

UNIVERSIDADE DE LISBOA  
FACULDADE DE PSICOLOGIA



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**Technologies are coming over for dinner:  
Do ritual participation and meaning mediate effects on  
family life?**

**Alexandra Urbano Magalhães Quaresma**

**MESTRADO INTEGRADO EM PSICOLOGIA**

**(Secção de Psicologia Clínica e da Saúde / Núcleo de Psicologia Clínica Sistémica)**

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Dissertação orientada pelo Professor Doutor João Manuel Monteiro da Silva Moreira

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### Abstract

The current study investigated whether digital technology use during family mealtimes decreases levels of child participation in this ritual, and consequently of ritual meaning, which then affects couple satisfaction, family cohesion, parental satisfaction and self-efficacy. Variables were measured by self-reports completed by 72 Portuguese parents of 3-to-10-year-old children. Using structural equation modeling, we tested whether child participation during mealtimes mediated the link between parent/child technology use and dinnertime ritual meaning; and whether ritual meaning mediated the link between child participation and family outcomes. The model yielded an acceptable fit and hypotheses were supported, showing a significant effect of technology use by parents, but not children. Higher levels of technology use by parents seems to decrease child participation in dinner-related activities ( $-.32, p < .05$ ), consequently affecting dinnertime ritual meaning ( $.70, p < .001$ ) and, further, family cohesion ( $.39, p < .01$ ), marital satisfaction ( $.25, p < .05$ ) and parental satisfaction ( $.41, p < .01$ ), but not parental efficacy. Results show modeling effects of technology use between marital partners ( $.76, p < .001$ ) and between parent and child ( $.29, p < .05$ ). These findings should encourage families to reduce technology use during mealtimes and promote child involvement to create more meaningful rituals and enhance family functioning and satisfaction.

**Keywords:** technologies; family mealtime ritual meaning; child participation; parenting; couple relationships; family functioning.

## Resumo

Este estudo procurou compreender se o uso de tecnologias digitais durante as refeições familiares diminui a participação da criança neste ritual, e conseqüentemente o significado do jantar, afetando a coesão familiar, a satisfação conjugal e o sentido de competência parental. Estas variáveis foram medidas através de instrumentos de autorrelato completados por 72 pais de crianças dos 3 aos 10 anos. Recorrendo a modelos de equações estruturais, testou-se o papel mediador da participação da criança na relação entre o uso de tecnologias pela família e o significado do jantar; e o papel mediador do significado do jantar na relação entre a participação da criança e as variáveis familiares. O modelo demonstrou um bom ajustamento e as hipóteses foram confirmadas, sendo que o uso de tecnologias pelos pais apresentou um efeito significativo sobre a participação da criança ( $-0.32, p < .05$ ), ao contrário do uso de tecnologias pelos filhos. Por sua vez, a menor participação da criança afetou o significado do jantar ( $0.70, p < .001$ ), reduzindo os níveis de coesão familiar ( $0.39, p < .01$ ), satisfação conjugal ( $0.25, p < .05$ ) e satisfação parental ( $0.41, p < .01$ ), sem afetar, porém, a eficácia parental. Foram encontrados efeitos de modelagem do uso de tecnologias entre pais ( $0.76, p < .001$ ) e entre pais e filhos ( $0.29, p < .05$ ). Os resultados sublinham a importância de reduzir o uso de tecnologias e envolver mais as crianças nas refeições, para aumentar o significado do ritual e promover o funcionamento e satisfação familiar.

**Palavras-Chave:** tecnologias; significado do ritual das refeições familiares; participação da criança; parentalidade; conjugalidade, funcionamento familiar.

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## Appendices

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## Introduction

The rapid development of Information and Communication Technologies (ICTs) in terms of size, ease of use, and integrating resources has enhanced its personal ownership and utilization. Various devices have become prominently present in daily life (Smith, 2012), including in domestic settings (Oduor et al., 2016) and both parents and children are using technologies actively and increasingly (Hiniker, Schoenebeck, & Kientz, 2016). Through the “domestication” of new devices (Haddon, 2006), changes in family life are emerging (Aponte, 2009; Blinn-Pike, 2009), especially when ICTs are used in the presence of other family members (Hiniker et al., 2016; Radesky et al., 2014).

Concomitant with the expansion of technologies is their presence throughout the family life cycle (Lanigan, 2009; Watt & White, 2000). Compared to couples without children, couples with children are more likely to own and use technology (Hughes & Hans, 2001; Kennedy, Smith, Wells, & Wellman, 2008), and the introduction of multiple devices into children’s lives seems to occur early among these families (Dias & Brito, 2016; Rideout, 2013; Wartella, Rideout, Lauricella, & Connell, 2013). Over time, and as parent-child relationships evolve, child media use tends to progressively rise (Rideout, 2013; Lauricella, Wartella, & Rideout, 2015; Pempek & McDaniel, 2016) and rules established by parents on technology use simultaneously decrease (Wartella et al., 2013). Likewise, the impact ICTs have on family life varies across family and individual developmental stages. To illustrate, whereas for younger children, technology use may reduce time otherwise spent playing with parents or siblings (Jordan, 2004), as adolescents reach a stage of negotiation of autonomy and independence, issues around ICT use can increase family conflict (Bacigalupe, 2011). As for couples, technology use may lead to mistrust and online infidelity (Hertlein & Ancheta, 2014) and for parents, perpetual connectivity may blur boundaries between work and family time (Chesley, 2005).

Facing the effects of technology use, parents play a significant role in regulation practices (Jennings & Wartella, 2004) and in creating the media environment at home (Lauricella et al., 2015; Stephen, Stevenson, & Adey, 2013). A child’s first contact with ICTs is usually influenced by parents’ practices, preferences and readiness to make their own devices available (Dias & Brito, 2016). Children learn from observing parents and other family members, making it likely parents model technology use in various settings throughout the day (Lauricella et al., 2015). Taking together a group of studies pointing to modeling effects, parents’ media habits

are similar between marital partners (McDaniel & Radesky, 2017) and predict technology co-use with their children (Connell, Lauricella, & Wartella, 2015), the likelihood of teaching children how to use technological devices (Barron, Martin, Takeuchi, & Fithian, 2009; Hollingsworth, Mansaray, Allen, & Rose, 2011) and, consequently, children's media habits (Jago et al., 2012; Lauricella, et al., 2015; Plowman, Stevenson, McPake, Stephen, & Adey, 2011).

Technology issues have hence risen to a prominent and challenging position in parenting (Shepherd, Arnold, & Gibbs, 2006) which entails for a balanced integration of technologies into family life at unprecedented levels (Yardi & Bruckman, 2011). With the lack of a reference model in this regard, and considering new technologies have emerged late in parent's lives (Huisman, Edwards, & Catapano, 2012; Plowman, McPake, & Stephen, 2010), some parents struggle with placing limits on ICT use (Jordan, Hersey, McDivitt, & Heitzler, 2006) and feel uncertain about the role of technologies in their children's lives (Jordan et al., 2006; Sanders, Parent, Forehand, Sullivan, & Jones, 2016; Shepherd, et al., 2006; Yardi & Bruckman, 2011).

### **Technologies and Family Interactions**

Previous studies have revealed that technology characteristics (accessibility, anonymity, affordability, approximation, acceptability, ambiguity, and accommodation) introduce qualitative changes in family relationships, structure and processes (Hertlein, 2012), holding the potential to facilitate as well as to disrupt family interactions (Carvalho, Francisco, & Relvas, 2015; Carvalho, Fonseca, Francisco, Bacigalupe, & Relvas, 2016; Sharaievska & Stodolska, 2016).

Technologies have come to show clear benefits when used to connect with family members at times when face-to-face interaction is not possible, for example, when family members or couples are separated by distance for long (Bacigalupe & Lambe, 2011; Sharaievska & Stodolska, 2016) or brief time periods (Stafford & Hillyer, 2012). Technology-mediated relationship maintenance has thus been found to be useful for families (Bacigalupe & Lambe, 2011; Padilla-Walker, Coyne, & Fraser, 2012), providing parents with a way to "check in" with their children (Palen & Hughes, 2007), and couples with new ways to interact and improve their relationship (Coyne, Stockdale, Busby, Iverson, & Grant, 2011; Neustaedter & Greenberg, 2012). Other benefits of technology use arise when devices are co-used to create leisure time among couples (Legget & Rossouw, 2014) and families (Padilla-Walker et al.,



2012; Sharaievska & Stodolska, 2016). Moreover, personal devices make it possible for family members to connect with others who are not present, and still be physically at home with family (Lanigan, 2009). However, this action does not necessarily orient to common activities (Ley et al., 2014) and may even lead to what has been described as family members being “alone together” (Turkle, 2011) or psychologically separated from those who are physically present (Stafford & Hillyer, 2012).

Greatest challenges seem to arise when technology is used in the presence of others, impoverishing involvement during family contact. Although ICT use may not affect the amount of time spent in social interaction with family, it reduces time for face-to-face conversation (Vilhelmson, Thulin, & Ekdér, 2017). Technologies such as mobile devices are creating the need to develop new kinds of interactions and relationship patterns (Aponte, 2009; Bacigalupe & Lambe, 2011; Carvalho et al., 2015; Lanigan, 2009; Stafford & Hillyer, 2012), in particular because they provide endless opportunities for distractions (Harmon & Mazmanian, 2013; McDaniel & Coyne, 2016a). Facing the magnitude of these issues, concepts such as “technofence” (McDaniel & Coyne, 2016a) and “phubbing” (Roberts & David, 2016) have emerged in recent works to designate technology-related interruptions or distractions during couple and family time.

Studies on couples’ technology use have found devices to frequently interrupt couple interactions like leisure time, conversations, and mealtimes (McDaniel & Coyne, 2016a). The perception of partners as being distracted with, or dependent on their smartphone seems to have a negative impact on relationship satisfaction (Coyne et al., 2011; Hussain, Cakir, Ozdemir, & Tahirkheli, 2017; Murray & Campbell, 2015; Roberts & David, 2016). Likewise, emerging research on distracted parenting has shown that parent’s mobile phone use in the presence of their children alters parenting and parent-child interactions (Hiniker et al., 2015; McDaniel & Coyne, 2016b; McDaniel & Radesky, 2017; Oduor et al., 2016; Radesky et al., 2014; Radesky et al., 2015). By being absorbed with mobile devices, parents tend to give less attention to their children (Hiniker et al., 2015; Hussain et al., 2017; Oduor et al., 2016; Radesky et al., 2014) and, in turn, time spent using technology may displace and decrease the frequency of meaningful parent-child connections (Kildare & Middlemiss, 2017; Radesky et al., 2015). Parents’ distraction with technology may also affect child’s adjustment, which is linked to externalizing and internalizing behaviors (McDaniel & Radesky, 2017). Inversely, young child’s frequency of digital technology use seems to also be related to parents’ outcomes, such as mother’s relationship satisfaction with her partner (Pempek & McDaniel, 2016).

Technological intrusions during family, couple and parent-child time may thus be undermining relationships by decreasing, replacing, or allowing for escape from face-to-face interactions (Hussain et al., 2017; Turkle, 2011; Vilhelmson et al., 2017). Nonetheless, these kinds of social disengagement may also bring personal benefits, because they allow occasional time for oneself (Murray & Campbell, 2015; Oduor, et al., 2016) and avoidance of unpleasant thoughts during family conflict (Sharaievska & Stodolska, 2016). In contrast, for some families, technologies have become a source of conflict when used for individual purposes in the presence of family members (Hiniker et al., 2015; Hiniker et al., 2016; Huisman et al., 2012; McDaniel & Coyne, 2016a; Oduor et al., 2016; Radesky et al., 2014; Radesky Peacock-Chambers, Zuckerman, & Silverstein, 2016; Sharaievska & Stodolska, 2016). As a result, being confronted with another's solitary use of technology tends to lead family members to feel resentment, frustration, bother and exclusion (Oduor et al., 2016).

Considering ecological influences (Bronfenbrenner, 1979), these studies illustrate how technology use by each family member interacts in a complex and circular manner, affecting individual and dyadic outcomes as well as features of the family as a whole. As many people struggle to control technology intrusions into face-to-face interactions (Jarvenpaa & Lang, 2005; Oulasvirta, Rattenbury, Ma, & Raita, 2012), reduced attention during these occasions (Sharaievska & Stodolska, 2016) often leads to feelings of social disconnection. Based on these findings, technology use may also be undermining face-to-face interactions during family rituals, and in particular mealtimes, which are important in creating and maintaining feelings of closeness and connection between family members (Fiese, 2006).

### **Technologies and Mealtimes**

The existing literature has shown interest in technologies' positive and negative effects on family interactions, but only a small number of studies have explored how mobile devices affect ritual life and family well-being. Additionally, little is known about technology use during mealtimes (Moser, Schoenebeck, & Reinecke, 2016). Mealtimes are essential components of family life which help enhance positive experiences central to family preservation, identity, disclosure and intimacy (Gutierrez, Price, & Arnould, 2008). Being a ritual, mealtimes, and specifically dinnertime, promote family, couple and individual well-being (Fiese, 2006). Although decreasing in frequency, these rituals seem to be maintaining their resilience over time (McIntosh et al., 2009; Chitakunye & Maclaran, 2014; Chitakunye &

Takhar, 2014; Ferdous, Ploderer, Davis, Vetere, & O'hara, 2016) and, in Portugal, most families with 11-year-old children still tend to have dinner together every day (Roos et al., 2014). More importantly, the current decline of family mealtime frequency may be explained by modern-life features like competing time commitments and technology-related disruptions (Fruh, Fulkerson, Mulekar, Kendrick, & Clanton, 2011; Gutierrez et al., 2008), more than by families' lack of appreciation of these gatherings (Fruh et al., 2011).

Parents and children recognize the presence of family members as essential to foster family satisfaction and communication (Hiniker et al., 2016; Lawrence & Plisco, 2017), which may explain why not only policymakers (American Academy of Pediatrics; AAP, 2016) but also families have come to seek screen-free mealtimes (Hiniker et al., 2016; Moser et al., 2016). Family rules, as well as values and norms, are prominent factors in shaping parents' and children's technology use (Ferdous, Ploderer, Davis, Vetere, & O'Hara, 2015). Some parents find it less acceptable for children to use their devices during mealtime, compared to adults, although phone use by adults is perceived as less acceptable when in the presence of children (Moser et al., 2016). When not put away, mobile devices may distract parents and, as a result, reduce parents' ability to attend to their children and show affection (Hiniker et al., 2016; Moser et al., 2016; Radesky et al., 2014). When it comes to parenting, not only parent-child interactions but also co-parenting perceptions are negatively affected by technology interferences during mealtimes (McDaniel & Coyne, 2016b). Similarly, parents with young children report ICT use during these occasions to also affect satisfaction with their couple relationship (McDaniel & Coyne, 2016a).

When technologies are present in dinnertime-related contexts (Chitakunye & Maclaran, 2014; Cronin & McCarthy, 2011) family members seem to multitask between technology use (Chitakunye & Takhar, 2012, 2014) and the typical activities associated with mealtimes (e.g., shopping or obtaining food, meal preparation, a prayer, eating, conversation, and cleaning up; Larson, Branscomb & Wiley, 2006). Therefore, the accessibility of digital technology devices may be increasing the likelihood of interference with mealtime-related family interactions (Gutierrez et al., 2008; Radesky et al., 2014; Chitakunye & Maclaran, 2014; Chitakunye & Takhar, 2014). Moreover, ICTs may alter communication processes, mealtime meaning (Fulkerson, et al., 2014), and family structure, values and identity (Chitakunye & Maclaran, 2014). Across time, family technology use may then be a habit turning into a routine, and undermining rituals typically based on face-to-face interactions (Fiese, 2006).

Several studies on family ICT use have shown concerns about television watching during meals (e.g., Chitakunye & Maclaran, 2014; McIntosh et al., 2009; Fitzpatrick, Edmunds, & Dennison., 2007; Roos et al. 2014; Martin-Biggers et al., 2014). Studying nine European countries, Roos and colleagues (2014) found that Portugal reports one of the highest rates of TV watching frequency during dinner. Whereas family members tend to organize the eating area around television (Chitakunye & Maclaran, 2014; Ferdous, Ploderer, Davis, Vetere, & O'Hara, 2016; Neumark-Sztainer, Story, Ackard, Moe, & Perry, 2000; Chitakunye & Maclaran, 2014), portable technologies are now able to move into family meal spaces. Given that the privatization of technologies, as opposed to their joint use, may further encourage individual activity at the expense of collective interaction (Epp, 2008), there is a growing need to understand how family mealtimes are altered now that new technologies, such as mobile phones and tablets, are becoming so present at the table (Chitakunye & Takhar, 2012; Ferdous et al., 2016).

In an observational study, Ferdous and colleagues (2016) convey technologies may be distracting elements in family interactions at the dinner table, especially when used individually. The same type of technology may be less acceptable when used to retract from family interactions (e.g., personal devices) but more acceptable when used for shared interest (e.g., television). Based on this assumption, new technologies can also be positively integrated into mealtimes, serving as a strategy to promote conversations about screen content (e.g., by evoking past events and memories; Ferdous et al., 2016) and to encourage children to eat (Ferdous et al., 2016; Ganesh, Marshall, Rogers, & O'Hara, 2014). On this matter, Ferdous and colleagues (2017) recently presented a “celebratory technology” which helps bring back attention to the traditional tasks of family meals. The collective use of this technological system encourages participation of all family members by introducing conversation, storytelling and future event planning.

Despite the findings on how technology and family mealtime settings interact in beneficial and disruptive ways, the reviewed literature did not address whether family technology use during mealtimes alters family members' investment and active participation in these rituals. More specifically, although it is known that ICTs are introduced in younger children's lives (e.g., Dias & Brito, 2016) we do not know whether the use of digital technologies during mealtimes at home alters the way children get involved in these occasions in the early stages of their ritual life.

## **Child Participation in Mealtimes**

Mealtime-related activities are essential to improve children's socialization into their families' culture, including ways of thinking, feeling, and acting (Larson et al., 2006). According to Rogoff and colleagues (1993), children's active participation in culturally structured activities, such as mealtimes, goes along with guidance and support. Usually, it is parents who have the most responsibility in shaping family ritual life (Fiese, 2006) and promoting children's involvement in mealtimes, by guiding and assigning tasks and roles according to children's capabilities.

From a very young age, different stages of responsibility and competence allow children to actively engage in the development of family rituals (Fiese, 2006; Fiese et al., 2002; Spagnola & Fiese, 2007). Once children are on average 3 to 5 years old, they already engage in simple household chores and daily life routines (Hofferth & Sandberg, 2000; Sytsma, Kelley & Wymer, 2001). When it comes to mealtimes, children start helping to prepare meals, setting and clearing the table, and washing dishes (Hofferth & Sandberg, 2000). In addition, they engage in less instrumental tasks, like storytelling, saying prayers and sharing everyday stories (Larson et al., 2006; Snow & Beals, 2006). By having these opportunities, children's interest in participating in such rituals is simultaneously enhanced (Woodruff & Kirby, 2013). Consequently, with children's involvement in family life during preschool years, routines are regularized, and rituals become more meaningful activities for the family as a unit (Evans & Rodger, 2008; Fiese, 2006), enabling an important shift away from couple-oriented rituals towards whole-family-centered rituals (Fiese, Hooker, Kotary, & Schwagler, 1993).

Although engaging children in mealtimes is essential to foster a sense of togetherness and belonging (Fiese, 2006), families seem to be facing inherent life cycle challenges and modern encounters which make child involvement more difficult. For instance, parents with school-aged children have expressed concerns about involving them in meal preparation due to time limitations and the resulting mess (Fulkerson et al., 2011). On the other hand, when children get older, their active participation may become a helpful strategy against these challenges (Dwyer, Oh, Patrick, & Hennessy, 2015). However, children may also renounce participating in mealtime-related tasks due to lack of interest or to prioritize other activities, including technology-related (Woodruff & Kirby, 2013). Taking into account the importance of all family members engaging in rituals, both parent and child reduced participation in mealtimes

due to modern challenges and alternative interests may hollow the meaning ascribed to family mealtimes (Fiese, 2006).

### **Mealtime Ritual Meaning and Family Features**

Family ritual meaning represents the degree to which rituals have a shared significance among family members (Fiese, 1992). This meaning ascribed to rituals is closely linked to family interactions and seems to affect child and adult well-being (Spagnola & Fiese, 2007). During the initial stages of the family life cycle, when the construction of rituals involving the whole system starts to take place, a lower meaning ascribed to rituals may negatively affect family life features (Spagnola & Fiese, 2007). Based on this assumption, we focused on couple satisfaction, parenting sense of competence, and family cohesion, which have shown links with ritual meaning in prior studies.

Family cohesion is a family functioning component consisting of the degree of commitment, help, and support family members provide to each other (Moos & Moos, 1986). This feature has been consistently associated with family ritual meaning (Crespo, Kielpekowski, Pryor, & Jose, 2011; Fiese & Kline, 1993; Fiese et al., 2002; Santos, Crespo, Canavarro, & Kazak, 2016). Literature refers to ritual meaning as a family cohesion promoter (Welsh, French, & Wall, 2011; Santos, Crespo, Silva, & Canavarro, 2012), but also as an indicator (Fiese et al., 2002). It thus appears to have a bidirectional link, in which more cohesive families invest more in rituals, and families who build up more meaningful rituals also become more cohesive (Crespo et al., 2011). In the context of family mealtimes, positive links have been found between cohesion and both meal frequency (Welsh et al., 2011) and the meaning ascribed to dinnertime (Fiese & Kline, 1993). These findings show that families who get together for mealtimes, among other rituals, tend to feel higher levels of family cohesion (Crespo, 2011; Evans & Rodger, 2008).

Research on ritual meaning among couples shows that family routines and rituals are associated with relationship satisfaction among romantic partners (Fiese et al., 2002). In particular, investment in family rituals was related to satisfaction with the marital relationship and couple closeness, particularly for women (Crespo, Davide, Costa, & Fletcher, 2008; Fiese et al., 1993). When couples become parents, and by the time their older child is of preschool age, meaningful family rituals may protect marital satisfaction (Fiese et al., 1993). Although studies about family mealtimes' effects on couple outcomes are scarce, existing studies show

insecure attachment among married couples to be associated with lower ritual meaning (Crespo et al., 2008; Santos et al., 2016), less frequent and planned family mealtimes and more television watching during mealtime (Bost, Wiley, Fiese, Hammons, & McBride, 2014). Given that attachment security is strongly related to the quality of human connection in couples, it may serve as a relevant proxy for marital satisfaction when exploring ritual meaning's effects.

Family routines and rituals have also been found to be associated with higher levels of parenting sense of competence and parent-child relationship quality (Fiese et al. 2002; Skeer & Ballard, 2013; Sprunger, Thomas, Boyce, & Gaines, 1985). Parenting sense of competence can be defined bi-dimensionally, comprising parental efficacy and satisfaction. Satisfaction reflects the parents' perception and meaning regarding their parental role (Sabatelli & Waldron, 1995). Efficacy is related to perceptions and expectations of parents' competence and problem-solving ability (Johnston & Mash, 1989). Previous studies on mealtimes have shown that investment in these rituals seems to be linked to mothers' perceptions of parenting competence and satisfaction (Evans & Rodger, 2008). Among fathers, Jacobs and Kelley (2006) found parental efficacy, but not satisfaction, to predict involvement in general caregiving. Nonetheless, little is known about how parenting sense of competence is related to family rituals such as mealtimes.

### **The Present Study**

Our review of the literature revealed an insufficient holistic understanding of ICTs' role during family time, and their effect on specific subsystem interactions, distinguishing among stages of the family life cycle, focusing on meaningful daily interactions and contemplating possible systemic consequences (Jennings & Wartella, 2004). Facing an unprecedented tech-generation (Hertlein, 2012), more research on the effects of new devices on family functioning and relationships is essential (Carvalho et al., 2016; Lanigan, 2009), especially when used during meaningful face-to-face interactions (Lauricella et al., 2015) such as mealtimes (Chitakunye & Maclaran, 2014; Chitakunye & Takhar, 2012; Cronin & McCarthy, 2011). Furthermore, possible mediating mechanisms, such as child participation and ritual meaning, could help explain the effects of ICT use on family outcomes, and should thus be explored.

The effects of ICT use during family interactions are mostly studied in parents (McDaniel & Radesky, 2017; Radesky et al., 2014) and older children and adolescents (Carvalho et al., 2016; Ólafsson, Livingstone, & Haddon, 2014) although younger children are increasingly

using ICTs (Dias & Brito, 2016). We sought to understand how parent and child digital technology use during mealtimes influenced children's participation in the ritual, considering families with preschool and school aged children. In this age period, children also become more involved in family rituals turning rituals become more relevant for the family (Fiese et al., 2002; Fiese, 2006; Spagnola & Fiese, 2007).

Although the child's role in ritual life is recognized, research on this matter is scarce (Crespo, 2007; Dwyer et al., 2015) and definitions are incongruent. Research on child participation in mealtimes has measured aspects such as mealtime attendance (McIntosh et al., 2009; McIntosh et al., 2010; Neumark-Sztainer et al., 2000) and mealtime existence or absence (Neumark-Sztainer et al., 2000). However, we believe that a definition based on a more active participation, reflecting children's involvement in typical family-related mealtime roles, tasks and enactments (Larson et al., 2006; Fiese, 2006; Fiese et al., 2002) would be most useful.

Research shows an increase of ICT use frequency (e.g., Pempek & McDaniel, 2016) and of ritual involvement (e.g., Fiese, 2006; Woodruff & Kirby, 2013) as children get older. Therefore, we sought to understand the transactions occurring between these dimensions in the specific context of family dinnertime, and how they affected ritual meaning and consequently overall family life. Although rituals are assets for family and couple well-being (Fiese, 2006; Imber-Black, 2002), studies mostly focus on mealtime frequency rather than quality (e.g., Lawrence & Plisco, 2017) and little is known about the effects these occasions have on family functioning and dyadic relationships within the family.

By addressing some of these gaps, we hope to contribute to the emerging research on the effects of technology in family life and meaningful interactions. As for practical implications, conclusions of this study may be relevant for developing strategies and guidelines on technology use and child involvement in mealtimes, to assist families with young children.

Proceeding from the reviewed literature, we expected to find a modeling effect of digital technology use during mealtimes between parents and child, and between marital partners (H1). We also hypothesized that higher levels of digital technology use during mealtimes would have a negative effect on couple satisfaction, parenting sense of competence and family cohesion, by decreasing levels of child participation in the ritual and dinnertime ritual meaning. Therefore, this study tested a mediating model, exploring whether child participation during mealtimes mediates the link between family technology use during mealtimes and dinnertime ritual meaning. We expected family technology use to negatively affect child participation,



which in turn would diminish the ritual meaning ascribed to dinnertime (H2). After that, we sought to explore whether the meaning ascribed to dinnertime mediated the link between child participation and family outcomes, expecting lower levels of child participation to decrease ritual meaning and consequently couple satisfaction, parenting sense of competence and family cohesion (H3).

## Method

### Participants

The sample included 55 mothers and 17 fathers, married (65.8%) or cohabitating (34.2%), having at least one child aged between 3 and 10 years old. Children were either from the current relationship (95.8%) or from a previous relationship of the participant (2.8%) or his/her partner (1.4%). Participants had been living together with their partners for a mean length of 11.36 years ( $SD = 5.06$ ; length range: 1 - 25). To meet independent observations' criteria, only one parent responded about one child in the target age category ( $M_{age} = 6.49$ ;  $SD = 2.35$ ). Twenty-nine children were of preschool age (3 to 5 years old), of which 51.7% were boys. Forty-three children were of school age (6 to 10 years old), of which 58.1% were boys. The responding parents' age ranged from 26 to 60 years old ( $M = 40.36$ ;  $SD = 6.29$ ) and their partner's age ranged from 18 to 60 ( $M = 40.47$ ;  $SD = 6.91$ ). All participating parents were Portuguese, living in Portugal and most defined their current living area as urban (76.4%). Most of the participants were working full-time (90.4%) and had completed secondary school (30%) or higher education (68%). As for the participants' partners, 86.3% were working full-time and most had completed secondary school (28.8%) or higher education (58.9%). The sample included four participants who reported a same-gender partner. This may have resulted from incorrect questionnaire completion, given that all of these participants reported the exact same age, level of education and employment situation for items about themselves and their partners. They also reported having children from the current relationship, when options such as the child being from a previous relationship or being adopted were available.

### Procedures

Part of the sample was recruited online by students of the Faculty of Psychology of the University of Lisbon, in exchange for extra credits on a course unit. These students were asked

not to participate themselves. Parallel to this approach, we recruited the remaining participants through a snowball strategy, by sharing an online questionnaire created in the *Qualtrics* platform. Prior to giving informed consent for participation (see Appendix A), participants were presented with a page of directions in which inclusion criteria were indicated. These included being at least 18 years old, in a couple relationship (i.e., marriage or cohabitation), and living with at least one child aged between 3 and 10 years old. Children could be from the participant's or their partner's previous relationships, as well as from the current relationship, as long as they were living with the participant and his/her partner. To meet the principle of independence of observations, people were asked not to respond if their partner had already participated, and each participating parent was asked to reply to the questionnaire focusing on only one 3-to-10-year-old child.

## Measures

**Socio-demographic data.** Information on demographics was collected regarding the participant, partner and the target child. In regard to the participating parents and their partners, we asked about age, gender, work situation, level of schooling, residence area type (*rural–urban*); relationship type (*marriage* or *cohabitation*) and duration of living together. The number of children, their age and gender were also reported. This study is focused on parents with 3-to-10-year-old children; therefore, participants were asked to respond to the questionnaire in relation to their child of this age category. Participants living with more than one child within the age category were asked to consider the child who would appear first when alphabetically ordering children's names.

**Family digital technology use frequency during mealtimes.** Three items assessed the frequency of digital technology use at mealtimes, for the participant, partner and child, responded through a two-step, 4-point Likert scale with a forced-choice format. First, the participants picked the description which best described their own/partner's/child's usual behavior, choosing between “Some people regularly use digital technologies (i.e., iPhone, tablet, laptop...) during family mealtimes at home (e.g., dinnertime)” and “Other people rarely use digital technologies during family mealtimes at home”. After that, they selected whether the description was *really true* or *sort of true*. This format was based on the Family Rituals Questionnaire (Fiese & Kline, 1993) described below. In addition to these items, filler items

about other typical activities within the household were assembled to try to reduce socially desirable answers.

**Child participation in mealtimes.** Child participation in dinnertime was assessed with 10 items, maintaining the two-step forced-choice format previously described. The items were developed based on research on typical activities, child roles and tasks during family meals (e.g., Fiese, 2006; Kiser, Medoff, Black, Nurse, & Fiese, 2010; Larson et al., 2006). To illustrate, the participant selected the description that best described the child's behavior, between "In some families, children help planning mealtimes (e.g., choosing what's for dinner)" and "In other families, children do not participate in mealtime planning". After that, they picked whether the previous description was *really true* or *sort of true*. These responses were combined to yield a 4-point Likert scale in which higher values reflect greater child participation in family mealtimes. In order to obtain a better internal consistency, two items were removed and a Cronbach's alpha of .71 was obtained for this scale.

**Family ritual meaning.** The family ritual meaning ascribed to dinnertime and annual celebrations was measured by the reduced version (Crespo & Lind, 2004) of the Family Rituals Questionnaire (FRQ) originally developed by Fiese and Kline (1993). The 10 items of the total scale were presented in their original two-step forced-choice format previously described. For each setting, five pairs of descriptions refer to family rituals' dimensions (i.e., occurrence, attendance, affect, symbolic significance and deliberateness; Fiese & Kline, 1993). For example, for the dinnertime setting, participants picked the description which best represented their family between "Some families regularly eat dinner together" and "Other families rarely eat dinner together." After that, they chose whether the description was *really true* or *sort of true*. The possible combinations yield a 4-point Likert scale mirroring the family's ritualization level or investment in family rituals. In this study, the Cronbach's alphas were of .72 for the total scale, and .69 and .80 for the dinnertime and annual celebrations subscales respectively. Given that the dinnertime scale yielded a satisfactory Cronbach's alfa, and the study is focused on mealtimes, the annual celebrations' data were not used.

**Marital satisfaction.** Relational satisfaction with the romantic partner was assessed with the Portuguese version (Antunes, Francisco, Pedro, Ribeiro, & Santos, 2014) of the Kansas Marital Satisfaction Scale (KMSS) formerly developed by Schumm and colleagues (1986). This is a validated instrument found to be a good couple satisfaction indicator (Antunes et al., 2014; Schumm et al., 1986). It is composed of three items presented on a 7-point Likert scale

varying from *Extremely Dissatisfied* to *Extremely Satisfied*. In the present study, the scale showed a good internal consistency with a Cronbach's alpha of .97.

**Parenting sense of competence.** Parenting Sense of Competence was assessed through the Parenting Sense of Competence Scale (PSOC) originally developed by Johnston and Mash (1989). The validated Portuguese version of this scale (Seabra-Santos et al., 2015) has 17 items designed to measure the parent's satisfaction and self-efficacy in his/her parenting role. Satisfaction represents a more subjective and affective dimension, and perception of efficacy is a more instrumental component of parenting sense of competence (Seabra-Santos et al., 2015). The items of this scale are rated on a 5-point Likert scale going from *I strongly disagree* to *I strongly agree*. Reliabilities for the total scale, as measured by Cronbach's alpha, was .82. For Satisfaction and Efficacy sub-scales, the Cronbach's alphas are respectively of .76 and .67.

**Family cohesion.** Family cohesion was measured with the Family Cohesion subscale of the Portuguese adaptation (Matos & Fontaine, 1992) of the Family Environment Scale (Moos & Moos, 1986) The subscale reflects the level of commitment, help and support between family members and has nine items presented on a 6-point Likert scale varying from *I strongly disagree* to *I strongly agree*. A good internal consistency was found, with a Cronbach's alpha of .82.

Additional items were included in the protocol but are not described here because they were not used in the data analyses.

## Statistical Analyses

Preliminary correlations between variables, and descriptive analyses of the collected data were conducted through the Statistical Package for the Social Sciences (SPSS), 24.0 software (IBM, SPSS Inc., Armonk, NY).

This research sought to explore the effects of family digital technology use during mealtimes on family life features, mediated through child participation and family dinner ritual meaning. To examine our mediation hypotheses, we tested Structural Equations Models (SEM) employing the AMOS 24 software (Arbuckle, 2013). Latent variables were created from indicators (i.e., observable variables consisting of parcels composed of odd vs. even items for each scale) for child participation in dinnertime, dinnertime ritual meaning and for the endogenous variables (i.e., couple satisfaction, parental self-efficacy and satisfaction, and

family cohesion). Creating these latent variables allows us to eliminate error variance and obtain better estimates of structural model effects.

In reference to model fit, Schreiber, Nora, Stage, Barlow, and King (2006) presented numerous goodness-of-fit indicators used by researchers to assess a model. Some common fit indexes are the Normed Fit Index (*NFI*), the Non-Normed Fit Index (*NNFI*, also known as *TLI*), the Incremental Fit Index (*IFI*), the Comparative Fit Index (*CFI*), and the root mean square error of approximation (*RMSEA*). According to Schreiber and colleagues' (2006) cutoff criteria for model fit assessment, the ratio of chi-square to the degrees of freedom ( $\chi^2/df$ ) should be under 2 or 3. The *NFI* and *CFI* should be higher than .95, although values over .90 are acceptable (Bentler & Bonett, 1980). *RMSEA* results from the comparison between the observed value and the estimated value and should be below .10 (Steiger, 1990) and as close to zero as possible. *RMSEA* values below .06 or .08 are estimated to be good (Schreiber et al., 2006). The model tested in this paper, (see Figure 1), yielded an acceptable fit,  $\chi^2(76) = 127.34$ ,  $p < .001$ ,  $\chi^2/df = 1.68$ , *CFI* = .90, *RMSEA* = .098. All manifest indicators had significant loadings on their latent variables (.48 to 1.02).

Following MacKinnon, Lockwood, and Williams' (2004) recommendations, we conducted a bootstrap resampling procedure (Shrout & Bolger, 2002) to supplement the SEM and test the significance of our indirect effects (i.e., mediation hypothesis). We made use of 200 bootstrap resamples drawn with replacement from the original sample to derive the bias-corrected 95% confidence interval for the indirect effect (Preacher & Hayes, 2004). This method has been pointed out as a more efficient way to assess mediation effects (MacKinnon et al., 2004), particularly with small sample sizes (Shrout & Bolger, 2002) like the one in this study. It also provides more accurate confidence limits for samples of which theoretical distribution is unknown (Arbuckle, 2013).

Finally, we tested the mediation model to examine the following hypotheses: (a) the mediating role of child participation in the association between digital technology use during mealtimes and dinnertime ritual meaning (H2) and (b) the mediating role of dinnertime ritual meaning in linking child participation during mealtimes to family life features (i.e., couple satisfaction, parental self-efficacy and satisfaction, and family cohesion) (H3). The hypothesis of modeling effects (H1) was tested through covariances between the exogenous variables (i.e., child's, participating parent's, and non-participating parent's digital technology use during mealtimes).

## Results

The results support our hypothesis regarding the links between parent and child technology use during dinnertime (H1). Technology use during dinner was found to be strongly and positively correlated between marital partners (.76,  $p < .001$ ), and positively, though less strongly, correlated between the child and the participating parent (.29,  $p < .05$ ) and between the child and the non-participating parent (i.e., the participant's partner) (.29,  $p < .05$ ).

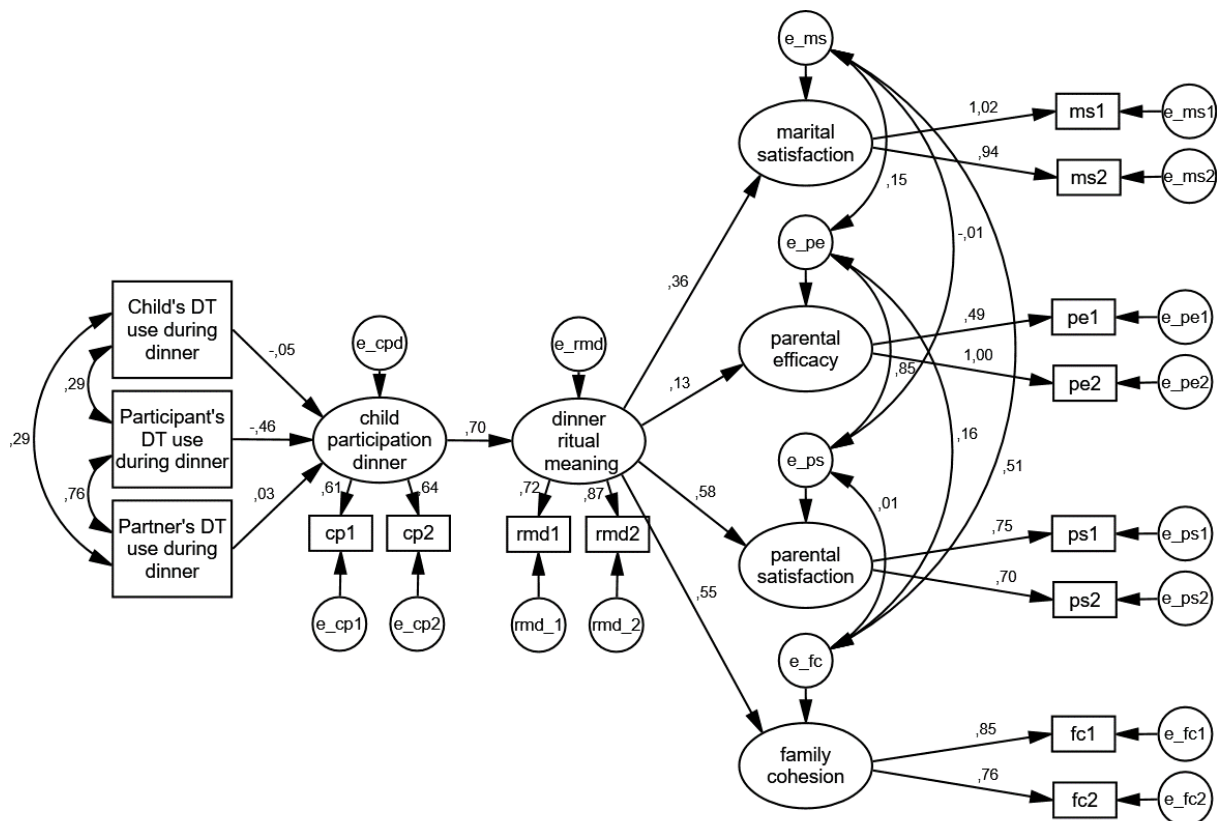


Figure 1. Path diagram with standardized coefficients for the mediation model. DT = digital technology; cp1, cp2 = parcels from child participation in dinnertime scale; rmd1, rmd2 = parcels from dinnertime ritual meaning scale; ms1, ms2 = parcels from KMSS; pe1, pe2 = parcels from the PSOC's efficacy subscale; ps1, ps2 = parcels from the PSOC's satisfaction subscale; fc1, fc2 = parcels from the family cohesion subscale from FES; e\_ = error terms for the endogenous variables; ellipses represent latent variables, rectangles represent observed variables, single straight arrows indicate hypothesized causal relationships, curved two-headed arrows indicate associations between variables.

Results indicated a significant negative effect of the participating parents' technology use during dinnertime upon child participation in this ritual ( $-.46, p < .05$ ). Unexpectedly, this effect was not found for child's ( $-.05, p = .73$ ) nor partner's ( $.03, p = .89$ ) technology use. In turn,

child participation showed a strong effect on the meaning conferred to the dinnertime ritual (.70,  $p < .001$ ). The hypothesis on child participation as a mediator linking family technology use during mealtimes to dinnertime ritual meaning (H2) was supported, further showing that this effect was significant specifically for the participating parent's technology use (-.32,  $p < .05$ ).

Results showed significant pathways linking dinnertime ritual meaning to family cohesion (.55,  $p < .001$ ), parental satisfaction (.58,  $p < .001$ ) and couple satisfaction (.36,  $p < .05$ ), but not to parental self-efficacy (.13,  $p = .36$ ). Significant mediation effects of dinnertime ritual meaning on family outcomes were found for family cohesion (.39,  $p < .01$ ), marital satisfaction (.25,  $p < .05$ ) and parental satisfaction (.41,  $p < .01$ ), supporting our hypothesis of dinnertime ritual meaning as a mediator between child participation and the measured family life variables (H3), except parental self-efficacy.

In sum, these results show modeling effects of technology use at dinnertime between marital partners and between parents and child. Findings are compatible with our main hypothesis that digital technology use by the participating parent during family dinnertime decreases child participation and consequently affects dinnertime ritual meaning. In turn, dinnertime ritual meaning appears to mediate the link between child participation and the levels of family cohesion, parental satisfaction and couple satisfaction. Finally, moderation effects of child age were tested, and none were significant.

The correlation matrix for the main variables of this study can be found in Appendix B.

## Discussion

This study aimed at testing whether family technology use during mealtimes negatively affected family life features by decreasing child participation and, consequently, dinnertime ritual meaning. Mediation effects were tested and associations between family members' technology use at mealtimes were explored to verify possible modeling effects. The results lent support to our hypotheses. First, results show a modeling effect of technology use during mealtimes between parents and children and between marital partners (H1). Then, child participation during mealtimes mediated the link between parental technology use and dinnertime ritual meaning (H2). And last, dinnertime ritual meaning was found to mediate the link between child participation and most of the family outcomes (H3).

Results concerning our first hypothesis (H1) are consistent with prior findings on modeling effects between parents' and children's ICT use (e.g., Lauricella, et al., 2015; Plowman et al., 2011). This study found the frequency of digital technology use during mealtimes by parents to be linked to the frequency of child technology use. Similar to other studies (Coyne et al., 2012; McDaniel & Radesky, 2017), this study also found strong correlations between partners' technology use in the family mealtime setting.

In contrast to the latter studies, the current study measured these modeling effects in the specific context of mealtimes. Being rituals, these occasions are central to create, reinforce and pass on family practices, norms and family identity (Epp & Price, 2008; Fiese et al., 2002; Wolin & Bennett, 1984). Considering that consumption practices, such as ICT use, can be transmitted between generations (Epp & Price, 2008), their use during family mealtimes may be an easily transmitted practice. Based on the assumption that rituals reflect family identity (Wolin & Bennett, 1984), and considering that families invite technologies to the dinner table, it is possible that by using technologies during meals, they also use these devices in other family settings.

Concerning the strengths of the modeling effects, results show a stronger correlation between the participant's and his/her partner's technology use, than between parent and child. The strong correlation between partners and the equal correlation between each parent and the child makes suggests that data analyses might benefit from joining the two parental use variables into one (i.e., parental technology use during mealtimes). However, the differing strengths of the effects may also be related to rules on technology use during mealtimes. Moser and colleagues' (2016) argue that parents find it less acceptable for children than for parents to use mobile devices during family mealtimes, and consequently, invest in setting limits on children's but not parent's technology use. Thus, although existing, the parent-child modeling effect may be buffered by parent's rules, values and norms on child technology use in this family context (Ferdous et al., 2015). In sum, correlations between partners and between parent and child may differ if rules for reducing technology frequency exist for children, but not for parents.

It is clear that mealtimes constitute an important learning context (Larson et al., 2006), in which parents establish rules, transmit family identity, values and practices, including about technology use. In addition, our findings seem to point to further mealtime-related enactments described in previous works (e.g., Fiese, 2006), namely parents' responsibility of promoting



child's involvement and active participation. Facing technology interferences in family life (e.g., Hiniker et al., 2016; Radesky et al., 2014), we hypothesized that technology use by children and parents would decrease child involvement in family mealtimes and in turn affect dinnertime ritual meaning (H2). This mediating effect was found to occur with the participating parents' technology use during mealtimes. However, no effect was found for the children's nor the non-participating parents' technology use.

The idea of children's technology use during mealtimes not affecting their own participation sounds contradictory, because focusing on a mobile device should make it more difficult for children to engage in family interactions (e.g., Gutierrez et al., 2008) and other typical mealtime tasks such as meal preparation, sharing everyday stories, or cleaning up. However, this lack of effect may be related to the type of functions and tasks assigned to children in this context. It is that likely children engage in simple tasks (e.g., Fiese, 2006) which are not as much influenced by whether they are using technology or not. This study does not explore the difficulty, nor the number of tasks children engage in at mealtimes. Neither does it consider how technologies are used (e.g., in a continuing or interrupted fashion). Given that, observational studies would be necessary to explore these issues.

The current study shows that children seem to be capable of using technologies and still participate in instrumental and relational enactments that characterize family mealtimes. Based on this assumption, the non-existing effect of children's technology use on their own participation may also be linked to the younger generations' greater ability for technology multitasking, including during activities such as eating (Carrier, Cheever, Rosen, Benitez, & Chang, 2009). This ability is possibly due to an early introduction of technological devices in children's lives, (e.g., Dias & Brito, 2016) which did not happen with their parents (Plowman et al., 2010).

When analyzing the effects of parents' technology use during mealtime, it seems to negatively affect child participation during mealtimes. Facing this result, it is plausible that technology use during mealtimes keeps parent's attention away from mealtime enactments which promote child participation. As reported in previous studies, parents' ability to attend to their children in face-to-face interactions may be limited by technology distraction (Hiniker et al., 2015; Hiniker et al., 2016; Hussain, et al., 2017; Moser et al., 2016; Oduor et al., 2016; Radesky et al., 2014) or by struggles with controlling technology intrusions (Jarvenpaa & Lang, 2005; Oulasvirta et al., 2012). Consequently, by being distracted with technology devices,

parents may underestimate their prominent role in involving children in instrumental and interactive mealtime tasks (Fiese, 2006), and therefore withhold children's participation in the ritual.

However, technology use by parents was only significant for the participating parents and not their partners. This may be related to the fact that all variables in this study were reported by the same parent, considering that only one parent of each child participated. We suggest that technology absorption when simultaneously dealing with mealtime-related tasks may also affect parents' perception of child technology use and child participation during mealtimes. In this way, it is possible that by being distracted with technology during mealtimes, parents find it more difficult to monitor other people's technology use and behaviors at that moment of time. Thus, they may be more inaccurate when judging child and partner technology use, as well as children's active participation during mealtimes. Also, reports on child technology use and participation may be affected by social desirability issues related to raising concerns on child technology use (Carvalho et al., 2015) and external expectations on parent's responsibilities facing these issues (Shepherd et al., 2006).

The strong correlation between parents' technology use may also account for the small effect of non-participating parents' technology use on child participation, considering that by including variables measuring strongly correlated constructs (e.g., parental technology use), a suppression effect may occur for the weaker predictor (Maassen & Bakker, 2001). However, thinking of parents individually, we may also think that technology use by the parent who is most involved in the ritual may have a greater effect of on child participation. Ritual kinkeepers (Leach & Braithwaite, 1996) may be expected to take a more active role in promoting child participation in family dinner by involving them in instrumental and affective mealtime tasks, while they also take responsibility for other elaborated mealtime-related tasks. Previous studies have introduced the idea that mothers are typically the ritual kinkeepers, responsible for and deeply involved in ritual life (Crespo, 2011; Crespo et al., 2008; Leach & Braithwaite, 1996). Offer and Schneider (2011) assessed dual-earner families, and found mothers to usually be more involved than fathers in multitasking practices related to home and childcare activities. Other authors also point toward gender roles differences within the domestic context of food consumption (e.g., Moisisio, Arnould & Price, 2004; Perista et al., 2016; Thompson, 1996; Woodruff & Kirby, 2013). Although participating parents in this study were mostly women, sample size limitations did not allow for gender comparisons to explore the possibility of parental technology use having a different impact on child participation, depending on the

parent's gender. Future research could consider how technology and other modern-time challenges calling for multitasking (Kennedy et al., 2008; Kildare & Middlemiss, 2017) may have an impact on how each family member participates and contributes to the meaning ascribed to family rituals. Especially because a heightened ritual meaning requires a balanced following of rules and fitting roles (Fiese & Kline, 1993).

In congruence with prior studies, our empirical findings show that child participation in meal-related tasks highly contributes to the meaning families assign to dinnertime ritual. Children usually engage in mealtime tasks such as helping prepare meals, setting and clearing the table (Hofferth & Sandberg, 2000), storytelling and sharing everyday stories (Larson et al., 2006; Snow & Beals, 2006). More importantly, the progressive increase of child involvement starting at their preschool years is essential to promote a shift away from simple caregiving routines to meaningful whole-family-rituals (Fiese, 2006), which may explain why in this study, the more children participate in family mealtimes, the more the whole family invests, and the more meaningful dinnertime becomes. We believe this result to be a contribution to the scarce literature on the importance of children's role in family rituals. In addition, given that heightened involvement is an essential experiential element of rituals (Fiese & Kline, 1993), not only child participation but also the parent's involvement at mealtimes may be essential for assigning more meaning to this ritual.

Child age and developmental stage have also been referred to as important factors to understand how participation fosters meaningful rituals (Fiese, 2006; Fiese et al., 2002; Spagnola & Fiese, 2007). Unfortunately, our analysis was founded on a small sample, limiting the possibility of assessing whether child participation increased with age, consequently enhancing ritual meaning, as proposed by previous authors (Fiese et al., 1993). In this study, controlling for children's age did not change the results.

In line with our hypothesis of child participation being a mediating variable (H2), our results show that parental technology use during family mealtimes seems to hollow ritual meaning by undermining the importance of children's active participation. Assuming family mealtimes should help improve family variables such as parental involvement, communication and family support (Martin-Biggers et al., 2014), an impoverished ritual meaning may have a negative influence on outcomes involving family functioning and dyadic relationships (Spagnola & Fiese, 2007). We expected to find a mediating path linking child participation at mealtimes and family cohesion, marital satisfaction and parenting sense of competence,

through dinnertime ritual meaning (H3). This hypothesis was supported for most of the outcomes. Results show significant effects of dinnertime ritual meaning on family cohesion, couple satisfaction and parental satisfaction, but not on parental sense of efficacy.

Although few studies found links between dinnertime ritual meaning and the measured outcomes, our results seem to be in consonance with research on ritual meaning in general. We found a positive link between dinnertime ritual meaning and family cohesion, a result that is congruent with those of previous research on the link between family rituals and family cohesion (Crespo et al., 2011; Fiese et al., 2002; Fiese & Kline, 1993; Santos et al., 2016; Welsh et al., 2011). Results on marital satisfaction are also consistent with those of previous literature showing involvement in couple and family rituals to be beneficial for marital satisfaction (e.g., Fiese et al., 2002; Fiese & Tomcho, 2001).

As for parent sense of competence, we separately analyzed its two components: parental satisfaction and sense of efficacy. Results suggest dinnertime ritual meaning has a significant predictive impact on parental satisfaction, but does not affect parental efficacy. Stronger effects on parental satisfaction than on parental efficacy have equally been found in previous studies (Johnston & Mash, 1989; Ohan, Leung, & Johnston, 2000; Rogers & Matthews, 2004; Seabra-Santos et al., 2015).

The fact that in the current study, satisfaction with being a parent is affected by the decrease in dinnertime ritual meaning, while self-efficacy is left unaltered, may be related to the nature of the two outcome variables. Fiese (2006) points out that family rituals are associated with feelings of self-competence and self-efficacy, but these feelings are more relational, rather than related to specific competencies. Parent's sense of efficacy as measured by the PSOC reflects indeed a more instrumental dimension of parenting, while parent satisfaction is more related to affect (Johnston & Mash, 1989). Therefore, it is possible that in this study, ritual meaning is more strongly connected to relational features such as parental satisfaction, but also marital satisfaction and family cohesion, than to less relational and more instrumental features such as parental self-efficacy.

Results suggest that parents may still feel competent in their role, although other aspects of family relationships are impoverished by the effects technology use during mealtimes has on child participation and, further, on ritual meaning. Considering that parental involvement and monitoring in global family settings have been associated to parent self-efficacy (Shumow & Lomax, 2002; Jacobs & Kelley, 2006), it seems likely that parents build their perception of

self-efficacy when involved in parent-child interactions that involve more instrumental practices. Based on our literature review, parental sense of efficacy seems to have been more studied in relation to routines, than to rituals (e.g., Sprunger et al., 1985; Fiese et al., 2002). Considering that mealtimes have both routine and ritual components, parents should be able to build sense of efficacy through the routine tasks present during mealtimes, such as problem solving, teaching manners, setting rules, and building vocabulary (Fiese, 2006). The lack of correlation between self-efficacy and ritual meaning may then also be related to the fact that this study only measured the ritual aspects of mealtimes, without considering the routine aspects which may be more closely linked to feelings of efficacy.

Continuing our comparison of outcome effect sizes, we find a higher impact of dinnertime ritual meaning on parental satisfaction and family cohesion, when compared to marital satisfaction. In other words, it seems that there are stronger effects on outcomes that involve more than one subsystem (i.e., parental satisfaction) or the system as a whole (i.e., family cohesion), than on outcomes involving only one subsystem (i.e., marital satisfaction). These differences in effect sizes may be related to the fact that rituals, and specifically dinnertime, are family gatherings in which children start participating in preschool years. Thus, rituals become more whole-family-centered and less couple-centered (Fiese et al., 1993). As a moment involving parents and children, it makes sense for family cohesion and parental satisfaction to show stronger links with dinnertime ritual meaning than marital satisfaction.

Technologies seem to be affecting various face-to-face interactions, including family rituals such as mealtimes at home. Thus, following previous authors, we wish to highlight the importance of reducing technology use during family mealtimes. In our sample, lower levels of technology use during dinner, in particular by parents, seemed to facilitate involvement in this ritual, and consequently raise levels of family cohesion, parental satisfaction and marital satisfaction. On the other hand, collective technology systems have been shown to promote family interaction during mealtimes (Ferdous et al., 2017). Given that families are complex and unique systems (Dias, 2011) and technology is here to stay, families are challenged with a constant need of readjusting family features in order to simultaneously respect the life stages and safely invite these new technological members into their lives (Carvalho et al., 2015).

## Limitations and Implications

Data based on self-report measures may be influenced by distortion, simulation and social desirability (Fernández-Ballesteros, 2004) and provide little insight into the holistic dynamics of family life. Although ritual meaning usually reflects family ritual life, even when reported by one person only (Fiese et al., 2002; McIntosh et al., 2009), features such as the frequency of digital technology use, child participation in mealtimes, family cohesion and couple satisfaction may be seen differently by other family members. Considering previous studies on technology use in presence of others (Hinikier et al., 2016; McDaniel & Coyne, 2016a; Oduor et al., 2016; Radesky et al., 2014; Sharaievska & Stodolska, 2016) it would be essential to assess how the effects found in this model affect parent and child individual variables.

Future studies should consider multiple reporters, including all family members typically present at mealtimes, to generate a more holistic understanding. Furthermore, quantitative studies could make use of multilevel models (Raudenbusch & Bryk, 2002) to better explore the role of different individual and family characteristics. Given that we cannot determine if alternative link directions would better explain the tested paths, longitudinal methods would be essential to assess possible bidirectional and circular interactions between the assessed variables (Boyd & Bee, 2011).

Regarding rituals as windows into family life (Wolin & Bennett, 1984), this study would also benefit from qualitative measures, through interviews and observation or recording methods, to capture what naturally occurs during dinnertime, and avoid the individualistic fallacy (Acock, 1999). By including these kinds of methods, future studies in this domain would be more capable of exploring family dynamics and issues such as whether digital devices are used continuously (e.g., Radesky et al., 2014) or casually (e.g., Hiniker et al., 2015), for what reasons and purposes technology is used during these occasions (e.g., Oduor et al., 2016) and what are the tasks and roles each family member is assigned to follow.

As for the sample limitations of the current study, a larger and more representative sample would give us the power to assess more precisely the size of effects between the variables, test for moderation effects and properly compare groups (e.g., family cycle stages, parent and children's genders; families with married and remarried parents). For example, this study included intact nuclear families and families with remarried parents, but the small sample size did not allow for them to be considered separately. On a related note, although Portuguese

families are mostly composed of couples with children (Instituto Nacional de Estatística; INE, 2016), future studies should also assess how rituals, and specifically mealtimes, are affected by technology use among families with different structures (e.g., single-parent or same-gender parents) and stages of the family life cycle, as well as in clinical samples and diverse socioeconomic groups. To further understand how technology is affecting family life by intruding into meaningful rituals, literature on this topic would benefit from assessing other ritual typologies (Roberts, 1988) including not only patterned interactions within families' everyday life (e.g., sleeping time, mealtimes), but also family celebrations which represent life cycle transitions (e.g., weddings, funerals), annual celebrations (e.g., Christmas) or family traditions (e.g., birthdays, family meetings).

Despite sample limitations, we believe we have contributed to research on this field in Portugal, addressing Fiese and colleagues' (1993) recommendation of studying family ritual life in different cultural backgrounds. The main contributions of this study are related to the effects found for the mediating variables. We tested a model which revealed mediating roles for both child participation and family dinnertime ritual meaning in regard to the frequency of ICT use during mealtimes, and its' impacts on family life. Although items created to measure child participation and digital technology use were not entirely validated, results illustrate circularity within family interactions, in which each family member, and specifically children, is shown to have a unique part in creating common meaning about family time. Through investment in these meaningful gatherings, family functioning and satisfaction is fostered.

In the matter of practical implications for families with preschool and school-age children, our findings show the importance of encouraging child involvement in meal-related tasks and disconnecting from digital media during family mealtimes, in order to create meaningful face-to-face interactions and invest in family occasions which help promote family well-being. Facing empirical findings in this area, professionals can be important resources for families, by providing scientifically based information, helping with decision-making and suggesting ways of monitoring technology use and enhancing family participation during mealtimes in a way which benefits the whole family. The influences that technology use during mealtimes may have on overall family outcomes can possibly go undetected. Thus, it would be of value to develop interventions involving psychoeducation as well as preventive programs to help families reflect on technology use during shared activities. Similarly, the dissemination of this

type of findings can contribute to help technology-related policymakers in developing strategies to assist families with young children.

## **Conclusions**

As technology use increases among parents and children, and multiple devices are integrating family life, several studies point to disruptions in face-to-face interaction due to technology use in the presence of other family members. This study shows the implications of digital technology use in rituals and specifically family mealtimes. Results should encourage families to reduce technology use during mealtimes and increase ritual investment, involving all family members, in order to promote more satisfactory family relationships and functioning.



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## Appendix A - Informed consent used in the online questionnaire.

### Instruções de Participação e Consentimento Informado

Solicitamos a sua participação num estudo a realizar no contexto de uma Dissertação de Mestrado da Faculdade de Psicologia da Universidade de Lisboa, pela mestranda Alexandra Quaresma, orientada pelo Professor Doutor João Manuel Moreira.

Agradecemos desde já a sua participação neste estudo, que tem como principal objetivo compreender o papel das tecnologias no quotidiano das famílias. Considerando que a investigação nesta área é ainda precoce, é importante perceber quais os benefícios e prejuízos associados às tecnologias. Este tipo de informação poderá ser fundamental para desenvolver medidas de uso de tecnologias que beneficiem toda a família. Pretende-se que a sua resposta seja a mais espontânea e verdadeira possível, escolhendo as opções que melhor se apliquem a si, não existindo respostas certas ou erradas. A sua colaboração nesta pesquisa deve ter um carácter voluntário e não envolve nenhuma remuneração, pelo que a decisão de participar é livre e pessoal, podendo, a qualquer momento, vir a desistir. Contudo, o seu contributo será de extrema importância, uma vez que permitirá o avanço no conhecimento científico. A participação terá a duração aproximada de 20 minutos e consiste em responder a um conjunto de questionários.

Caso necessário, pode fazer o preenchimento em mais do que uma sessão. Se interromper o seu preenchimento sem o ter terminado, quando regressar ao link as suas respostas terão sido guardadas. No entanto, esta funcionalidade só poderá ser utilizada se: (1) o seu programa de navegação na internet (browser) autorizar a colocação de "cookies", (2) aceder sempre no mesmo computador e com o mesmo browser e (3) não decorrer mais de uma semana entre o início do preenchimento e a submissão final.

Para participar no estudo deverá ter mais de 18 anos, ser de nacionalidade portuguesa, residir em Portugal, estar atualmente numa relação de casamento ou união de facto, e residir com pelo menos um filho ou filha (seu/sua, do seu cônjuge ou de ambos) com idade compreendida entre os 3 e os 10 anos, inclusive. Deve ser apenas um dos elementos do casal a preencher este questionário. Por exemplo, caso seja o pai a preencher o questionário, a mãe não deverá preenchê-lo, e vice-versa.

Os dados recolhidos serão totalmente confidenciais e será assegurado o seu anonimato, não sendo registado o seu nome ou qualquer outro elemento identificativo durante o questionário. Caso esteja interessado/a em receber, no final na investigação, um resumo dos resultados em linguagem não técnica, ou para qualquer outra questão relativa ao estudo, poderá contactar a investigadora através do email alexandra.quaresma@campus.ul.pt.

Ao prosseguir garante que leu e concordou com as indicações acima contidas, e que aceita colaborar voluntariamente nesta investigação.

Caso responda a este questionário a pedido de um aluno, indique o número de aluno de quem o/a convidou a participar. \_\_\_\_

**Appendix B** - Correlation matrix of the main variables of the study.

Table 1

*Correlation matrix of the main variables of the study.*

	1	2	3	4	5	6	7	8	9
1. Participant's DT use dinner	–								
2. Partner's DT use dinner	.76	–							
3. Child's DT use dinner	.30	.29	–						
4. Child Participation dinner	-.31	-.20	-.12	–					
5. Dinnertime ritual meaning	-.39	-.29	-.05	.45	–				
6. Marital Satisfaction	.08	.07	.04	.11	.31	–			
7. Parent Efficacy	-.03	.01	.12	.22	.07	.16	–		
8. Parent Satisfaction	-.30	-.24	-.05	.31	.39	.23	.55	–	
9. Family Cohesion	-.02	-.08	-.07	.38	.37	.52	.05	.23	–

### **Appendix C** – Resumo alargado em português.

As tecnologias de informação e comunicação (TIC) têm vindo a integrar-se no contexto familiar (Haddon, 2006), estando presentes ao longo do ciclo vital da família (Lanigan, 2009; Watt & White, 2000). Tanto pais como filhos usam diversos tipos de tecnologias (Hiniker, Schoenebeck, & Kientz 2016), sendo que o uso das TIC pelas crianças parece estar relacionado com o uso de tecnologias dos pais e com as perceções que estes desenvolvem sobre o uso destes dispositivos (e.g., Lauricella, Wartella, & Rideout, 2015).

Vários estudos têm vindo a apontar benefícios e prejuízos do uso das TIC em diferentes aspetos da vida familiar (Carvalho, Francisco, & Relvas, 2015; Carvalho, Fonseca, Francisco, Bacigalupe, & Relvas, 2016; Przybylski & Weinstein, 2012; Sharaievska & Stodolska, 2016), sendo que os maiores desafios parecem surgir quando as tecnologias são usadas na presença de outros elementos da família (Hiniker, et al., 2016; Radesky et al., 2014). Considerando que várias pessoas sentem dificuldade em controlar a forma como as tecnologias interferem com as interações face-a-face (Jarvenpaa & Lang, 2005; Oulasvirta, Rattenbury, Ma, & Raita, 2012; Rainie & Keeter, 2006), uma atenção reduzida durante estes momentos (Sharaievska & Stodolska, 2016), pode levar a sentimentos de desligamento social nas relações familiares (e.g., Harmon & Mazmanian, 2013), conjugais (e.g., McDaniel & Coyne, 2016a) e parentais (e.g., Hiniker et al., 2015). Desta forma, é possível que o uso de tecnologias tenha efeitos nocivos em interações relacionadas com os rituais familiares, que são essenciais para criar e manter sentimentos de proximidade entre os elementos da família (Fiese, 2006).

Os rituais familiares, e nomeadamente as refeições, são componentes fundamentais da vida familiar, visto potenciarem a intimidade e a construção da identidade familiar (Gutierrez, Price, & Arnould, 2008). Sendo rituais, as refeições podem ter um significado especial para a família, promovendo o bem-estar individual, conjugal e familiar (Fiese, 2006). No entanto, face a desafios de gestão do tempo, a frequência deste ritual tem vindo a diminuir (Fruh, Fulkerson, Mulekar, Kendrick, & Clanton, 2011; Gutierrez et al., 2008). Para além da frequência, a qualidade destes momentos familiares também tende a ser afetada com o uso de TIC em simultâneo com o envolvimento em atividades relacionadas com as refeições (Chitakunye & Takhar, 2012, 2014). Apesar de terem sido apontados benefícios no uso de tecnologias durante as refeições para a interação intra-familiar (Ferdous, Ploderer, Davis, Vetere, & O'hara 2016; Ferdous et al., 2017), muitos estudos apontam para a importância de reduzir a frequência do

uso de tecnologias (Hiniker et al., 2016; Moser, Schoenebeck, & Reinecke, 2016) e investir mais ativamente nos rituais familiares (Dwyer, Oh, Patrick, & Hennessy, 2015).

No que diz respeito ao investimento nos rituais, é esperado que as crianças comecem a participar nos rituais familiares desde cedo, sendo que a partir da idade pré-escolar elas desempenham algumas tarefas instrumentais, tais como ajudar na preparação das refeições (Hofferth & Sandberg, 2000) e tarefas relacionais, tais como partilhar histórias do dia-a-dia (Larson, Branscomb, & Wiley, 2006; Snow & Beals, 2006). Com este envolvimento por parte da criança, apoiado e incentivado pelos pais (Rogoff et al., 1993; Fiese, 2006), as rotinas regularizam-se e os rituais ganham mais significado para a família no seu conjunto (Evans & Rodger, 2008; Fiese, 2006). No entanto a falta de tempo e a existência de interesses externos põem em causa o envolvimento dos elementos da família nas refeições (Fulkerson et al., 2011; Woodruff & Kirby, 2013). Com um investimento reduzido nestas ocasiões, o significado que é atribuído aos rituais pode diminuir, pondo em causa variáveis familiares (Spagnola & Fiese, 2007) tais como a coesão (e.g., Crespo, Kielpikowski, Pryor, & Jose, 2011; Fiese & Kline, 1993), a satisfação conjugal (Crespo, Davide, Costa, & Fletcher, 2008; Fiese, Hooker, Kotary, & Schwagler, 1993) e o sentido de competência parental (Evans & Rodger, 2008).

A revisão de literatura efetuada revelou uma insuficiente compreensão holística dos efeitos do uso das tecnologias em interações significativas do dia-a-dia, considerando vários subsistemas, distinguindo fases do ciclo vital da família e analisando possíveis consequências sistémicas (Jennings & Wartella, 2004). Face a uma geração tecnológica sem precedentes (Hertlein, 2012), torna-se fundamental desenvolver o estudo do impacto do uso das TIC nas dinâmicas familiares (Carvalho et al., 2016; Lanigan, 2009).

Apesar do aumento substancial do uso de TIC por crianças muito jovens (Dias & Brito, 2016), o uso de tecnologias tem sido sobretudo estudado em pais (McDaniel & Radesky, 2017; Radesky et al., 2014) e em crianças mais velhas e adolescentes (Carvalho et al., 2016; Ólafsson, Livingstone, & Haddon, 2014). O presente estudo pretende explorar os efeitos do uso de tecnologias por pais e por crianças mais novas durante as refeições, sobre a participação ativa da criança no ritual da hora do jantar. Apesar de o papel da criança ser reconhecido na literatura, poucos estudos se têm focado na importância do seu envolvimento nas tarefas e interações típicas das refeições familiares (Larson et al., 2006; Fiese, 2006; Fiese et al., 2002). Por fim, apesar de os rituais serem considerados como fundamentais para o bem-estar familiar e

conjugal (Fiese, 2006; Imber-Black, 2002), poucos estudos focaram os efeitos do significado atribuído ao ritual no funcionamento familiar e nas relações diádicas dentro do sistema familiar.

Com base na revisão de literatura, procurámos encontrar um efeito de modelagem do uso de tecnologias digitais durante as refeições entre pais e filhos e entre os pais (H1). De seguida, pusemos a hipótese de que níveis mais elevados de uso de tecnologias digitais durante as refeições teriam um efeito negativo nos níveis da participação da criança e, conseqüentemente, no significado do ritual do jantar, reduzindo os níveis de satisfação conjugal, sentido de competência parental e coesão familiar. Assim, procurou compreender-se se a participação da criança tem um papel mediador na relação entre o uso de tecnologias pela família (pais/filhos) e o significado do jantar (H2); e se o significado do jantar tem um papel mediador na relação entre a participação da criança e as variáveis familiares (H3).

Para responder a estes objetivos, foi criado um questionário online através da plataforma *Qualtrics*, completado por 55 mães e 17 pais numa relação conjugal, a viver com pelo menos uma criança com idade compreendida entre os 3 e os 10 anos (média da idade = 6.49;  $SD = 2.35$ ). Apenas um dos pais respondeu ao questionário, focando-se em apenas um filho(a) com idade entre os 3 e os 10 anos. O protocolo de investigação incluiu: três itens para avaliar a frequência do uso de tecnologias digitais durante as refeições pelo participante, o cônjuge e o(a) filho(a); oito itens para medir a participação da criança no ritual do jantar; e as versões portuguesas do *Family Rituals Questionnaire (FRQ)* – para avaliar o significado do ritual do jantar –, da subescala da coesão familiar da *Family Environment Scale* – para avaliar a coesão familiar –, da *Kansas Marital Satisfaction Scale (KMSS)* - para avaliar a satisfação conjugal –, da *Parenting Sense of Competence Scale (PSOC)* – para avaliar o sentido de competência familiar, composta pelas subescalas da satisfação parental e da auto-eficácia parental. Foram encontrados alfas de Cronbach satisfatórios para cada escala.

De forma a explorar os papéis mediadores da participação da criança nas refeições (H1) e do significado do jantar (H2) na relação entre o uso de tecnologias durante o jantar e as variáveis familiares, recorreremos a modelos de equações estruturais (SEM). O modelo testado (ver Figura 1) demonstrou um bom ajustamento  $\chi^2(76) = 127.34, p < .001, \chi^2/gl = 1.68, CFI = .90, RMSEA = .098$  e a significância dos efeitos de mediação foi testada com recurso a uma técnica de reamostragem do tipo *bootstrap* com 200 amostras e um intervalo de confiança de 95% (Preacher & Hayes, 2004). Os efeitos de modelagem do uso das tecnologias digitais (H1) foram analisados através de covariâncias entre as variáveis exógenas.

As hipóteses foram confirmadas, sendo que os resultados apresentam um efeito mediador significativo da participação da criança no ritual na relação entre do uso de tecnologias pelos pais participantes no estudo e o significado do ritual ( $-.32, p < .05$ ), mas não do uso de tecnologias digitais pelos filhos e pelos pais que não participaram no estudo (H2); por sua vez, a menor participação da criança afetou o significado do jantar, que por sua vez funcionou como mediador, reduzindo os níveis de coesão familiar ( $.39, p < .01$ ), satisfação conjugal ( $.25, p < .05$ ) e satisfação parental ( $.41, p < .01$ ), sem afetar, porém, a eficácia parental (H3). Foram ainda encontrados efeitos de modelagem do uso de tecnologias entre os pais ( $.76, p < .001$ ) e entre pais e filhos ( $.29, p < .05$ ) (H1).

Tal como em estudos anteriores (e.g., Coyne et al., 2012; Lauricella, et al., 2015; McDaniel & Radesky, 2017; Plowman, Stevenson, McPake, Stephen, & Adey 2011), este estudo encontrou efeitos de modelagem no uso de tecnologias digitais entre os pais e entre pais e filhos (H1). Tendo este estudo considerado o uso de tecnologias nas refeições familiares, é expectável que a natureza deste ritual no que respeita à transmissão de normas, práticas e identidade familiar (Epp & Price, 2008; Fiese et al., 2002; Wolin & Bennett, 1984) possa facilitar e promover a transmissão intergeracional do uso de tecnologias neste contexto.

No que diz respeito à hipótese de que a participação da criança medeia a relação entre o uso de tecnologias pela família e o significado do ritual do jantar (H2), os resultados indicam que este efeito ocorre apenas em relação ao uso de tecnologias pelos pais que participaram no estudo, e não ao uso pela criança ou pelos pais que não participaram no estudo. Assim, o maior uso de tecnologias pelos pais reduz a participação da criança, afetando conseqüentemente o significado do ritual.

O facto de o uso de tecnologias pela criança não afetar a participação da própria pode estar relacionado com a maior simplicidade das tarefas atribuídas às crianças no contexto das refeições (Fiese, 2006), que podem não ser tão influenciadas pelo uso ou não de tecnologias. Assim, as crianças parecem conseguir usar tecnologias e, simultaneamente, participar nas tarefas instrumentais e relacionais das refeições familiares. Em relação ao facto de o uso de tecnologias pelos pais influenciar negativamente a participação da criança, pode supor-se que a distração causada pelas TIC reduza a capacidade de estar atento às interações que ocorrem durante as refeições familiares (Hiniker et al., 2015; Hiniker et al., 2016; Hussain, Cakir, Ozdemir, & Tahirkheli, 2017; Moser et al., 2016; Oduor et al., 2016; Radesky et al., 2014). Considerando que os pais têm um papel fundamental no desenvolvimento dos rituais, a

diferença do efeito do uso de tecnologias entre os pais pode estar associada a um maior envolvimento nos rituais por parte dos pais participantes em comparação com os cônjuges. Ao estarem distraídos com tecnologias enquanto gerem as tarefas associadas às refeições, os pais podem subestimar o seu papel em envolver a criança (Fiese, 2006), por sua vez contribuindo para uma menor participação por parte desta. Os resultados demonstram ainda que uma participação mais reduzida põe em causa o significado atribuído ao ritual do jantar, sendo que quanto menos a criança participa, menor o significado atribuído ao ritual. Com um baixo significado do ritual, as variáveis familiares tendem a ser afetadas.

No que concerne a hipótese de que o significado atribuído ao ritual medeia a relação entre a participação da criança e as variáveis familiares (H3), verificou-se que a hipótese é apoiada para a coesão familiar, a satisfação conjugal e a satisfação parental, mas não para a auto-eficácia parental. Estes resultados estão em consonância com estudos anteriores que demonstram associações entre os rituais e a coesão familiar (e.g., Crespo et al., 2011; Fiese et al., 2002) e a satisfação conjugal (e.g., Fiese et al., 2002; Fiese & Tomcho, 2001). Em relação às variáveis do sentido de competência parental, outros estudos apresentam resultados semelhantes aos agora encontrados, em que os efeitos são mais fortes sobre a satisfação parental do que sobre a auto-eficácia parental (e.g. Ohan, Leung & Johnston, 2000; Seabra-Santos et al., 2015). Denota-se ainda que os efeitos mais fortes se verificam em variáveis que incluem mais do que um subsistema (e.g., coesão familiar e satisfação parental), possivelmente pelo facto de os rituais familiares terem um significado mais associado à família como um todo do que à família enquanto casal (Fiese et al., 1993).

O facto de a satisfação parental ser afetada pela diminuição do significado do jantar enquanto a auto-eficácia se mantém estável, pode estar relacionado com a natureza destas variáveis. Os rituais familiares parecem estar relacionados com a auto-eficácia a um nível mais relacional do que a um nível de competências específicas (Fiese, 2006). Assim, é compreensível que a satisfação parental, por ser uma variável relacional, esteja mais fortemente associada ao significado dos rituais do que a auto-eficácia. Por outro lado, a natureza instrumental da auto-eficácia poderia ligar-se a atividades que pusessem em prática aspetos relacionados com a resolução de problemas, o estabelecimento de regras e o ensino (Fiese, 2006). Estes tipos de práticas são igualmente encontrados nas refeições familiares, mas estão ligadas a rotinas e não ao significado de ritual que é atribuído a estes momentos. Visto este estudo ter avaliado o significado do ritual, e não a presença de rotinas, a auto-eficácia potencialmente sentida durante as refeições não se verifica nos nossos resultados.

O uso de tecnologias parece afetar as interações familiares, incluindo durante as refeições como o jantar. Assim, este estudo sublinha a importância de reduzir o uso de tecnologias durante as refeições e de investir nos rituais, nomeadamente através do envolvimento mais ativo das crianças. A participação de todos os elementos da família poderá ter um impacto importante no significado do ritual da hora de jantar, melhorando o funcionamento e a satisfação familiar.



