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Department of Psychology – Faculty of Health Sciences

Is Daily Workload and Parental Screen Time Affecting Parent-Child Relationships?

An Experience Sampling Study

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Main Thesis for the degree of Cand. Psychol. PSY-2901. December 2022

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Acknowledgments

The present study is written as my main thesis for the degree of Cand. Psychol. at UiT – The Arctic University of Norway. I contacted my primary supervisor Monika Abels in the interest of writing a thesis about parental screen time and work-related stressors, as she and my secondary supervisor Dana Unger had presented the theme as a possible project for my class.

Under supervision, I developed the hypotheses, gathered, and translated questionnaires, recruited participants, and completed the data collection. I have conducted the data analyses and written my thesis.

I would like to thank both of my supervisors for all the help and support I received during this semester, especially Dana, who provided guidance in the analysis process and useful suggestions during all stages of the project.

This paper is dedicated to my beloved daughter who inspires me every day, and my late father who would have been proud of my accomplishments.

Abstract

As both work and screens are big parts of the daily life of parents, it is important to understand the impact they can have on family relationships. The aim of this paper was to investigate how parents' daily workload affected their screen time in the afternoon, and how this screen time affected their relationship with their children. I chose to use the experience sampling method to collect data from $N = 37$ parents in Norway over a period of ten working days. Some of my results were marginally significant: The daily workload of the parents affected the parents' work-related- and personal screen time in the afternoon. Additionally, work-related screen time had a significant positive effect on the parent-child relationship. While there were a few marginally significant findings and significant findings, all my hypotheses were rejected. Future research may benefit from larger samples, include different work-related stressors, explore possible moderator variables, and have more specific screen time variables.

Is Daily Workload and Parental Screen Time Affecting Parent-Child Relationships?

An Experience Sampling Study

Working parents of small children face the daily challenges of balancing many vital aspects of their life. Most of their time and energy is spent on work during the day, and residual stress can lead to parents turning to their screens at home to regulate their emotions (Illies et al., 2010; Spector & Jex, 1998; Wolfers, 2021). If parents spend a lot of time on their screen devices during family time, this leads to less interaction with their children and can be of consequence to the relationship they share with their children (McDaniel, 2019). This paper will present a theoretical model merging work and developmental psychology, and the aim is to raise the question of how a higher amount of work during the day affects parental screen behavior, how the screen use affects the relationship between parent and child, and if screen time acts as a mediator between workload and the parent-child relationship. As screen use has become highly prevalent in the population (Statistics Norway, 2021; Yuan et al., 2019), its effect on parenting and parents' relationship with their children is an important contribution to the part of developmental psychology that focuses on how screens affect children. While there is research connecting screen time to negative effects on interactions between parent and child (Mangan et al., 2018; McDaniel, 2019), and research illustrating how negative aspects of work can make parents alter their behavior around their children (Repetti et al., 2009), there has yet to be a scientific contribution that draws a connection between the two. Merging the research on screen use with work psychology will be a way of gaining a wider knowledge of how different aspects of daily life affect family dynamics. This study provides three contributions. Firstly, merging the research on parental screen time with parental work experiences may result in insights into how work factors affect parental behavior in the afternoon. Second, I provide a new method of measuring parental screen time by using different categories, that give more insight into how the different aspects of screen

time affect the parent-child relationship. Lastly, by using an experience sampling method, this paper can provide insights into the daily lives of parents. This study investigates whether working parents' reported workload on a specific day at work affects the time spent on screen devices, how screen time impacts the parent-child relationship, and whether screen time mediates the relationship between workload and parent-child relationships. The method used is experience sampling, by measuring parents' daily levels of workload, screen use, and their self-reported relationship with their child over a period of ten working days.

The theoretical model of daily workload, screen time, and parent-child relationship

My proposed model (see Figure 1) gives an overview of the variables and hypothesized relationships in this study. The workload is the amount of work the parent is put under during a specific workday (Illies et al., 2010; Spector & Jex, 1998) and is thought to affect the amount of time they spend on their screens in the afternoon. To explore the effect of both workload and screen time, I have decided to differentiate between distinct types of parental screen time (work-related, family-related and personal) which I expect to differently affect the parent-child relationship, see Figure 1. This is to investigate in greater detail how the several types of parental screen time affect the parent-child relationship independently. Furthermore, I have decided to measure the constructs on a day-to-day level to observe the within-person effects.

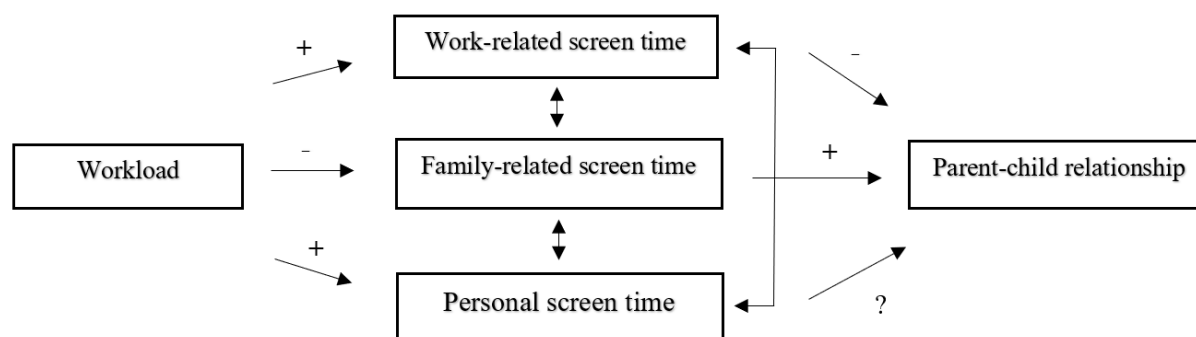


Figure 1. The hypothesized model of Workload, Screen use, and Parent-Child Relationship.

Own work.

Effects of parental work-experiences on family interactions

Modern families often have one or more parents who are also employees. The experiences parents have at work can affect their parenting (Bronfenbrenner, 1979; Bronfenbrenner, 1981; Repetti et al., 2009). In a review article by Repetti et al. (2009), results illustrated how day-to-day experiences at work affected parental behavior in the afternoon. An example from the review is that a high reported workload in parents working in air traffic control resulted in higher levels of parental withdrawal (Repetti et al., 2009). Meaning that in order to regulate themselves in response to a high workload, the parents socially withdrew from their children, leading to fewer interactions and less time spent together. The pressure of being a good parent and employee can be hard to manage, and experiences at work can affect parents at home (Greenhaus & Beutell, 1985; Sonnentag & Fritz, 2014). Thoughts and feelings surrounding work can make the parent feel tired and stressed (Repetti et al., 2009). Roskham and Mikolajczak (2021) illustrated possible negative outcomes of parental exhaustion; if a parent is tired, they often distance themselves from their children emotionally, and they can experience feelings of low self-efficacy regarding their parenting. This can lead to consequences for the parent-child relationship, as young children rely on their parents to be present, attentive, and responsive to have healthy development (Bakoula et al., 2009; Crnic & Greenberg, 1990; Krapf-Bar et al., 2022).

Workload: A work-related stressor

Experiences at work that elicit negative reactions in the employee can be defined as work-related stressors (Sonnentag & Fritz, 2014). Such stressors can cause affective, cognitive, or behavioral reactions, and it's the latter that I will focus on in this study. These stressors can be physical, emotional, social, or other factors that affect a person's well-being negatively. The specific work-related stressor I want to focus on in this study is workload. Workload as a construct represents the amount of work, related to the work capacity of an

employee (Illies et al., 2010). Ideally, the daily workload should not exceed the amount of work an employee can do in a single day. A high workload can lead to consequences for the person. Research illustrates that a high workload is related to both fatigue and stress (Illies et al., 2010), and a high workload can make it more difficult to psychologically detach from work (Sonnentag & Fritz, 2014). This detachment is a critical factor to keep work and free time separate. To cope with the mental load of work as they return home, parents may resort to coping measures (Wolfers, 2021). A focus study pointed towards the use of screens as a strategy to deal with stress, in which parents reported using their smartphones to distract themselves, gain emotional support and seek information (Wolfers, 2021).

Statistics Norway (2013) shows that Norwegian parents often bring work home, both physically and psychologically. This implies that parents are not only doing work-related tasks during family time, but they are also having thoughts and are thus mentally occupied by work during the time they spend with their children. As mentioned, studies have shown that parents withdraw socially to cope with work-related stressors (Malinen et al., 2017) and that work-experiences impact parents' mental well-being, parenting, and interactions with their children (Malinen et al., 2017; Ohu, 2019). Because of these examples in research, I believe that an increased workload on a specific day of work will lead to several behavioral aspects: The person needing to spend more time in the afternoon trying to relax and detach or doing work-related tasks to decrease the stress brought on by workload. This will be further discussed as I present the hypotheses, as I will present the screen time variables first.

Screen time

Screen use is highly prevalent in everyday life. Screen time is here defined as the time a person spends on a screen device. Screen devices such as smartphones are valuable tools designed to make many parts of life more accessible (i.e., looking up information online, doing chores, entertainment, and communication). In Norway, while the use of television has

declined, with 46% of ages 9-79 using television in 2021 compared to 86% in 2015, (Statistics Norway, 2021), the use of screens is still high in the population. An estimated 93% between the age of 16 and 79 own a smartphone, and 68% of the population own a tablet, respectively (Statistics Norway, 2021). In this study, multiple screens were included, such as smartphones, laptops, tablets, and television, because of the differentiated screen time variables. This decision was made to better differentiate between the three screen time measures; for example, some parents may use their smartphones for work-related purposes, while others use their laptops.

Many studies have found a relationship between screen use and its negative impact on mental health (Dempsey et al., 2014; Sun et al., 2005; Thomée et al., 2011). Thomée et al. (2011) examined mobile phone use in young adults and found an association between high mobile phone use and reported sleep disturbance and depression symptoms. A study investigating adults' TV habits and well-being illustrated that each hour spent watching TV was associated with lower mental and physical well-being (Dempsey et al., 2014). Finally, Sun et al. (2005) found in their sample that persons with a higher reported media use were significantly more likely to develop depression. Meanwhile, positive effects of screen time have been found (Wang & Vella-Brodrick, 2018). In one study, they looked at the different psychological aspects of media use, including the subjective experience of screen use. The results showed that the pleasure from a person's screen time positively impacts the person's reported well-being (Wang & Vella-Brodrick, 2018).

As we see, screen use is prevalent in the adult population and can have several consequences. This is also true for parents (Radesky et al., 2014; Yuan et al., 2019). Parents check their phones 67 times a day on average and spend several hours on their phones every day (Yuan et al., 2019). To further explore the interactions between parental screen use and

the relationship with their children, it is necessary to understand why parents turn to their screen devices in the time they spend with their children.

Why are parents using their screens around their children?

In addition to work and parenting, parents also have their smartphones and other screen devices, which draw attention (Stothart et al., 2015; Thornton et al., 2014). Screens can serve as distractors from parent-child interactions during family time. It is important for parents to be involved and attentive to most aspects of their children's lives and in family time after work. This means they must be present and engaging with their child(ren). The afternoons can be short and hectic in a family of working parents. Mealtimes, activities, and homework for older children are some of the objectives parents need to oversee. Parents state that they use screens as a means of entertainment for their children, so that the parent can do other activities (Elias & Lemish, 2021), and thus be useful to lessen the load on the parent. Parents may also use their screens to regulate both their (Hiniker et al., 2016; Wolfers, 2021) and their children's (Elias & Lemish, 2021) emotions. Screens can also be used as a social activity that the whole family can do together with little effort (Elias & Lemish, 2021).

One reason for parents to turn to their screens is a force of habit (McDaniel, 2019). Screens such as mobile phones and television are highly normalized in our society (Statistics Norway, 2021). Parents may be used to having screens on in the background or have a habit of spending time on their phones. A factor reinforcing these habits is notifications (McDaniel & Coyne, 2016). The sound or vibration from a notification gains the attention of the user, making them aware of the device and more likely to engage with it. Some people get overly attached to their screen devices, especially smartphones. The attachment can become so strong that some people experience anxiety or high levels of discomfort when apart from their smartphone (King et al., 2014).

The task of parenting children can raise a lot of dilemmas and questions. Parents have reported using their screen devices as tools for looking up information to answer such questions or to get peace of mind about the problems they face regarding parenting (Radesky et al., 2016). Finding answers to their questions or reading experiences from other parents can be validating and make them feel at ease and experience less anxiety regarding their parenting.

Finally, work factors are highlighted as contributing factors to parental screen time in a review by McDaniel (2019). Other studies also show this (Hiniker et al., 2015; Mangan et al., 2017). Parents may be compelled to use their screen devices such as smartphones, laptops, or tablets to answer work-related messages or do work-related tasks in the afternoon. If they experience a large amount of workload during the day, they may be inclined to spend time doing work-related tasks when their child is present. Parents have stated in interviews that doing work-related tasks while taking care of their children makes them feel more productive (Mangan et al., 2017).

Screen time variables

As mentioned, I have decided to differentiate between three separate measures of parental screen time; work-related screen time, family-related screen time, and personal screen time. If one compares personal screen time and family-related screen time, personal use will imply that the child is less attended to in favor of the screen device. In contrast, in family-related use, the parent and the child interact using the screen device. I have chosen to measure work-related screen time and personal screen time separately. This is because I argue that work-related screen time affects the parent-child relationship differently, as research suggests that doing work-related tasks during family-time impacts the parent's mood negatively (Repetti, 2009). The following section will explain each of the screen time variables in greater detail.

Work-related screen time

Work-related screen time refers to all screen time used for working purposes, such as answering work-related e-mails, working on a work-related task on the computer, or answering a text from a colleague or boss. Parents have stated that they use their smartphones for work-related purposes while simultaneously caring for their children (Mangan et al. 2018). Like personal screen time, work-related screen time will make the parents attentive to the screen device instead of their children. There may be situations where the child bids for the parent's attention, which can be grounds for conflict between the child and the parent.

Family-related screen time

Family-related screen time refers to a social form of screen use (i.e., watching tv, playing video games together, or video chatting with other family members). A coined definition is joint media engagement which refers to a shared experience using a media outlet (Takeuchi & Stevens, 2011). The use of joint media engagement is widely discussed. While it can be a way for parents to engage in activities the child is interested in (Kushlev & Dunn, 2019), research suggests that parent engagement in such activities often is limited and that other forms of play are preferred (Ewin et al. 2020). Related to the parent-child relationship, joint media engagement was found to be a positive factor, with these interactions leading to fewer conflicts between the parent and child (Beyens & Beullens, 2016; Sobel et al., 2017). Qualitative studies showed that parents reported that joint media engagement was seen as a form of quality time with their children (Sobel et al., 2017).

Personal screen time

Personal screen time refers to time spent on screens in solitude, scrolling on apps, reading, or answering e-mails or messages that are not work-related, and so on. This type of screen time is used as a means of entertainment, it can be a tool for managing daily tasks such as paying bills, ordering groceries, looking up information online, or communicating with

friends or family. Personal screen time often elicits positive emotions in the user and can lead to the person being in a better mood, and less stressed (Boles & Roberts, 2008; Wang & Vella-Brodrick, 2018). Regarding information-seeking, this kind of screen time can make parents less stressed (Radesky, 2016). If a parent is worried about something regarding their child, seeking information online can leave the parent feeling less anxious. Personal screen time is an activity that makes little room for multitasking. A phenomenon called “phubbing” means ignoring by focusing on the screen/smartphone instead of the person seeking attention (Chotpitayasunondh & Douglas, 2018). Children have also reported feeling ignored when a parent uses their smartphone instead of engaging with them (AVGtechnologies, 2015).

Parent-child relationship

The parent-child relationship is a unique and intimate bond, unlike any other relationship. A stable and interactive parent-child relationship is crucial because it supports healthy child development (Mangan et al., 2018). Children rely on their parents’ attention and response to learn and develop their language (Tamis-LeMonda et al., 2001), as well as many essential social and emotional skills (Jeong et al., 2020). Children in highly connected parent-child relationships usually show more positive social and emotional outcomes, such as more friendships and higher levels of peer acceptance in kindergarten (Clark & Ladd, 2000). Research shows that children in a nurturing and stable relationship with their parents have a higher level of well-being later in life (An & Cooney, 2006). A responsive parent-child relationship is also connected to higher emotional functioning in older children (Boutelle et al, 2009). Responsive parenting is vital to a normal and healthy child's development, and children who learn social and emotional competencies have better academic performance later in life (Darling-Churchill & Lippman, 2016).

In contrast, a non-responsive parent-child relationship would see unsuccessful attempts from the child to gain the parent's attention. A classical study introduced the still-

face paradigm (Tronick et al., 1975) and illustrated the distress brought on infants as their mother is unresponsive. In the study, the mother of an infant is tasked to stop responding to the infant's cues over a short period of time. The children strongly react to their mother's lack of interaction and display anger, sadness, or withdrawal. This effect has since been replicated in several studies (Mesman et al., 2009). A similar effect has also been shown in experiments implementing a screen and like in the original still face study by Tronick and colleagues (1975), the child becomes distressed as their caretaker becomes non-respondent and shows a "still face" when engaging with a screen device (Stockdale et al., 2020).

Consequences of parental screen use on the parent-child relationship

It is already established that parental screen use influences the interactions between parents and their children (Abels et al., 2018; McDaniel, 2019; Kushlev & Dunn, 2019). When parents are occupied with a screen device, for example, a smartphone, they will be less sensitive to the child's needs and may have a delayed response to a child's bids for attention (McDaniel, 2019). As parents use their screens when their children are present, it can cause interruption of interactions or affect the parents' responses to their children (Abels et al., 2018; Hiniker et al., 2015; Kushlev & Dunn, 2019; McDaniel, 2019). This is a problem because disrupted interactions, or the child's bid for attention being ignored, can negatively affect the relationship between child and parent (Radesky et al., 2016). Parents themselves report that they experience a change in their children when they spend time on their screens: They state that their children display more negative emotions when the parent is occupied with a screen device (Radesky et al., 2016). Observational studies have investigated parental screen use in natural settings, such as playgrounds. The findings suggest that when parents are occupied with their screen during activities with their children, they are observed to have fewer verbal interactions with their children, are less responsive towards their children, and at

times are harsher in their interactions with the children (Abels et al, 2018; Hiniker et al., 2015).

Hypotheses

The proposed research model of my study can be seen in Figure 1. I suggest that a high amount of daily workload will influence parental screen time and thus affect the parent-child relationship. I also expect that screen time is a mediator between the parents' daily workload and the parent-child relationship in the evening. Firstly, as I expect the parents to have difficulty detaching from work if they experience a high workload during the day (Sonnentag & Fritz, 2014), I suggest there will be a relationship between a high reported workload and work-related screen time. As parents have previously stated that they do work-related tasks on their screens while in the care of their children (Mangan et al., 2017), I propose that a high workload will positively affect work-related screen time because of the difficulty of detaching from work.

H1a: An elevated workload during the workday will make the parents more inclined to use their screens for work-related purposes during family time in the afternoon.

As the parent is mentally or physically occupied with either thought of work or work-related tasks, I suspect that there will be less time for the parent to spend with their child. Because of this, I expect there to be fewer interactions between parent and child in the parent has experienced a high workload during the day, and thus it will be less family-related screen time during the afternoon. The hypothesis is the following:

H1b: A high amount of daily workload will lead to less family-related screen time.

If a working parent experiences a high workload during their workday, they may experience feeling tired during the afternoon (Illies et al., 2010). It can also be more difficult for parents to detach themselves from their thoughts and feelings about work during this time (Sonntag & Fritz, 2014). To handle this, the parents in my sample may use coping measures to regulate

themselves (Wolfers, 2021). As parents have been found to distance themselves from their children as a response to a high workload (Repetti et al., 2009), I suggest that they may use their personal screen time as a coping measure.

H1c: Daily workload is positively related to personal screen time in the parent.

The second section concerns day-to-day levels of parental screen time and the proposed effect it has on the daily parent-child relationship. A higher amount of parental screen time is found to lead to fewer interactions between parent and child (McDaniel, 2019). The lack of these interactions may negatively affect the daily parent-child relationship (Radesky et al., 2016). If the parent ignores the child while being occupied with a screen device, it may lead to negative reactions from the child (Stockdale et al., 2020). The parent may be less sensitive to the child's needs and be less likely to pick up on the child's cues (McDaniel, 2019). If parents spend their time in the afternoon doing work-related tasks, it can lead to fewer interactions with their children. The lack of interaction may thus negatively affect the parent-child relationship (Radesky et al., 2016).

H2a: The daily work-related screen time in parents will affect the parent-child relationship negatively.

Parent-child interactions are found to be positive for the parent-child relationship, as well as the child's development (Jeong et al., 2020; Mangan et al., 2018; Tamis-LeMonda et al., 2001). As the family-related screen time implies that the parent and their child are actively interacting when using the screen, I expect that the more interactions they share in the afternoon, the better the relationship will be rated in the evening:

H2b: A higher amount of daily family-related screen time between parent and child will be positively related to the parent-child relationship.

I question whether daily personal screen time will affect the relationship negatively or positively. Existing research points to the lack of interactions between parent and child, which

is thought to affect the relationship negatively (McDaniel, 2019). Further, in contrast, when the parent is occupied with their screen device, it can also serve as a means of safety or comfort for the parent (Elias & Lemish, 2021; Wolfers, 2020); this leads to the parent having a better mood or having their questions answered and is thought to both be positive for the parent-child relationship. This leads to my research question regarding how personal screen time affects the parent-child relationship:

RC1: How does the parents' personal screen time during the afternoon affect the daily parent-child relationship?

As stated, when parents experience a high daily workload, they may have difficulty detaching from work-related thoughts (Sonnetag & Fritz, 2014), and may distance themselves from their children (Repetti, 2009). Parents may use their screens as either a means of distraction or use their screen devices to do work-related tasks in the afternoon. This, in turn, can lead to fewer interactions between parent and child, and in that regard, the parents' screen time in the afternoon may mediate the relationship between daily workload and the parent-child relationship. I have two hypotheses and one research question regarding screen time as a mediator:

H3a: The parents' daily work-related screen time will mediate the relationship between the workload on a specific workday and the parent-child relationship in the afternoon.

H3b: Daily family-related screen time is expected to be a mediator between parents' workload during the day and the parent-child relationship.

RC2: Is personal screen time in parents mediating the relationship between the daily amount of workload and the parent-child relationship in the afternoon?

To investigate these hypotheses and research questions, I conduct an experience-sampling study on a sample of Norwegian parents with one or more children aged 1-6 years. I

measure the day-to-day levels of self-reported workload, screen use, and the parents' reported relationship with their child(ren).

Method

Procedure

In this study, I used experience sampling to test the hypotheses. The experience sampling method (ESM) collects information on the daily experiences of human life (Bolger et al. 2003; Gabriel et al. 2019; Ohly et al., 2010). This method was chosen because of the opportunity to capture the parents' day-to-day experience of their reported workload, the level of the parent-child relationship, and the parents' self-reported use of screen time.

The experience sampling duration was 10 working days, with two questionnaires each working day, one after work and one at bedtime, respectively. The ten day-period was chosen to best meet the criteria set for reaching a sufficient Level 2 sample size for ESM (Gabriel et al., 2019). We invited parents to take part on the days on which they indicated that they meet the criteria of working during the day and spending time with the child in the afternoon. All questionnaires were sent to the participants via email. In addition to daily surveys, participants were asked to fill out a survey at the beginning of the study that measured demographics such as age, gender, number of children, the children's age, line of work, and education level. The participants who completed at least 70% of the trial were rewarded with gift cards with a value of NOK 150. This incentive was determined necessary to ensure that participants completed the trial, as it requires participants to answer multiple surveys each day over a longer period. The gift cards were funded by the Department of Psychology.

The research took place in Norway. Participants were recruited via flyers in numerous kindergartens and health offices in a city in northern Norway, social media, and e-mails from their kindergarten managers. All the participants were informed of the nature of the study in terms of participation and privacy, and each gave their informed consent to take part in the

experiment. The anonymity of participants was ensured by providing each participant with a code generated by the software, which was untraceable to their email address. No other personal information was collected from the participants than their email addresses, which were needed to provide them with the gift cards and links to the questionnaires.

During the experience sampling trial, the participants received an email each day after work (16:00) with a link to the first daily survey. The first questionnaire measured participants' reported workload. After the children's bedtime (21:00), they received the second daily survey, which measured their relationship with their children and how much screen time they had during the afternoon. To ensure that participants answered on the same day, a time limit of 2 hours was set. Additionally, they received reminders to complete each daily questionnaire. Lastly, a control question asking parents how they spent their afternoon ensured that they were, in fact, spending at least one hour with the target child that afternoon.

I chose to exclude participants that reported working part-time (less than 75%), due to one of the central variables being a measure of workload, in which a low amount of work time could create issues in our sample. For example, there can be a difference in how the amount of workload affects a person working fewer hours in a day, compared to working full time. In addition, I decided to exclude participants reporting to work during evenings, nights, and weekends, due to the time-of-day questionnaires were sent to participants. The ethics committee of the Department of Psychology at UiT, the Arctic University of Norway approved of this study design.

Participants

Initially, 43 working parents had an interest in participating in this study. Six of the participants were missing one measuring point (either the afternoon measure or the evening measure) and were thus excluded from the sample. A total of 37 participants were thus

included in my sample (response rate = 86%). On average, the participants took part on 5.6 days, with 197 measurement points in total.

The participants in this study were working parents with at least one child between the ages of 1 and 6. The gender distribution was as follows: 76.7% women and 23.3% men. The age range was 26-42 years. Participants were asked about their education and their occupational status. Regarding education, 43.3% of participants had a bachelor's degree, 20% had a master's degree, 3.3% had a doctoral degree and 30% reported finishing high school. As for occupation, most participants reported working in the field of education (30%) and health services (16.7%), while many other occupations were represented; industry and production (13.3%), IT and communication (6.7%), finance (3.3%), construction (3.3%), public administration (3.3) and arts and entertainment (3.3%).

Regarding their family life, 36.7% of the participants had one child, 36.7% had two children, 23.3% had three, and 3.3% had four. The age range of the children was between 0 – 17 years, and the distribution of age was as follows: 23.3% of the children were 1 year, 14% were 4 years, 11.6% were 2 years, 11.6% were 3 years and 11.6% were six years. The rest of the children (27.9%) were out of the specified age range. The participants were asked to choose and answer regarding the oldest child in the age range of 1-6 if they had multiple children. I chose to do this to ensure that participants answered for the same child each day and, at the same time, did not record any information about the child other than their age.

Measurements

To collect the data, several psychological scales and general questionnaires were chosen. The questionnaires (see Appendix) were used to collect participants' sociodemographic information, a baseline for the parent-child relationship, and self-report day measures of the parent-child relationship, workload, and self-reported screen time. The alpha levels for the questionnaires I used were calculated for each measuring point and ranged from

.915 to .961 for the Parent-Child Relationship scale (day-to-day level). Alphas for the Workload questionnaire were also computed, specified by weekdays, and ranged from .890 to 1.000, respectively. The software used to generate the questionnaires and send them to the participants daily was provided by SoSci Survey.

Workload

The participant's reported workload was measured at the time they ended their workday, at 16:00. A questionnaire developed by Spector and Jex (1998) was used to measure the workload construct. The full scale included several job stressors scales, and thus it was reduced to only measure workload. I then ended up with five items with a five-point Likert scale, ranging from "Never" to "All the time" and all items were translated into Norwegian. An example is: "How often did your job require you to work very hard?"

Screen time

Participants' screen time was measured daily by self-report at 21:00. They were asked to report hours and minutes spent on personal screen time, shared screen time, and work-related screen time. As explained to participants with examples, their personal screen time was the number of hours and minutes spent on a screen for personal purposes, such as social media, shopping, looking for information, reading, and so on. The shared use included all time spent on screens together with their child, for example, watching TV together, playing games, or other activities. Work-related use referred to the time spent engaging in work-related screen use, such as answering emails or looking up information regarding work. For all the categories, the participants were asked to answer in hours and minutes from the time they finished work, to the time the child went to bed.

The Parent-Child Relationship

The daily parent-child relationship was measured after their child was put to bed, at 21:00. To measure the parent-child relationship, I merged two scales. One is the Child-Parent

Relationship Scale Short Form (Pianta, 1992), and all items used were translated into Norwegian. The 15-item scale measures the psychological constructs of Closeness and Conflict from the parent's point of view and gives insight into how mothers and fathers perceive the relationship with their children (Pianta, 1992). All items use a five-point Likert scale (Ranging from *definitely does not apply* to *definitely applies*) Participants also had the option of choosing a sixth option (*irrelevant*) in case the question had a bad fit, for example, because of their child's age. I used three items from the Child-Parent Relationship Scale Short Form and two items from the Marriage Quality Scale (See Appendix). An example from the selected items is: "It is easy to be in tune with what my child is feeling". These specific items were chosen as best to measure the day-to-day relationship between parent and child. Further, items such as "my child values his/her relationship with me" were excluded because our target sample was parents of children between the ages of 1-6. In addition, two items from the "Marriage quality scale" by Norton (1983) were used. An example from the scale is: "My relationship with my partner makes me happy". Both items were adapted to fit a parent-child relationship at the day-level.

Data Analysis

My study design assigned participants to several levels, and thus, a multilevel model was deemed appropriate for the data analysis. Analyses were conducted in IBM SPSS 29 and Mplus 8.2 (Muthén & Muthén, 2017).

To test the study hypotheses, I specified a mediation model linking daily workload to the three screen time variables (personal, family-related, and work-related), as well as three screen time variables on the parent-child relationship on the within level. The indirect effects of the screen time variables were also accounted for. Lastly, a variable was computed to control for the day of the week. Specifically, I wanted to control for how the day of the week

impacted the parents' reported measures on the scales. The control variable did not change the results, and the results presented are without the control variable.

Construct validity

A confirmatory factor analysis was conducted to measure the psychometric properties of the scales used for the day-to-day measurements. In line with Bolger and Laurenceau (2013), the models were defined on the within- and the between-person level. The goodness of fit of the models followed recommended values (Hu and Bentler, 1999). The difference testing of the models was done using the Satorra-Bentler (S-B) scaled χ^2 difference test (Satorra & Bentler, 2001).

I examined a two-factor model where the two variables "Workload" and "Parent-child relationship" each represented one factor. The model had a satisfactory fit, $\chi^2(134) = 220.708$; RMSEA (Root Mean Square Error of Approximation) = .057; TLI (Trucker-Lewis Index) = 0.904; CFI (Comparative Fit Index) = 0.917; SRMR (Standardized Root Mean Square Residual) within = 0.074 and between = 0.170. I also specified a one-factor model: $\chi^2(136) = 709.249$; RMSEA = 0.146; TLI = 0.373; CFI = 0.453; SRMR within: 0.247 and between: 0.390, which was found to have a significantly poorer fit than the hypothesized model, S-B scaled $\chi^2 \Delta (-3) = (673.321)$, $p < .01$.

Results

Descriptive Statistics

Means, standard deviations, and correlation coefficients for each variable are presented in table 1.

Table 1

Means, Standard Deviations, and Intercorrelations of all variables

Variable	1	2	3	4	5
1. Workload		.07	.17	-.16	.05

2. Work-Related Screen Time	.14		.00	.07	.10
3. Family-Related Screen Time	.04	-.20		-.05	.03
4. Personal Screen Time	.10	.33	-.34		-.01
5. Parent-Child Relationship	-.11	-.12	-.30	-.51	
M	14.4	6.7	23.8	27.2	26.2
SD	4.7	17.8	35.5	30.0	4.7

Note. Correlations above the diagonal represent the day-level correlations ($N = 197$).

Correlations below the diagonal are person-level correlations ($N = 37$). The coefficients in bold are $p < .05$.

To test the hypotheses, I first examined the variance on the within- and between-person level in the variables “Workload”, Parent-child relationship” and the three screen time variables. This was done by computing interclass correlation coefficients (ICC) and observing how big a portion of variance was on the within-person level. The ICCs for the variables were as follows: Workload: .513, Parent-Child Relationship: .606, Work-Related Screen Time: .563, Family-Related Screen Time: .807, and Personal Screen Time: .712, respectively. These results show a great variation on the within-person level, and it was thus decided to go forward with the multilevel analyses.

The hypothesized model is illustrated in Figure 1, and the results are presented in Tables 2-4. My results indicate that the model had a good fit: $\chi^2(3) = 0.069$; RMSEA = 0.000; TLI = 2.263; CFI = 1.000; SRMR within: 0.005 and between: 0.000. Hypothesis 1a predicted that workload is positively related to the parents’ reported work-related screen time. My results (see Table 2) show no significant effect (Estimate = 1.240, $SE = 1.128$, $p = .272$), which rejects my hypothesis (H1a). In hypothesis 1b, it was expected that a higher reported workload would lead to parents using their screens less for family-related purposes. There was a marginally significant effect between the workload variable and family-related screen

time, although the direction was opposite than hypothesized (Estimate = 8.311, $SE = 4.560$, $p = .068$). Therefore, hypothesis H1b was also rejected. Regarding personal screen time, RC1 asks how the daily workload affects the parents' personal screen time in the afternoon. My results show a marginally significant negative effect of workload on personal screen time (Estimate = -4.680, $SE = 2.583$, $p = .070$).

Table 2

Unstandardized coefficients from the Multilevel model of Workload on Work-related screen time, Family-related screen time, and Personal screen time

Predictor	Workload				CI_{95}	
	Estimate	(SE)	z	p	Lower	Upper
Within-level						
Work-related screen time	1.240	1.128	1.099	0.272	-0.971	3.450
Family-related screen time	8.311	4.560	1.822	0.068	-0.628	17.249
Personal screen time	-4.680	2.583	-1.813	0.070	-9.740	0.380

Note.

In hypothesis 2a, it was expected that work-related screen use would affect the parent-child relationship negatively. The results, illustrated in Table 3, show that work-related screen time had a positive effect on the parent-child relationship (Estimate = 0.006, $SE = 0.002$, $p = .006$). Hypothesis H2a was thus rejected. Regarding hypothesis H2b, I expected that family-related screen time would positively affect the parent-child relationship. There was no significant effect of family-related screen time (Estimate = -0.001, $SE = 0.002$, $p = .476$), and the hypothesis was rejected. Lastly, hypothesis H2c predicted that personal screen time would negatively affect the parent-child relationship. This hypothesis was also rejected (Estimate = 0.003, $SE = 0.003$, $p = .389$).

Table 3

Unstandardized Coefficients from the Multilevel Model of Work-related screen time, Family-related screen time, and Personal screen time on the Parent-Child Relationship

Predictor	Parent-Child Relationship				<i>CI</i> ₉₅	
	Estimate	(<i>SE</i>)	<i>z</i>	<i>p</i>	Lower	Upper
Within-level						
Work-Related Screen Time	0.006	0.002	2.772	0.006	0.002	0.011
Family-Related Screen Time	-0.001	0.002	-0.713	0.476	-0.004	0.002
Personal Screen Time	0.003	0.003	0.862	0.389	-0.004	0.009

Note.

Hypothesis 3a proposed that work-related screen time is a mediator connecting the daily workload and the parent-child relationship. I examined the 95% Confidence intervals (see Table 4) of the proposed indirect effects of work-related screen time (Estimate = 0.008, *SE* = 0.007, *p* = .276, 95% *CI* [-.006 - .022]), and the hypothesis was rejected. As for hypothesis 3b, family-related screen time was expected to mediate the relationship between daily workload and the parent-child relationship. There was no significant effect observed in my results (Estimate = -0.009, *SE* = 0.014, *p* = .517, 95% *CI* [-.037 - .019]), and hypothesis 3b was rejected. Lastly, research question 2 asked whether personal screen time acts as a mediator between daily workload and the parent-child relationship. The indirect effect was non-significant (Estimate = -0.013, *SE* = 0.016, *p* = .409, 95% *CI* [-.054 - .018]), and thus personal screen time did not mediate the relationship and the hypothesis was rejected.

Table 4
Unstandardized Coefficients of the indirect effects from the multilevel model.

Indirect effects	Parent-Child Relationship				<i>CI</i> ₉₅	
	Estimate	(<i>SE</i>)	<i>z</i>	<i>p</i>	Lower	Upper
Work-Related Screen Time	0.008	0.007	1.090	0.276	-0.006	0.022

Family-Related Screen Time	-0.009	0.014	-0.647	0.517	-0.037	0.019
Personal Screen Time	-0.013	0.016	-0.825	0.409	-0.054	0.018

Note.

Discussion

The goal of the present paper was to investigate how parents' daily workload and screen time affects the relationship they share with their children. The aim was to contribute to the part of developmental psychology that focuses on how work-related aspects of life affect family dynamics (Repetti et al., 2009) and merge it with the expanding field of research focused on how screen use affects parenting (McDaniel, 2019).

My analyses found no significant results suggesting that parents' daily workload affects their reported screen time in any of the three screen time variables on the within level, although the daily workload had a marginally significant effect on the family-related- and personal screen time. Regarding how workload affects work-related screen time, I expected a higher amount of workload during a specific workday to lead to parents spending more time on work-related screen use in the afternoon. This was based on the assumption that parents with a high daily workload would bring their work home due to detachment difficulties (Sonnetag & Fritz, 2014). A possible explanation for the non-significant effect is that the parents don't prioritize work during family time. The recorded screen time is in the time between the parent finishing their workday, and the child being put to bed. Then, it can be that the parent does work-related tasks on their screens after their child is asleep. Second, as there was observed a correlation, although non-significant, between the amount of workload and the time spent on screens for work-related purposes, it could be that my data did not have enough power to illustrate the effect. Finally, it is possible that there is no relationship between a high workload and the time spent on a screen for work-related purposes and that the hypothesis is wrong. The positive effect between daily workload and family-related screen

time was marginally significant. As such, it suggests that there can be a relationship between the more workload a parent is put under makes them spend more time with their child using a screen device, although my data lacked the power for it to reach the threshold. My hypothesis regarding how workload affects family-related screen time was in the opposite direction, and thus rejected. The present theory suggests that parents who are under pressure from work distance themselves from their children at home (Repetti et al., 2009), and thus I expected that a higher rate of daily workload would lead to less time spent on screens for family-related purposes in the afternoon. Spending time together while using a screen is more effortless than other activities, such as reading or playing (Elias & Lemish, 2021). A possible explanation is that as parents' energy is depleted from the amount of work during a workday, it is easier to spend time together using a screen than doing other activities. I presented a research question regarding the effect of daily workload on the parents' reported personal screen time in the afternoon. There was a negative effect between daily workload and personal screen time, which was marginally significant, even though it didn't reach the threshold. This effect tells us that parents who experience more workload during a day at work would spend less time on their screens for personal use in the afternoon. A possible explanation for this is that the parents spent less time on their screens for personal use to avoid online stressors. In sum, most of the results did not reflect nor confirm my hypotheses. There can be several explanations for this: Firstly, there is possible that a high workload has no effect on parents' screen time. Although the theory presented in my introduction points toward there being a work factor present that affects parental screen time (McDaniel, 2019), it is possible that there are other factors than workload. Second, because some of my results were marginally significant, it is possible that my data lacked the power to fully investigate the relationships.

As for hypothesis 2a, I expected work-related screen time to affect the parent-child relationship negatively. My results showed a significant positive effect of work-related screen

time in the afternoon, on the parent-child relationship. The results then suggest that more work-related screen use leads to a better relationship between the parent and child. This is the opposite of what my hypothesis states, as I expected there to be a negative effect due to fewer quality interactions that can take place as the parent is using their screens for work-related purposes. It can be, however, that as parents do work-related tasks, their mood improves, and they focus more on having more quality time with their children. In hypothesis 2b, I expected that more family-related screen time in the afternoon would positively affect the parent-child relationship, because of the shared interaction. The effect of family-related screen time was negative, although non-significant, and my hypothesis was rejected. This negative effect could be interesting to further explore, to gain a better understanding of shared screen time and the effect it can have on parent-child relationships. Regarding personal screen time, I presented a research question asking how personal screen time in the afternoon would affect the parent-child relationship. I asked this question due to research pointing towards personal screen time as mood-improving (Wolfers, 2021) and can be a useful tool for making parents more confident, for example, information seeking (Radesky et al., 2016). On the other hand, it could also have a negative effect due to the lack of interaction between parent and child (McDaniel, 2019). My results showed a non-significant positive effect of personal screen time on the parent-child relationship. Although the effect was non-significant, the results suggest that there can be a positive effect of personal screen time on the parent-child relationship. To further investigate this relationship, it would be interesting to break up screen time into more specific measurements to fully explore the different relationships.

In hypotheses 3 a and b, and research question 2, I expected that each of the screen time variables would mediate the relationship between the daily workload and the parent-child relationship. All three hypotheses were rejected by my results, which suggests that

screen time does not mediate this relationship. An explanation for this is that there can be possible moderator variables that affect the mediation process (Muller et al., 2005).

Practical implications

The present study has some practical implications. A better understanding of how work factors affect parent behavior can be a useful contribution to developmental psychology. As the prevalence of parental screen use is high, a better understanding of the effect it has on their parenting can be of great significance for developmental psychology, as well as the parents themselves. By understanding the effects of their own behavior, parents can make informed choices and may choose to alter it by limiting their screen use among their children.

Limitations and suggestions for future research

One aspect that needs to be addressed is the measurement tools used in the present study. The study relies on participants' self-reports, which can be inaccurate due to several factors. One is common-methods bias (Kamakura, 2010). Because my data is based on self-report, the participants' responses on one questionnaire may be influenced by one of the other questionnaires. Another is the effect of the social desirability bias (King & Bruner, 2000). Parents themselves report that they both judge other parents for using screens around children, and at the same time feel judged by others when using screens around their children (Hiniker et al., 2015). Because of this, they may be inclined to report less screen time to reduce any internalized judgment they may have toward parental screen time. Participants were informed that the study wanted to investigate family relationships, work, and screen use. Whether the participants moderated their screen use during the trial is unsure, as no baseline was established prior to the study. Future research could benefit from such a baseline to observe if there is a difference in screen behavior during the study.

As the method used measured the participants' day-to-day levels of the target constructs, there is the possibility that their responses were affected by factors other than the

target constructs. Previous research on screen time points towards several factors that affect how much time a person spends on their screen. Habits are one factor that can make a person more susceptible to turning to their phone for entertainment. In my study, participants' habits concerning their screen use were not accounted for, and it could be a factor affecting screen use. Other possible factors are their daily mood, boredom, and other daily life experiences. Related to the parent-child relationship there are many possible explanations related to fluctuations in the daily measured parent-child relationship. These can be attributed to parent factors or child factors. The daily mood of both parent and child can have an impact on how their shared relationship may be on a specific day.

A further limitation of the study is the number of participants. As Gabriel et al. (2019) concluded, for ESM, a sample size of at least 83 (level 1) is recommended to have a balanced number of level 2 measurements. This study had a total of 37 participants at level 1, and thus, it could benefit from a larger sample to better meet the criteria (Gabriel et al., 2019). Further research may benefit from having a larger sample size to better explore the effects workload has on parental screen time.

Finally, my study provides a basis for future research. As my study lacked the power to fully explore the relationship between daily workload, parental screen time, and parent-child relationships, future research may benefit from a larger sample size. Future research exploring the effects of work-related factors on parental screen time may benefit from investigating other work-related stressors to gain a wider knowledge of the effect work has on parental screen time.

Conclusion

Although most of my hypotheses were rejected, this study did provide some new and interesting findings and may serve as a foundation for new research questions and hypotheses. While previous research has pointed toward work factors affecting parental screen time, this

study directly measured the effects of parents' workload on a day level. By illustrating that a higher workload during the day can affect parental screen behavior around their children in the afternoon, it is possible to expand on this research to further explore how work factors play a part in parental screen behavior and its effects on the parent-child relationship.

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Appendix

Questionnaires

Screening

Items

1. Hva er din stilling på jobb?
 - a. Direktør/ledelse
 - b. Ansatt med veilederrolle
 - c. Ansatt uten veilederrolle
 - d. Selvstendig næringsdrivende
 - e. Læreplass
 - f. Turnuskandidat
 - g. Lærling
 - h. Student
 - i. Arbeidsledig
 - j. Annet, det er
2. Har du en heltidskontrakt (100 % arbeidstid)?
 - a. Ja/nei
3. Når jobber du?
 - a. 8.00 til 16.00 (eller lignende)
 - b. Fast nattskift
 - c. Roterende skift
4. Hvor mange barn bor i husstanden deres?
 - a. Hvor gamle er barna som bor i husstanden deres? Vennligst angi alder i år. Om du har mer enn 4 barn i husstanden, vennligst angi alderen til de to yngste og de to eldste barna.
 - b. Er barnet eller barna i barnehage på dagtid?
 - c. Hvis nei, har du alternativ barnepass? For eksempel dagmamma eller besteforeldre
5. Hvilke dager vil du tilbringe minst 1 time sammen med et av barna dine (i alderen 1-6), på ettermiddagen? Kryss av for hvilke dager, de neste to ukene.
 - a. Ukedagene for de neste ukene listet opp for deltakere

Consent

1. Jeg forstår at jeg har mottatt og forstått informasjonen om dette forskningsprosjektet om jobb, familie og skjermtid, og har hatt anledning til å stille spørsmål.
2. Jeg forstår at jeg deltar frivillig i denne studien og kan trekke meg fra studien når som helst uten å oppgi årsak.
3. Jeg forstår at jeg godtar at dataene mine blir samlet inn som en del av denne studien og vil bli registrert, lagret og behandlet anonymt.
4. Jeg forstår at anonymiserte data vil bli gjort tilgjengelig for andre forskere.
5. Jeg forstår at jeg godtar at e-posten min blir lagret, slik at jeg skal kunne bli kontaktet (f.eks. bli tilsendt lenkene til spørreskjemaene) som en del av studien.
6. Jeg vil gjerne delta i studien «Jobb, familie og skjermtid».

Demographics

Items

1. Hvor bor du?
 - a. Norge
 - b. I et annet land, det er:
2. Hva er din status?
 - a. Direktør/ledelse
 - b. Ansatt med veilederrolle
 - c. Ansatt uten veilederrolle
 - d. Selvstendig næringsdrivende
 - e. Læreplass
 - f. Turnuskandidat
 - g. Lærling
 - h. Student
 - i. Arbeidsledig
 - j. Annet, det er
3. Har du en heltidskontrakt (100 % arbeidstid)?
 - a. Ja
 - b. Nei
4. Når jobber du?
 - a. 8.00 til 16.00 (eller lignende)
 - b. Fast nattskift
 - c. Roterende skift
5. Hvilke dager skal du jobbe de neste to ukene?
6. Kjønn
 - a. Mann
 - b. Kvinne
 - c. Ikke-binær
 - d. Annet
7. Hvilket år er du født?
8. Hvilken utdanning har du?
 - a. Grunnskole
 - b. Vidergående skole
 - c. Bachelorgrad
 - d. Mastergrad
 - e. Doktorgrad
 - f. Jeg studerer for øyeblikket
 - g. Annet
9. Hva er din status?
 - a. Direktør/ledelse
 - b. Ansatt med veilederrolle
 - c. Ansatt uten veilederrolle
 - d. Selvstendig næringsdrivende
 - e. Læreplass
 - f. Turnuskandidat
 - g. Lærling
 - h. Student
 - i. Arbeidsledig
 - j. Annet:

10. Hvor mange år har du jobbet? (i år)
11. Hvor mange år har du jobbet i din nåværende organisasjon? (i år)
12. Jobber du fulltid eller deltid? Fulltid Deltid
13. Hvor mange timer i uken jobber du i gjennomsnitt?
14. Jobber du skiftarbeid?
 - a. Ja
 - b. Nei
15. Indiker hvilken sektor du jobber i.
 - a. Finans/forsikring
 - b. Konstruksjon
 - c. Salg og engroshandel
 - d. Energi og vannforsyning
 - e. Utdanning og undervisning
 - f. Hotel og restaurant
 - g. Helse
 - h. Håndverk
 - i. IT & kommunikasjon
 - j. Kunst & underholdning
 - k. Jordbruk og Skogbruk
 - l. Offentlig administrasjon
 - m. Industri og produksjon
 - n. Trafikk
 - o. Forskning
 - p. Annet
16. Har du selv mulighet til å bestemme når du jobber?
 - a. Ja Nei
17. Har du selv mulighet til å bestemme når du avslutte å jobbe?
 - a. Ja Nei
18. Har du selv mulighet til å bestemme når du skal ha pauser i arbeidsdagen?
 - a. Ja Nei
19. Vennligst fortell oss kort hva din stillingstittel er på din hovedjobb.
20. Hvor mange ansatte rapporterer til deg direkte?
 - a. Vennligst før inn antall ansatte som rapporterer til deg. Har du ikke en lederrolle, vennligst sett inn tallet 0.
21. Hva slags arbeidskontrakt har du?
 - a. Fast ansettelse Midlertidig ansettelse
22. Har du en romantisk partner?
 - a. Ja Nei
23. Om du har en romantisk partner, deler dere bolig?
 - a. Ja Nei
24. Hvor mange barn bor i husstanden deres?
 - a. 0, 1,2,3, > 4
25. Hvor gamle er barna som bor i husstanden deres?
 - a. Vennligst angi alder i år. Om du har mer enn 4 barn i husstanden, vennligst angi alderen til de to yngste og de to eldste barna.
26. Er barnet eller barna i barnehage på dagtid?
 - a. Ja Nei
27. Hvis nei, har du alternativ barnepass? For eksempel dagmamma eller besteforeldre
 - a. Ja Nei
 - b.

Child-Parent Relationship Scale (30-item version)

Source:

Pianta, R. C. (1992). Child-parent relationship scale. Retrieved from <https://curry.virginia.edu/faculty-research/centers-labs-projects/castl/measures-developed-robert-c-pianta-phd>

Items and instructions

Vær vennlig å reflekter hver av de ulike påstandene nedenfor passer til forholdet mellom deg og ditt barn. Svar for ditt eldste barn i alderen 1-6.

Eksempel: Hvis du har 3 barn på 5 måneder, 4 år og 7 år så skal du svare for barnet som er 4 år.

1 = Passer svært dårlig

2 = Passer ikke noe særlig

3 = Nøytral, usikker

4 = Passer noe,

5 = Passer svært godt

6 = Irrelevant for mitt barn (På grunn av f.eks. alderen på barnet)

- | | | |
|-----|----------------------------------------------------------------------------------------------------------|--------|
| 1. | Jeg deler en varm og omsorgsfull relasjon med barnet mitt. | 123456 |
| 2. | Jeg og barnet mitt ser alltid ut til å slite med hverandre. | |
| 3. | Barnet mitt søker trøst hos meg hvis han/hun er opprørt. | |
| 4. | Barnet mitt er ukomfortabel med fysisk affeksjon fra meg. | |
| 5. | Barnet mitt synes vårt forhold er verdifullt. | |
| 6. | Barnet mitt virker opprørt eller flau når jeg korrigerer han/henne. | |
| 7. | Barnet mitt aksepterer ikke hjelp når han/hun trenger det. | |
| 8. | Når jeg roser barnet mitt stråler hun/han av stolthet. | |
| 9. | Barnet mitt reagerer sterkt på separering fra meg. | |
| 10. | Barnet mitt deler spontant informasjon om seg selv. | |
| 11. | Barnet mitt er for avhengig av meg. | |
| 12. | Barnet mitt blir lett sint på meg. | |
| 13. | Barnet mitt ønsker å gjøre meg fornøyd. | |
| 14. | Barnet mitt føler at jeg behandler han/henne urettferdig. | |
| 15. | Barnet mitt ber om hjelp fra meg når han/hun egentlig ikke trenger det. | |
| 16. | Det er lett å sette seg inn i hva barnet mitt føler. | |
| 17. | Barnet mitt ser på meg som en kilde til straff og kritikk. | |
| 18. | Barnet mitt uttrykker å bli såret eller sjalu dersom jeg er sammen med andre barn. | |
| 19. | Barnet mitt fortsetter å være sint eller er sta etter å ha blitt disiplinert av meg. | |
| 20. | Når barnet mitt gjør ugang, så responderer han/hun på blikket eller tonefallet mitt. | |
| 21. | Å håndtere barnet mitt tapper energien min. | |
| 22. | Jeg har lagt merke til at barnet mitt kopierer min atferd eller hvordan jeg gjør ting. | |
| 23. | Dersom barnet mitt er i dårlig humør har vi en lang og vanskelig dag foran oss. | |
| 24. | Mitt barns følelser for meg kan være uforutsigbart og endre seg plutselig. | |
| 25. | Til tross for at jeg gjør mitt beste, så er jeg ukomfortabel med hvordan jeg og barnet mitt går overens. | |
| 26. | Jeg tenker ofte på barnet mitt når jeg er på jobb. | |
| 27. | Barnet mitt klager eller gråter når han/hun vil ha noe fra meg. | |
| 28. | Barnet mitt er slu eller manipulerende mot meg. | |
| 29. | Barnet mitt deler åpent om sine følelser og opplevelser med meg. | |
| 30. | Mine interaksjoner med barnet mitt får meg til å føle meg som en effektiv og selvsikker forelder. | |

Source 2:

Norton, R. (1983). Measuring marital quality: A critical look at the dependent variable. *Journal of Marriage & the Family*, 45, 141–151. 10.2307/351302

Original items from Marriage quality (Norton, 1983)

1. My relationship with my partner makes me happy.
2. We have a good marriage.

Norwegian adaptation

Items

1. Forholdet mellom meg og barnet mitt gjør meg glad.
2. Jeg og barnet mitt har et godt forhold.

Parent-child relationship, day-to-day level

Sources:

Pianta, R. C. (1992). Child-parent relationship scale. Retrieved from <https://curry.virginia.edu/faculty-research/centers-labs-projects/castl/measures-developed-robert-c-pianta-phd>

Norton, R. (1983). Measuring marital quality: A critical look at the dependent variable. *Journal of Marriage & the Family*, 45, 141–151. 10.2307/351302

Items are translated from English and adapted to day-to-day level.

Original items from CPRS (Pianta, 1992)

- “I share an affectionate, warm relationship with my child”
- “If upset, my child will seek comfort with me”
- “It is easy to be in tune with what my child is feeling”

Original items from Marriage quality (Norton, 1983)

- “My relationship with my partner makes me happy”
- “We have a good marriage”

Instructions and items translation

Nå vil du bli stilt en rekke spørsmål relatert til relasjonen mellom deg i ditt barn. Vær vennlig å kryss av hvilket punkt som passer for deg og ditt barn i dag.

Merk: svar for det samme barnet som du har svar for i undersøkelsen så langt, det eldste barnet mellom 1-6 år.

Eksempel, har du et barn på 5 måneder, et barn på 3 år og et barn på 7 år så velger du det barnet som er 3 år.

I dag har ...

1. Jeg og barnet mitt hatt et godt forhold
2. Forholdet mellom meg og barnet mitt gjort meg glad
3. Jeg delt en varm og omsorgsfull relasjon til barnet mitt
4. Det vært lett for meg å sette meg inn i hva barnet mitt sine følelser
5. Barnet mitt har søkt trøst hos meg når opprørt

- a. *Passer ikke* *Passer svært godt*
 Irrelevant

Quantitative Workload

Source

Spector, P. E., & Jex, S. M. (1998). Development of Four Self-Report Measures of Job Stressors and Strain: Interpersonal Conflict at Work Scale, Organizational Constraints Scale, Quantitative Workload Inventory, and Physical Symptoms Inventory. *Journal of Occupational Health Psychology*, 3, 356-367.

Instruction and Items

Ranger følgende utsagn etter hvordan du har hatt det denne dagen på jobb.

Hvor ofte...

- 01 ... krevde jobben din at du måtte jobbe veldig raskt? Aldri Hele tiden
- 02 ... krevde jobben din at du måtte jobbe svært hardt?
- 03 ... førte jobben din til at du fikk svært dårlig tid til å fullføre arbeidsoppgaver?
- 04 ... var det svært mye som trengtes å bli gjort?
- 05 ... måtte du utføre flere arbeidsoppgaver enn hva du kan klare å utføre på en god måte?

Screen time

Source: Vizcaino, M., Buman, M., DesRoches, C. et al. Reliability of a new measure to assess modern screen time in adults. *BMC Public Health* 19, 1386 (2019).

<https://doi.org/10.1186/s12889-019-7745-6>

Items and instruction

Nå vil du bli stilt spørsmål om hvor mye tid du har brukt på skjerm fra du kom hjem til barnet eller barnene ble lagt for kvelden. Det er viktig at du er så nøyaktig som mulig. Dersom det er under 1 time, skriv 0 i kolonnen for timer og antall minutter brukt.

Type skjermbruk

1. Personlig skjermtid (Eksempelvis: sosiale medier, lese avisen, shoppe, lete opp informasjon på nettet)
2. Delt skjermtid med barnet (Eksempelvis: Se på TV sammen, spille spill sammen eller annet)
3. Jobbrelatert skjermtid (Eksempelvis: Lese eller svare epost eller meldinger, lese jobbrelatert informasjon eller andre jobbrelaterte formål)
 - a. Oppgi timer og minutter

Merk: svar for det samme barnet som du har svar for i undersøkelsen så langt, det eldste barnet mellom 1-6 år.

Eksempel, har du et barn på 5 måneder, et barn på 3 år og et barn på 7 år så velger du det barnet som er 3 år.