ejsp.1880>

Niven, K. (2017). The four key characteristics of interpersonal emotion regulation. *Current Opinion in Psychology*, 17, 89–93. <https://doi.org/10.1016/j.copsyc.2017.06.015>

Niven, K. (2016). Why do people engage in interpersonal emotion regulation at work?. *Organizational Psychology Review*, 6(4), 305–323. <https://doi.org/10.1177/2041386615612544>

Niven, K. (2022). Does interpersonal emotion regulation ability change with age?. *Human Resource Management Review*, 32(3), 100847. <https://doi.org/10.1016/j.hrmr.2021.100847>

Niven, K., Holman, D., & Totterdell, P. (2012). How to win friendship and trust by influencing people's feelings: An investigation of interpersonal affect regulation and the quality of relationships. *Human Relations*, 65(6), 777–805. <https://doi.org/10.1177/0018726712439909>

Niven, K., Macdonald, I., & Holman, D. (2012). You spin me right round: Cross-relationship variability in interpersonal emotion regulation. *Frontiers in Psychology*, 3, 394. <https://doi.org/10.3389/fpsyg.2012.00394>

Niven, K., Totterdell, P., & Holman, D. (2009a). A classification of controlled interpersonal affect regulation strategies. *Emotion*, 9(4), 498–509. <https://doi.org/10.1037/a0015962>

Niven, Karen, Totterdell, Peter and Holman, David (2009b) Affect regulation and well-being in the workplace: An interpersonal perspective. In: Antoniou, Alexander-Stamatios G, Cooper, Cary L, Chrousos, George P, Spielberger, Charles D and Eysenck, Michael W, (eds.) *Handbook of Managerial Behavior and Occupational Health. New Horizons in Management*. Edward Elgar, pp. 218-228. <http://dx.doi.org/10.4337/9781848447219.00024>

Niven, K., Totterdell, P., Holman, D., & Headley, T. (2012). Does regulating others' feelings influence people's own affective well-being?. *The Journal of Social Psychology*, 152(2), 246-260. <https://doi.org/10.1080/00224545.2011.599823>

Niven, K., Totterdell, P., & Holman, D. (2007). Changing moods and influencing people: The use and effects of emotional influence behaviours at HMP Grendon. *Prison Service Journal*, 173, 39-45. http://webarchive.nationalarchives.gov.uk/20070906165759/hmprisonservice.gov.uk/assets/documents/10002f60changing_moods_influencing.pdf

Niven, K., Totterdell, P., Stride, C. B., & Holman, D. (2011). Emotion Regulation of Others and Self (EROS): The development and validation of a new individual difference measure. *Current Psychology*, 30(1), 53-73. <https://doi.org/10.1007/s12144-011-9099-9>

Niven, K., Totterdell, P., Holman, D., & Cameron, D. (2013). Emotional labor at the unit-level. In *Emotional Labor in the 21st Century* (pp. 101-123). Routledge.

Norman, D. A. (2004). *Emotional design: Why we love (or hate) everyday things*. New York, Basic Books.

Nozaki, Y., & Koyasu, M. (2015). Interpersonal emotional intelligence reduces the gap in anger regulation confidence caused by self-other dissimilarity. *Psychologia*, 58(1), 49-60. <https://doi.org/10.2117/psysoc.2015.49>

Ohrt, J. H., Foster, J. M., Hutchinson, T. S., & Ieva, K. P. (2009). Using music videos to enhance empathy in counselors-in-training. *Journal of Creativity in Mental Health*, 4(4), 320-333. <https://doi.org/10.1080/15401380903372539>

O'Boyle Jr, E. H., Humphrey, R. H., Pollack, J. M., Hawver, T. H., & Story, P. A. (2011). The relation between emotional intelligence and job performance: A meta-analysis. *Journal of Organizational Behavior*, 32(5), 788-818. <https://doi.org/10.1002/job.714>

Pacella, D., & López-Pérez, B. (2018). Assessing children's interpersonal emotion regulation with virtual agents: The serious game Emodiscovery. *Computers & Education*, 123, 1-12. <https://doi.org/10.1016/j.compedu.2018.04.005>

Pallavicini, F., Pepe, A., Caragnano, C. C., & Mantovani, F. (2020). Video games to foster empathy: a critical analysis of the potential of Detroit: Become Human and the Walking Dead. In *Universal Access in Human-Computer Interaction. Applications and Practice: 14th International Conference, UAHCI 2020, Held as Part of the 22nd HCI International Conference, HCII 2020, Copenhagen, Denmark, July 19–24, 2020, Proceedings, Part II 22* (pp. 212-228). Springer International Publishing. http://dx.doi.org/10.1007/978-3-030-49108-6_16

Pallud, J. (2017). Impact of interactive technologies on stimulating learning experiences in a museum. *Information & Management*, 54(4), 465-478. <https://doi.org/10.1016/j.im.2016.10.004>

Palmateer, T., & Tamminen, K. (2018). A case study of interpersonal emotion regulation within a varsity volleyball team. *Journal of Applied Sport Psychology*, 30(3), 321-340. <https://doi.org/10.1080/10413200.2017.1367335>

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49(4), 41-50. <https://doi.org/10.2307/1251430>

Parkinson, B., & Totterdell, P. (1999). Classifying affect-regulation strategies. *Cognition and Emotion*, 13(3), 277-303. <https://doi.org/10.1080/026999399379285>

- Parkinson, B., Simons, G., & Niven, K. (2016). Sharing concerns: Interpersonal worry regulation in romantic couples. *Emotion, 16*(4), 449-458. <https://doi.org/10.1037/a0040112>
- Parkinson, B., Totterdell, P., Briner, R. B., & Reynolds, S. (1996). *Changing moods: The psychology of mood and mood regulation*. London, UK: Longman.
- Patel, S., Pelletier-Bui, A., Smith, S., Roberts, M. B., Kilgannon, H., Trzeciak, S., & Roberts, B. W. (2019). Curricula for empathy and compassion training in medical education: a systematic review. *PloS one, 14*(8), e0221412. <https://doi.org/10.1371/journal.pone.0221412>
- Pedersen, R. (2010). Empathy development in medical education—a critical review. *Medical Teacher, 32*(7), 593-600. <https://doi.org/10.3109/01421590903544702>
- Pekaar, K. A., Bakker, A. B., Van der Linden, D., & Born, M. Ph?. (2018). Self-and other-focused emotional intelligence: Development and validation of the Rotterdam Emotional Intelligence Scale (REIS). *Personality and Individual Differences, 120*, 222–233. <https://doi.org/10.1016/j.paid.2017.08.045>
- Pekaar, K. A., Bakker, A. B., Born, M. P., & Van Der Linden, D. (2019). The consequences of self-and other-focused emotional intelligence: Not all sunshine and roses. *Journal of Occupational Health Psychology, 24*(4), 450-466. <https://doi.org/10.1037/ocp0000134>
- Pekaar, K. A., van der Linden, D., Bakker, A. B., & Born, M. P. (2020). Dynamic self-and other-focused emotional intelligence: A theoretical framework and research agenda. *Journal of Research in Personality, 86*, 103958.
- Potash, J. S., Chen, J. Y., Lam, C. L., & Chau, V. T. (2014). Art-making in a family medicine clerkship: how does it affect medical student empathy?. *BMC Medical Education, 14*, 1-9. <https://doi.org/10.1186/s12909-014-0247-4>
- Prentice, C. (2019). Managing service encounters with emotional intelligence. *Journal of Retailing and Consumer Services, 51*, 344-351. <https://doi.org/10.1016/j.jretconser.2019.07.001>
- Prentice, C. (2023). *Leveraging Emotional and Artificial Intelligence for Organisational Performance*. Singapore: Springer Nature. <https://doi.org/10.1007/978-981-99-1865-2>
- Puccinelli, N. M. (2006). Putting your best face forward: the impact of customer mood on salesperson evaluation. *Journal of Consumer Psychology, 16*(2), 156-162. https://psycnet.apa.org/doi/10.1207/s15327663jcp1602_6

Puccinelli, N. M., Goodstein, R. C., Grewal, D., Price, R., Raghubir, P., & Stewart, D. (2009). Customer experience management in retailing: understanding the buying process. *Journal of Retailing*, 85(1), 15-30. <https://doi.org/10.1016/j.jretai.2008.11.003>

Pugh, S. D. (2001). Service with a smile: Emotional contagion in the service encounter. *Academy of Management Journal*, 44(5), 1018-1027. <https://psycnet.apa.org/doi/10.2307/3069445>

Pugliesi, K. (1999). The consequences of emotional labor: Effects on work stress, job satisfaction, and well-being. *Motivation and Emotion*, 23(2), 125-154. <https://doi.org/10.1023/A:1021329112679>

Rafaeli, A., & Sutton, R. I. (1991). Emotional contrast strategies as means of social influence: Lessons from criminal interrogators and bill collectors. *Academy of Management Journal*, 34(4), 749-775.

Reeck, C., & Onuklu, N. (2022). Interpersonal Emotion Regulation: Consequences for Brands in Customer Service Interactions. *Frontiers in Psychology*, 13, 872670. <https://doi.org/10.3389/fpsyg.2022.872670>

Reilly, J. M., Trial, J., Piver, D. E., & Schaff, P. B. (2012). Using Theater to Increase Empathy Training in Medical Students. *Journal for Learning through the Arts*, 8(1) <https://escholarship.org/uc/item/68x7949t>

Renna, M. E., Quintero, J. M., Fresco, D. M., & Mennin, D. S. (2017). Emotion regulation therapy: a mechanism-targeted treatment for disorders of distress. *Frontiers in Psychology*, 8, 98. <https://doi.org/10.3389/fpsyg.2017.00098>

Riches, S., Iannelli, H., Reynolds, L., Fisher, H. L., Cross, S., & Attoe, C. (2022). Virtual reality-based training for mental health staff: a novel approach to increase empathy, compassion, and subjective understanding of service user experience. *Advances in Simulation*, 7(1), 19. <https://doi.org/10.1186/s41077-022-00217-0>

Riess, H., Kelley, J. M., Bailey, R. W., Dunn, E. J., & Phillips, M. (2012). Empathy training for resident physicians: a randomized controlled trial of a neuroscience-informed curriculum. *Journal of General Internal Medicine*, 27(10), 1280-1286. <https://doi.org/10.1007/s11606-012-2063-z>

Rivera-Pelayo, V., Fessler, A., Müller, L., & Pammer, V. (2017). Introducing mood self-tracking at work: Empirical insights from call centers. *ACM Transactions on Computer-Human Interaction (TOCHI)*, 24(1), Article No: 3, 1-28. <https://doi.org/10.1145/3014058>

Roberts, R. J., & Lane, A. M. (2021). Mood responses and regulation strategies used during COVID-19 among boxers and coaches. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.624119>.

Robert, C., & da Motta Veiga, S. P. (2017). Conversational humor and job satisfaction at work: Exploring the role of humor production, appreciation, and positive affect. *Humor*, 30(4), 417-438. <https://psycnet.apa.org/doi/10.1515/humor-2017-0034>

Rogers, C. R. (1975). Empathic: An unappreciated way of being. *The Counseling Psychologist*, 5(2), 2–10. <https://doi.org/10.1177/001100007500500202>

Roter, D., Rosenbaum, J., De Negri, B., Renaud, D., DiPrete-Brown, L., & Hernandez, O. (1998). The effects of a continuing medical education programme in interpersonal communication skills on doctor practice and patient satisfaction in Trinidad and Tobago. *Medical Education*, 32(2), 181-189. <https://doi.org/10.1046/j.1365-2923.1998.00196.x>

Russell, J.A (2003). Core affect and the psychological construction of emotion. *Psychological Review*, 110(1), 145-172. <https://psycnet.apa.org/doi/10.1037/0033-295X.110.1.145>

Russell, J. A., & Feldman Barrett, L. (2009). Core affect. *The Oxford Companion to Emotion and the Affective Sciences*, 104.

Russell, J. A. (1980). A circumplex model of affect. *Journal of Personality and Social Psychology*, 39(6), 1161-1178. <https://psycnet.apa.org/doi/10.1037/h0077714>

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78. <https://psycnet.apa.org/doi/10.1037/0003-066X.55.1.68>

Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, 69(4), 719–727. <https://doi.org/10.1037/0022-3514.69.4.719>

Saedpanah, D., Salehi, S., & Moghaddam, L. F. (2016). The effect of emotion regulation training on occupational stress of critical care nurses. *Journal of Clinical and Diagnostic Research: JCDR*, 10(12), VC01-VC04. <https://doi.org/10.7860%2FJCDR%2F2016%2F23693.9042>

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition, and Personality*, 9(3), 185–211. <https://doi.org/10.2190/DUGG-P24E-52WK-6CDG>

Sari, D., Taskiran, N., Baysal, E., Acar, E., & Cevik Akyil, R. (2020). Effect of an aged simulation suit on nursing students' attitudes and empathy. *European Geriatric Medicine*, 11, 667-675. <https://doi.org/10.1007/s41999-020-00316-z>

Schaefer, L. (2019). Emotional labor training: The effect of deep level acting training on nursing anesthetist students [Master's thesis, Southern Illinois University at Edwardsville]. Retrieved from <https://www.proquest.com/docview/2303891065>

Schifferstein, H. N. (2021). Designing food experiences: a multisensory approach. In S. Massari (Ed.), *Transdisciplinary Case Studies on Design for Food and Sustainability* (pp. 115-130). Elsevier. <https://doi.org/10.1016/B978-0-12-817821-8.00015-1>

Schifferstein, HNJ. (2011). Multi sensory design. In CJ. Hooper, JB. Martens, & P. Markopoulos (Eds.), *Proceedings of the DESIRE'11 Conference - Creativity and Innovation in Design* (pp. 361-362). Association for Computing Machinery (ACM).

Schuppert, H. M., Timmerman, M. E., Bloo, J., Van Gemert, T. G., Wiersema, H. M., Minderaa, R. B., Emmelkamp, P.M.G, & Nauta, M. H. (2012). Emotion regulation training for adolescents with borderline personality disorder traits: a randomized controlled trial. *Journal of the American Academy of Child & Adolescent Psychiatry*, 51(12), 1314-1323. E2. <https://doi.org/10.1016/j.jaac.2012.09.002>

Schleicher, D., Jones, P., & Kachur, O. (2010). Bodystorming as embodied designing. *interactions*, 17(6), 47-51. <https://doi.org/10.1145/1865245.1865256>

Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., & Dornheim, L. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*, 25(2), 167-177. [https://psycnet.apa.org/doi/10.1016/S0191-8869\(98\)00001-4](https://psycnet.apa.org/doi/10.1016/S0191-8869(98)00001-4)

Schutte, N. S., & Stilinović, E. J. (2017). Facilitating empathy through virtual reality. *Motivation and Emotion*, 41, 708-712. <https://psycnet.apa.org/doi/10.1007/s11031-017-9641-7>

- Segal, Z., Williams, M., & Teasdale, J. (2018). *Mindfulness-based cognitive therapy for depression*. New York, Guilford Press.
- Shao, Y. N., Sun, H. M., Huang, J. W., Li, M. L., Huang, R. R., & Li, N. (2018). Simulation-based empathy training improves the communication skills of neonatal nurses. *Clinical Simulation in Nursing*, 22, 32-42. <https://doi.org/10.1016/j.ecns.2018.07.003>
- Shapiro, J., & Hunt, L. (2003). All the world's a stage: the use of theatrical performance in medical education. *Medical Education*, 37(10), 922-927. <https://doi.org/10.1046/j.1365-2923.2003.01634.x>
- Shaw Brown, C., & Sulzer-Azaroff, B. (1994). An assessment of the relationship between customer satisfaction and service friendliness. *Journal of Organizational Behavior Management*, 14(2), 55-76. https://doi.org/10.1300/J075v14n02_05
- Sherman, Elaine, Anil Mathur, and Ruth Belk Smith. "Store Environment and Consumer Purchase Behavior: Mediating Role of Consumer Emotions." *Psychology & Marketing* 14, no. 4 (1997): 361-78. DOI: [https://doi.org/10.1002/\(SICI\)1520-6793\(199707\)14:4<361::AID-MAR4>3.0.CO;2-7](https://doi.org/10.1002/(SICI)1520-6793(199707)14:4<361::AID-MAR4>3.0.CO;2-7).
- Singh, J., Goolsby, J. R., & Rhoads, G. K. (1994). Behavioral and psychological consequences of boundary spanning burnout for customer service representatives. *Journal of Marketing Research*, 31(4), 558-569. <https://psycnet.apa.org/doi/10.2307/3151883>
- Solomon, S. (2022). *Interpersonal Emotion Regulation: Its Impact On the Service Team* [Doctoral dissertation]. University of Haifa, Israel.
- Spies, K., Hesse, F., & Loesch, K. (1997). Store atmosphere, mood and purchasing behavior. *International Journal of Research in Marketing*, 14(1), 1-17. [https://doi.org/10.1016/S0167-8116\(96\)00015-8](https://doi.org/10.1016/S0167-8116(96)00015-8)
- Spierings, G. (2021). *Prana: your luminous meditation assistant: An exploration of light as a supportive medium for meditation*. [Master's thesis, Delft University of Technology] Retrieved from <http://resolver.tudelft.nl/uuid:3f75908e-5120-4e5f-ad40-4d00f85d3ecc>
- Stappers, P. J., & Giaccardi, E. (2017). Research through design. In *The encyclopedia of human-computer interaction* (pp. 1-94). The Interaction Design Foundation.

Stavroulia, K. E., Baka, E., Lanitis, A., & Magnenat-Thalmann, N. (2018). Designing a virtual environment for teacher training: Enhancing presence and empathy. In *Proceedings of Computer Graphics International* (pp. 273-282). <https://doi.org/10.1145/3208159.3208177>

Stephan, A. (2017). Moods in layers. *Philosophia*, 45(4), 1481–1495. <https://doi.org/10.1007/s11406-017-9841-0>

Stepien, K. A., & Baernstein, A. (2006). Educating for empathy: a review. *Journal of General Internal Medicine*, 21, 524-530. <https://doi.org/10.1111%2Fj.1525-1497.2006.00443.x>

Stokes 3rd, J. (1980). Grief and the performing arts: a brief experiment in humanizing medical education. *Academic Medicine*, 55(3), 215

Stylios, G. K., & Yang, D. Y. (2013). The concept of mood changing garments made from luminescent woven fabrics and flexible photovoltaics: MoodWear. *Advances in Science and Technology*, 80(22), 22-29. <https://doi.org/10.4028/www.scientific.net/AST.80.22>

Sun, D., Paredes, P., & Canny, J. (2014, April). MouStress: detecting stress from mouse motion. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*(pp. 61-70). <https://doi.org/10.1145/2556288.2557243>

Surprenant, C. F., & Solomon, M. R. (1987). Predictability and personalization in the service encounter. *Journal of Marketing*, 51(2), 86-96. <https://psycnet.apa.org/doi/10.2307/1251131>

Sutton, R. I. (1991). Maintaining norms about expressed emotions: The case of bill collectors. *Administrative Science Quarterly*, 36(2),245-268. <https://psycnet.apa.org/doi/10.2307/2393355>

Sutton, R. I., & Rafaeli, A. (1988). Untangling the relationship between displayed emotions and organizational sales: The case of convenience stores. *Academy of Management Journal*, 31(3), 461-487.

Sweeney, K., & Baker, P. (2018). Promoting empathy using video-based teaching. *The clinical teacher*, 15(4), 336-340. <https://doi.org/10.1111/tct.12693>

Swinyard, W. R. (1993). The effects of mood, involvement, and quality of store experience on shopping intentions. *Journal of Consumer Research*, 20(2), 271-280. <https://psycnet.apa.org/doi/10.1086/209348>

Swinyard, W. R. (2003). The effects of salesperson mood, shopper behavior, and store type on customer service. *Journal of Retailing and Consumer Services*, 10(6), 323–333. [https://doi.org/10.1016/S0969-6989\(02\)00037-1](https://doi.org/10.1016/S0969-6989(02)00037-1)

Tamminen, K. A., & Crocker, P. R.E. (2013). “I control my own emotions for the sake of the team”: Emotional self-regulation and interpersonal emotion regulation among female high-performance curlers. *Psychology of Sport and Exercise*, 14(5), 737–747. <https://psycnet.apa.org/doi/10.1016/j.psychsport.2013.05.002>

Taylor, S. E., Sherman, D. K., Kim, H. S., Jarcho, J., Takagi, K., & Dunagan, M. S. (2004). Culture and social support: Who seeks it and why? *Journal of Personality and Social Psychology*, 87, 354–362. <http://dx.doi.org/10.1037/0022-3514.87.3.354>

Teding van Berkhout, E., & Malouff, J. M. (2016). The efficacy of empathy training: A meta-analysis of randomized controlled trials. *Journal of Counseling Psychology*, 63(1), 32–41. <https://doi.org/10.1037/cou0000093>

Thayer, R.E. (1989). *The biopsychology of mood and arousal*. New York: Oxford University Press.

Thoits, P. A. (1996). Managing the emotions of others. *Symbolic Interaction*, 19(2), 85–109. <https://psycnet.apa.org/doi/10.1525/si.1996.19.2.85>

Thompson, R. A., & Meyer, S. (2007). Socialization of emotion regulation in the family. In J.J. Gross (ed.) *Handbook of emotion regulation* (pp. 249–268)

Totterdell, P., & Parkinson, B. (1999). Use and effectiveness of self-regulation strategies for improving mood in a group of trainee teachers. *Journal of Occupational Health Psychology*, 4(3), 219–232. <https://psycnet.apa.org/doi/10.1037/1076-8998.4.3.219>

Totterdell, P., & Niven, K. (2014). *Workplace moods and emotions: A review of research*. Createspace Independent Publishing.

Totterdell, P., & Holman, D. (2003). Emotion regulation in customer service roles: testing a model of emotional labor. *Journal of Occupational Health Psychology*, 8(1), 55–73. <https://psycnet.apa.org/doi/10.1037/1076-8998.8.1.55>

Uslu, P. E., Desmet, P. M., & Schifferstein, H. N. (2022). The Eye Inward and the Eye Outward: Introducing a Framework for Mood-Sensitive Service Encounters. *She Ji: The Journal of Design, Economics, and Innovation*, 8(1), 118-146 <https://doi.org/10.1016/j.sheji.2021.12.002>

Vasquez, C. A., Niven, K., & Madrid, H. P. (2020). Leader interpersonal emotion regulation and follower performance. *Journal of Personnel Psychology*, 19(2), 97-101. <https://psycnet.apa.org/doi/10.1027/1866-5888/a000249>

Venkatesh, V., & Speier, C. (1999). Computer technology training in the workplace: A longitudinal investigation of the effect of mood. *Organizational behavior and human decision processes*, 79(1), 1-28.

Visch, V. T., & Goudbeek, M. B. (2009, September). Emotion attribution to basic parametric static and dynamic stimuli. In *2009 3rd International Conference on Affective Computing and Intelligent Interaction and Workshops* (pp. 1-5). IEEE. <https://doi.org/10.1109/ACII.2009.5349548>

Voorhees, C. M., Fombelle, P. W., Gregoire, Y., Bone, S., Gustafsson, A., Sousa, R., & Walkowiak, T. (2017). Service encounters, experiences and the customer journey: Defining the field and a call to expand our lens. *Journal of Business Research*, 79, 269-280. <https://doi.org/10.1016/j.jbusres.2017.04.014>

Watson, D., & Tellegen, A. (1985). Towards a consensual structure of mood. *Psychological Bulletin*, 98(2), 219-235. <https://psycnet.apa.org/doi/10.1037/0033-2909.98.2.219>

Wear, D. (1991). Painters and patients: how art informs medicine. *Family Medicine*, 23(7), 531-533.

Weaver, A. D., Allen, J. A., & Erks Byrne, R. (2019). Coping with emotional labor: an intervention study. *Management Research Review*, 42(9), 1033-1048. <https://doi.org/10.1108/MRR-07-2018-0259>

Webster, D. (2010). Promoting empathy through a creative reflective teaching strategy: A mixed-method study. *Journal of Nursing Education*, 49(2), 87-94. <https://doi.org/10.3928/01484834-20090918-09>

Wensveen, S., Overbeeke, K., & Djajadiningrat, T. (2002, June). Push me, shove me and I show you how you feel: Recognising mood from emotionally rich interaction. In *Proceedings*

of the 4th conference on Designing interactive systems: processes, practices, methods, and techniques (pp. 335-340).

Whitford, D. K., & Emerson, A. M. (2019). Empathy intervention to reduce implicit bias in pre-service teachers. *Psychological Reports, 122*(2), 670-688. <https://doi.org/10.1177/0033294118767435>

Williams, M., & Emich, K. J. (2014). The experience of failed humor: Implications for interpersonal affect regulation. *Journal of Business and Psychology, 29*(4), 651–668. <https://doi.org/10.1007/s10869-014-9370-9>

Williams, S., & Wong Wee Voon, Y. (1999). The effects of mood on managerial risk perceptions: Exploring affect and the dimensions of risk. *The Journal of Social Psychology, 139*(3), 268–287. <https://doi.org/10.1080/00224549909598384>

Wimmer, L., Von Stockhausen, L., & Bellingrath, S. (2019). Improving emotion regulation and mood in teacher trainees: Effectiveness of two mindfulness trainings. *Brain and Behavior, 9*(9), e01390. <https://doi.org/10.1002/brb3.1390>

Winning, A. P., & Boag, S. (2015). Does brief mindfulness training increase empathy? The role of personality. *Personality and Individual Differences, 86*, 492-498. <https://doi.org/10.1016/j.paid.2015.07.011>

Winter, R., Leanage, N., Roberts, N., Norman, R. I., & Howick, J. (2022). Experiences of empathy training in healthcare: a systematic review of qualitative studies. *Patient Education and Counseling, 105* (10), 3017-3037. <https://doi.org/10.1016/j.pec.2022.06.015>

Wong, E., Tschan, F., & Semmer, N. K. (2017). Effort in emotion work and well-being: The role of goal attainment. *Emotion, 17*(1), 67–77. <https://doi.org/10.1037/emo0000196>

Wright, S., Wong, A., & Newill, C. (1997). The impact of role models on medical students. *Journal of General Internal Medicine, 12*, 53-56. <https://doi.org/10.1046/j.1525-1497.1997.12109.x>

Xue, H., Desmet, P. M. A., & Fokkinga, S. F. (2020). Mood granularity for design: Introducing a holistic typology of 20 mood states. *International Journal of Design, 14*(1), 1–18. Available at <http://www.ijdesign.org/index.php/IJDesign/article/view/3578/891>

- Xue, H., Zheng, Q., & Desmet, P.M.A. (2023). Touchy-feely: A designerly exploration of haptic representations of three mood states. In De Sainz Molestina, D., Galluzzo, L., Rizzo, F., Spallazzo, D. (eds.), *IASDR 2023: Life-Changing Design*, 9-13 October, Milan, Italy. <https://doi.org/10.21606/iasdr.2023.325>
- Xu, S., Yang, H. H., MacLeod, J., & Zhu, S. (2019). Interpersonal communication competence and digital citizenship among pre-service teachers in China's teacher preparation programs. *Journal of Moral Education*, 48(2), 179-198. <https://doi.org/10.1080/03057240.2018.1458605>
- Yee, R. W., Yeung, A. C., & Cheng, T. E. (2008). The impact of employee satisfaction on quality and profitability in high-contact service industries. *Journal of Operations Management*, 26(5), 651-668. <https://doi.org/10.1016/j.jom.2008.01.001>
- Yee, R. W., Yeung, A. C., & Cheng, T. C. E. (2011). The service-profit chain: An empirical analysis in high-contact service industries. *International Journal of Production Economics*, 130(2), 236-245.
- Yoon, J. (2018). Escaping the emotional blur: Design tools for facilitating positive emotional granularity [Doctoral dissertation, Delft University of Technology] Retrieved from <https://repository.tudelft.nl/islandora/object/uuid:5f807568-492b-40eb-8618-bcdf1e1b2e7c?collection=research>
- Zacker, J., & Bard, M. (1973). Effects of conflict management training on police performance. *Journal of Applied Psychology*, 58(2), 202-208. <https://doi.org/10.1037/h0035659>
- Zaltman, G. (1996). Metaphorically speaking. *Marketing Research*, 8(2), 13-20.
- Zapf, D., Vogt, C., Seifert, C., Mertini, H., & Isic, A. (1999). Emotion work as a source of stress: The concept and development of an instrument. *European Journal of Work and Organizational Psychology*, 8(3), 371-400. <https://doi.org/10.1080/135943299398230>
- Zapf, D., & Holz, M. (2006). On the positive and negative effects of emotion work in organizations. *European Journal of Work and Organizational Psychology*, 15(1), 1-28. <https://doi.org/10.1080/13594320500412199>
- Zazulak, J., Sanaee, M., Frolic, A., Knibb, N., Tesluk, E., Hughes, E., & Grierson, L. E. (2017). The art of medicine: arts-based training in observation and mindfulness for fostering the

empathic response in medical residents. *Medical Humanities*, 43(3), 192-198. <https://doi.org/10.1136/medhum-2016-011180>

Zhang, M., & Jansen, B. J. (2009). Influences of mood on information seeking behavior. In *CHI'09 extended abstracts on human factors in computing systems* (pp. 3395-3400).

Zomerdijk, Leonieke G., and Christopher A. Voss. "Service Design for Experience-Centric Services." *Journal of Service Research* 13, no. 1 (2010): 67-82. DOI: <https://doi.org/10.1177/1094670509351960>.

Appendices

Appendix A. Mood Aware Communications Diary

Instructions

When you notice a client's mood and a change in the way you communicate, please record the situation by completing the following two tasks:

Task 1. Record the encounter: if possible, take some photos and videos to record the environment and situation after the encounter (you may either send them via e-mail or to keep them for yourself).

Task 2. Record the details of the encounter

- Following the guidance provided in this diary, look more closely into the encounter.
- Preferably, please report on the details directly after the encounter.
- If it is not possible to make a report, please write down a few keywords and fill out questions 3, 4, 5, 6, and 7 quickly; then fill in the rest before the day ends.
- Please report at least 2 mood sensitive encounters per day. You are of course encouraged to report more.

Table A1. Mood Aware Communications Diary.

Sections	Questions
Facts	Day Number Date My mood aware communications at work. Please report at least 2 mood-aware communications for today.
Moods	<ol style="list-style-type: none"> 1. My Mood: ... 2. My Clients' Mood: ... <p>Please mark your mood & your client's mood in the figure. (For detailed descriptions of moods, you can check the 20-Moods typology booklet.)</p> <ol style="list-style-type: none"> 3. When we were communicating, we were in ... (If possible, please take a photograph of the environment you were in and send it to the researcher.) 4. The client was/had ... (Describe the client without revealing his/her identity; this is to help you remember the reported moment when discussing during the interview.) 5. I interpreted his/her mood from/by ... (Please explain all the hints you used to guess your clients' mood: the way she/he speaks, moves, reacts; body posture, etc.)

Table A1. (Continued)

Sections	Questions
Mood Regulation	<p>6. When you noticed the clients' mood, did it influence or change your communication style? If so: how?</p> <p>(Please give as much detail as possible about how you adjusted your communication, such as the way you spoke, moved, reacted, or your body posture.)</p> <p>7. Before/after this communication, did you do something to change your mood? If yes, what was it?</p> <p>(You can draw inspiration from the examples given and mark them if any of them are familiar. Feel free to take notes as well.)</p> <ul style="list-style-type: none"> • Looking for a distraction (e.g., staying busy, daydreaming, engaging in a hobby) • Rewarding yourself (e.g., doing pleasurable activities, self-indulgence) • Venting (e.g., expressing, telling, writing about the feelings) • Positive thinking (e.g., acting happy, savoring what you have, seeing bright side) • Seeking relaxation (e.g., stretching, controlling breathing) • Seeking refreshment (splashing water on face, taking a walk, eat/drink) • Reducing demands (reducing workload, cancelling activities) • Withdrawing (e.g., seclusion, turning off the phone, avoiding stimulation) • Eliminating energy drainers (e.g., avoiding demanding people/tasks) • Re-energizing (e.g., resting the eyes, taking a nap, going to bed early) • Seeking social support (e.g., asking friends' help, seeking professional help) • Rationalizing mood (e.g., tracking/analyzing mood, seeking causes) • Transforming creatively (e.g., finding a way to express mood, creative writing, painting) • Embracing mood (e.g., allowing, accepting, appreciating mood) • Detaching from mood (e.g., engaging in mindfulness, religious ritual, meditation)

Table A2. Example Mood Aware Communications Diary filled in by a participant.

Sections	Answers
Moods	<ol style="list-style-type: none"> 1. My mood: productive 2. My clients' mood: miserable 3. When we were communicating, we were in ... my [medical] practice. 4. The client was/had ... old woman with the root canal treatment 5. I interpreted his/her mood from/by ... she was dreading the treatment, had shaky movements, shoulders in, hardly any eye contact and no communication.

Table A2. *(Continued)*

Sections	Answers
Mood Regulation	<p>6. When you noticed the clients' mood, did it influence or change your communication style? If so: how?</p> <p>Yes, I tried to make her feel comfortable, less miserable. Make eye contact, gently touch her arm, speaking softly but calm and clear.</p> <p>7. Before/after this communication, did you do something to change your mood? If yes, what was it?</p> <p>The patient required a lot of my energy so I wanted to reenergize by getting something to eat.</p>

Appendix B. Study 1: Coding Scheme

Table B1. Coding scheme.

Categories	Themes	Subthemes	Keywords/Codes
1. Noticing Moods & Mood Changes	Self-awareness		Own mood awareness Awareness of behavioral manifestations Desirability of mood-awareness
		Layers of mood	Work mood Private mood
	Subset of moods	Job/context specific moods	
2. Provider Mood Regulation	Mood regulation strategies		Seek distraction Self-reward Vent Positive thinking Seek relaxation Seek refreshment Reduce demands Withdraw Eliminate energy drainers Reenergize Seek social support Rationalize Transform creatively Embrace Detach
	Mood-regulation time		Preparation for the encounter Mood regulation during encounter Post-encounter mood regulation
3. Noticing the Client's Mood	Observable mood cues	Face	Facial expression, eye contact, gaze, skin tone
		Body	Breathing, bodily movements, posture, hand gestures
		Voice	Tone of voice, tempo, pitch
		Behavior	Reactions/attitude/tendencies, interactions with other people
		Communicated content	Situation/story, feelings, questions asked
	Products	Interactions with products	
	Recognition of client mood		Ease & difficulty of client mood interpretation (intuitive or deliberate) Client information and background

Table B1. (Continued)

Categories	Themes	Subthemes	Keywords/Codes
4. Service Adjustment to Client's Mood	Interpersonal mood regulation strategies	Understanding	Interested, attentive, connected, open, inclusive, empathetic
		Calming	Relaxed, calming, comforting, distracting
		Encouraging	Reassuring, supportive, encouraging, motivating, complimenting
		Efficient	Serious, productive, problem-solving, giving advice, constructive
		Sociable	Cheerful, enthusiastic, friendly, humorous
		Apologetic	Remorseful, caring, giving, apologetic, reconciliatory, valuing
		Tolerant	Agitated, hasty
		Blunt	Direct, lecturing, blunt, to-the-point, critical, reprimanding
		Distant	Restrained, reticent, passive, withdrawn, ignoring, cautious
		Strategy dynamics & use	Ease & difficulty of finding appropriate strategies Motivation to change strategies Goal of the encounter & related strategies Multiple strategies in a single encounter Different intensities of strategies Contextual strategies
5. Products Playing Role in the Encounter	Product functions		Products that indicate & detect mood Products that regulate, induce, or influence mood Products that support/accommodate a mood sensitive communication
6. Problems & Difficulties			Difficulty being mood-aware Difficulty being mood sensitive all the time Confusion between moods and emotions Difficulty finding the opportunity to regulate mood Difficulty overcoming unwanted moods Difficulty guessing client moods accurately Difficulty selecting appropriate strategy

Appendix C. Descriptions of Nine Interpersonal Mood Regulation Strategies

Table C1. Descriptions of nine interpersonal mood regulation strategies.

Strategy	Description	Example Anecdotes
1. Understanding	<p>You are fully focused on the clients' words and nonverbal cues.</p> <p>You allow your client to tell his/her situation by taking your time.</p> <p>You aim to convey the message that the client is being understood.</p>	<p>Educator: Cheerful; Student: Lethargic—I approached the student after he mentioned it to the group. I was extra soft, soft voice, not doing other things, giving full attention to him. Maintained eye contact. I think I gave more pause, more silence in between.</p> <p>Healthcare Professional: Vigorous; Patient: Anxious—Showed compassion and understanding, politely took the time to explain. I couldn't find anything that was worrisome, so I said, "Oh there is nothing worrying me—but of course I understand it's a strange sensation so let's wait and see how it will develop."</p> <p>Government Employee: Amiable; Citizen: Boisterous—I just listened to her attentively and gave her room to complain while doing my best to help her with the website.</p>
2. Calming	<p>You are calm and relaxed. You are showing this to the client so the client can relax as well. You may try to distract the client.</p> <p>You aim to bring the client at ease.</p>	<p>Educator: Productive; Student: Stressed—I slowed down my own verbal communication. During the walk I decreased my tempo to bring him ... beside me. Tried to keep eye contact. I am usually very calm and relaxed whatever happens. It puts people at ease. I was a beacon of calmness and that's what I also want to convey to those who are stressed. I really listened to him, telling him "Okay, don't be stressed; it's just a presentation, say what you want to say." I was really sitting at the edge of my seat and listening. And when I ask questions, I do that very calmly. Not posing nasty questions, just posing questions to get them at ease.</p> <p>Healthcare Professional: Productive; Patient: Anxious—This was a patient who required a minor surgical procedure. I tried to keep the conversation to small things to make the patient feel more relaxed. That was working. I performed the procedure while we were talking about non-medical matters—small things to make the patient feel more relaxed ... so things that had nothing to do with the procedure itself.</p>

Table C1. (Continued)

Strategy	Description	Example Anecdotes
3. Encouraging	You are willing to help and alleviate the negative feelings of the client. This style is about supporting the other person, comforting them by giving reassurance, convincing the client that everything will be alright. It is also about clarifying the client's worries/doubts and questions.	<p>Government Employee: Relaxed; Citizen: Anxious & Serious—She is scared to experience the same things again. So I tried to give her a lot of compliments for everything that she was doing right because she was doing everything the right way with the baby. She asked what she should do, and I asked her what she felt like doing and then supported her by saying, "That's fine, you are the mom. You got this, you can do it." She needs just a little bit more assurance that things are going right ...</p> <p>Healthcare Professional: Productive; Patient: Anxious—She told me that the last time the anesthesia didn't work, and I said, "Okay, let's take some time, I won't start until you feel numb." So when I give anesthesia, I also do it very calmly—especially with patients like this, I do it extra carefully, extra soft. I took the time to explain why her whole mouth was numb. I waited until she didn't feel the air I blew on her gums. Because I wasn't in a hurry, I did some administration on my computer while she was getting numb and then after a minute or two, I started the treatment. I told her "If you feel anything, just raise your hand and I will stop immediately." I asked frequently if she was still okay. Afterwards she was calm too, and the treatment went alright.</p>
4. Sociable	You are being friendly, easy-going and open to communication. You may make jokes. You show willingness to help and have a genuine interest in engaging in a decent conversation with the client. This style is about having a decent encounter and helping the client.	<p>Educator: Amiable; Student: Cheerful—Got influenced by her enthusiasm, by speaking louder, laughing, smiling. Laid back in the chair, looking up. It was a very nice meeting, nice talking about the master graduation project.</p> <p>Healthcare Professional: Cheerful; Patient: Cheerful—The patient was there for a vaccination. He was happy as he was anticipating a trip. He transferred his happy mood to me. For me, it was a nice, 'in between' consultation, because there were no serious health issues. It's nice to talk about travel destinations. So we had a cheerful conversation about the client's travel purposes. When somebody comes in here cheerful, your mood is also lifted.</p>

Table C1. (Continued)

Strategy	Description	Example Anecdotes
5. Apologetic	<p>You acknowledge the situation and present your apologies. You are ready to accept the mistakes and to make a real effort to fix the issue. You apologize verbally and show that you are sorry bodily and with your facial expressions. You try to clarify the reason why the mistake or inconvenience has happened.</p>	<p>Government Employee: Amiable; Citizen: Rebellious—They had to make an appointment at the city center as we couldn't solve the issue here, so he got really angry. I explained the situation but he didn't listen. I apologized for that but there was nothing I could do at that moment. I tried to speak to him, but he kept going. I just told him that I am here to help him. Still he didn't want to take that and he kept going. I couldn't do anything. Eventually, I told him "Sir, I am trying to help you here, it's not that I am sending you away. I just can't help you at the moment. In this office we don't do it, so there is nothing I can do right now. I would really like to help you but I am not able to. And nobody else in this building is able to."</p> <p>Government Employee: Amiable; Citizen: Cheerful—I thought she would still be a bit grumpy because of the inconvenience. If that would be the case, I could understand why she would feel that way. I was prepared for grumpiness, but she was okay so I had to switch my strategy. If she had been grumpy, I would have apologized for the situation and told her I am sorry she had to come back. When I am sorry, I show that bodily. I try to express that I am really sorry for them. So, I was prepared for that but then she came in and I had to start smiling, and be more friendly. Of course, I still apologized for the situation, because we made the mistake so we have to apologize.</p>
6. Efficient	<p>You are willing and determined to solve the situation at hand. You convey your message as effectively, realistically, objectively, briefly, and productively as possible. You give advice and you focus mostly on the important facts and necessary topics; you are focused on the task at hand.</p>	<p>Educator: Amiable; Student: Vigorous—It was a meeting about a graduation project. I took a decisive approach to her. . . . talking in bold sentences, like, "Okay this is what we are going to do," "Let's do that." "Please write a proposal as soon as possible."</p> <p>Government Employee: Sentimental & Amiable; Citizen: Productive – I clicked on the number and he was at my desk really fast. He had everything ready so he gave it to me and I asked the questions. He answered them short and quick. I just asked him the things I needed to ask and also kept it short and brief. There were no personal things shared. Mostly, when someone comes to collect their documents, you have like a small chit chat in between, but with him there wasn't any.</p>

Table C1. (Continued)

Strategy	Description	Example Anecdotes
7. Tolerant	<p>You are following their lead and you try to fix the situation at hand as tolerantly and patiently as possible. Your motivation is not very high, the tension starts to build and you are feeling slightly agitated yet trying to remain polite.</p>	<p>Government Employee: Amiable; Citizen: Boisterous—I saw that he knew that he had the wrong number but he acted surprised. First, I told him I can't help him. He started to raise his voice. Looking at our agenda I saw that it was quiet so I decided to help him ... But he was still being impolite. He also asked questions that didn't have anything to do with the process, but still about the office. But I was like, 'Well you are here for this situation so let's do this.' Still, he was trying to make a point and it wasn't really a nice conversation. I also answered all the questions he had, to outsmart him. But I just stayed polite.</p> <p>Healthcare Professional: Cheerful; Patient: Stressed—I felt agitated and stressed after a point because she couldn't say what she wanted from me and she was taking so much time. There were two more patients waiting. But I stayed calm and very polite. I asked her twice, "Okay I see that you are very stressed and I really want to help you but what can I do for you now in these 10 minutes? What can I do for you now?" but then the whole story again. In the end, I advised her to make another appointment for additional complaints.</p>
8. Blunt	<p>You are being direct and intolerant. You are intervening in the situation in a direct manner to fix the problem at hand. You starkly point out the reality to the client, in a direct, matter-of-fact way. You draw the line for the sake of the client.</p>	<p>Healthcare Professional: Agitated & Peaceful; Patient: Productive—I became agitated when she had no regard for our former agreement and when she told me what to do. I became more direct in my communication with more rigid movements. She wanted me to pull the tooth. I told her that it is not what I am going to do and I became also more direct in my communication, saying, "No, I am not willing to do this because it is a waste, I am not pulling a tooth for no reason. These are the options for what we can do." So, I became more direct, and then eventually she was like, "Hmm okay—okay." She understood. So, I think I dropped my shoulders a bit to stand firm and insisted with my opinion.</p> <p>Government Employee: Serious; Citizen: Agitated & Stressed—I expected her mood would be like this, so I arrived in a serious mood myself. I was there to ask if she had any questions and explain why the situation was the way it was. She was cold and she was opposing everything I said. So after a while, I said, "Okay, well, this is what is going to happen if you don't cooperate," and then she started crying and I was able to become a little more amiable. But at first, I was very strict and serious. I was like, 'Ok, this is the situation and nothing more, nothing less.'</p>

Table C1. (Continued)

Strategy	Description	Example Anecdotes
9. Distant	<p>You tend to either shut down the conversation or withdraw. You don't have the energy to deal with the situation or you want to save energy for later, therefore, you withdraw from the conversation. Alternatively, you may want to seriously listen without saying anything to save energy.</p>	<p>Educator: Sentimental; Student: Agitated—Actually, it made me even more calm & relaxed. A kind of rebellious reaction maybe. I was so serious, melancholic & sad this day. When I saw him in his annoyed & agitated mood, I think I unconsciously responded with, "I'm not following your vibe, because it would be toxic for me today." So, I started breathing even more calm, peaceful and felt detached from myself & focused on the content.</p> <p>Government Employee: Serious; Citizen: Agitated—Normally, I ask a lot of questions to people that come talk to us but because he was so aggressive, I stayed very quiet. I probably stepped back. When he started to say insulting things, I said, "No, sorry—I'm not having this conversation," and then physically turned away and started looking at other people.</p>

Appendix D. Products Found

Table D1. Products found in the diary study.

Example Products/ Factors/ Activities Found When ...	Mood Indicators and Detectors	Mood Regulators, Inducers, and Influencers	Supporters/ Accommodators of the Communication
Noticing own mood	Mobile phone application: Served to report and track service provider's mood.		
Regulating own mood		<p>Food & drink: Served to regulate mood (e.g., to reenergize, seek out social support, or self-reward)</p> <p>Mobile phone & computer & headphones: Served to provide distraction, to vent, and to withdraw from social interaction.</p> <p>Office furniture: Served to regulate mood (e.g., mirror to think positively or a desk to withdraw)</p> <p>Environmental factors: Served to regulate or influence the service providers' mood and the clients' mood. (e.g., going out for fresh air and stretching to feel refreshed)</p>	

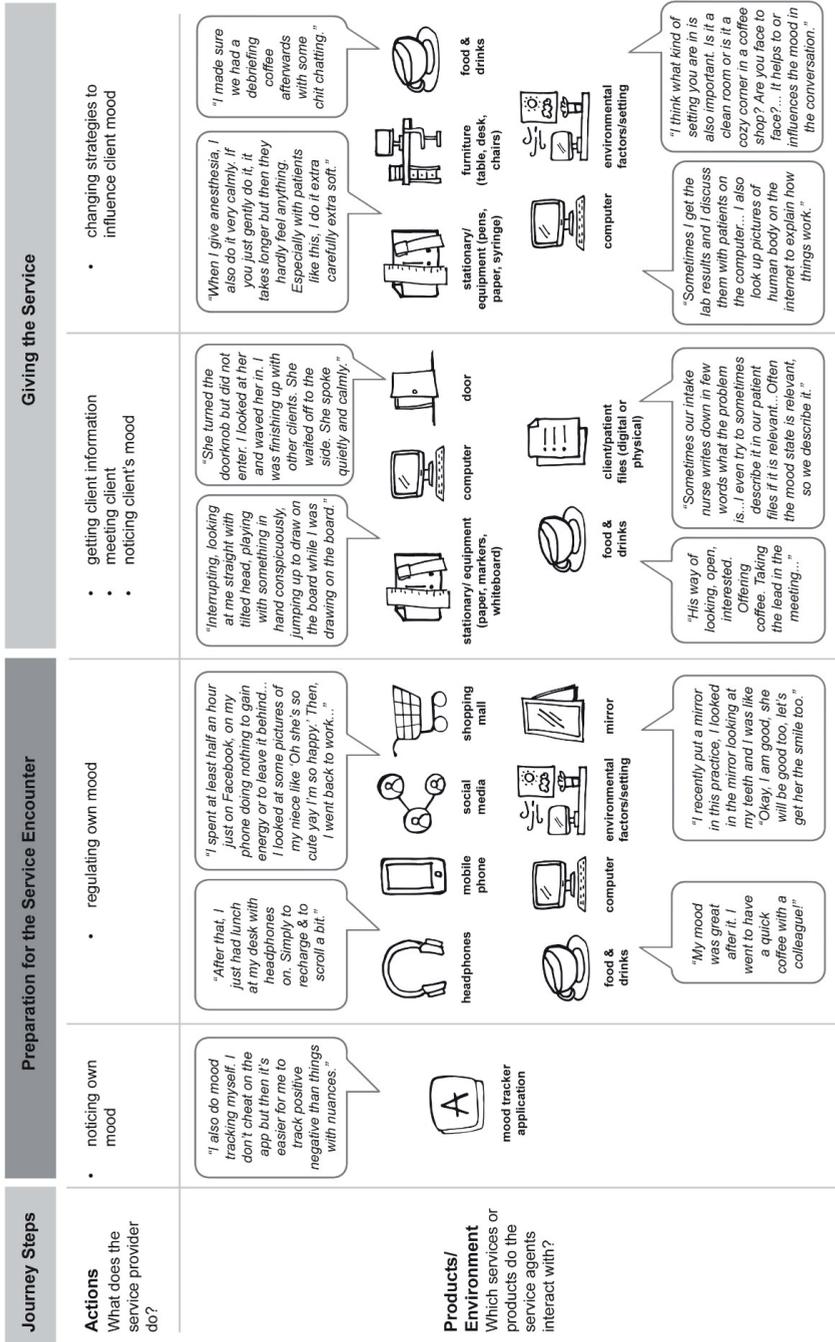
Table D1. (Continued)

Example Products/ Factors/ Activities Found When ...	Mood Indicators and Detectors	Mood Regulators, Inducers, and Influencers	Supporters/ Accommodators of the Communication
Interpreting client's mood	<p>Computer & patient files: Served to indicate and keep the record of the client's mood & situation</p> <p>Office door knob: Served to help detect clients' mood (turned hesitantly and slowly by the client)</p> <p>Stationary: Served to help detect client mood (e.g., pen, markers, whiteboard)</p> <p>Food & drinks: Served to indicate the client mood.</p>		

Table D1. (Continued)

Example Products/ Factors/ Activities Found When ...	Mood Indicators and Detectors	Mood Regulators, Inducers, and Influencers	Supporters/ Accommodators of the Communication
Adjusting communication			<p>Stationary and office equipment: Served as communication supports (e.g., computer screens, paper, pens, official government office forms, x-rays, syringes)</p> <p>Patient Files: Served to prepare for the encounter by indicating the upcoming patient's mood, complaint or situation.</p> <p>Food & drink: A coffee accompanied to the debriefing chat after a difficult meeting.</p> <p>Environmental factors: Served to accommodate the client's mood and needs (e.g., lighting, room size, noise, crowding, scent, cleanliness, furniture placement and comfort, comfort of a surgery room or a clinic)</p>

Appendix E. Service Provider Journey Map



Appendix F. Interpersonal Affect Regulation Literature Reviewed for Detailed Descriptions

Adapted from Niven et al.,s (2009a) review on “Strategies Used to Achieve Controlled Interpersonal Affect Regulation” and Interpersonal Affect Regulation strategies together with literature from 2009 onwards

Goal	Interpersonal Mood Regulation Strategies	Interpersonal Affect Regulation & Communication Style Literature Reviewed
Improve Affect	Understanding	<p>Talking about the issues, listening to their emotions, letting the other feel the way they feel and vent, acknowledging the other person’s feelings, making time for the other, indicating availability (Alame, 2016);</p> <p>Positive Problem Focused Affective Engagement: listening to target’s problems, allowing them to vent their emotions, talking about their problems, having a supportive conversation, making time for the target (Niven et.al, 2009a);</p> <p>Mirroring affective responses (Thompson & Meyer, 2007);</p> <p>Sharing stories (Schrock et al., 2004);</p> <p>Active listening (Cross et al., 2003)</p> <p>Agreeing, listening, letting the person vent, mere presence, empathy (Lively, 2000);</p> <p>Listening to anxieties (Pierce, 1999)</p> <p>Open listening, eye contact, attention, allowing person to vent (Frost & Robinson, 1999)</p> <p>Accessibility (presence, talking, listening), inquiry (asking how the person feels, withholding judgment), attention (eye contact, nodding), validation (communicating positive regard and appreciation), empathy (Kahn, 1993);</p> <p>Discussing personal life and feelings (Henderson & Argyle, 1985);</p> <p>Emotional support: showing sympathy and understanding, listening, empathizing (House & Kahn, 1985);</p>
	Calming	<p>Distraction (Friesen et al., 2015);</p> <p>Acceptance by Distracting Attention: arranging a social activity for the target, giving the target a card signed by his or her friends, inviting the target on holiday, running a bath for the target, buying the target a drink (Niven et.al, 2009a);</p> <p>Selecting situations for others (Gross & Thompson, 2007);</p> <p>Physical soothing, distracting attention (Thompson & Meyer, 2007);</p> <p>Having food together (Henderson & Argyle, 1985)</p>

Goal	Interpersonal Mood Regulation Strategies	Interpersonal Affect Regulation & Communication Style Literature Reviewed
Encouraging	<p>Recognizing and appreciating the other's efforts, saying that you are on their side, telling the other that he/she is doing good, expressing belief, pointing at future opportunities, providing reassurance, telling the other to believe in him/herself (Alame, 2016);</p> <p>Positive appraisals, Hockey chatter (e.g., saying "great job"), being supportive, tap on the pads (e.g., giving encouragement and confidence) (Friesen et al., 2015);</p> <p>Positive Target-Focused Affective Engagement: discussing positive characteristics of the target, blaming someone other than the target, reminding them that he or she has done fine in similar situations, praising their work, expressing belief in their abilities (Niven et.al, 2009a);</p> <p>Affirmation of each other's identity (Schrock et al., 2004);</p> <p>Offering reassurance, complimenting (Pierce, 1999);</p> <p>Acts of support of comforting (Thoits, 1996)</p> <p>Reassuring, comforting (House & Kahn, 1985);</p>	
Sociable	<p>Humour (e.g., making jokes), fun activities (e.g., going out, dancing) (Friesen et al., 2015);</p> <p>Acceptance by Humor: acting silly to make the target laugh, laughing with the target, entertaining the target, sending the target a funny message, sticking funny notes on the target's work (Niven et.al, 2009a);</p> <p>Friendliness (Kahn & Hyun, 2009);</p> <p>Black humor (Crawley, 2004);</p> <p>Smiling, speaking with enthusiastic tones (Cross et al., 2003)</p> <p>Humor, (Cahill & Eggleston, 1994; Francis et al., 1999; Locke, 1996; Schrock et al., 2004; Sutton, 1991);</p> <p>Smiling, presenting positive cheer (Pierce, 1999);</p> <p>Compassion (warmth, affection, kindness, smiling, joking) (Kahn, 1993);</p> <p>Displaying positive emotions (Rafaeli & Sutton, 1990);</p> <p>Chatting casually, joking, teasing (Henderson & Argyle, 1985);</p>	
Apologetic	<p>Keeping in touch with the other (Roberts & Lane, 2021);</p> <p>Giving special treatment, making the other feel valued, apologizing for a mistake made, spending time with the other (Alame, 2016);</p> <p>Acceptance by Valuing: spending time with the target, being there for the target, telling the target how much you value him/her, making the target feel special and cared about, saying "hello" to the target (Niven et.al, 2009a);</p> <p>Valuing the other's opinions (Cross et al., 2003);</p> <p>Emotional Support (communicating caring and concern, valuing, being there) (House & Kahn, 1985);</p>	

Goal	Interpersonal Mood Regulation Strategies	Interpersonal Affect Regulation & Communication Style Literature Reviewed
	Efficient	<p>Providing assignments and challenges, giving a personalized plan, offer support, give advice, setting up having regular meetings (Roberts & Lane, 2021);</p> <p>Offering help, giving advice, direction and guidance to solve issues, coaching the person, helping the other reframe the situation and see things from another perspective, looking at the facts, discussing the solution and an action plan to solve it, solving the other's problem (Alame, 2016);</p> <p>Goal setting (Friesen et al., 2015);</p> <p>Positive Engagement by Cognitive Engagement: making the target aware that others support him/her, giving him/her advice, trying to get the other to view a situation objectively, rationalizing a decision that the target made, discussing his/her opportunities (Niven et.al, 2009a);</p> <p>Supportive interchanges (Schrock et al., 2004);</p> <p>Practical help (Lively, 2000);</p> <p>Giving practical support, reappraising negative situations (Frost & Robinson, 1999);</p> <p>Support (reframing and analyzing situations, providing resources) (Kahn, 1993);</p> <p>Helping the person, giving personal advice (Henderson & Argyle, 1985);</p> <p>Instrumental (practical or tangible help, providing material goods), informational (providing guidance and advice) (House & Kahn, 1985);</p>
Worsen Affect	Tolerating	<p>Rejection by Putting Ones' Feelings First: acting annoyed with the target, telling the target to stop interfering, sounding annoyed when speaking with the target, sulking around the target, patronizing the target (Niven et.al, 2009a);</p> <p>Negative eye contact (Neuman & Baron, 1998)</p>

Goal	Interpersonal Mood Regulation Strategies	Interpersonal Affect Regulation & Communication Style Literature Reviewed
Blunt	<p>Shifting from emotions to facts, saying that it is not a big deal, saying that the behavior is unacceptable (Alame, 2016);</p> <p>Negative Behavioral and Affective Engagement: explaining to the target why he or she has made you feel bad, making the target realize that he or she has hurt someone else, explaining to the target how he or she made others feel, challenging the target's behavior, highlighting the consequences of the target's actions, letting the target know you think he or she is not pulling his or her weight, giving the target boring tasks, putting the target under pressure, telling the target that he or she missed a deadline, complaining that the target has forgotten to do something (Niven et.al, 2009a);</p> <p>Negative eye contact, aggression (Neuman & Baron, 1998)</p> <p>Reminding of obligations, reminding the person of his or her role responsibilities (Vangelisti et al., 1991);</p> <p>Teaching the person (Henderson & Argyle, 1985);</p>	
Distant	<p>Silent treatment (Friesen et al., 2015);</p> <p>Non-confrontational Rejection by Withdrawal: refusing to talk with the target, giving the target the 'silent treatment', not replying to the target's message, making it clear that you do not care how the target feels, making the target believe no-one likes him or her (Niven et.al, 2009a);</p> <p>Ignoring affective responses (Thompson & Meyer, 2007);</p> <p>Silent treatment (Neuman & Baron, 1998)</p>	

Appendix G. Descriptions of Nine Interpersonal Mood-Regulation Strategies

Strategy Names (given by the authors)	Strategies	Body & Voice	Example Client Moods
Understanding	<ul style="list-style-type: none"> - positively engaging in the conversation - taking time to listen to & to talk about their problems - asking questions to encourage them to talk - allowing them to vent their emotions - acknowledging their story & showing and stating that they are being understood 	<ul style="list-style-type: none"> - being attentive to the client's words & non-verbal cues - leaning-in & maintaining eye contact - nodding, affirming with words and interjections - talking less, remaining mostly silent & giving pauses to give space for the client - speaking softly & politely 	<ul style="list-style-type: none"> Anxious Gloomy Grumpy Lethargic
Calming	<ul style="list-style-type: none"> -drawing their attention to things that would evoke a desirable mood -distracting the client by asking easy & comforting questions -engaging in small talk & chatting about unrelated topics -making the client feel comfortable, relaxed and at ease 	<ul style="list-style-type: none"> - maintaining eye contact - having a relaxed & open posture - moving/walking calmly & slowly intentionally to radiate calmness - speaking calmly & quietly - taking time to breathe between sentences 	<ul style="list-style-type: none"> Stressed Anxious Gloomy Rebellious
Encouraging	<ul style="list-style-type: none"> - convincing, supporting, comforting, reassuring or empowering the client - allowing them to ask any question and giving elaborate answers to clarify worries & doubts - avoiding intimidating words or sentences complimenting the client and assuring them that they are performing well - expressing belief in their abilities - repeating important points & asking questions to check with them 	<ul style="list-style-type: none"> - leaning forward to listen - maintaining eye contact - gently touching the client's arm/shoulder to show they are supported - speaking slowly, softly, calmly, confidently and clearly 	<ul style="list-style-type: none"> Anxious Miserable Stressed Gloomy

Strategy Names (given by the authors)	Strategies	Body & Voice	Example Client Moods
Sociable	<ul style="list-style-type: none"> - being friendly, easy-going open for communication - warmly greeting the client and taking the time for the client - asking questions to facilitate the conversation - making jokes and entertaining the client by using humor - offering things like coffee or tea to accompany the pleasant conversation 	<ul style="list-style-type: none"> - being at ease, warm & interested - having an open and upright posture - showing willingness, enthusiasm & energy to help and listen - being talkative and speaking in a high tone of voice - smiling and laughing 	<ul style="list-style-type: none"> Amiable Cheerful Relaxed Jubilant
Apologetic	<ul style="list-style-type: none"> - giving client the chance to vent - explicitly apologizing and clarifying the reason for the mistake or the inconvenience - showing that you care about the client and that the issue will be handled with care - actively trying to find ways to fix the issue - offering alternative options or ways to make it up to the client - offering favors and trying to please the client 	<ul style="list-style-type: none"> - showing that you are sorry bodily - expressing apologies with facial expressions - speaking clearly 	<ul style="list-style-type: none"> Rebellious Miserable Agitated Grumpy
Efficient	<ul style="list-style-type: none"> - being realistic, objective, informative and constructive - giving advice & guiding - helping the client see a situation objectively - discussing the client's options - focusing on the important facts & topics - keeping the interaction short and to the point 	<ul style="list-style-type: none"> - showing determination to solve the issue - acting productive and confident without stalling or chitchatting - maintaining eye contact - having an open and assertive attitude - talking in a serious and productive tone of voice 	<ul style="list-style-type: none"> Anxious Productive Serious Boisterous

Strategy Names (given by the authors)	Strategies	Body & Voice	Example Client Moods
Tolerating	<ul style="list-style-type: none"> - trying to fix the situation at hand as tolerantly & patiently as possible - providing facts, being clear - trying to negotiate with the client - acting annoyed - responding in a hasty manner - finding shortcuts to end the conversation 	<ul style="list-style-type: none"> - making an effort to stay engaged in the conversation - tension in the body due to the stressful encounter - talking less and remaining mostly silent. - sounding annoyed when talking - physically showing impatience and agitation 	<ul style="list-style-type: none"> Rebellious Stressed Boisterous
Blunt	<ul style="list-style-type: none"> - not wanting to stall or waste time with irrelevant subjects or demands - giving less freedom and maintaining a structured conversation. - explicitly stating, warning or implying that the client is heading in the wrong direction - pointing out client's mistakes/their approach - challenging client's behavior - explaining the consequences of their actions 	<ul style="list-style-type: none"> -looking strict, strong & decisive -tense, rigid posture & moving stiffly -conveying a strong and decisive attitude -sitting up straight & tall -leaning forward or standing firmly using expressive body gestures 	<ul style="list-style-type: none"> Agitated Stressed Grumpy Sentimental
Distant	<ul style="list-style-type: none"> - wanting to save energy by shutting down the conversation mentally and/ or verbally - refusing to talk to the client & remaining silent - not replying to the client or dodging client's questions - stalling to gain some time - explicitly stating that you are not able to help 	<ul style="list-style-type: none"> -pulling back by creating distance with the client -crossing arms and displaying a closed posture -physically turning or walking away talking less -using short & brief sentences 	<ul style="list-style-type: none"> Serious Rebellious Vigorous Agitated

Appendix H. Three Guiding Cards

How to use this card set?



1

Individual Activities

Individual Activities

Spread out the 9 mood-sensitive communication style cards & the 20 mood typology sheet on the table.

Explore Styles

Pick a style that seems familiar to you and think of the moments you recently applied it. Then, go through all nine and think of one person you know well per style (for this workshop, you can think about 2-3 styles in detail) who applies that style frequently to deal with others' moods in your own network.

Get to Know the Styles

Pick one style that you are not very familiar with or you would like to try out that week (in this case, a style you'd like to try out and apply more often). Think of who applies this style frequently in your social network. Try to incorporate it (for this workshop, try to think of ways of incorporating it) into your daily interactions. After a week, reflect on whether/how you applied it (for the workshop, you may skip this step).

Apply Styles in Hypothetical Scenarios

Pick three (for this workshop, pick two) random moods for clients and think of which styles would fit with them. Try to enact the styles as if you are talking to a client. How does it feel to use these styles? Which barriers do you perceive while using them? How could you tackle these? This will help you to understand the differences more vividly.

How to use this card set?



2

Duo Activities

Duo Activities

Spread out the 9 mood-sensitive communication style cards & the 20 mood typology sheet on the table.

Explore & Discuss Styles

Pick a style that your friend/colleague/partner (for this workshop, you can try to guess the frequently used style of your partner) uses the most and think of a specific moment (for this workshop, you can share one recent personal anecdote). Discuss each other's frequently used styles.

Styles Charade to Explore Manifestations

Pick one random style and try to enact the style while your partner plays the client in a chosen context. Start by using only your words, voice or your body language. Continue to enact until your partner identifies the style. Continue till each of you enacts at least 4 styles (for this workshop, try to at least enact 2 styles each of you, if you have time left, you can try out more)

Random Mood - Communication Style Combinations

Pick one random style and try to enact that style. Let your partner pick a random mood from the 20 mood typology sheet and portray that. And then another one. This way, you can experience how the effectiveness of the communication style changes in relation to the mood of the other person. You can try out all the 9 communication styles by applying this exercise. (for this workshop, try to explore at least 2 moods. If you have time left, you can switch roles and explore another communication style)

Applying Styles in a Conversation

Ask your partner/friend how they are feeling that day by showing them the 20 mood typology sheet. Then, while having a conversation and talking about their issues (for this workshop, you may talk about even their feelings or how life is going etc.), keep the cards in front of you to identify which styles might be appropriate for that moment. Use the cards as a guide to tailor your conversation.

How to use this card set?



3

Group Activities

Group Activities

Spread out the 9 mood-sensitive communication style cards & the 20 mood typology sheet on the table.

Explore & Discuss Styles

Pick one person and try to guess which communication style they often use in their daily lives to regulate the other persons' mood. Then, discuss whether your guess was accurate and let that person nominate the next in line. Once everyone has their turn, reflect on each other's frequently used styles. (for this workshop, you can just tell which styles you frequently use and discuss each others' styles)

Styles Charade

Divide the group into two. Pick one random style and try to enact the style to the other group by playing a service provider - client interaction. Start out by using either your words, your voice or your body language. Continue to enact until they guess the style you are enacting correctly. Continue till each group enacts at least 4 styles (for this workshop, you may choose how many to explore depending on the time).

Applying Styles in a Hypothetical Scenario

Divide the group into two. Let group A choose a random mood and a hypothetical scenario to act out. You can be inspired by your recent interactions. Let group B try to solve the situation by using appropriate communication styles. Then, switch roles.

Mood - Communication Style Combinations

In the group, define a hypothetical service-client interaction scenario. Assign one person to be the service provider and let that person pick a random style. Let each of the other group members choose one random mood and portray that mood as clients one by one. You can see how the effectiveness differs between people with different moods (for this workshop, if you have time left, you can try the exercise out for another communication style).

Appendix I. Study 3: Coding Scheme – Card Set Workshop

Categories	Themes	Subthemes/Codes
1. Usability of the Cards & Activities	Content	Unclear introduction
		Confusion about the purpose of the card set
		Unclear instructions for activities
		Misleading and limited client moods
		Need for a facilitator
		Overlapping activities
		Confusion about what interpersonal mood regulation strategy is
		Comments on the strategies
		Helpfulness of enactment on learning
	Language	Complexity of the language
	Look & Layout	Visuals
		Quotes
		Layout
	Reflections/Topics emerged during discussion	Impact of social interaction on moods
		Impact of using certain strategies on own moods
		Impact of moods on social interaction and on one's ability to manage other's moods
		Impact/Effectiveness of the strategy – do they meet the expectations of the client? To what extent do they want to be regulated? To what extent should one intervene?
		Difficulties selecting the appropriate strategy
		Difficulties managing own mood before managing others' moods
		Difficulties guessing client mood
		Difficulties distinguishing positive strategies
		Difficulties changing strategies in long-term/re-occurring encounters
		Difficulties applying/conveying strategies and limitations of online settings
		Difficulties conveying the strategies correctly – does it come across right?
		Influencing factors on one's strategy selection (own mood, interaction history, client's expectation from the provider, provider's expectation from the client, roles - hierarchy - type of relationship, context)
		Realization of the need for self-awareness
		Strategies used in professional (education) & private encounters
		Own frequent/unfamiliar strategies
		Other people's frequent strategies
		Occurrence/dynamics of strategies
		Usefulness/purpose of the strategies – what is the purpose of using distant/tolerating? (intention and motives)

Categories	Themes	Subthemes/Codes
2.Usefulness & Value		Providing options Enabling discovery of possibilities of interpersonal mood regulation strategies Deep dive into a single strategy Allowing chance to do exercises Increasing self-awareness of personally used strategies Increasing self-awareness of own boundaries when applying the strategies
3.Future Usage Opportunities	Tool to Improve Communication & Increase Self-Awareness	Training tool (for service providers, teachers, students) Empathy Tool or Co-creation Tool (for service providers, clients and stakeholders) Tangible Reminder Tool (for service providers or general) Self-Reflection Tool (service providers or general) Game (for group of friends or romantic couples)

Appendix J. Study 4: Coding Scheme for the Frequency Analysis (For Top 5)

Final Descriptive Words constructed by merging synonyms	Author's Codes	Respondent's Descriptions
Understanding	Understanding	understanding
Listening	Listening	Listening, active listener, good listener, ready to listen
Supportive	Supportive	supportive
	Encouraging	encouraging
	Motivational	Motivational, motivating
Reassuring	Reassuring	Reassuring
	Anxiety Reliever	Anxiety Reliever
	Consoling	Consoling
	Comforting	Comforting
	Relaxing	Relaxing
Sympathetic	Empathetic	Empathetic
	Compassionate	Compassionate
	Sympathetic	Sympathetic
Patient	Patient	Patient
Calming	Calming	Calming
Polite	Polite	Polite
	Respectful	Respectful
	Courteous	Courteous
Relaxed	Relaxed	relaxed
	At ease	At ease
	Comfortable	comfortable
Helpful	Helpful	Helpful
Positive	Positive	Positive
Friendly	Friendly	Friendly
	Warm	Warm
	Personable	Personable
Cheerful	Cheerful	Cheerful
	Joyful	Joyful
Welcoming	Welcoming	Welcoming

Final Descriptive Words constructed by merging synonyms	Author's Codes	Respondent's Descriptions
Gregarious	Gregarious	Gregarious
	Social	Social
	Hospitable	Hospitable
	Sociable	Sociable
Personal	Patient	Personal
Apologetic	Apologetic	Apologetic, apologising
	Sorry	Sorry
	Contrite	Contrite
Sincere	Sincere	Sincere
Cooperative	Cooperative	Cooperative
Direct	Direct	Direct
	Straightforward	Straightforward
	Matter-of-fact	Matter-of-fact
Professional	Professional	Professional
Serious	Serious	Serious
	Business-like	Business-like
	No nonsense	No nonsense
Efficient	Efficient	Efficient
Result-Driven	Result-Driven	Result-Driven
	Solution-Oriented	Solution-Oriented
	Problem-Solving	Problem-Solving
	Task-Oriented	Task-Oriented
Tense	Tense	Tense
	Anxious	Anxious
	Nervous	Nervous
Frustrated	Frustrated	Frustrated
Impatient	Impatient	Impatient
Stressed	Stressed	Stressed, stressed-out
Annoyed	Annoyed	Annoyed
	Irritated	Irritation
	Exasperated	Exasperated
Aggressive	Aggressive	Aggressive
	Combative	Combative
Rude	Rude	Rude

Final Descriptive Words constructed by merging synonyms	Author's Codes	Respondent's Descriptions
Dominant	Authoritative	Authoritative
	Dominant	Dominant, controlling, dominating, taking control
	Bossy	Bossy
	Commanding	Commanding
Harsh/Strict	Harsh	Harsh
	Stern	Stern
	Inflexible	Following strict rules, not flexible
Assertive	Assertive	Assertive
	Pushy	Pushy
Unhelpful	Unhelpful	Unhelpful
	Useless	Useless
Closed	Closed	Closed, close-minded
Unwilling to communicate	Unwilling	Unwilling
	Uncommunicative	Uncommunicative
Distant	Distant	Distant, keeping distance
	Aloof	Aloof
	Cold	Cold
	Standoffish	Standoffish
Uncooperative	Uncooperative	Uncooperative

Appendix K. Workshop Materials

Appendix 1K – 20 Mood Sheet



Cheerful

You feel light-hearted, carefree and vibrant.

You see the world as a pleasant and sunny place without obstacles.



Amiable

You feel tender and gentle.

You see the world as a warm and soft place, full of friends.



Giggly

You feel light-hearted and exuberant.

The world seems a silly or absurd place, like a circus or a comedy club.



Jubilant

You feel very excited, 'hyper', and blissful.

The world seems to be a beautiful and vibrant place.



Boisterous

You feel rowdy, exuberant, and unrestrained.

You see the world as a big playground.



Rebellious

You feel passionate, devoted and recalcitrant.

You see the world as an uptight place, full of nonsensical rules.



Vigorous

You feel forceful, confident, and in control.

The world seems ready to be conquered by you.



Productive

You feel sharp, focused, alert, and confident.

The world seems to be full of challenges, but you are the ideal person to tackle them.



Serious

You feel earnest, composed, and focused.

The world seems a straightforward and functional place.



Stressed

You feel hurried, restless and uncomfortable.

You see the world as a demanding and cold place.



Anxious

You feel nervous, tense&jittery.

You see the world as an uncertain place full of insurmountable obstacles and indistinct threats.



Agitated

You feel tense, restless, and overstimulated.

The world seems offensive, dangerous, and out to get you.



Miserable

You feel awful and powerless.

You see the world as a grim, cruel place devoid of hope or joy.



Grumpy

You feel vexed, bad-tempered, and ungratified.

The world seems unfair and turned against you.



Gloomy

You feel somber, down, or 'blue'.

The world seems dark, cold, joyless, and without colour.



Lethargic

You feel sluggish, extinguished, and 'brain dead'.

The world seems desolate and barren.



Relaxed

You feel content, laidback and mellow.

The world seems a simple and sympathetic place.



Peaceful

You feel tranquil, serene and connected to the moment.

You see the world as a vast place. You are merely a tiny part of that whole.



Dreamy

You feel detached, relaxed, and comfortable.

The world seems a pleasant and unthreatening place.



Sentimental

You feel nostalgic, melancholic, or 'bittersweet'.

The world seems to be both a beautiful and a painful place full of touching stories.

Appendix 2K – 20 Context Sheet



Medical Staff

You are a doctor and you are seeing your patient in your clinic.



Care Giver

You are a caretaker and you are looking after your patient.



Real Estate Agent

You are a real estate agent and you have an appointment with your client.



Bank Officer

You are a bank employee and you will see your client who needs your advice.



Educator

You are a teacher/educator and you will have an individual meeting with your student.



Receptionist

You are a receptionist and the client is here to ask a question.



Police Officer

You are a police officer and you are having a spontaneous encounter with one of the citizens.



Salesperson

You are a salesperson and you are helping your client with their purchase.



Flight Attendant

You are a flight attendant and you are helping one of your passengers.



Designer

You are a designer and you have an appointment with one of your clients.



Lawyer

You are a lawyer and you are meeting your client.



Consultant

You are a consultant and you are seeing your client.



Artist

You are an artist and you are meeting your client for a project.



Server

You are a server and you are serving a client.



Hairdresser

You are a hairdresser and you have an appointment with one of your clients.



Government Employee

You are working at the government office and you are meeting a citizen seeking help.



Event Organizer

You are an event organizer and you are meeting one of your clients for their event.



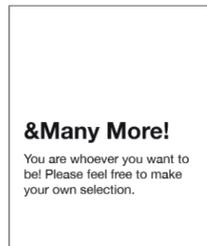
Tour Guide

You are a tour guide and you are meeting your client.



Secretary

You are a secretary and you are having a conversation with one of the employees.



&Many More!

You are whoever you want to be! Please feel free to make your own selection.

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Appendix 3K – Instruction Sheet

Instructions for Strategy Exploration

For each strategy, we follow the same steps.

As a group:

1. Watch video.
2. Form duos.

As duos:

Role-Play (15 minutes)

1. Divide into rooms.
2. Choose roles:
 - Who is the service provider?
 - Who is the client?
3. Define scenario:
 - Service provider chooses the context. Pick the one which is the closest to the service roles that you are familiar with. If it's not there, you can name it yourself as well.
 - Client chooses his/her mood.
4. Watch the video again before you start.
5. Set the timer for 5 minutes.
6. Role-play the strategy you watched (bodily, facial expression & words).
7. Switch roles.
8. Repeat 5-6. (if you like, you can re-define the scenario - step 3)

Discuss (15 minutes)

1. Tell the researcher that you are done and ask for the description card.
2. Reflect with description cards:
 - How did you experience this strategy as a service provider and client?
 - How did you apply it? Check the description and reflect on your partner's performance. Any additional or different things they did?
 - Do you recognize this as a client and/or the service provider?

Once done, come back to main room.

Appendix L. Workshop Guideline

Parts	Steps	Actions
Part 1: Introduction & Warm-Up [20 min]	Introduction & Formalities	Thank participants, introduce yourself, explain the purpose of the session (explore strategies through role playing) and the plan of the session. Ask to sign the consent form & the demographic questions form before the workshop begins.
	Opener to the Topic	Give the description of mood, interpersonal mood regulation, the overview of the nine strategies, explain the goal of the project, purpose of the study (explore effect of videos) and introduce the agenda (warm-up, 3 strategy exploration, plenary discussion)
	Warm up exercise 1	Please introduce yourself, your profession, and what your mood is currently. You can choose from the 20 human mood typologies.
	Warm up exercise 2	<p>For the next exercise, let's stand up. Now, we will practice embodying moods in our movements. Together with the instructions, you will bodily perform 4 moods (gloomy, agitated, cheerful, and peaceful) while walking. You will walk around the space, and following my instructions, you will change your walking style. You can exaggerate the moves. This is only for warming-up, not about good acting.</p> <ul style="list-style-type: none"> – Let's start walking neutrally, at your own pace. Move around the space. Explore the space. Notice others. Make eye contact. – Now let's walk faster. Keep moving around the space. Faster! – Ok, now slow down. Move very slowly. – Now let's walk in a gloomy way. You feel somber, down or blue. The world seems dark, cold and joyless. Show gloominess not only on your face but also in your walk. Move in a gloomy way. Show others how down you are. – Now walk in an agitated manner. You feel tense, restless and overstimulated! The world seems offensive, dangerous and out to get you. Show others how agitated you are! – Now let's move on to being cheerful. Walk in a lighthearted, carefree and vibrant way. The world is a pleasant and sunny place without obstacles. Show us how cheerful you are. – Now let's slowly walk peacefully; you feel content, laidback and mellow. The world seems like a simple sympathetic place. You are walking in a safe place. Show others how peaceful and calm you are. – Now let's slow down and stop. – Now that you are warmed up, we can start the main session.

Parts	Steps	Actions
Part 2: Exploring Strategies & Role-Playing [1 h 40 min]	Preparation (5 minutes)	Introduce the steps of the exploration: watch together, role-play - switch roles - role-play – discuss in duos, come back for group discussion. Explain the detailed steps (given in the Instruction sheet) before watching the first video. Instruct participants that they will be exploring 3 strategies. (2 positive & 1 negative during the session) and that they can choose the last positive strategy as a group. Ask if participants have any questions to ask before they start exploring and clarify any confusion/misunderstanding.
	Positive Strategy 1	Show the positive strategy video. Give the 20 context sheet, 20 mood sheet, instruction sheet to the participants. Invite them to find a partner to explore the positive strategy and let them choose their room. Once everyone is back, ask how the exploration went.
	Negative Strategy 1	Show the negative strategy video. Invite participants to find a new partner to explore the strategy and let them choose their room. Once everyone is back, ask how the exploration went.
	Break [10 minutes]	
	Positive Strategy 2	Show the positive strategy video. Invite participants to find a new partner to explore the strategy and let them choose their room. Once everyone is back, ask how the exploration went.
Part 3 – Plenary Discussion [30 min]	Takeaways	<ul style="list-style-type: none"> – What information is present for you now as a participant of this workshop? – What do you want to take with you from this workshop?
	Usability	<ul style="list-style-type: none"> – What do you think about the videos? Could you reflect on the role of the videos? – What do you think of the role-playing? – What do you think about the format? Watching – role-playing – discussing?) – Is there anything you found confusing/difficult or unpleasant? – Anything you would like to change to improve? – Anything you particularly liked/noticed/found interesting?
	Value	<ul style="list-style-type: none"> – What is your opinion on the value or impact of using these videos in such a workshop for educators/service providers?
	Additional Opportunities for Meaningful Usage	<ul style="list-style-type: none"> – Imagine you are a teacher who is responsible for training other educators on interpersonal mood regulation strategies. You are given these video materials. How would you use them? – What would you do differently? – How else could these video materials be made useful in your practices?

Appendix M. Study 5: Coding scheme – Video Workshop

Categories	Sub-Categories	Themes	Subthemes/Codes
1. Usability of the Videos & Role-Playing & Printed Materials	Videos	Strengths	<p>Evoked lively reactions & comments (both from target & agent POV)</p> <p>Found to be explicit & straightforward</p> <p>Optimal duration</p> <p>Mostly possible to imitate strategy</p> <p>Intuitive & easy to understand</p> <p>Conveying essence quickly and effortlessly</p> <p>Evaluated performance even without the description cards (except for a few strategies – calming, sociable and tolerating) though not all sub-strategies</p> <p>Pinpointed sub-strategies in the video when reading the description card</p> <p>Generic content helped imagination and focus</p> <p>Extremeness helped clarification & distinction</p>
		Weaknesses	<p>Problems conveying all the sub-strategies (Sociable-joke & Calming-distracting)</p> <p>Confusion about the strategy name (Tolerating)</p> <p>Fake & artificial nature, extremeness and exaggeration</p> <p>Abstractness, generalness & being out of context</p>

Categories	Sub-Categories	Themes	Subthemes/Codes
	Role-Playing & Discussions	Strengths	<p>Intriguing and insightful</p> <p>Thinking of new possibilities, reflecting on topic, applying new information</p> <p>Choosing familiar context vs. new scenarios</p> <p>Easy to create/role-play scenarios based on past experiences</p> <p>Manageable duration</p> <p>Switching partners is positive</p> <p>Enjoyable to freely create playful scenarios</p> <p>Exploring different mood-strategy combinations</p> <p>Using other strategies when exploring one strategy</p> <p>Empathizing with the target & understand expectations</p> <p>Observing each other</p> <p>Exchanging experiences and tips</p> <p>Learning from each other</p> <p>Aligning the understanding and collaboratively re-define meaning</p> <p>Access hidden knowledge</p> <p>Making fine-grained distinctions between the explored strategies</p>
		Weaknesses	<p>Difficult to create a realistic backstory for hypothetical scenario in unfamiliar contexts</p> <p>Too much imagination required, detached participants</p> <p>Difficult to concentrate on scenario creation, service role immersion and strategy implementation</p> <p>Not enough tension in backstories</p> <p>Difficulty enacting due to being too self-conscious</p> <p>Difficulty feeling at ease with role-play</p> <p>Quality of role-playing depended on partner</p>

Categories	Sub-Categories	Themes	Subthemes/Codes
	Printed Materials (20 Mood sheet, 20 context sheet, instruction sheet, description cards)	Strengths	<p>20 Context Sheet:</p> <ul style="list-style-type: none"> – Inspiring & supporting to make a decision & create playful scenario – Giving freedom to choose <p>20 Mood Sheet:</p> <ul style="list-style-type: none"> – Inspiring & supporting to make a decision & create playful scenario – Giving freedom to choose – Clear & understandable overview <p>Description Cards:</p> <ul style="list-style-type: none"> – Helped to self-evaluate – Helped to peer-evaluate – Helped to understand the weaknesses – Supported video content to be understood in depth & more clearly <p>Instruction Sheet:</p> <ul style="list-style-type: none"> – Provided the general procedure <p>Format & Workshop:</p> <ul style="list-style-type: none"> – Helpful warm-up
		Weaknesses	<p>20 Mood Sheet:</p> <ul style="list-style-type: none"> – Complex vocabulary for some <p>Description Cards:</p> <ul style="list-style-type: none"> – Confusion about when to receive the cards (with videos, after or after role-playing) <p>Instruction Sheet:</p> <ul style="list-style-type: none"> – Unclear instructions on how to do the role playing (how many times to watch videos, how to team up, what to do first - picking the role/context or the mood, divulging or not divulging the mood to the peer, how to role-play the strategy, how detailed should the scenario be, how to do the role-play, how much time to take for the exercise, when to switch roles and discuss, what to do after peer discussion etc.) <p>Format & Workshop</p> <ul style="list-style-type: none"> – Unclear goal/aim of the workshop – Unclear what an interpersonal mood regulation strategy is

Categories	Sub-Categories	Themes	Subthemes/Codes
2.Usefulness & Value of videos for professional situations		Participants' Comments	<p>Making strategies clear</p> <p>Concrete, intuitive and quick representation requiring less of an effort</p> <p>Starter/Demonstration tool to prepare for role-playing</p> <p>Give the opportunity to;</p> <ul style="list-style-type: none"> – Reflect on moods in the context of interpersonal communication – Acknowledge the repertoire of strategies for different situations – Understand & discuss about the strategies – Critically reflect on one's own strategy and how the strategies are personally applied – Discover strategies that one is familiar and unfamiliar with – Develop new skills by testing in a safe environment without real-life consequences & hierarchical concerns – Learn from each other & exchange knowledge <p>Useful for clients as well to empathise with service providers</p>
		Participants' Takeaways from the workshop	<p>Increasing awareness on the explored strategies</p> <p>Made the intuitive act become conscious</p> <p>Realization of different possibilities</p> <p>Understanding the usefulness/effectiveness of the strategies</p> <p>Multiple strategy uses in one interaction</p> <p>Dynamic and natural flow of strategies</p> <p>Awareness of moods and the difference between emotions</p> <p>Realization of re-occurring moods and strategies in education context</p>

Categories	Sub- Categories	Themes	Subthemes/Codes
		Reflections /Topics emerged during discussion	<p>Mood-strategy combinations (when choosing scenarios, during enactment some work, some not – there is different tension)</p> <p>Influencing factors on one’s strategy selection (own mood, interaction history, client’s expectation from the provider, provider’s expectation from the client, context, content of the conversation, medium of communication, power dynamics, roles - hierarchy - type of relationship, organizational goal, impression management, type of activity, culture, gender, time/period)</p> <p>Impact of moods on interaction and on one’s ability to manage other’s moods (emotional labor, deep/surface acting)</p> <p>Difficulties managing own mood before managing moods of others</p> <p>Difficulties guessing client mood</p> <p>Nature of each of the strategy:</p> <ul style="list-style-type: none"> -Usefulness/Effectiveness of the strategy -Limitations of using the strategy -Difficulties faced while applying a strategy -How the strategy is perceived -Impact/Outcome of the strategy on the other person <p>Goal/purpose of the strategy</p> <p>Motives for engaging in interpersonal mood regulation</p> <p>Own familiar/unfamiliar strategies</p> <p>Strategies preferred as the client</p> <p>Appropriateness of the strategies and the sub-strategies for context</p> <p>Frequently observed client (student) moods for context (education)</p> <p>Importance of service provider mood</p> <p>Occurrence/dynamics of the strategies in interaction</p> <p>Strategies used in professional (education) & private encounters</p> <p>Additional sub-strategies introduced by the participants</p>

Categories	Sub-Categories	Themes	Subthemes/Codes
3.Additional Usage Opportunities of the videos as training materials	Tool to Improve Communication & Increase Self-Awareness	Training Tool	In fun therapeutic event for providers to vent In walk-in workshop where service providers can get case-specific consultation & practice specific strategies In professional development workshop for both experienced and new employees As a personal training tool & ongoing reflection tool for current students Empathy tool to understand other work groups & be inspired from
		Inspiration Tool	Open-source inspiration & reflection tool
	Intervention Ideas to Facilitate Mood-Sensitive interactions by using strategies		Additional aid materials for each strategy (e.g., Calming: a list of sentences/topics for small talk) Cheat sheet Communication tool with clients to understand their needs AI tool detecting moods and suggesting strategies Room that changes settings to fit to the strategies Chatbots & online services

Appendix N. Propositions for Form

Name of the Character & Effect on the User	Key Words to describe the character of the strategy	Color & Shape – Size & Texture	Behavior/Movement	Sound
<p>The Understanding: Makes the audience/interactor feel accepted, listened to and understood</p>	<p>Attentive Listening patiently Leaning closer</p> <p>Interested Engaged</p> <p>Acknowledging/ Affirming /Confirmatory Empathetic</p>	<p>Color: Transparent, white, cream, light blue or mirror-like reflective</p> <p>Shape: Round Texture/Material: e.g., Frosted glass</p>	<ul style="list-style-type: none"> - Moves at slow-medium speed in a straight line. - May pretend to approve by making a movement similar to a nodding movement. - May change color or increase brightness upon touch to indicate that information has been "received" or "registered". - May respond to sound/movement by shining brighter or using internal movements to show that it is listening "all ears". - Approaches the interactor to indicate attention and curiosity. - Tends to side with the interactor to show interest. 	<ul style="list-style-type: none"> - Mostly Quiet - Breaks silence to confirm or ask a question - Low pitch - Soft voice tone - Slow/medium rhythm

Name of the Character & Effect on the User	Key Words to describe the character of the strategy	Color & Shape – Size & Texture	Behavior/Movement	Sound
<p>The Calming: Makes the audience/interactor feel at ease and distracted, and also feel a bit of awe and fascination</p>	<p>Calming Relaxing Easing Distracting Peaceful Mesmerising</p>	<p>Color: Blue/green Light purple/pink Shape: Sphere Changing opacity Texture/Material: Soft texture (velvet, silk, cotton etc.) or gel-like material</p>	<p>- Moves calmly and slowly like a panda, koala or sloth - Rotates around itself - Sways or rocks itself - Floats in the air - Makes different and unexpected movements or distracts with color/shape changes - Glows, shines or sparkles</p>	<p>- Zen/meditative sounds - Beach waves/water - Harp - Low pitch - Syncopated rhythm</p>
<p>Encouraging: Makes the audience/interactor feel encouraged, confident, safe, hopeful, supported and motivated.</p>	<p>Reassuring Supportive Complimenting Motivating Expressing belief Hopeful Lifting spirit Compassionate</p>	<p>Color: Light green, High opacity, solid color Shape: Sphere but may have crescent-like arms and then merge and become round again Texture/Material: Maybe shiny/shiny, Strong/flexible/durable or organic material</p>	<p>- Moves at <u>medium speed</u>. - As affectionate as a mother otter. - <u>Hugs, touches or wraps</u>. - Reaches out and approaches the interactor's side. - Has <u>positive energy and a calm spirit</u>.</p>	<p>-A rhythm at a moderate pace -Positive, calm and hopeful notes -Sounds that give confidence and motivation.</p>

Name of the Character & Effect on the User	Key Words to describe the character of the strategy	Color & Shape – Size & Texture	Behavior/Movement	Sound
<p>Sociable: Makes the audience/interactor feel welcome, cheerful, pleasant and happy.</p>	<p>Happy Cheerful Friendly Warm Easy-going Open for communication Humorous/Funny Pleasant Talkative Convivial Enthusiastic</p>	<p>Color: Burst of color like a rainbow or bright yellow like the sun Form: Sphere Texture/Material: High opacity, Flexible and slightly soft, polished and shiny</p>	<p>- Moves by <u>energetically jumping at medium-speed, like a happy dog or a baby elephant.</u> - Moves on a curved path. - <u>Rebounds dynamically from the surfaces it hits.</u> - May make unexpected funny movements (we can think of them as metaphors for jokes) (maybe like a kite blowing in the wind or like a creature that is scrunched inside a flexible ball and is about to come out of it)</p>	<p>- High pitch - Less silence - Festive like a blackbird bird - Unexpected funny sounds?</p>

Name of the Character & Effect on the User	Key Words to describe the character of the strategy	Color & Shape – Size & Texture	Behavior/Movement	Sound
<p>Apologetic: Makes the audience/interactor feel that he is served, cared for and valued.</p>	<p>Sorry begging Sad Seeking Resolution Reconciliatory Concerned Caring Pleasing Pitiful Embarrassed</p>	<p>Color: Pale yellow/beige low opacity Form: Sphere Texture/Material: A soft, matte/rough and perhaps wrinkled/cracked surface?</p>	<p>- Moves fluently at medium speed - Can draw small ovals around itself at medium speed to show its sadness, regret and anxiety? - Moves as if begging or praying (e.g., can stretch and return to its original shape) - Does not leave the user after touching, it follows him. - May bow and shrink to show embarrassment and sadness (its little tentacles may move like dog ears laying back to suggest timid reaction) - It can be deformed when it hits surfaces</p>	<p>- Low pitch - Andante (semi-slow)</p>

Name of the Character & Effect on the User	Key Words to describe the character of the strategy	Color & Shape – Size & Texture	Behavior/Movement	Sound
<p>Efficient: Makes the audience/interactor feel productive, determined and energetic.</p>	<p>Efficient Guiding/giving advice/solution-oriented Constructive Informative Productive Focused Objective /Realistic Assertive Active Determined Energetic</p>	<p>Color: Bright orange Shape: Sphere with hexagonal corners Texture/Material: Shiny polished surface, hard yet flexible like bouncy plastic balls</p>	<p>- <u>Acts quickly and decisively without delay or stalling.</u> - <u>Moves with sharp movements on a straight and short path.</u> - <u>Is positive and has high energy like a bee.</u> - Returns to the interactor immediately after being touched, like a boomerang. - Rebounds dynamically from the surfaces it hits.</p>	<p>- Middle fret - Moderate silence - Short and concise sounds - staccato - Allegro - Rhythmic like a manufacturing factory or a clock</p>

Name of the Character & Effect on the User	Key Words to describe the character of the strategy	Color & Shape – Size & Texture	Behavior/Movement	Sound
<p>Tolerating: Makes the audience/interactor feel uncomfortable, uneasy, misunderstood and a little angry.</p>	<p>Stretched a bit thin Annoyed/Tense Irritated Impatient Agitated Hasty Fed-up Overwhelmed but Resisting/Enduring Complaisant</p>	<p>Color: Gray Shape: Spherical shape with corners/sharp edges or holes. Shattered tempered glass or cracked surface Material/Texture: Can be a durable material such as fiberglass or cracked tempered glass.</p>	<p>- Moves fast to moderate speed. - May almost seem like it's about to burst, crack, or break, like a puffer fish. Snappy. - May twitch, vibrate, or wiggle to show its nervousness. Fidgety. - Makes sharp and short movements to show its impatience and desire to cut things short. - To show that its patience is about to wear thin, it can have holes and smoke may come out of the holes or it may swell more.</p>	<p>- Middle fret - Stretching sound for tension - Low speed - Continuous sound (like buzzing)</p>

Name of the Character & Effect on the User	Key Words to describe the character of the strategy	Color & Shape – Size & Texture	Behavior/Movement	Sound
<p>Blunt: Make the audience/interactor feel sad, frustrated, or angry.</p>	<p>Warning Showing reality Pointing out mistakes Corrective Straightforward/ Direct Strict Decisive Firm/Rigid Slight anger</p>	<p>Color: Red Shape: Spherical with spiky or cornered blunt surfaces Texture/Material: It can be transparent and show another sphere or cubical form inside, the opacity may vary (to show that it is "frank", inside and out), or alternatively, it can be a single layer and transparent to emphasize that "it is what it is".</p>	<p>- Moves very fast and aggressively. - Bounces hard off the surfaces it hits - May look as if wagging finger at the interactor or shaking its head as if to say "no" - Can flash like a police beacon or lighthouse to warn</p>	<p>- Cold metallic sounds</p>
<p>Distant: Make the audience/interactor feel unaccepted and perhaps a bit ignored.</p>	<p>Cold Unwilling to communicate Distant Detached Silent Closed Passive</p>	<p>Color: Cool grey, Cool blue Shape: Sphere shape with cavities that repel each other Texture/Material: ?</p>	<p>- Moves reluctantly and slowly. - Responds slowly when touched, postponed reaction. - Exhibits avoidance behavior, just like similar poles repel each other (as in interactive ferrofluid) - Does not move much - Tends to move in the opposite direction or away from the interactor's area. - It can shrink and close when touched, like a roly-polly bug or a mimosa plant.</p>	<p>-Very low pitch -Delayed sound -Sound echoes emphasizing empty space</p>

Appendix O. Descriptions of Characters

Interpersonal Mood Regulation Strategy name represented by the character	Short Explanation of the Intended Expression
Understanding	The character is attentive and interested . It allows you to take your time to explain your situation. It acknowledges you and shows you that you are understood .
Calming	The character is calming and relaxing so that you can relax as well. It puts you at ease .
Encouraging	The character is supportive and motivating . It expresses faith and reassures you that everything will be alright.
Sociable	The character is friendly, cheerful and humorous . It shows warmth and openness .
Apologetic	The character is concerned and feels sorry . It is ready to make an effort to fix your issue by being reconciliatory and caring .
Efficient	The character is productive and constructive . The aim is to objectively guide you and offer solutions .
Tolerating	The character tries to be as tolerant as possible. However, it shows tenseness, impatience and haste . It is agitated yet enduring .
Blunt	The character is direct, frank and firm . It intervenes and shows you the reality starkly and matter-of-factly .
Distant	The character is closed, withdrawn and avoiding . It shows unwillingness and is uncooperative .

Appendix P. Study 6: Coding Scheme for the Frequency Analysis (For Top 5)

The ones with ** are only mentioned by 2 participants and with *** by 3 participants that were aside from the top 5

Final Descriptive Words constructed by merging synonyms	Author's Codes	Respondent's Descriptions
Movement	Movement	Constantly moving, Cyclical movement, movement, control of movements, always moving, motion, action, pace
	Motion	Motion
	Action	Action
	Pace	Pace
Transparency	Transparency	Transparency, transparent
Beauty	Beautiful	Beautiful, beauty
	Grace	Grace
	Charm	Charm
	Charisma	Charisma
Coolness***	Coolness	Coolness, cool
Calmness	Calmness	Calm, Calmness
	Serenity	Serenity
	Collected	Collected
	Quiet	Quiet
	Peacefulness	Peace, peacefulness
	Tranquil	Tranquil
	Contained	Contained
	Restful	Restful, rest
	Stillness	Stillness
Curiosity/ Interest***	Curiosity	Curiosity, curious
	Interest	Interest
	Intrigue	Intrigue
Intelligence	Knowledge	Knowledge
	Intelligence	Intelligence, intelligence
	Illumination	Illumination
	Scientific thinking	Scientific thinking
	Analytical	Analytical
	Logic	Logic

The ones with ** are only mentioned by 2 participants and with *** by 3 participants that were aside from the top 5 (*Continued*)

Final Descriptive Words constructed by merging synonyms	Author's Codes	Respondent's Descriptions
Happiness**	Happiness	Happiness
	Contentment	Contentment
	Joy	Joy
Fluidity**	Fluidity	Fluidity, Fluid
	Flowing ease (1)	Flowing ease
	Free-flowing (1)	Free-flowing
Slow	Slow	Slow
Growth	Growth	Growth, growing
Guarded	Enveloping instinct	Enveloping instinct
	Shielding from external stimuli	Shielding from external stimuli
	Guarded	Guarded, quick guarded
Constrained	Constrained	Constrained
	Constricted	Constricted
	Bound	Bound
	Bondage	Bondage
Connectedness**	Connectedness	Connectedness, Connection-making,
	Interconnectivity	Interconnectivity
Unpredictability/ Unstable***	Unpredictable	Unpredictable, unpredictability
	Uncertainty	Uncertainty, uncertain
	Mercurial personality	Mercurial personality
	Temperamental	Temperamental
	Unsure	Unsure
	Unsettled	Unsettled
	Volatile	Volatile
	Unstable	Unstable, instability
	Insecure	Insecure

The ones with ** are only mentioned by 2 participants and with *** by 3 participants that were aside from the top 5 (Continued)

Final Descriptive Words constructed by merging synonyms	Author's Codes	Respondent's Descriptions
Agitation	Agitated	Agitated, agitation
	Delirium	Delirium
	Struggle to contain emotions	Struggle to contain emotions
	Frantic	Frantic
	Frenetic	Frenetic energy
	Out of control	Out of control
	Hyperactivity	Hyperactivity
	Flighty	Flighty
Anger**	Anger	Anger, angry
	Aggression	Aggression, aggressive when provoked, aggressiveness
	Apoplectic	Apoplectic
	Irratiness	
	Rage	Rage, fire rage,
	Fury	Fury
Death	Death	Death
	Decay	Decay
Change	Quiet change	Quiet change, change
	Shift	Shift
	Change	Internal changes, rapid changes, changing mind
Mild/Delicate***	Mildness	Mildness
	Delicate	Delicate
	Softness	Softness
Scary ***	Fear	Fear
	Horrifying	Horrifying
	Scary	Scary
Cold/Indifferent	Cold	Cold
	Indifferent	Indifferent
	Stoic	Stoic
	Neutral	Neutral

The ones with ** are only mentioned by 2 participants and with *** by 3 participants that were aside from the top 5 (*Continued*)

Final Descriptive Words constructed by merging synonyms	Author's Codes	Respondent's Descriptions
Tense/ Unease**	Uneasy (anxiety/ agitation)	Uneasy, uneasiness
	Anxious	Anxious, anxiety, anxiousness
	Nervous	Nervous, nervousness
	Jittery	Jittery
	Tension/tense	Tension/tense
	Angst	Angst
Mechanical	Mechanical	Mechanical, mechanic
	Robotic	Robotic, robot-like
	Machine-like	Machine-like
	Droid-like	Droid-like
Sturdy	Solid	Solid
	Rigid	Rigid
	Hard	Hard
	Strong	Strong
	Sturdy	Sturdy
	Steady	Steady
	Strength	Strength
Active/Energetic	Energy	Building energy, energy, energetic, high energy, sci-fi energy core, energized,
	Dynamic	Dynamic
	Liveliness	Liveliness
	Active	Active
	Busy	Busy
Modern	Modern	Modern
	Futuristic	Futuristic
	New age	New age
	Advanced	Advanced
	Innovation	Innovation
	Newness	Newness

The ones with ** are only mentioned by 2 participants and with *** by 3 participants that were aside from the top 5 (*Continued*)

Final Descriptive Words constructed by merging synonyms	Author's Codes	Respondent's Descriptions
Fastness	Quickness	Quickness, quick
	Rapid	Rapid
	Speed	Speed
	Fast	Fast
About to Explode	About to explode	About to explode, reaching a boiling point
	Explosive	Potentially explosive, explosions,
	Eruptions	Eruptions
	Contained energy	Contained energy
Fiery	Hot-headed	Hot-headed
	Fiery	Fiery
	Irritability	Irritability
	Burning	Burning
Danger	Dangerous	Dangerous, danger
Sadness**	Sadness	Sadness, sad
	Depression	Depression
	Sorrow	Sorrow
	Grief	Grief
Darkness	Darkness	Darkness
	Dark	Dark
	Murky	Murky

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Pelin Esnaf-Uslu obtained her bachelor's degree in Industrial Product Design from Mimar Sinan Fine Arts University. She relocated to the Netherlands to pursue a Master of Science in Design for Interaction at TU Delft in 2016. During her studies, under the supervision of Professor Pieter Desmet, she conducted a research internship focused on mood and sleep, identifying products associated with fifteen mood regulation strategies. Then, for her master's thesis, *Empathy as a Design Skill*, she aimed to enhance designers' empathic abilities by breaking empathy into six key attention points and helping designers increase their awareness (graduating cum laude in 2018).

Pelin is interested in understanding the motivations and needs underlying human experiences, with the goal of supporting well-being and improving interactions. By applying design-driven methods and drawing insights from psychology, her work seeks to improve education and inspire students, educators, and designers.

Publications

Esnaf-Uslu, P., Desmet, P. M. A., & Schifferstein, H. N. J. (2021). *Mood-sensitive communication styles: Embodiment through a card-based tool*. 1-2. Paper presented at 7 Experiences 2021 Summit, Breda, Netherlands.

Uslu, P. E., Desmet, P. M., & Schifferstein, H. N. (2022). The Eye Inward and the Eye Outward: Introducing a Framework for Mood-Sensitive Service Encounters. *She Ji: The Journal of Design, Economics, and Innovation*, 8(1), 118-146.

Esnaf-Uslu, P., Desmet, P., & Schifferstein, H. (2024). Interpersonal Mood Regulation Strategies Card Set. Zenodo. <https://doi.org/10.5281/zenodo.13330788>

Esnaf-Uslu, P., Desmet, P., & Schifferstein, H. (2024). Video Depictions of Nine Interpersonal Mood Regulation Strategies. Zenodo. <https://doi.org/10.5281/zenodo.13319379>

Esnaf-Uslu, P., Desmet, P., & Schifferstein, H. (2024). Character Animations Representing Nine Interpersonal Mood Regulation Strategies. Zenodo. <https://doi.org/10.5281/zenodo.13332931>

