Designing for Everyday Family Wellness: Understanding Norms and Rituals for Supporting Family Meal Practices

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Everyday family wellness roots in the most ordinary, daily routines of family life. However, busy schedules and poor communication can make it difficult to enjoy such routines, even for families outside the context of a chronic condition of a family member. Examining how families organize, communicate and collaborate around everyday family processes provides an opportunity to better understand the complexity of family dynamics and design for everyday family wellness. To do so, we used family meal practices as a window and interviewed 18 families with pre-teen children to understand how families navigate this core daily activity throughout the holistic processes of planning, purchasing, preparing, dining, and cleaning. Applying the lens of Family Development Theory, we describe the challenges and needs surrounding family meals as well as families' strategies to facilitate meal-related interactions. We identify design opportunities to support families in communicating and constructing norms and rituals in shared experiences. Building on current findings, we aim to explore ways of designing family wellness technologies by supporting the process of norm and ritual building for families.

1 INTRODUCTION & BACKGROUND

A family is a social unit as much as a health unit [2]. Within a family, individuals communicate, collaborate, and interact with each other on a daily basis. These activities impact how the family functions and the everyday wellness of its members [2, 19]. Family routines and rituals have shown to have a significant impact on family health and wellness [3, 5, 9]. However, the majority of the HCI and WISH work has been focused on family routines and rituals in the context of a chronic condition of a family member [3]. What needs and challenges are in the everyday settings of family lives? How do families navigate their daily routines and form practices in shared experiences? There is an untapped opportunity to understand the natural practices of families and explore the ways technology can/should play a role in supporting everyday family wellness.

To do this, we decided to focus on one of the core social activities of everyday family life, family meals. In particular, we decided to look into the holistic family meal practice through the processes of planning, purchasing, preparing, dining, and cleaning. The HCI and WISH communities have studied family eating practices and mealtimes in relationship

to health and technology extensively over the years. For the most part, research in this space has primarily focused on the mealtime itself: designing for commensality (typically defined as "the practice of sharing food and eating together in a social group such as a family" [6]), companionship [6–8], eating together at a distance [1, 11, 20], and eating behavior and diets [10, 13, 17, 18]. However, family meals also embody many aspects of family life: how families communicate and coordinate, how they carve out time to be together, and the dynamics of the family as a group. Targeting the dining practices missed the opportunity to holistically understand the family meal experiences (including the processes of meal planning, grocery shopping, food preparation, etc.). This calls for studying the family meal beyond the dining processes and carefully investigating the overall experience more closely. As a common and key family event, family meals also serve as an important window to understand and design for naturalistic everyday family interaction as well as exploring the design of family wellness technology in this context.

Using shared family meals as a lens, we set out to conduct a series of studies to examine goals and challenges around everyday shared family experiences and explore design opportunities for wellness technologies for ordinary family lives. In this work-in-progress, we summarize and highlight our findings from our first project as part of an ongoing research on designing for everyday family wellness. In this project, we conducted interviews with 18 families with children between 9 to 14. We aimed to answer these research questions:

- How do families navigate and form norms and rituals around shared family meals?
- What are the goals and challenges that families have regarding their daily meal practices?
- How might technology support everyday family wellness in the context of shared family meals?

2 METHODS

We conducted remote semi-structured interviews with families recruited through online platforms and social media (IRB protocol 2004183741). We targeted collocated families (i.e., parent(s) and child(ren) living in the same household) in the United States with at least one child between the age of 9 to 14. We asked families about their current mealtime practices, roles, challenges, goals, and technology use. We also asked families to reflect on their experiences during the shared family meal activity, which we asked families to complete before the interview. We then qualitatively coded the interviews, generating themes and identifying relevant theories as a guiding framework in analysis.

2.1 Participants

Our participants' demographic is mostly white (14 out of 18), middle or upper-middle (11 out of 18) nuclear families. All participants were assigned an ID to record anonymous data. Families were indicated by "F" alongside their participation number. Participants from the same family were labeled with the same numerical family number. We marked mothers with an "M" and fathers with a "D" next to their family number (e.g., D1 and M1 represent the father and mother from family F1). Children were recorded with "F" to indicate their family's number as well as "K" written alongside their individual numbers. Children's individual numbers were based on their birth orders. For example, children in family F1 are indicated by F1K1 (eldest child) and F2K2 (next eldest child). Participant demographic information can be found in Table 1 under the appendix.

2.2 Family meal activity and Interviews

Before the interview, each participating family was asked to complete a meal activity in which they try to carry out a family meal consisting of planning, purchasing, cooking, eating, and cleaning together. Each family was asked to take

10 to 15 photos or short video clips to capture the process. Families were reminded to carry out the activity as similar to their regular meal routines as possible and did not need to make anything special. The photos from the meal activity allowed researchers to get a sense of how the activity went as well as to probe questions during the interviews. Each interview was conducted with parents and children simultaneously and lasted between 60 and 90 minutes.

2.3 Analysis

The authors started by code-coding the first 10 families to get a primary understanding of the data to identify potential themes. In the meantime, new interviews were conducted and coded for refining existing themes and adding new ones. Based on these transcripts, we developed initial codes around families' practices, attitudes, and challenges around meal processes. When discussing the data and comparing it with family theories, we began to see how families form routines and unique rules during meal practices and how their goals and challenges are in relation to norms and rituals. We then turned to existing family theories and identified Family Development Theory [16] to help understand these observations. We therefore switched to a more deductive approach by using Family Development Theory [16] to help analyze data. Our final analysis contained seven high-level codes associated with three main concepts from the theory (norms, roles, and transitions), which we applied to all interviews. In this paper, we will highlight parts of our findings and insights around the norms and rituals [16] as it relates to the theory.

3 FINDINGS AND INSIGHTS

Using the Family Development Theory [16] as a lens, our findings surfaced several highlights on goals and challenges of everyday family meal practices as well as design considerations for family wellness technologies. Specifically, participants reported strategies and challenges in communicating and creating family *norms* and *rituals*. In this section, we summarize these findings and discuss opportunities for supporting norm(ritual)-building in designing for everyday family wellness.

3.1 Strategies and challenges of communicating and creating internal norms and rituals

As the Family Development Theory states, *internal norms* refer to the rules that are "made up" by individual families [16]. These family-specific norms guide behaviors and expectations within the particular family group. In our study, 7 out of 18 families intentionally created internal norms to govern specific meal practices as well as to reinforce desired behaviors, such as the use of technology and table manners. These internal norms are expressed through routine behaviors and naturally sit in the routine practices of family lives. Families often invented "code names" to describe the specific norms only known to the family members (e.g. "trash plate", "culinary adventures"). In some cases (5 out of 18), internal norms went beyond guiding behaviors and became family rituals. Such internal norms evolved from rules into events with symbolic meaning in celebrations and togetherness, which also introduce fun and playfulness into everyday mealtime routines [5, 9]. However, several (6 out of 18) families described challenges in communicating and constructing internal norms.

Families mentioned creating internal norms and rituals required every family member's commitment and effort. It also required more thought and preparation to create desired interactions around these norms and rituals, even just for one themed dinner where everyone had meaningful conversations (F2). Another challenge was brought up by F8, where they explained how they had to rely on external resources or services to augment the process. External constraints such as busy schedules also limited the chances of creating internal norms. For example, M21 mentioned how she struggled to establish any norms due to the burden of being a Ph.D. student and a mother to 2 kids.

3.2 Design opportunities for supporting everyday family wellness

Our data revealed that families frequently create and adapt internal norms to make mealtime routines efficient and more interesting. These constructed internal norms not only helped with addressing the time and scheduling constraints but also allowed families to insert joy and fun into the daily process of family functioning. Previous research proposed that routine elements of family mealtimes are related to children's well-being and the creation of family identity [5, 9]. Patterned social interactions happen at family mealtimes, such as asking about how each other's day went, have a positive impact on children's behavior and emotional development and can positively improve family wellness as a whole [9].

Interactive technologies hold great potential to support everyday family wellness as they construct internal norms and form family rituals around daily shared experiences such as family meals. HCI and WISH researchers have designed celebratory technologies that support and augment the positive aspects of interactions during a meal [1, 4, 12, 14]. Systems like TableTalk [6] and Telematic Dinner Party [1] presented ways of enriching the eating experience at the dining table and facilitating engaging conversations and interactions. These systems provided a sense of setting and structure to the interaction during the eating practices. However, more HCI and WISH research is needed to understand how technologies can best support the *process* of creating internal norms. Despite the benefits of having internal norms and rituals as shown in previous literature and our data, only 7 out of 18 total families in our study intentionally created internal norms or rituals in their existing meal processes. Many (6 out of 18) talked about challenges in creating and communicating norms and rituals. Internal norms and rituals are desirable yet hard to create in complex, busy family lives, and technology can help with this process.

One way of supporting the norm-creation process could be assisting and empowering families to form their own norms through self-guided activities. Families in our study valued their internal norms in large part because they made these norms themselves. Families' self-generated "code names" and the sheer diversity of internal norms suggest that technologies that seek to impose a norm may be dead on arrival. Interactive technologies could also support the meal processes themselves, scaffolding families' collaborative purchasing, planning, preparation, and cleanup experiences through flexible toolkits that allow families to make mealtimes more their own. Imagine a "meal kit" that, instead of providing pre-packaged ingredients, supports families in creating customized, new meal rituals just for them. Recent design of the technology acceptance toolkit [15] used cards with questions to help designers consider multiple factors in designing health technologies with long-term user acceptance. A similar toolkit could be designed as a card deck with prompts to guide family members to discuss and consider factors in building an enjoyable internal norm. For example, each card could list potential influencing factors in a given step or aspect of the entire meal process. The family would be prompted to reflect on their current practices and challenges within the given step and assign roles and tasks for each member to make it collaborative and interesting. Such activities will encourage and scaffold engaging communication among members, and by doing so, support family wellness through ordinary routines of everyday family lives.

4 FUTURE WORK

We plan to build on our findings and explore how everyday family wellness can be supported through technologies in various shared family experiences and processes with diverse types of families. We also hope to conduct design participatory design sessions and work with families to come up with a toolkit for designing and evaluating everyday family wellness technology.

5 ACKNOWLEDGMENT

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A PARTICIPANT DEMOGRAPHIC INFORMATION

Table 1. Participant Demographic information

ID #	Number of Participants	Race/Ethnicity	Parent (Gender,Age)	Children (Gender,Age)	Household Income
F1	4	White	M1 (Female,N/A) D1 (Male, N/A)	K1 (Male, 11) K2 (Female, 8) K3 (Male,4)	N/A
F2	4	White	M2 (Female, 40) D2 (Male, 43)	K1 (Female, 14) K2 (Male, 12)	$75.000-$99,999
F5	4	White	M5 (Female, 46) D5 (Male, 48)	K1 (Female, 11) K2 (Male, 8)	$100,000-$149,999
F6	4	White	M6 (Female, 39) D6 (Male, 45)	K1 (Female, 12) K2 (Male, 10)	$200,000 and over
F7	4	White	M7 (Female, 41) D7 (Male, 43)	K1 (Female, 12) K2 (Female, 10)	$150,000-$199,999
F8	2	White	M8 (Female, 43) D8 (Male, 40)	K1 (Non-Binary, 10)	$50,000-$74,999
F11	4	White	M11 (Female, 43) D11 (Male, 47)	K1 (Male, 16) K2 (Male, 14)	$200,000 and over
F12	4	White; Black or African American	M12 (Female, 46) D12 (Male, 50)	K1 (Male, 12) K2 (Male, 11)	$200,000 and over
F13	3	Asian/Pacific Islander	M13 (Female, 36) D13 (Male, 41)	K1 (Male, 11)	$200,000 and over
F16	4	White	M16 (Female, 39) D16 (Male, 38)	K1 (Male, 15) K2 (Non-Binary, 11)	$100,000-$149,999
F18	2	White	M18 (Female, 46) D18 (Male, N/A)	K1 (Female, 11)	$75,000-$99,999
F19	3	White	M19 (Female, 46) D19 (Male, 49)	K1 (Male, 10)	$75,000-$99,999
F20	3	Black or African American	M20 (Female, 39)	K1 (Male, 16) K2 (Male, 14)	$39,000-$49,999
F21	3	Asian/Pacific Islander	M21 (Female, 46)	K1 (Male, 15) K2 (Male, 11)	Under $15,000
F26	4	White	M26 (Female, 36) D26 (Male, 42)	K1 (Female, 9) K2 (Female, 11)	$100,000-$149,999

F27	3	White	M37 (Female, 42) D27 (Male, 40)	K1 (Female, 10)	$75,000-$99,999
F28	4	White	M28 (Female, 46) D28 (Male, 46)	K1 (Female, 14) K2 (Male, 12)	$50,000-$74,999
F32	5	White	M32 (Female, 39) D32 (Male, 39)	K1 (Female, 12) K2 (Male, 10) K3 (Male, 7)	$75,000-$99,999