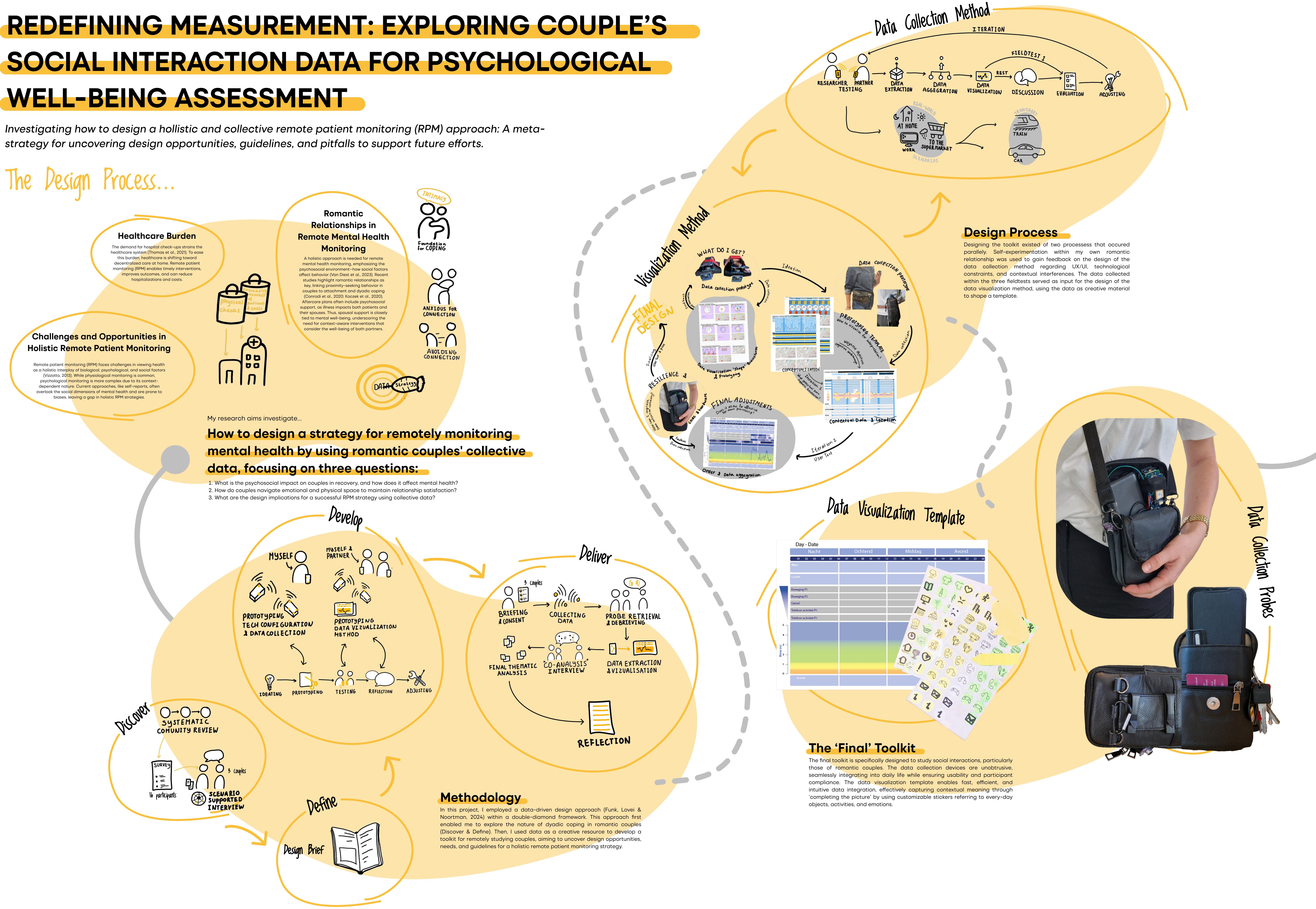
SOCIAL INTERACTION DATA FOR PSYCHOLOGICAL WELL-BEING ASSESSMENT

Investigating how to design a hollistic and collective remote patient monitoring (RPM) approach: A metastrategy for uncovering design opportunities, guidelines, and pitfalls to support future efforts.

doi.org/10.3389/fpsyt.2020.00561 - 6. Van Diest, S. L., Oudsten, B. L. D., Aaronson, N. K., Beaulen, A., Verboon, P., Aarnoudse, B., & Van Lankveld, J. J. D. M. (2023). Emotionally focused couple therapy in cancer survivor couples with marital and sexual problems: a replicated single-case experimental design. Frontiers in Psychology, 14. https://doi.org/10.3389/fpsyg.2023.1123821

The Design Process...



The Results...

Use Case

To focus the project, I chose colorectal cancer survivorship as the use case for designing a holistic RPM strategy, addressing specific healthcare and illness aspects.

Partner Involvement

Colorectal Cancer Survivorship

Colorectal cancer is a leading cancer in the Netherlands, with 128,000 new cases annually and an increasing trend (Praagman, Slotman, Van Disseldorp & Lemmens, 2024; IKNL, 2022). Currently, 70% of survivors live (IKNL, 2024). This underscores the importance of addressing post-cancer care, known as survivorship. Survivors are monitored for 5 years posttreatment during the follow-up phase, with periodic check-ups and treatment planning with their doctors (MLDS, 2023).

ΟΟ Cancer survivorship affects not just the patient but also spouses and family caregivers, who are part of the survivorship experience (Rutherford et al., 2020).)0 Despite this, partners are often only intermittently involved and primarily seen as support providers in psychoeducational programs, rather than integral SURVIVORSHIP participants in therapy (Bodenmann et al, 2017). **Target Group** This study focuses on colorectal cancer survivors aged 55-75, who are in a romantic relationship and within five years post-treatment (IKNL, 2024). The target group also includes their spouses. Disclaimer Due to the sensitivity of this group, working with

them involves challenges. To address this, the scope may be broadened to include romantic couples aged 55-75 without direct cancer experience, as relationship satisfaction-important for dyadic coping-is not illness-specific.

offering psycho-social help

5-year SUPERVISION

Periodic

heck-ups

Detecting Recorrences

Detecting Metastasis

checking for new polyps or tumors

Recognizing Processing troubles

Individual-Specific Distress

Cancer survivors face significant distress from psychosocial challenges such as sleep issues, fatigue, pain, bowel problems, fear of recurrence, and financial strain (Averyt et al., 2014). These issues can impair social functioning and reduce quality of life (Appleton et al., 2013), leading to psychological effects like altered body image and survivor's

Spouses also experience distress, balancing caregiving with additional household and financial responsibilities. This can conflict with their own autonomy and sense of significance causing emotional strain as their lives center around their

partner's well-being.

Loss of

Identil

Restless

Anxiety

uncertainty

Financial

Caregiver Household

Responsibilit

Social pressure

life style modifications

Lack . Support

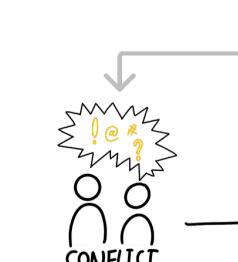
social Esolement

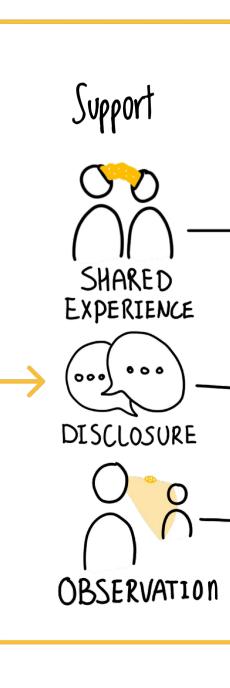
Relational Distress

emotional awareness can strain relationships. For instance, while a spouse may expect a return to normalcy, the survivor might still struggle with their health, leading to pressure and tension. Relational intimacy is crucial, as psychological distress often correlates with the level of intimacy and joint distress appraisals.

Causes for Distress

An illness, and the post-illness phase, does affect how patients and their family navigate their daily life depending on the diagnostic and curative intervention consequences (Van Diest et al, 2023). Related to mental health, I aimed to investigate aspects of daily life postillness that lead to distress.





Facing Breast Cancer: A Theoretical Foundation and Descriptive Case Study. Journal Of Psychology Bulletin, 48(4), 534–549. https://doi.org/10.1177/01461672211016920 - 19. Johnson, M. D., Lavner, J. A., Nund, M., Zemp, M., Stanley, S. M., Neyer, F. J., Impett, E. A., Rhoades, G. K., Bodenmann, R., Buhler, J. L., Burriss, R. P., Wünsche, J. A., Wund, M., Zemp, M., Stanley, S. M., Neyer, F. J., Impett, E. A., Rhoades, G. K., Bodenmann, R., Buhler, J. L., Burriss, R. P., Wünsche, J. A., Nund, M., Zemp, M., Stanley, S. M., Neyer, F. J., Impett, E. A., Rhoades, G. K., Bodenmann, R., Buhler, J. L., Burriss, R. P., Wünsche, J., & Grob, A. (2021). Within-Couple Associations Between Communication and Relationship Satisfaction Over Time. Personality & Social Psychology Bulletin, 48(4), 534–549. https://doi.org/10.1177/01461672211016920



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SURVIVORS DISTRESS FACTORS

lack of

(emotional) Physical & sexual)

Intimacy

Loss of autonomy

symptom

Return to work

stigma

low-seifesteem

Intimacy

A supportive relationship can help individuals

cope with distress and adjust to challenges

Rutherford et al., 2020). Effective emotional egulation by both partners is vital, with interpersonal stress management often being more beneficial than individual coping (Diest et al., 2023). Relationship problems can hinder coping, as social support, particularly from a partner, relies heavily on emotional intimacy and open communication about cancerrelated concerns (Taskforce Cancer Survivorship, 2020).

SELF OTHER SELF OTHER $(\widehat{}) \rightarrow (\widehat{})$ SELF

VIEWING

SELF OTHER

OTHER

OTHER

OTHER

BEING AVAILAB

The Spatial Domain

While emotional intimacy is hard to measure, physical proximity is more tangible. Attachment is reflected in both emotional and physical closeness. Proximity seeking, a key attachment strategy, involves verbal and non-verbal behaviors to maintain desired closeness between partners (Conradi et al., 2020). Thus, physical proximity may influence the quality of interactions and the exchange of support in couples (Ogolsky et al., 2022).

Dyadic Coping

Dyadic coping is crucial for managing stress within relationships. It involves how couples work together to handle stress, impacting both partners' well-being. Collaborative stress management enhances coping abilities, supports each other's health, and boosts relationship satisfaction. Effective dyadic coping improves psychological and physical health, performance, and fosters unity, trust, and intimacy.

Conflict Impact

The impact of conflicts depends on how well partners align on important issues, rather than how often conflicts occur. Lack of support or equality can lead to conflicts, which affect both individual and relationship well-being. Resolving conflicts is essential for maintaining and improving relationships and personal well-being. Effective conflict resolution promotes growth and reduces tension, though recovery time may vary based on the issue's significance and resolution

style.

Intimacy Over Time

Conversations with couples revealed that dyadic coping affects relationship quality in both shortterm and long-term ways.

Short-Term Impact: Significant issues and differences in opinions can lead couples to take physical space to manage emotions, reducing joint emotional intimacy during conflicts.

Long-Term Impact: Resolved conflicts require time to restore intimacy, while unresolved issues or avoidance can increase emotional distance and frustration. Persistent negative interactions erode satisfaction and support, significantly affecting long-term relationship quality.

Communication

and body language can be challenging

Effective communication enhances emotional awareness, trust, and support, leading to higher relationship satisfaction (Johnson et al., 2022). Positive communication involves interest and clarification, while negative or withdrawn communication creates distance and frustration. External stress often increases the frequency of conversations. Physical intimacy may negatively affect the frequency and depth of disclosures, as interpreting facial expressions

Attachment Attachment theory identifies four styles of

attachment, with secure attachment being the most supportive of dyadic coping. Attachment refers to the emotional bonds and connections formed with others, particularly in close relationships. Secure attachment develops when partners consistently provide validation and suppo<mark>rt, remaining available and responsive to</mark> each other's needs (Conradi et al., 2013). However, the demands of cancer survivorship can strain this availability, affecting both partners' emotional regulation and dyadic coping resources (Appleton et al., 2013).

DISTANCE

PUBLIC >365 cm

SOCTAL

120 - 365 cm

PERSONAL 45-120 cm

NTLMATE

Demographic Factors Patients immediately post-treatment are more

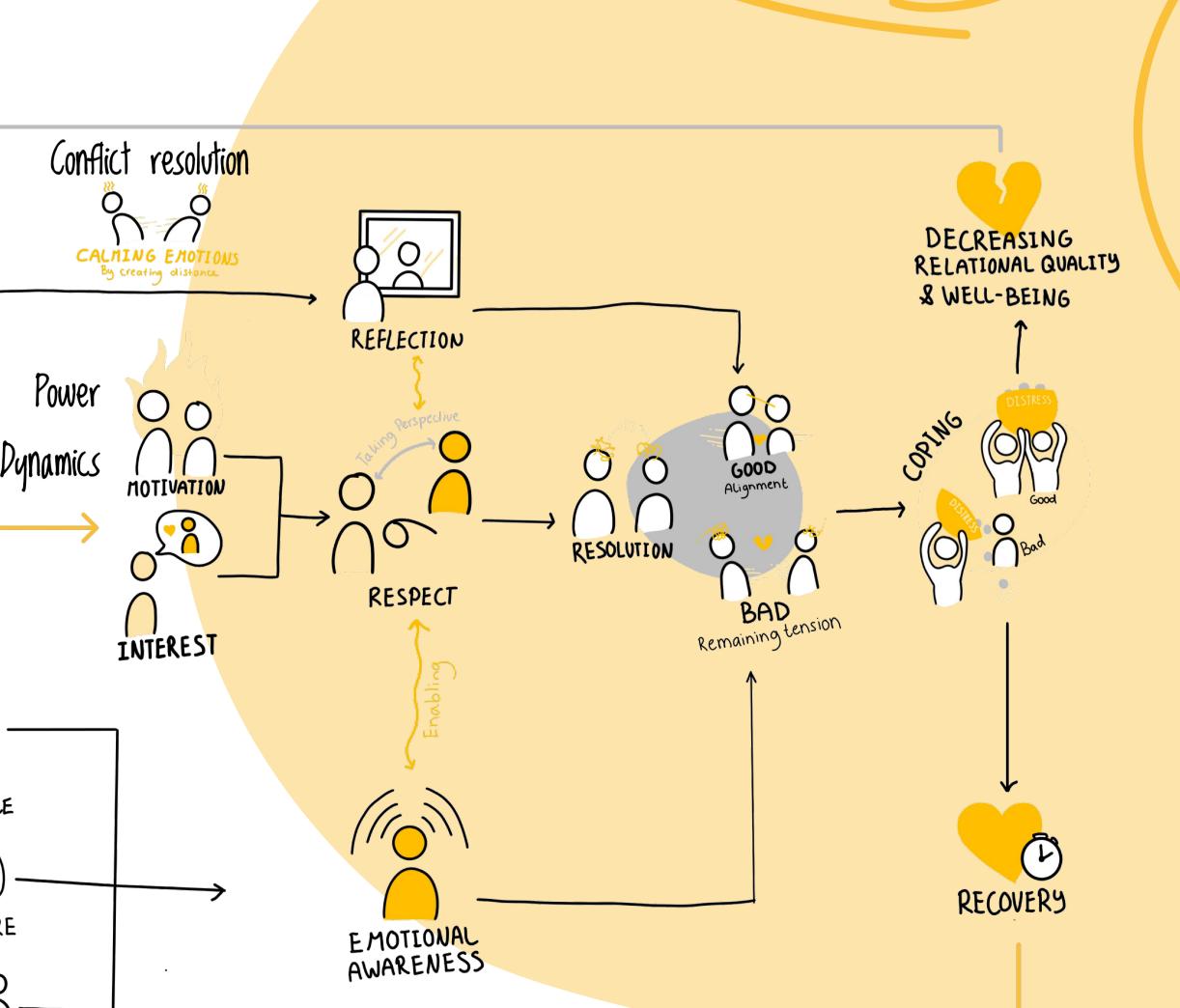
likely to experience unmet psychological and social support needs (Andreu et al, 2021). Older patients, in particular, tend to underreport these unmet needs due to lower expectations of health services, a greater sense of stoicism, and the presence of taboos surrounding psychological or sexual issues.

Differences in survivorship experiences and

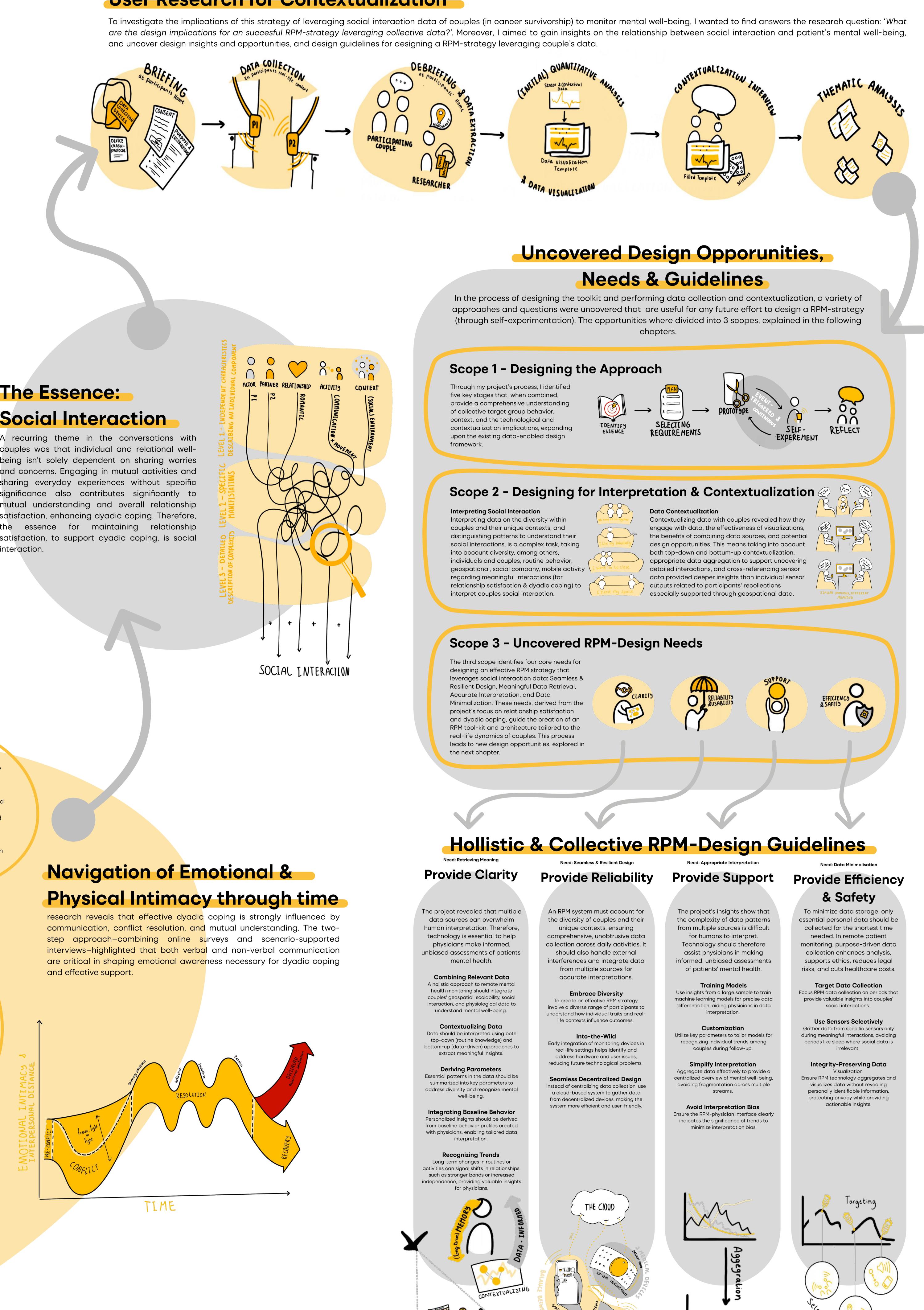
Decision-Making

Effective communication in relationships involves deciding when and how to disclose information. This decision is influenced by personal experiences, emotional awareness, and stress levels (Adamson 2013). Familiarity between partners aids in understanding and compromise. Moreover, evaluating your partner's emotional availability and interpreting non-verbal cues are crucial for effective communication (Conradi et al., 2020). Conflict resolution requires timing discussions based on

emotional readiness and responding to partner cues. Lastly, maintaining relationship quality depends on mutual respect and interest. Lack of effort or respect can diminish satisfaction and well-being, making active listening and empathy essential for a thriving relationship.

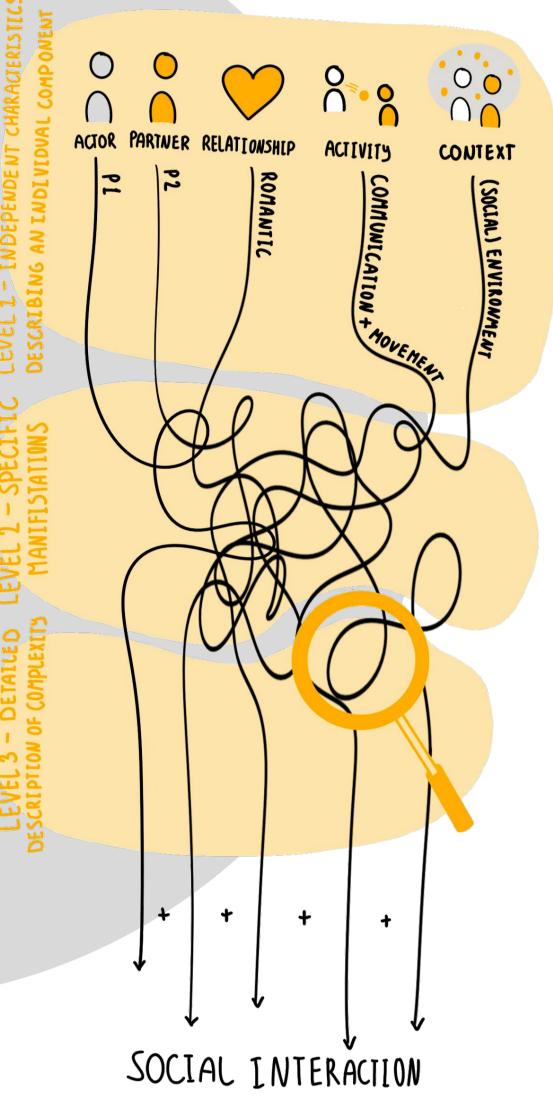


User Research for Contextualization



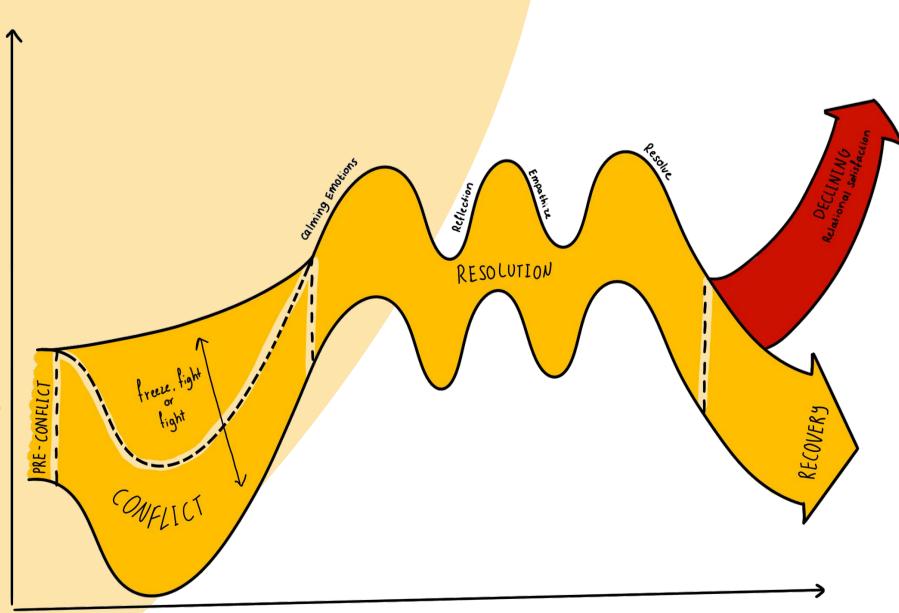
The Essence: Social Interaction

couples was that individual and relational wellbeing isn't solely dependent on sharing worries and concerns. Engaging in mutual activities and sharing everyday experiences without specific significance also contributes significantly to mutual understanding and overall relationship satisfaction, enhancing dyadic coping. Therefore, the essence for maintaining relationship satisfaction, to support dyadic coping, is social interaction.



Navigation of Emotional & Physical Intimacy through time

research reveals that effective dyadic coping is strongly influenced by communication, conflict resolution, and mutual understanding. The twostep approach-combining online surveys and scenario-supported interviews-highlighted that both verbal and non-verbal communication are critical in shaping emotional awareness necessary for dyadic coping and effective support.



RECOGNIZING TRENDS