

Changes in perspective: parenting and well-being of adolescents in daily life

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General discussion

"Grown-ups never understand anything by themselves, and it is exhausting for children to have to provide explanations over and over again. That's the way they are. You must not hold it against them. Children should be very understanding of grown-ups."

Le Petit Prince



Throughout the transformational phase of adolescence, during which young people start to develop their identity and become more autonomous, parents remain key for the development and socialization of their children (Soenens et al., 2019; Steinberg & Silk, 2002). Decades of research have consistently shown that parenting characterized by warmth and support and few conflicts is associated with adolescent well-being (Pinquart, 2017; Weymouth et al., 2016), with adolescents' and parents' behavior affecting each other reciprocally (Pinquart, 2017). Ecological validity of these findings however has been questioned as most studies were based on self-report questionnaires with relative long time-intervals that focused on differences between persons. In this dissertation, a first step was taken towards measuring parenting processes in daily life over time within persons and families by investigating parent-adolescent interactions (separate for mothers and fathers) in relation to daily positive and negative affect of adolescents and assess differences between individuals and families, in particular in the context of adolescent depression. In this closing chapter, I will summarize the main findings of this dissertation and discuss how they contribute to the field. I will end by presenting some important clinical implications and suggestions for ways to move forward.

Summary of main findings

In *Chapter 2,* we started by investigating the within-person association between experienced daily parental support and adolescent daily negative mood, based on adolescents reports from the Grumpy or Depressed project. In addition, we examined four factors that might explain individual differences in this link between parental support and adolescent negative mood: adolescent gender, severity of adolescent depressive symptoms, perceived intrusiveness of parents, and overall social support. Results demonstrated that, on average, adolescents reported more negative mood on days when they perceived their parents to be less supportive. Moreover, the association between daily parental support and daily negative mood was stronger for adolescents who reported more depressive symptoms and for adolescents who perceived their parents as less intrusive. Adolescent gender and perceived social support did not explain differences between adolescents.

In Chapter 3, we built upon these findings and examined whether adolescent positive and negative affect and parental warmth and criticism during momentary parent-adolescent interactions differed between families with an adolescent with a depression and families with an adolescent without psychopathology based on the sample of RE-PAIR. In this study, parenting was not only assessed at the end of the day (as in the Grumpy or Depressed project), but also at the momentary level, and both adolescents and their parents reported on parenting. We found that adolescents with a depression reported less positive and more negative affect in general as well as during parentadolescent interactions than adolescents without psychopathology. The levels of momentary parental warmth and criticism during these parent-adolescent interactions did not differ between the groups, not from the perspective of the adolescent nor from the mother or father. Interestingly, these findings deviated from adolescents' and parents' reports on retrospective questionnaires, where adolescents with a depression and their parents reported more negative on their relationship (i.e., less care, more overprotection) than adolescents without psychopathology and their parents. Perceived parental warmth and criticism were related to adolescent positive and negative affect during parentadolescent interactions, but the association did not differ between adolescents with and without a depression. Substantial differences between individuals, even within the group of adolescents with a depression, indicated that the direction and strength to which momentary parenting and affect are related differs between adolescents, regardless of their clinical status.

The imposed social distancing measures due to the COVID-19 pandemic provided a unique opportunity to examine whether family dynamics are impacted by such a macro-level influence. In *Chapter 4*, we compared momentary positive and negative affect of adolescents and both parents and daily parental warmth and criticism (assessed at the end of the day) from both the perspective of adolescents and parents of the RE-PAIR study during two weeks of the COVID-19 pandemic (end of April 2020) and a similar two-week period pre-pandemic. Findings showed that positive affect of adolescents and parents as well as parental warmth and parental criticism from perspectives of adolescents and parents did not change due to the COVID-19 pandemic. Parents did show an increase in negative affect in a two-week period during the first lockdown of the COVID-19 pandemic compared with a similar period pre-pandemic. Intolerance of uncertainty and other COVID-19 related factors (i.e., living surface, income, working from home) did not explain this increase of parental negative affect. Although parents and adolescents on average seemed to deal fairly well with the circumstances at that time, substantial differences between individuals were found, with some parents and adolescents reporting a decrease in positive affect, while others reported an increase.

In Chapter 5, we aimed to describe how adolescents perceive daily parental warmth and criticism (reported at the end of the day) and compared this to their mothers' and fathers' perception of parenting to gain more insight into discrepancies between them. Moreover, we did not only test whether adolescents' and parents' perceptions of daily parenting were independently related to adolescent daily affect, but also whether discrepancies between these perceptions were related to adolescent affect by using multilevel polynomial regression models and response surface analyses. Generally, we observed that adolescents' and parents' (both mothers and fathers) reports of daily parenting differed significantly, with adolescents reporting more parental warmth and less parental criticism than their mothers and fathers. Moreover, in addition to adolescents' own reports of parenting, not parents' perspective of daily parental warmth and criticism by itself, but differences and overlap with adolescents' perspective were of importance for adolescent daily affect.

As adolescents' and parents' behaviors and affect interact and influence each other, a next step was to take into account the role of parents' affect. In *Chapter 6*, we therefore examined whether adolescents' and parents' individual reports of daily parental warmth and discrepancies between them related to daily affect of both parents and adolescents using novel hybrid models. We investigated this in two samples, which provided the opportunity to replicate the findings across two different cultural contexts: American (FLOW sample) and Dutch (RE-PAIR sample). Moreover, we explicitly examined differences between adolescent-mother and adolescent-father dyads in the RE-PAIR sample. Overall, in both samples, we found that parents' and adolescents' individual reports of daily parental warmth were related to their own daily happiness, irritation, and sadness. The discrepancies between adolescent-parent reports of parental warmth were more consistently related to parents' affect, indicating that parents' own affect may be more important for their perceptions of their own parenting than discrepancies between parent-adolescent reports may have on the affect states of adolescents or parents. Moreover, we found that interrelatedness of irritation and sadness was stronger between adolescent-father than adolescent-mother dyads.

Besides examining ecological validity of previously reported associations between parenting and adolescent well-being, in *Chapter 7*, we aimed to explore the use of an innovative method using Bluetooth low energy (BLE) beacons and a smartphone application to objectively assess parent-adolescent physical proximity in daily life (i.e., frequency and duration). We used this method to trigger questionnaires to investigate whether the quantity of time spent together is indicative of the quality of their interactions. By using this unobtrusive, novel method we were able to objectively assess frequency and duration of parent-adolescent proximity in the daily flow of life. Results showed that adolescents were more often in proximity with their mothers than fathers and spent more time together throughout two weeks. Furthermore, the method also enabled relating the frequency and duration of proximity with subjective experiences of interactions. This showed for example that when adolescents and mothers spent more time together, mothers reported less parental criticism during their interactions (or otherwise put; when mothers reported less parental criticism, adolescents and mothers spent more time together).

Describing the everyday experience of parenting and affect

Our results indicated that what we currently know about parenting based on retrospective questionnaires (e.g. about the last weeks, months, or year), may paint a somewhat different picture than what is going on at the momentary (at this moment) or daily (at the end of the day) level within-persons. Adolescents generally reported less parental criticism of mothers and fathers compared to their parents, which was true for adolescents with and without depression. With respect to parental warmth, adolescents without psychopathology reported also more daily parental warmth than parents, while adolescents with a depression reported less maternal warmth compared to their mothers, while reports on warmth of fathers were the same as father reports (chapter 5 and additional analyses).

Interestingly, these findings are in contrast to results based on retrospective questionnaires, where parents are generally more positive about their own behavior than adolescents (De Haan et al., 2018; Hou et al., 2020). Thus, parenting assessed retrospectively does not necessarily translate to the daily level. Parents may report more favorable about their own behavior retrospectively due to wanting to conform to social norms (Janssens et al., 2015). However, adolescents' retrospective reports can also be biased, for instance by adolescents' (negative) mood at the time of reporting (Rudolph, 2009). Assessing parenting daily in a short questionnaire may result in less biased reports. Nevertheless, asking how parents and adolescents experienced parenting throughout the day at the end of the day, as we did in some studies included in this dissertation, is still based on some recollection and does not completely rule out recall bias (Robinson & Clore, 2002). Peak and end effects may be a relevant source of bias here, referring to individuals' daily retrospective reports being affected by the most intense or recent affect (Fredrickson, 2000). We therefore also measured parenting at the momentary level if parents and adolescents interacted with each other, but parents and adolescents did not receive questionnaires at the exact same time to prevent discussion on their ratings. Testing differences in adolescent-parent perceptions of parenting at the same time-point was therefore hindered. Future studies might consider aligning the prompting of questionnaires in parents and adolescents, despite the disadvantages this may have.

We were able to compare parenting at the momentary level between families with an adolescent with a depression and families with an adolescent without psychopathology (chapter 3). Unexpectedly, reported parental warmth and parental criticism during parent-adolescent interactions in families with an adolescent with a depression did not differ from families with an adolescent without psychopathology, not from the perspective of the adolescent nor from the perspective of the mother and father. As the adolescents with a depression reported lower levels of positive affect and higher levels of negative affect during these interactions than adolescents without psychopathology, one would expect that affect influenced their perception of parenting and resulted in more negative parenting reports. However, this was not the case, at least not at the momentary level. Based on retrospective questionnaires, that were also part of the RE-PAIR study, adolescents with a depression and their parents overall did perceive parenting as more negative (i.e., less care, more overprotection) than adolescents without psychopathology and their parents. This finding corresponds to previous work in adolescents and adults with a depression (e.g., Kullberg et al., 2020; Sheeber et al., 2007; Valiente et al., 2014). It moreover supports the idea that cognitive biases may play a role here, at least for adolescents, with for instance negative attention or recall bias influencing their retrospective reports of parenting (Platt et al., 2017; Trull & Ebner-Priemer, 2009).

In addition, parental mood can also be negatively impacted by the depression of their child. In a previous qualitative study, parents of adolescents with a depression indicated for instance that they felt more worried and distressed, partly blamed themselves for the struggles of their adolescent, and questioned their parenting abilities (Stapley et al., 2016). Additional analyses in the RE-PAIR sample, based on multilevel models, confirmed this suggestion. Parents of adolescents with a depression on average reported lower levels of positive affect and higher levels of negative affect on the momentary level as well as during interactions with adolescents compared to parents of adolescents without psychopathology (all p's < .01). Considering that our study was the first to assess parenting at the momentary level in a clinical sample, more research is necessary to replicate these findings. More generally, taking into account parents' experiences of adolescence, parenting, and their own affect deserves more attention in future studies, as adolescence is not only a challenging period for adolescents, but also for parents.

Objectively assessing parent-adolescent proximity in daily life

To overcome having to rely on time-based sampling and to assess parent-adolescent interactions at the moments that these occur, we developed a new method that tracks the proximity between adolescents and parents. As this proximity may be a sensitive marker of actual parent-adolescent interactions, we used this information to trigger questionnaires including questions on how they experienced their interactions (chapter 7). To do so, we developed and tested an innovative method that combined BLE beacons and a smartphone application (Ethica) to track proximity between adolescents and parents and to prompt questionnaires after proximity measures had indicated a possible interaction. Our results demonstrated that adolescents generally spent more time with mothers than with fathers — a finding that had also been observed in previous work using questionnaires and hence served as a validation (Larson & Richards, 1991; Phares et al., 2009; Van Lissa & Keizer, 2020). Moreover, based on the questionnaires triggered after signaled proximity parents and adolescents indicated a fair amount of parent-adolescent interactions: adolescents

indicated an interaction with parents in 66% of the questionnaires and parents reporting an interaction with adolescents in 80% of the questionnaires. Parents and adolescents, however, did not always receive the questionnaire at the same time or answered the questionnaire both. It was therefore not possible to analyze differences between parents' and adolescents' perceptions of parenting at the momentary level based on the proximity measures. So far, our unobtrusive method thus enabled gaining more insight into proximity of parents and adolescents and relating this to the individual experiences of quality of interactions. Future studies are necessary to further develop and validate this method in various social domains to enhance our understanding of social interactions in daily life.

Micro-level processes between perceived parenting and adolescent affect

Although how parenting is perceived may differ between levels of assessment, our findings regarding the within-person associations between parenting and adolescent affect at the micro-level were similar to previous studies using retrospective questionnaires assessing these associations at the between-person level. Results of our studies showed that, on average, on days or moments that adolescents perceived more warmth, more support, and less criticism from their parents they also reported more positive and less negative affect (chapter 2, 3, and 5). The importance of perceived parenting for adolescents' well-being in everyday life is further demonstrated by the robustness of these findings after adding parents' perception of parenting (chapter 5) or personal characteristics such as gender (chapter 2 and 3). Combined with previous studies that used retrospective questionnaires at the macro-level our results point towards a certain homology over time scales when it comes to the relation between parental warmth and adolescent affect (e.g., Pinquart, 2017; Weymouth et al., 2016). This supports the idea that, despite a key developmental task for adolescents is to become more autonomous, their development and well-being benefits the most if this strive for independence happens in the context of a close and secure relationship with parents (Soenens et al., 2019; Steinberg & Silk, 2002). However, using EMA to assess the association between parenting and adolescents' affect at the within-person level has an important added value as it enables taking into account momentary or daily fluctuations and hence study this for a specific person or family.

Since parents and adolescents in the RE-PAIR and FLOW study were both asked about parenting behavior at the end of the day, we were able to shed some light on how discrepancies between these perspectives related to affect in daily life (chapter 5 and 6). We applied polynomial regression models and response surface analyses to assess associations between our daily assessments of parenting and affect, which enabled including parents' and adolescents' individual perceptions of parenting and the interaction between perceptions (chapter 5). Results showed that in addition to adolescents' or parents' own individual perspective, the extent to which this perspective corresponded to or differed from the other perspective was of importance for daily well-being of adolescents. Our findings seem to align with the proposed and supported maladaptive hypothesis in retrospective studies at the macro-level (De Los Reyes et al., 2019; Hou et al., 2020), indicating that divergence in parent-adolescent reports is associated to poorer adolescent well-being, especially when adolescents report more negative about parenting than their parents. However, as previously mentioned, adolescents' negative mood may also influence the perception of parenting (Rudolph, 2009). As a next step, we included parents' affect in addition to adolescents' affect (chapter 6) to test

the idea that divergence between perceptions may also undermine parents' well-being (De Los Reyes, 2011). Our results indicated that divergence between adolescents' and parents' reports of parental warmth was more consistently related to parents' daily affect than to adolescents' daily affect. Interestingly, by including both adolescents' and parents' affect, our findings seem to suggest that it is mood that impacts the perception of parenting instead of the discrepancies affecting mood. To date, only few studies, focusing on adolescent affect, have examined the predictive effect of adolescents-parent discrepancies of parenting and did not find support for these effects over time (e.g., Nelemans et al., 2016). More work is needed to gain insight into the direction of effects and the role informants' mood plays when assessing these discrepancies.

Taken together, previous findings at the group level on the associations between parenting, discrepancies, and (adolescent) affect do seem to generalize to person-specific daily life processes. Parenting and affect in a family context are dynamic, can co-fluctuate and influence each other on a daily and momentary basis and the current data illustrate how valuable it is to assess these processes on the within-person level.

One size does not fit all adolescents and families

By assessing parenting and affect repeatedly at the momentary and daily level, we were able to test the idea that processes between parenting and adolescent affect differ between individuals and families as suggested in ecological models of development (e.g., Sameroff, 2010) and differential susceptibly hypothesis (e.g., Pluess & Belsky, 2010). Based on our findings, as well as other recent studies (e.g., Bülow, Van Roekel, et al., 2022; De Vries et al., 2022), heterogeneity in daily life processes seems to be the rule rather than the exception. Not only the amount of time spent together by parents and adolescents (chapter 7) or the impact of the COVID-19 pandemic on daily family life (chapter 4) differed between individuals, but also the direction and extent to which parenting and affect are related in daily life (chapter 2 and 3) – even within a subgroup of adolescents, for instance adolescents with a depression (both in a community and clinical sample - figures in chapter 2 and 3). Importantly, our results further illustrated that even within an adolescent or family there is substantial variation. That is, adolescent A may benefit from a certain level of parental warmth and support at a given day, while this behavior influences adolescent A negatively at another day. Similarly, also parentadolescent discrepancies varied between- and within-dyads (chapter 5 and 6). Taken together, this supports the notion that psychological processes are heterogeneous (Bolger et al., 2019) and is a warning against the 'one size fits all' fallacy (Keijsers & Van Roekel, 2018; Keijsers et al., 2016). Moreover, it highlights the importance of focusing more on the unique interactions of a person or family and its environment in everyday life, which can be captured relatively easily with EMA.

To contribute to a better tailoring of preventions and interventions to the needs of an individual or family, we took some first steps to better understand the individual differences. General social support (chapter 2) and adolescent sex (chapter 2 and 3) did not explain differences between individuals in how parenting and adolescent affect in daily life are related. Furthermore, although parental support seemed to be more beneficial for adolescents' affect in adolescents with more depressive symptoms at the *daily* level (chapter 2), we were not able to replicate these findings in adolescents with a clinical diagnosis of depression and assessing parental warmth and criticism at the *momentary* level (chapter 3). Time scale of measurement may play a role here and previous findings

align with our seemingly contrasting findings. That is, depressive symptoms explained individual differences in the link between parenting and adolescent affect when examining this association at the daily level (Timmons & Margolin, 2015), but not at the momentary level (Bülow, Van Roekel, et al., 2022). Although our findings indicated substantial individual differences, more sophisticated methods and statistics, such as person-specific N=1 models, on larger amounts of data per individual or family are necessary to better understand the individual processes and variation as well as investigating personal characteristics or contextual factors explaining these differences (e.g., Bülow, Neubauer, et al., 2022; Valkenburg et al., 2021). This type of work would not only yield more insight into individual differences but could also contribute to formulating more general parenting principles, that work for (almost) all adolescents. A recent study shed some first light on this by showing that parental warmth and autonomy support had positive effects on adolescent well-being in almost all families (91-98%). Although strength of the association differed, direction of effects were universal (Bülow, Neubauer, et al., 2022).

The importance of parenting of mothers and fathers

An important and unique aspect of the RE-PAIR study is that we included fathers in addition to mothers. According to the family system theory (Cox & Paley, 1997), the mother-adolescent relationship and father-adolescent relationship represent distinct but related subsystems within the family (Restifo & Bögels, 2009). Although research suggests that mothers and fathers serve unique roles in parenting their adolescents (e.g., Lamb & Lewis, 2013), few studies have included fathers, let alone in studies on parenting in everyday life. In 95 of the 114 participating families, two parents participated in the EMA of the RE-PAIR study. This enabled us to gain insight into the daily life parenting processes of mother-adolescent dyads and father-adolescent dyads, from the perspective of the adolescent as well as from the perspective of mothers and fathers themselves. Although not explicitly reported in our studies, multilevel analyses indicated that at the daily level adolescents without psychopathology reported that their mothers showed generally more warmth and more criticism than fathers (p's < .01), even though reports of adolescents with a depression indicated no differences between parental warmth and criticism of mothers and fathers. Concerning the association between parenting and adolescent affect, we found that perceived parental warmth and criticism of both mothers and fathers is relevant for adolescent positive and negative affect at the momentary and daily level (chapter 3 and 5). Generally, adolescents' positive affect seemed to be somewhat more affected by their mothers than fathers. For instance, whereas for adolescents the discrepancies with their mothers' perceptions regarding parental warmth were related to adolescent daily positive affect, this was not the case regarding discrepancies with fathers (chapter 5 and 6). Moreover, adolescents reported more positive affect when interacting with mothers and fathers at the same time compared to with fathers only (chapter 3).

Additionally, we were also able to assess whether interrelatedness of affect differed between adolescent-mother and adolescent-father dyads (chapter 6). We found that daily happiness of adolescents and mothers was more strongly related compared to adolescents and fathers, while daily sadness and daily irritation in adolescent-father dyads were more strongly related compared to adolescent-mother dyads. These findings may reflect more compartmentalization of affect in mothers (Erel & Burman, 1995; Krishnakumar & Buehler, 2000), with mothers being more cautious in showing

their negative emotions to their children. In line with this, previous work has found that fathers were more likely than mothers to spillover tension from the marital dyad to the parent-child dyad indicating a difficulty of fathers to compartmentalize their affect (Almeida et al., 1999).

These findings point towards an important next step in research, including adolescent-mother-father triads in one model. A recent study shed a first light on the inter-individual dynamics of affect in the family sphere by simultaneously including affect states of mothers, fathers, and adolescents (Veenman et al., 2022). Results of the network models showed that affect of adolescents, mothers, and fathers influence each other, also over time. Moreover, as previous research showed that siblings may experience parenting in a unique way, and that experiences of siblings has been related to mental health of the individual, over and above the individual experience of parenting (Kullberg et al., 2021), it seems essential to study the family as whole.

Strengths & limitations

The studies included in this dissertation contribute to the understanding of parenting and well-being of adolescents and parents at the level where the actual parenting takes place, i.e., everyday life. By utilizing EMA, we were able to zoom in to the dynamic person- and family-specific processes in an ecological valid way. Due to the unique multi-informant sample and by using novel statistical techniques, we demonstrated the importance of not only taking into account adolescents' affect and perception of parenting of both mothers and fathers, but also mothers' and fathers' own daily life experiences. Additionally, designing and implementing a novel method to track proximity of adolescents and parents yielded some exciting first insights into time spent together in the family context. This method is a promising tool to enhance the understanding of social interactions in daily life, also outside the family context. Repeatedly assessing parenting and affect also enabled providing evidence for the ideas (e.g., Pluess & Belsky, 2010; Sameroff, 2010) that the direction and extent to which parenting relates to affect differs between individuals and provided some first insights on characteristics that may account for these differences. Lastly, the inclusion of adolescents with a depression and their parents in addition to adolescents without psychopathology and their parents yielded valuable information to guide parenting interventions in clinical practice. Although recruitment of families with an adolescent with a depression was challenging, as is often the case with clinical samples, EMA compliance of these adolescents (64%) and parents (72%) was only slightly lower than from the families with an adolescent without psychopathology (adolescents: 68% and 82%) and were still largely in line with previous work in adolescents (Van Roekel et al., 2019) and adults (Wrzus & Neubauer, 2022).

Notwithstanding the contribution of this dissertation to the field, several limitations should also be taken in consideration. A first remark concerns the samples. All studies (Grumpy or Depressed, RE-PAIR, and FLOW) in this dissertation included WEIRD (White, Educated, Industrialized, Rich, and Democratic) samples which limits generalizability of our conclusions. We tried to be inclusive in the recruitment for the RE-PAIR study, by recruiting nation-wide, offering to plan the research day in the lab on a weekend day, and providing arrangements with a hotel. Ultimately, however, 66% of parents in the RE-PAIR sample completed higher vocational school or university while this is approximately 35% of adults in the general Dutch population (Statistics Netherlands, 2021). Second, the sample size of the RE-PAIR study on which most chapters were based, was relatively small. In total, 115

adolescents and their parents participated (of which 114 families participated in the EMA). Power, however, is not only based on sample size but also on the amount of observations, which was quite large in our study. In total, adolescents and parents received 56 questionnaires during 14 consecutive days (i.e., a total of 6384 questionnaires for adolescents and 11884 for parents). We accounted for this nestedness of observations in appropriate multilevel analyses that were cross-sectional in nature. Future studies should aim for larger sample sizes, however, or increase the amount of observations. This would also enable an exploration of the bidirectional nature of parenting processes and application of more idiographic approaches. A third concern relates to the instruments that we used to measure parenting. Parental warmth and criticism in the EMA of RE-PAIR were measured by one (i.e., daily level) or two items (i.e., momentary level). We specified these items based on theories and questionnaires as no parenting questionnaire suited for EMA was validated at the start of RE-PAIR. Although the use of single-item measures has been debated (Allen et al., 2022), they may be quite suited for EMA research as this reduces the burden on participants and increases compliance of questionnaires (Eisele et al., 2022). More research needs to be done to gain more consensus on which items to use to assess parenting and affect as well as to test validity and reliability. A promising step was taken by starting an item repository by Kirtley and colleagues (Kirtley et al., 2020).

Clinical implications

Based on our findings I like to specify a number of important clinical implications and recommendations. First, our findings highlight the need for including mothers and fathers in treatment, as involving parents already has been shown to result in better treatment outcomes for children with a depression (Dowell & Ogles, 2010; Oud et al., 2019). Clinical interventions should for instance include psychoeducation to inform and support parents. During qualitative interviews in the RE-PAIR study, parents of adolescent with a depression mentioned feeling helpless, not knowing how to best support their adolescent as they had trouble relating to what the adolescents was going through. This has also been reported in an earlier qualitative study (Stapley et al., 2016). Thus, parents could be provided with more information on for instance how a depression may present itself in daily life (i.e., adolescent can be irritated) and how low affect of their adolescent may impact how they experience events or (parenting) behaviors (i.e., cognitive bias). As parents also indicated that they questioned their parenting abilities (Stapley et al., 2016), another aspect to address is the important role parents still play for adolescents' well-being and that adolescents generally benefit from receiving warmth and support. Recently, a course has been developed for parents with an adolescent with a depression or depressive symptoms in the Netherlands, Samen Sterk (Samen Sterk, 2022). The course aims to inform parents about depression in adolescents, provide tools to improve communication with their children, and parents are encouraged to also formulate their own goals suiting their family, thereby facilitating tailoring the intervention to the needs of a family's specific situation. Although effectiveness of the intervention has not been tested empirically, parents indicated that they felt very much supported by the intervention. Hence, it seems a promising direction to follow.

Second, although it is developmentally appropriate for adolescents to develop their own perspective and disclose less information to their parents (Keijsers et al., 2009; Smetana et al., 2006), the differences between perceptions of parents and adolescents of parenting may also indicate that behavior of parents does not always fit the needs of an adolescent (Eccles et al., 1993; Lerner et al.,

1986) and that this can negatively impact adolescents' well-being. Thus, parents' often well-intended behavior may not suit the needs of an adolescent at that specific moment. This advocates for (more) communication between adolescents and parents to better understand each other's intentions and behaviors. To foster more open communication, designing an easy accessible intervention (i.e., a game or an app) with tools to carve out time for each other and have fun or constructive conversations may help parents and adolescents to become more attuned to each other.

Third, how parents react to and coach their children's emotions is based on the awareness, acceptance, expression, and regulation of parents' own emotions (Gottman et al., 1996). Better emotional awareness, acceptance, and regulation of negative emotions by parents as well as adolescents has been related to lower levels of depression (e.g., Hunter et al., 2011; Larsen et al., 2013; Schwartz et al., 2018). Thus, with mood swings being seen as typical part of adolescence (Arnett, 1999) and being a possible indicator of mental health problems (Maciejewski et al., 2014), addressing parents' attitudes and behaviors towards emotions may be of vital importance. In a recent qualitative study, Dutch adolescents who experienced mental health problems mentioned that they felt concerned to share their feelings with their family for instance because they feared a lack of understanding (Leijdesdorff et al., 2021), which was also discussed by adolescents in the RE-PAIR study. Some adolescents also mentioned that their parents never shared their emotions and felt that parents did not know how to express them themselves (Leijdesdorff et al., 2021). This supports our suggestion to develop interventions that aim to help parents to develop an emotion coaching style of parenting. Some studies already showed that parents' emotion communication improved after completing an emotion-focused intervention (Shaffer et al., 2019). It may even be taken a step further, by additionally implementing emotion coaching at the meso (i.e., school) and macro (i.e., society) level. Ultimately, this might contribute to detecting mental health problems earlier or maybe preventing them in some cases by affecting the discourse about emotions at the societal level.

A final clinical implication and recommendation concerns the use of EMA. Applying this method to assess parenting and well-being in the family context can also be valuable outside of research. After completing the EMA of RE-PAIR parents often mentioned they became more conscious of how they felt (e.g., almost never irritated) and how they behaved (e.g., lacking sport activities) indicating that keeping track of feelings and activities in itself can raise awareness (see also Runyan et al., 2013). In clinical practice, monitoring feelings, whereabouts, and activities of a client or family could provide relevant information for diagnostics and treatment, especially when this is discussed with clients (Van Os et al., 2017). Patterns in affect fluctuations and (discrepancies in perceptions of) family interactions may become visible and may be a valuable point of departure for further explorations. Our novel method of tracking proximity between individuals, which still needs further development, may ultimately also contribute to the diagnostic or treatment process. It could help mapping the social network of a person, which in turn could be linked to a person's experienced or reported feelings. Although monitoring thoughts and behaviors could already be seen as an intervention, clinical practice may also use EMA to actually provide real-time feedback, also known as ecological momentary interventions (EMI; Heron & Smyth, 2010). EMIs in adults generally have been shown to affect mental health and positive psychological well-being, with the effect being larger when additional support was provided by a mental health professional (Versluis et al., 2016). The use of our method could potentially contribute to a more targeted intervention. For instance, if adolescents

report to feel more stressed or to experience more parental criticism than usual in several consecutive assessments when being close to their parents, they could receive a notification with the advice to discuss this with their parents.

Future directions

Since a lot of questions remain to be answered regarding parenting and adolescents' well-being, I would like to close this chapter by proposing some ways to move forward. The first suggestion concerns what we measure, when examining interactions in daily life. Although we asked parents and adolescents how pleasant the interaction was, the topic of the interaction and its relevance remains unclear. Therefore, including additional open-ended questions or qualitative aspects on experiences of parenting and well-being in EMA therefore seems important. More generally, involving adolescents or families in research through participatory methods, such as participatory action research (Loewenson et al., 2014), may contribute to for instance translating or implementing research findings more easily to the everyday life. The importance of participatory research with a bottom-up approach is increasingly being acknowledged in grants and seems as a promising direction for research.

Another important next step is to elucidate the direction of effects regarding the dynamic daily life processes between parenting and affect as well as examining these associations on various timescales. The dynamic systems perspective (e.g., Kunnen et al., 2019; Smith & Thelen, 2003) proposes that development is shaped by dynamic processes interrelating at different time scales. However, to date, we know little about which parenting processes happen on a specific timescale. Recent studies provided some interesting first insights for instance by showing that parental support did not predict adolescent depressive symptoms on different levels (i.e., days, weeks, months, and years), while adolescent depressive symptoms predicted decreases in parental support two weeks and three months later (Boele et al., 2022). At the micro-level (i.e., hours), it was found that perceived parental warmth predicted adolescent negative affect three hours later, but not six hours later. In turn, negative affect did not predict perceived parental warmth three hours later (Bülow, Van Roekel, et al., 2022). More work needs to be done to uncover the reciprocal dynamic patterns. Designing studies that include data collection at both micro and macro time intervals could help to gain more insight into these dynamic patterns.

Another direction for future work concerns applying a person-specific idiographic approach (Molenaar, 2004). Knowing more about the characteristics or environmental contexts that impact adolescents' development negatively could contribute to detecting at-risk individuals or families early and possibly preventing worsening of the situation or symptoms. Also, gaining more information on characteristics that contribute to adolescents' resilience would foster the development of preventive strategies and parenting advice. More work needs to be done here, in order to ultimately develop interventions that include general parenting principles with specific directions on how to tailor the intervention to the specific needs of an adolescent or family.

Furthermore, the daily life experiences of adolescents with a depression and their families deserve more investigation. Numerous factors can be taken into account in this line of work, but an important one might be negative self-evaluations (e.g., Beck, 1967; Orchard & Reynolds, 2018). This was often mentioned by parents of adolescents with a depression in RE-PAIR and adolescence is an essential period for the development of the self is (Erikson, 1968). Thus, how adolescents perceive

and evaluate themselves on a daily basis may be important to include in future studies. This would also enable possibly disentangling whether negative self-evaluation precedes negative mood or that it is the other way around, which could be valuable information for clinical practice.

Several of our suggestions for future research would require larger sample sizes or following (full) families for a longer period of time. However, assessing parenting and affect for a longer period of time may be burdensome for the family and hence be not realistic. Moreover, including siblings would not only complicate the recruitment of families but also the design of the study. For instance, different age-appropriate questionnaires may be needed to measure parenting, complicating comparing the different perceptions. Furthermore, the currently available statistical methods are not yet suited to analyze such complex data. The need for larger sample sizes or inclusion of the family as a whole seems especially challenging when aiming to recruit at-risk or clinical samples, which is already challenging when focusing on one individual. A possibility to partly overcome these issues would be to encourage researchers to use a similar research design and collaborate more worldwide. The open science practices already facilitate combining datasets, but especially for EMA research, more consensus on for instance items or sampling schemes is necessary.

A final remark I would like to discuss is that as researchers we may not be able to ever completely grasp and unravel the dynamic parenting processes between parents and adolescent in daily life. Although EMA enables gaining more insight into the interplay between persons including everyone's perspective in its natural context, it always concerns a simplified version of a specific interaction. Even though combining this information with for instance physiological measures such as heartrate and qualitative interviews can provide more insight, 'the sum is more than its parts' as Aristotle said. Human behavior might always be partly immeasurable and incomprehensible (Scheepers, 2021) and reality may be more or different than what we can perceive, touch, and measure (Klein, 2018). This implies that not knowing or not understanding something (fully) remains part of our life. In my opinion, this is not a pessimistic viewpoint, but an inspiring one that keeps researchers ambitious and curious.

Conclusion

The current dissertation aimed to investigate parenting processes in relation to affective well-being in families in the daily flow of life from different perspectives (i.e., adolescent, mother, father), on different levels (i.e., objective, momentary, and daily), and in a clinical sample (families with an adolescent with a depression) in addition to community samples. Our findings conform the notion that on an everyday basis parenting of mothers and fathers is important for adolescents' well-being. Moreover, we showed that adolescents, parents, and their perceptions of parenting influence each other and that becoming more attuned to each other's intention and needs is essential. Importantly, we consistently demonstrated that not only the extent and direction of the dynamic processes between parenting and affect in daily life differs between, but also within persons and families. This stresses the need for research focusing on individual processes and combining quantitative with qualitative measures on how individuals perceive and make sense of events, relationships, and the self. The use of more idiographic approaches would not only enable gaining more insight into these differences between individuals, but also contribute to identifying parenting practices that work for

almost all adolescents. This would facilitate the development of interventions combining universal parenting principles with suggestions for tailoring it to individual- or family-specific situations.

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