Master's thesis

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A Longitudinal Study of the Predictive Effects of Adolescent Self-Esteem and Conflicted Relationship with Parents on Adolescent Well-Being at Ages 14, 16, and 18

Master's thesis in General Psychology
Supervisor: Vera Skalická
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Abstract

Familial relationships and self-esteem are considered notable predictors of well-being in adolescence. However, the field is currently lacking a sufficient body of longitudinal studies exploring the effects of self-esteem and family conflict on adolescent well-being over time. The thesis encompasses a longitudinal analysis exploring the effects of global self-esteem (GSE) and conflicted relationship with parents (CRP) on the development of adolescent well-being from ages 14 to 18, whilst controlling for family functioning, parental mental health, gender, and previous levels of well-being. Data were employed from the Trondheim Early Secure Study (TESS; $N = 514$), a longitudinal cohort study. The current study utilizes TESS reports from when the participants were 12 to 18 years old. Multivariate regression within the Structural Equation Modeling (SEM) framework was conducted. Results showed GSE to have a positive predictive effect on well-being at all three time points. Higher levels of perceived maternal CRP at age 12 predicted lower levels of well-being at age 14. By focusing specifically on the development of well-being, operationalized as life satisfaction, during adolescence, this study contributes to a deeper understanding of the predictive effects of family conflict and self-esteem in the context of a highly developmental stage, thereby providing valuable insights for both theory and practice in the field of adolescent psychology. By addressing predictors of adolescent well-being identified in this study, such as the quality of familial relationships and self-esteem, interventions can be tailored to better support adolescents' development, improving their well-being within specific contexts, such as family environments, and enhance their overall quality of life. Implementing targeted strategies during childhood may not only foster well-being during adolescence but also lay the foundation for positive outcomes in adulthood.

Sammendrag

Familiære relasjoner og selvbilde betraktes som to betydelige prediktorer for generell livskvalitet i ungdomstiden. Likevel mangler feltet for øyeblikket tilstrekkelig med longitudinelle studier som utforsker effektene av selvbilde og familiekonflikt på ungdommers generelle livskvalitet over tid. Masteroppgaven omfatter en longitudinell analyse som utforsker effektene av globalt selvbilde (GSE) og konfliktfylte relasjoner til foreldre (CRP) på utviklingen av ungdoms generelle livskvalitet fra alderne 14 til 18 år, samtidig som det kontrolleres for familiefungering, foreldres psykiske helse, kjønn og tidligere nivåer av generell livskvalitet. Data ble hentet fra Tidlig Trygg i Trondheim-studien (TTiT; N = 514), en longitudinell kohortstudie. Den nåværende studien bruker TTiT-rapporter fra da deltakerne var 12 til 18 år gamle. Multivariat regresjon innenfor rammeverket for strukturell ligningsmodellering (SEM) ble utført. Resultatene viste at GSE hadde en positiv prediktiv effekt på generell livskvalitet ved alle tre tidspunkt. Høyere nivåer av konfliktfylt relasjon til mor ved alderen 12 år predikerte lavere nivåer av generell livskvalitet ved alderen 14 år. Ved å fokusere spesifikt på utviklingen av generell livskvalitet, operasjonalisert som livstilfredshet, i løpet av ungdomsårene, bidrar denne studien til en dypere forståelse av de prediktive effektene av familiekonflikt og selvbilde i konteksten av en utviklingsfase, og gir dermed verdifull innsikt for både teori og praksis innenfor feltet av ungdomspsykologi. Ved å adressere prediktorer for ungdoms generelle livskvalitet som er identifisert i denne studien, som kvaliteten på familiære relasjoner og selvtillit, kan tiltak tilpasses for å bedre støtte ungdoms utvikling, og dermed forbedre deres generelle livskvalitet innenfor spesifikke kontekster, som innad i familier. Implementering av målrettede strategier i barndom fremmer ikke bare generell livskvalitet i ungdomsårene, men kan også legge grunnlaget for positive utfall i voksenlivet.

Preface

Completing this master's thesis has been a challenging, yet rewarding journey, enriched by the guidance of many individuals whom I am deeply grateful to acknowledge. First and foremost, I extend my heartfelt appreciation to my supervisor, Vera Skalická, and co-supervisor, Jolene van der Kaap-Deeder, for their invaluable contributions throughout this research journey. Their expertise has been instrumental in shaping the direction and quality of this thesis. Their thorough and frequent constructive feedback and insightful suggestions have been pivotal during this process.

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Finally, to my family, friends, my cat, and other loved ones, thank you for your support and encouragement throughout this journey. As I present this thesis, I do so with humility, recognizing that it is the culmination of the collective efforts of many individuals. It is my hope that this research contributes meaningfully to the field of developmental psychology and inspires further inquiry and exploration in understanding adolescent development.

Monika Ljøkjell

Contents

Figures

Tables

Abbreviations

CAMHP	Child and Adolescent Mental Health Problems
CAPA	Child and Adolescent Psychiatric Assessment
CPS	Conflict and Problem-Solving Scales
CRP	Conflicted Relationship with Parents
FAD	McFaster Family Assessment Device
GAD	General Anxiety Disorder
GSE	Global Self-Esteem
HCSL-25	Hopkins Symptom Checklist 25
HUNT	Helseundersøkelsen i Nord-Trøndelag
IPC	Interparental Conflict
NRI	Network of Relationships Inventory
NTNU	Norges Teknisk-Naturvitenskapelige Universitet
PWB	Psychological Well-Being
SDT	Self-Determination Theory
SDQ	Strengths and Difficulties Questionnaire
SLE	Stressful Life Events
SPPA-R	Revised Self-Perception Profile for Adolescents
T6-8	Time 6-8 (time periods when new data are collected from the sample)
TESS	Trondheim Early Secure Study
TTiT	Tidlig Trygg i Trondheim
WB	Well-Being

A Longitudinal Study of the Predictive Effects of Adolescent Self-Esteem and Conflicted Relationship with Parents on Adolescent Well-Being at Ages 14, 16, and 18

Research on adolescent well-being reflects the noteworthy changes that occur during this period, encompassing physical, neurodevelopmental, and psychosocial developmental changes (Steinmayr et al., 2019). Adolescent well-being serves as a crucial indicator of mental health and correlates positively with numerous favorable personal, psychological, behavioral, social, interpersonal, and intrapersonal outcomes (Proctor et al., 2009). Erikson's (1968) psychosocial theory, particularly the "Identity vs. Role Confusion" stage, highlights the critical challenges adolescents face in establishing their identities amid societal pressures. Successful resolution of this stage fosters self-confidence and positive relationships, while unresolved conflicts can impact well-being (Marcia, 1980; Rubins, 1968; Sandhu et al., 2012). Understanding and supporting adolescents through this psychosocial stage is crucial for promoting their well-being (Call et al., 2002). Positive environments at home, school, and peer relationships play pivotal roles in providing a nurturing environment that allows adolescents to navigate these changes and challenges (Erikson, 1968; Marcia, 1980).

A vast number of cross-sectional studies has found adolescent well-being to be related to a variety of factors including self-esteem, peer relationships, mental and physical health, parental marital status, life events, and perceived child-parent relationships (Guevara et al., 2021; Ho et al., 2008; Kerig, 1996; Seim et al., 2021). Two of the more prominent factors linked to adolescent well-being are quality of familial relationships (Gomez-Baya et al., 2020; Phillips, 2012; Povedano-Diaz et al., 2020) and adolescents' self-esteem (Harter, 2012; von Soest et al., 2016). The dynamics of adolescent-parent relationships have been a longstanding focus in developmental science. Self-esteem, referring to a person's subjective evaluation of his or her self-worth (Chung et al., 2017), is an important variable that acts as a protective

factor against a multitude of problems, and is therefore linked with children's adaptive functioning (Butler & Gasson, 2005). Previous research has identified self-esteem to be associated with developmental changes in well-being (Gomez-Baya et al., 2020; Kim & Nho, 2020).

A review study by Banati and Bacalso (2021) attempted to map the gaps in research on well-being in adolescence. They uncovered, among other limitations, a predominant focus on outcomes rather than predictors in research on adolescent well-being and social-emotional health. Cuesta and Leone (2020) conducted a similar review study and noted an overall lack of estimates on heterogeneous effects across age and gender, as well as robust empirical methods in this research area. They suggested that lack of quality data, challenges in defining adolescence, and ensuring ethical research, contribute to these knowledge gaps. Furthermore, there is a necessity for more longitudinal studies exploring adolescent development of well-being, and identifying associated factors over time (Steinmayr et al., 2019).

The rationale behind the choice of exploring the predictive effects of global self-esteem and conflicted relationship with parents specifically, is grounded in filling existing gaps in the field, mainly by providing insight into the development of well-being during adolescence. In studies on adolescent well-being and self-esteem, there is a recurring issue of not including any or enough control variables to minimize the confounding bias, which can be viewed as a limitation (Wooldridge, 2020). As for the variable conflicted relationship with parents (CRP), the majority of research is concentrated on the significance of emotional variability within mother-child relationships (Branje, 2018). Further research is needed to explore whether similar associations exist in father-child interactions regarding aspects such as well-being and relational development (Smetana & Rote, 2019). Additionally, a review by Smetana and Rote (2019) suggested that the field of adolescent-parental conflicted

relationships would be advanced by greater precision in defining the particular adolescent–parent relationship that are associated with specific adolescent outcomes, such as well-being.

As an attempt to contribute to the limited longitudinal studies on the development of well-being in adolescents, this study aims to explore how global self-esteem (GSE) and conflicted relationship with parents (CRP) predict the development of well-being among adolescents in the ages 14 to 18. The study will explore whether these variables predict adolescent well-being, taking into account potential covariates such as gender, family functioning, and parental mental health.

Development of Well-Being During Adolescence

Well-being is a multifaceted construct defined through different perspectives. Often, well-being is assessed through objective measures, primarily related to one's standard of living, and subjective measures, which encompass psychological, social, and spiritual aspects and are based on cognitive and emotional assessments of one's life (Trudel-Fitzgerald et al., 2019). Jahoda (1958) formulated a conceptualization of mental well-being that goes beyond just looking at the absence of illness, by offering detailed descriptions of what it means to be in a state of optimal well-being. In other instances, in which measures of well-being focus on psychological aspects like happiness, they are often referred to as measures of psychological well-being (PWB; Ryff, 1989; Trudel-Fitzgerald et al., 2019). This perspective considers life satisfaction as a dimension of PWB, in which such dimensions serve as components of broader "quality of life" measures (Trudel-Fitzgerald et al., 2019). Subjective well-being (SWB) is another term that appears frequently in this field, and its definition is very similar to PWB. SWB encompasses cognitive and affective evaluations of one's overall quality of life, including life satisfaction and emotional experiences (Diener et al., 2002).

This thesis will be utilizing the concept of well-being in terms of life satisfaction. Generally, reports on life satisfaction do not simply calculate the average of different life

domains or moments. Instead, they mirror an individual's contentment with personally significant aspects of life and their overall interpretation of life as a whole (Diener et al., 2002). In this thesis, well-being is operationalized as the definition used in the British Household Panel Study (Taylor et al., 2010), in which well-being was measured based on how satisfied or happy one is with the state of important domains in life, such as school, family, friends, academic performance, appearance, and life as a whole.

When considering well-being and, specifically, life satisfaction in adolescence, several theories focus on the unique challenges and developmental aspects of this life stage. Identity Development Theory (Erikson, 1959) explores the formation of a stable and coherent sense of self during adolescence, in which a positive and well-defined identity contributes to well-being. There are also numerous theories emphasizing adolescent development in context, such as Bronfenbrenner's (2013) Ecological Systems Theory. His theory considers the impact of various environmental systems (such as family, peers, school, and community) on adolescent development, emphasizing the pivotal influence of familial factors (Katsantonis et al., 2023).

Besides the beneficial effects of well-being for individuals' positive developmental outcomes (e.g., vitality; Trudel-Fitzgerald et al., 2019), research has also shown well-being to be a protective factor for mental health issues and disorders (Alam, 2022b). For instance, it has been found that mental disorders among young people have become a prevalent health issue with serious outcomes, such as substance abuse, social isolation, declining academic performance, and a rise in dropout rates (Heizomi et al., 2015). There is growing support for the idea that PWB is linked to reduced physical disease and mortality risks (Trudel-Fitzgerald et al., 2019). In general, mental health is associated with both physical well-being and overall life satisfaction. As a result, a lack of mental well-being can pave the way for the development of mental disorders and a decline in functional capacity (Heizomi et al., 2015). Research on the consequences of, and predictors for, poor mental health during childhood and adolescence

is important, as adolescents are increasingly experiencing more mental health problems (Alam, 2022a; Heizomi et al., 2015).

Life satisfaction is a pivotal factor in the development of children and youth, providing various advantages to their overall PWB (Park, 2004). Life satisfaction significantly influences the psychological development of children and adolescents (Sarriera et al., 2015), acting as a protective factor against stress-induced mental health issues (Park, 2004). Elevated levels of life satisfaction may encourage exploration in children and adolescents, serving as a positive contributor for their overall development (Gilman et al., 2008). Moreover, adolescence represents a period of social reorientation, where transient dissatisfaction with social relationships may serve as a contributor for adolescents to pursue new social roles and cultivate lasting connections (Blakemore & Mills, 2014; Majorano et al., 2015).

Research on the development of well-being during adolescence has generated mixed findings. On the one hand, longitudinal and cross-sectional studies exploring development of well-being during adolescence, have found a decline in subjective well-being during early adolescence (10 to 14 years of age) (Brooks et al., 2015; Goldbeck et al., 2007; Katsantonis et al., 2023; Marquez & Long, 2021), which may be associated with a decline concerning satisfaction with friends, in addition to a generally stressful context of school transitions from elementary to higher levels of education (Katsantonis et al., 2023; Marion et al., 2013). Research on the development of life satisfaction during late adolescence, particularly at 16 or 18 years of age, underscores a decline in life satisfaction that extends into early adulthood and continues into middle age (Blanchflower & Oswald, 2008; Cheng et al., 2017). This decrease is attributed, at least in part, to factors such as heightened social, financial, professional, or family and peer pressures (McAdams et al., 2012). The decrease in well-being during adolescence tend to be steeper than at any other point across adulthood (Orben et al., 2022). Despite the indication of a decline in well-being during early adolescence, most studies on

this topic show a generally stable development during this time period (Katsantonis et al., 2023; Salmela-Aro & Tynkkynen, 2010; Steinmayr et al., 2019; Tolan & Larsen, 2014). Some possible explanations for this discrepancy may be that some of the studies that revealed a decline were cross-generational (trend) evidence from large-scale surveys, whereas the studies that did not support this claim were mainly longitudinal (Katsantonis et al., 2023). The inconsistency might also be caused by variations in age range, indicators of well-being, geographical and cultural sampling, and other methodological concerns, including the impact of time period, cohort and instrumentation effects (Orben et al., 2022).

Recent studies and meta-analyses imply various predictors of higher levels of well-being and life satisfaction in adolescence, including global self-esteem (Kekkonen et al., 2020; Szcześniak et al., 2021) and positive familial relationships (Kekkonen et al., 2020; Oropesa Ruiz, 2022). Notably, social capital, including peer relationships, emerges as a robust predictor of life satisfaction during adolescence (Calmeiro et al., 2018). Whilst it is important to know the developmental changes in well-being during adolescence, that in itself is insufficient if we want to influence well-being in the long term. Two of the most prominent factors are self-esteem and family conflict. Hence, the following sections of this thesis will conduct a thorough exploration of the predictive effects of self-esteem and relationships with parents, and additionally exploring family functioning, parental mental health, and gender as potential covariates.

The Significance of Global Self-Esteem for Adolescent Well-Being

Self-esteem is viewed as the primary evaluative element of one's self-perception, and is therefore considered a fundamental psychological concept (von Soest et al., 2016). Self-esteem is usually defined as an individual's overall perspective or assessment of themselves (von Soest et al., 2016), and reflects a person's beliefs about their self-worth and whether they consider themselves deserving of respect (Yanal, 1987).

Harter et al. (1999) defined self-esteem as one's overall evaluation of him- or herself, including feelings of general happiness and satisfaction. Harter's (1999) conceptualization of self-esteem focuses primarily on the cognitive evaluation of an individual's adequacy, in which one's level of adequacy, or competence, directly influences the amount of support one receives from others of significance. According to Harter's (1993; 1999) theory, self-esteem comprises various dimensions of competence and worthiness, including academic competence, social acceptance, athletic ability, physical appearance, and behavioral conduct, among others. Harter's perspective suggests that individuals evaluate themselves across these different domains and form judgments about their self-worth based on their perceived overall competence and acceptance (Harter et al., 1998).

Global self-esteem (GSE; Harter, 2012), which is the definition used in this study, is an evaluation of how happy one is with their life and whether one is generally happy with the way he or she is as a person. This definition is similar to Rosenberg's (1965) notion of self-esteem, and constitutes a general perception of the self, in contrast to the domain-specific assessment of ability (Harter, 2012).

Identity theory can be suggested as one theoretical framework for self-esteem, by viewing self-esteem as both an outcome of, and ingredient in, a self-verification process that occurs within groups (Cast & Burke, 2002). An individual's self-worth increases by verification of role identities by the group (Cast & Burke, 2002). Self-esteem can also be understood through Maslow's hierarchy of needs (1987), in which self-esteem is considered a basic need for human beings. Another key theory that fathoms the concept of self-esteem is terror management theory (Greenberg & Arndt, 2012). From this viewpoint, humans stand apart from other species due to their ability to contemplate the uncontrollable and absurd nature of the world they inhabit, where impending mortality is the unavoidable certainty (Greenberg et al., 1986). To confront this awareness of mortality, individuals have evolved a

cultural worldview infused with elements of order, predictability, meaning, and continuity (Pyszczynski et al., 2004). Terror management theory assumes that self-esteem arises from a sense of personal worth rooted in beliefs about the validity of this worldview and one's ability to live by its cultural norms, serving as a buffer against the fear of death (Greenberg & Arndt, 2012). Those with high self-esteem tend to adopt a more positive and less fatalistic outlook on life compared to those with low self-esteem, thus better equipped to navigate reminders of mortality and the finite nature of existence in daily life (Pyszczynski et al., 2004).

Whether conceptualizing self-esteem as an ingredient in a self-verification process, a buffer against the fear of death, a basic human need, or as Harter (1993) defines it: “the level of global regard that one has for the self as a person” (p. 88), all of these functional explanations align with the notion that the construct has a positive nature. Accordingly, self-esteem is considered to promote psychological well-being, in addition to being a protection against mental health problems (Muris & Otgaar, 2023). A substantial body of empirical research substantiates its correlation with positive outcomes. For example, in a significant large-scale study involving over 13,000 college students across 31 countries worldwide, self-esteem showed a positive correlation with life satisfaction (Diener & Diener, 1995). The study indicated that higher levels of self-contentment among participants were associated with greater overall life satisfaction. Several studies support this finding by proposing self-esteem as being a predictor of well-being (Diener & Diener, 1995; Moksnes & Espnes, 2013; Seligman & Csikszentmihalyi, 2000), involving individuals' perceptions of their life quality, encompassing both cognitive evaluations, such as life satisfaction (Moksnes & Espnes, 2013; Rey et al., 2011), and emotional responses, like experiencing positive affect (Diener et al., 2015; Diener et al., 1999). Self-esteem has been shown to correlate positively with general well-being and negatively correlated with stress, depression, and anxiety (Katsantonis et al., 2023; Morejón et al., 2004). Moreover, research indicates that high self-esteem serves as a

predictive factor for future success and well-being in various life domains, including relationships, work, and health (Orth & Robins, 2014).

Adolescence aligns with changes in social and educational environments, especially during school transitions (Harter & Leahy, 2001), and can be particularly dynamic concerning self-esteem. Harter (1993; 1999) theorizes that self-esteem development during adolescence is a complex process influenced by both internal and external factors, including social and cognitive processes, which contribute to the formation of one's self-concept and evaluation of self-worth. This period involves significant developmental transitions across various domains, impacting global self-esteem (Białecka-Pikul et al., 2019).

A study conducted by Tucci et al. (2007) found that 46% of 600 Australian adolescents reported lacking self-confidence or a sense of security. Additionally, 54% expressed concerns about not fitting in, and 40% believed that they could not meet the societal expectations placed upon them in terms of performance. It is clear that studies on the importance of self-esteem, or the lack thereof, during adolescence is of importance as the prevalence of low self-esteem is as high as it is. A study evaluating predictors of life satisfaction among adolescents found results of self-esteem to be the main predictor, followed by the predictors family support and positive family communication (Soares et al., 2019). Low self-esteem, regardless of the presence of psychopathology, can have a negative impact on the quality of life for adolescents, especially those prone to high risk (Seim et al., 2021).

As for the development of self-esteem across the life span, a review article of longitudinal studies concluded that self-esteem increases from adolescence to middle adulthood, peaks around age 50 to 60 years, and then decreases with an accelerating pace into old age (Orth & Robins, 2014). They also found a trend of self-esteem as a relatively stable trait, yet not entirely resistant to change. Individuals who possess relatively high or low self-esteem at a particular stage of life are prone to maintaining similar levels decades later (Orth

& Robins, 2014). During adulthood, self-esteem tends to be a stable trait within one's personality, that in relation to life satisfaction can explain between-person variation (Anusic & Schimmack, 2016). However, during early and middle adolescence, self-esteem is still developing and is more susceptible to situational factors and evaluations from others (Kuster & Orth, 2013).

Consequently, enhancing self-esteem may play a crucial role in improving the quality of life for adolescents. In a critical time period such as adolescence, factors such as self-esteem play an even more crucial part in adolescents' lives (Białecka-Pikul et al., 2019; Gredler, 2012). This study aims to investigate the predictive effect of self-esteem on adolescent well-being, a topic that has accumulated significant attention within existing literature. Previous research has predominantly concentrated on exploring the predictive effects of low self-esteem, particularly in predicting outcomes such as adolescent depression or engagement in health-compromising behaviors (Gittins & Hunt, 2020; McGee & Williams, 2000; Steiger et al., 2014). Therefore, it is necessary to contribute to the exploration of self-esteem's proactive influence on positive developmental outcomes. Aligned with the perspectives of positive psychology, this study aims to contribute to the field by further exploring the positive predictive effect of self-esteem on adolescent well-being.

Consequences of Conflicted Relationship with Parents for Adolescent Well-Being

Conflicts and distancing between adolescents and parents were traditionally regarded as an inevitable outcome of puberty's biological changes (Freud, 1937; Smetana & Rote, 2019). Contrary to the initial assertions of psychoanalytic theory, highly conflict-ridden adolescent-parent relationships are not typical (Smetana & Rote, 2019). Instead, they often stem from problematic relationships in childhood and are linked to various indicators of adolescent maladjustment (Rutter et al., 1976; Steinberg et al., 1990).

As the adolescent undergoes rapid biological, neurological, and cognitive changes, these changes significantly affect their relationships and general psychosocial functioning (Branje, 2018; Collins & Steinberg, 2006). The emotional impacts of puberty (Cservenka et al., 2015), combined with the ongoing development of emotional self-regulation during adolescence (Bowers et al., 2011), could amplify the intensity and frequency of conflicts between parents and adolescents (Branje, 2018; Laursen et al., 2017). Additionally, adolescents seek independence, autonomy, and reduced parental control more rapidly than they acquire self-regulation (Crone et al., 2016). As parents tend to desire a better balance in their teenagers between autonomy and self-regulation, there is a diminished sense of connection and an increase in conflicts between parents and their adolescent children (Collins et al., 1997; Pinquart & Silbereisen, 2002).

According to Self-Determination Theory (SDT; Deci & Ryan, 2012), the key to healthy development and motivation in adolescents lies in their relationship with parents or caregivers (Griffin et al., 2017). As adolescents strive for autonomy and relatedness, optimal parental guidance is considered to consist of setting reasonable limits while providing stimulating challenges, supporting the adolescents' autonomous functioning, and providing care and love (La Guardia & Ryan, 2002). Unlike traditional views, SDT emphasizes that adolescent individuation involves internalizing values and developing identity within familial and cultural contexts. It rejects the notion that detachment from parents is necessary or beneficial, instead seeing it as a reaction to unmet psychological needs (La Guardia, 2009). Adolescence is a crucial period for internalizing self-regulation, transitioning from externally driven actions to self-endorsed behaviors (La Guardia & Ryan, 2002).

Research indicates that how adolescents perceive their relationships and support from both parents and other family members serves as a crucial predictor of life satisfaction (Kekkonen et al., 2020), and is associated with well-being throughout life (Szcześniak &

Tułecka, 2020). A more favorable family climate and good relations with parents tend to improve adolescent well-being (Guevara et al., 2021). A longitudinal study found that parent-adolescent conflict was negatively related to life satisfaction and self-esteem (Shek, 1998). The longitudinal analyses suggested that the relations between adolescent PWB and parent-adolescent conflict were bidirectional (Shek, 1998). Another study indicated that the strongest and most consistent predictor of adolescent well-being is mother-adolescent disagreement (David et al., 1996). In an attempt to examine daily variability of family conflict and self-perceived well-being, findings indicate that both parents and adolescents reported significantly lower well-being on days they were experiencing more conflict than usual (Silva et al., 2020).

To summarize, CRP tends to have a negative predictive effect on adolescent well-being, although poor well-being also predicts higher levels of CRP. The scale of CRP that is used to measure level of conflict within the adolescents' relationship with their parents consists of children's perceptions of their relationships with their mother and father (Furman & Buhrmester, 1985). This thesis will specifically examine the effect of CRP as a predictor of adolescent well-being, contributing to our understanding of how family dynamics shape adolescent development.

Providing a Nuanced Perspective: The Roles of Family Functioning, Parental Mental Health, and Gender

Family Functioning and Well-Being

Besides looking at GSE and CRP as predictors of adolescent well-being, this study also aimed to provide a nuanced perspective on these relations by taking into account other important predictors of adolescent well-being, namely family functioning, parental mental health, and gender differences. First, considering family functioning, theories of family systems can provide a framework for better understanding the significance of the contextual

factors of family. The family systems theories encompass the idea that a family is a cohesive entity that extends beyond the mere combination of its individual components (Titelman, 2012). Bronfenbrenner (1979) highlighted the significance of contextual variation in human development, by proposing his Ecological Systems Theory, which places a strong emphasis on the quality and context of a child's environment. He argues that as a child develops, their interactions with their surroundings become increasingly intricate (Ryan, 2001).

Children who have emotionally unavailable, rejecting, and unsupportive caregivers often develop a self-perception of being incapable, unlovable, and unworthy, which is reflected in their overall low self-esteem (Seim et al., 2021). The dynamics of family functioning also appear to be a critical factor influencing life satisfaction. Life satisfaction shows a positive and significant correlation with overall family satisfaction, including strengths such as cohesion, flexibility, and communication. Conversely, it exhibits a negative and significant correlation with entangled, disengaged, and chaotic family functioning (Povedano-Diaz et al., 2020; Szcześniak & Tułecka, 2020). Phillips (2012) has found evidence that supports a strong correlation between family climate, involving the level of one’s satisfaction with their family and the level of negative affect within the family, and current well-being, such as self-esteem, hopelessness, and optimism. Similarly, Gomez-Baya et al. (2020) found evidence for a correlation between a more positive family climate and greater adolescent life satisfaction.

Studies show that with the transition of a child entering puberty, the quality of family functioning tend to decrease simultaneously (Steinberg, 2014). Empirical findings actually indicate that some children who are living in a family situation with lower functioning, tend to go through puberty earlier (Ellis et al., 2011). This can be explained by variance in biological sensitivity to context, and pubertal timing being sensitive to stress.

Because a variety of empirical work has provided evidence for a likely association

between family functioning and well-being, family functioning was included as a covariate in the current study. A broader understanding of the significance of family dynamics and functioning is undoubtedly of importance in exploring the facets of adolescent well-being.

Associations Between Parental Mental Health and Adolescent Well-Being

Children of parents who experience mental health issues, such as depression and anxiety, are at an increased risk of developing a psychiatric mental disorder themselves (Collishaw et al., 2016; Steinsbekk et al., 2019). Another study put forward an explanatory model for the worsening of child and adolescent mental health problems from childhood to adolescence (Fatori et al., 2013). The study observed that maternal anxiety or depression over a span of five years were linked to the deterioration of child and adolescent mental health problems, as a result of the mother's impaired ability to be a satisfactory caretaker (Murray & Cooper, 1997). Parental mental health issues have also been identified as a factor that can limit the acquisition of social skills in offspring, and may even model socially incompetent or antisocial behavior directly (Wichstrøm et al., 2023).

Results from a British longitudinal study show that parental distress is an important determinant of children's life satisfaction (Powdthavee & Vignoles, 2008). Other research into the transmission of mental distress and negative emotions within the family between parent and child suggests that a parent's heightened level of mental distress may have a direct impact on the child's well-being (Almeida et al., 1999; Powdthavee & Vignoles, 2008). It remains uncertain whether the influence of parental distress on a child's well-being constitutes a separate process from the already established negative contagions discussed in existing literature. For instance, a distressed parent might intensify the child's distress, subsequently reducing their levels of life satisfaction (Powdthavee & Vignoles, 2008).

Studies have provided evidence for a significant correlation between the subjective

mental health status of parents and the physical and PWB of adolescents (Giannakopoulos et al., 2009). It is also necessary to account for the possible genetic factors of parental mental health (Bordin et al., 2009), considering that genetically mediated mental health status, such as parental depression, can have both a genetic and environmental impact on children's behavior (Silberg et al., 2010). Relevant for this thesis, the same study also found a significant correlation between parental mental health and parent-child relationship, and adolescent's self-perception.

These findings reinforce the importance of parental mental health status, along with other variables, as a significant factor influencing the development of adolescents' well-being. Therefore, the variable parental mental health is accounted for as a covariate in the current study.

Gender Differences in Adolescent Well-Being

In the review study identifying gaps in research on well-being in adolescence by Banati and Bacalso (2021), they noted that gender differences are rarely considered in the analyses. Despite gender and sex inequities being the most widespread themes in the identified studies, they are addressed in fewer than one-fifth of the studies that were examined (Banati & Bacalso, 2021).

However, studies that do examine gender inequities in life-satisfaction tend to find small or no differences. One meta-analysis on gender differences in life satisfaction (Chen et al., 2020) found results indicating that life satisfaction remains consistent across gender groups, with a small difference in favor of male children and adolescents. Studies in Western countries have also found little inequities between males and females regarding subjective life satisfaction, but when small gender differences were found, boys usually reported higher life satisfaction than girls (Gilman & Huebner, 2003). Other studies indicate that adolescent girls exhibit significantly lower levels of subjective well-being and experience more internalizing

mental health issues compared to adolescent boys (Goldbeck et al., 2007; Moksnes & Espnes, 2013). Recent research spanning 73 countries has supported this finding (Campbell et al., 2021).

Based on the information above, it is important to control for gender, and whether potential gender inequities in well-being endure across time (Joshanloo & Jovanović, 2020). Gender is also included as a covariate in the current study.

The Current Study

This study aims to explore the life satisfaction dimension of well-being, by analyzing whether GSE and CRP have a predictive effect on the development of well-being during adolescence. It is of importance to examine this effect because of the great impact GSE and CRP can have on adolescents' quality of life, as research indicates that both variables are two of the most prominent predictors of well-being (Guevara et al., 2021; Seim et al., 2021). This longitudinal study aims to be a contributor in decreasing the research gaps in the field, by providing further evidence for GSE and CRP as predictors of well-being, in addition to understanding of how these constructs correlate over time. The study also considered gender as a covariate, as this has rarely been included in similar studies (Banati & Bacalso, 2021).

The current study investigated predictors of the development of well-being in adolescents from 14 to 18 years of age. The effects of CRP and GSE at the ages of 12, 14 and 16 on subsequent well-being (i.e., ages 14, 16, and 18, respectively) were examined. Based on the reviewed literature, this study tested the following hypotheses, while controlling for the effects of family functioning, parental mental health, gender, and for previous levels of well-being:

H1: Higher levels of global self-esteem will be related to better well-being two years later (at ages 14, 16, and 18).

H2: Higher levels of conflicted relationship with mother and father will be related to lower levels of well-being two years later (at ages 14, 16, and 18).

Methods

Participants and Procedure

The Trondheim Early Secure Study (TESS) conducted by Wichstrøm et al. (2012), includes children of the 2003 and 2004 birth cohorts in Trondheim, Norway. In total, 3,456 children were invited to participate. Initially, an invitation letter, along with the Strengths and Difficulties Questionnaire (SDQ) version 4–16 (Goodman et al., 2000), were sent to the children's homes. Out of the total number of invited children, 3,358 (Figure 1) of them participated at their routine health check-up at the age of 4. Parents were informed about TESS by a healthcare professional, following ethical guidelines from the Regional Committee for Medical and Health Research Ethics in Mid-Norway, and written consent was obtained from the parents (n = 2,475).

In order to increase statistical power, children were grouped into four categories based on their SDQ score (0–4, 5–8, 9–11, 12– 40). The likelihood of selection increased with higher SDQ scores, with selection probabilities of 37%, 48%, 70%, and 89% for the respective score categories. This oversampling of children with potential mental health problems was accounted for in the data analyses. Out of the 1,250 children randomly chosen for the study, 1007 (Figure 1) participated at Time 1 (M_{age} = 4.7 years, SD = 0.30; 49.1% boys) (Morken et al., 2021). The drop-out rate after obtaining consent at the well-child clinic was consistent across SDQ scores (p = .86) and gender (p = .31). Retesting took place biennially from age 6 to age 18. For further information about the sample and procedure, see Steinsbekk and Wichstrøm (2018).

The analytical sample used in this study consisted of 514 participants across four waves of data collection (T5, T6, T7, and T8), in which the participants were 12 (M_{age} = 12.49, SD = 0.16, 51.7% girls, 48.3% boys), 14 (M_{age} = 14.35, SD = 0.16, 52.9% girls, 47.1% boys), 16 (M_{age} = 16.98, SD = 0.31, 55.0% girls, 44.9% boys), and 18 (M_{age} = 18.60, SD =

0.24, 56.0% girls, 44.0% boys) years of age, respectively. Thus, across these waves, the sample (N = 514) consisted of 45.33% males and 54.67% females. Further sociodemographic characteristics of the sample can be found in Table 1. The Regional Committee for Medical and Health Research Ethics approved the study.

Attrition analyses for our analytical sample (N = 514) accounted for participants who discontinued their involvement in a study before it was completed, leading to incomplete data or missing data points. Attrition at T6 was predicted by CRPF (conflicted relationship with father) at T5 (OR = .88, 95% CI [.777, .997], p = .045). This indicates that participating adolescents who did not have a conflicted relationship with their father had a greater likelihood of dropping out of the study. Attrition at T6 was also predicted by family functioning (OR = .25, 95% CI [.106, .578], p = .001) and parental mental health (OR = .93, 95% CI [.881, .991], p = .024) at T5. For family functioning, the analysis revealed that those who reported lower quality of family functioning were of higher risk of dropping out of the study. For parental mental health, participants who had parents with fewer mental problems were of higher risk of dropping out of the study. Attrition at T7 was predicted by gender (OR = .51, 95% CI [.296, .867], p = .013), indicating that boys were of greater risk of dropping out of the study than girls. Attrition at T7 was also predicted by CRPM (conflicted relationship with mother) at T6 (OR = 1.10, 95% CI [1.010, .1.209], p = .030) and by CRPF at T6 (OR = .86, 95% CI [.777, .959], p = .006), indicating that participating adolescents with conflicted relationship with their mother, and participants who did not have conflicted relationship with their father, were of higher risk of dropping out of the study. Family functioning was also a predictor for attrition at T7 (OR = .38, 95% CI [.200, .726], p = .003), meaning that participants who reported lower quality of family functioning were of higher risk of dropping out of the study. There were no significant predictors for attrition at T8 (no study variables at T7 nor gender).

Figure 1

Flow Chart of Recruitment and Follow-Up

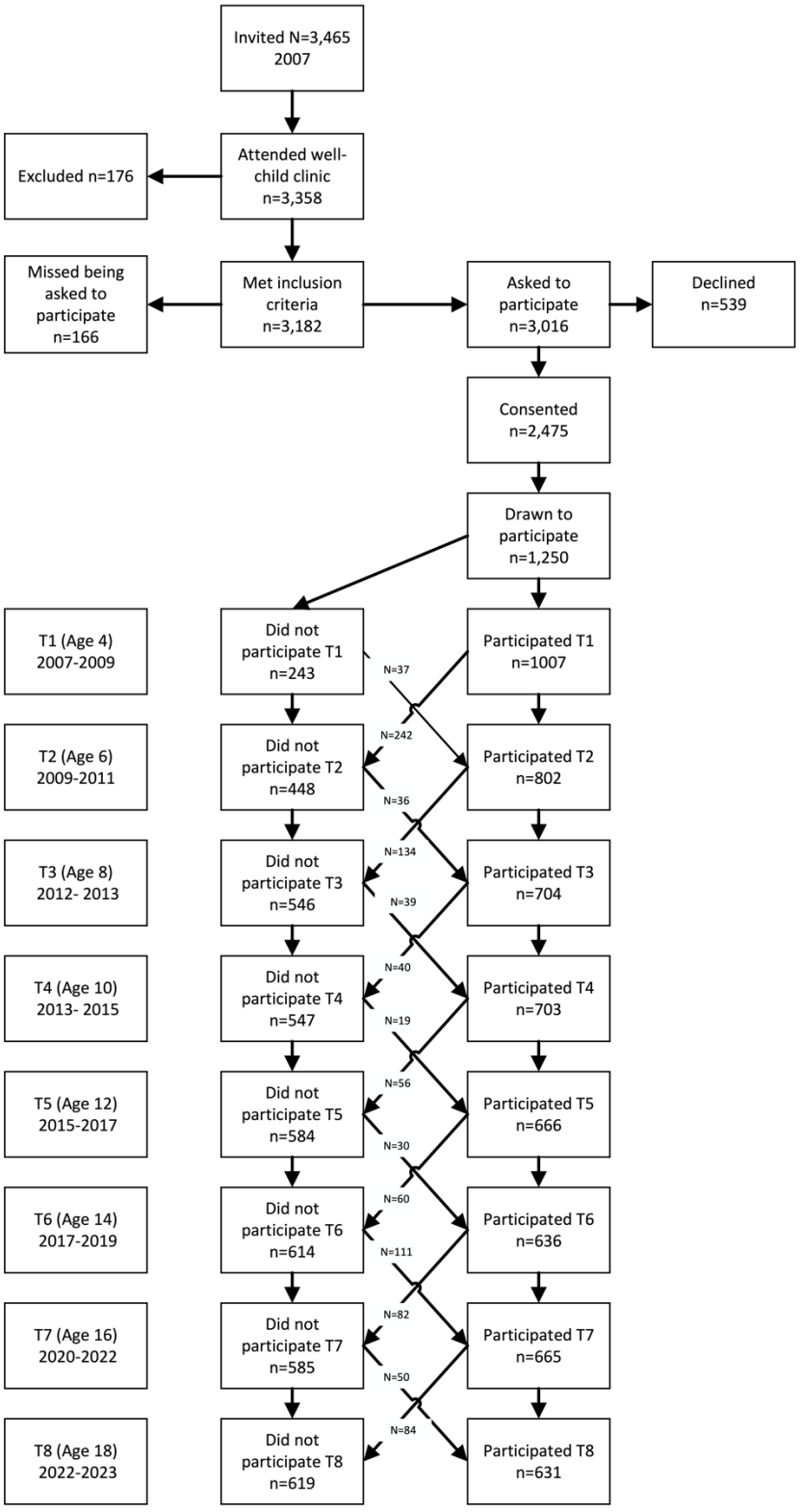


Table 1

Sample Characteristics and Descriptives

Characteristics	% (*n* = 514)
Male	45.3
Female	54.7
Ethnic origin of biological mother	
Norwegian	93.0
Other countries	7.0
Ethnic origin of biological father	
Norwegian	90.7
Other countries	8.3
Biological parent's marital status	
Married	59.3
Separated/divorced	14.0
Widowed	0.1
Cohabitating > 6 months	24.3
Cohabitating < 6 months	0.4
Never lived together	1.9
Informant parent's socioeconomic status	
Leader	22.4
Professional, higher level	37.1
Professional, lower level	27.6
Formally skilled worker	12.3
Farmer/fishermen	0.2
Unskilled worker	0.5

Measures

Well-Being

Well-being was measured using a 6-item questionnaire developed for the UK Millennium Study/British Household Panel Study (Connelly & Platt, 2014; Taylor et al., 2010). The questionnaire is called the Youth Well-Being Questionnaire, and includes six dimensions of well-being, tailored to children (see Appendix). These dimensions encompass school life, family, friendships, academic performance, self-image, and overall life satisfaction. Children express their degree of happiness in each of these domains on a 7-point scale, ranging from *not at all happy* to *completely happy*. An example item is "How do you feel about your family?". The scores are averaged to reflect their overall well-being (Patalay & Fitzsimons, 2016). Higher scores indicate higher levels of well-being. The internal consistency of the well-being scale was found to be good (T6 $\alpha = .80$; T7 $\alpha = .80$; T8 $\alpha = .77$).

Global Self-Esteem

GSE was measured through a subscale of the Revised Self-Perception Profile for Adolescents (SPPA-R; Harter, 1988; Wichstrøm, 1995), consisting of five items rated on a 4-point Likert scale. The rating scale ranged from *describes me very well* to *describes me very poorly.* An example is "I am not happy with the way I look", reflecting global self-esteem as the evaluation of how much a person likes oneself, or is happy with oneself (Harter, 1999). The results of the computed Cronbach's alpha coefficients indicated acceptable to excellent levels of internal consistency, with alpha values of .75 at T5, .84 at T6, and .86 at T7. To minimize response bias, the items of positive value were reverse coded, while the items of negative value were kept in their original form. The total score after recoding positive items indicates level of self-esteem, with higher scores indicating higher levels of self-esteem.

Conflicted Relationship with Parents

CRP was measured through the Network of Relationships Inventory (NRI; Furman &

Buhrmester, 1985). The NRI measures children's perceptions of their relationships with their mother, father, and teacher at each assessment point. The analyses of this thesis specifically focused on responses related to the mother and father relationships, excluding teacher-related responses. The subscale of the NRI that is utilized in the TESS comprises 12 items across four subdimensions: antagonism, conflict/quarreling, satisfaction, and emotional support, with each scale consisting of three items. This thesis focused on conflicted relationships, thereby only including the antagonism and conflict/quarreling subscales (and excluding satisfaction and emotional support). Participants rated each item on a 5-point Likert scale ranging from *almost never/not at all/very bad* to *almost always/very much/very good*. An example of a conflict scale item is "How often do you and this person disagree and quarrel with each other?". Higher scores indicate higher levels of conflict within the parent-adolescent relationship. Cronbach's alpha values for NRIM (scale for conflicted relationship with mother) were .91 at T5, .91 at T6, and .91 at T7. Values for NRIF (scale for conflicted relationship with father) were .91 at T5, .91 at T6, and .93 at T7. All values are considered excellent.

Family Functioning

Family functioning was measured using the McFaster Family Assessment Device (FAD; Epstein et al., 1983). The participating adolescents' parents completed the General Functioning Scale (Epstein et al., 1983), a subscale of the FAD, which comprises 12 items (see Appendix). This subscale assesses various aspects of emotion expression within the family, acceptance, reciprocated support, and decision-making processes within the family. Items were rated on a 4-point scale, ranging from *strongly agree* to *strongly disagree*. Items for family functioning were recoded, so that higher scores indicate more adaptive family functioning. One example item is "We can look for support in each other in times of a crisis".

Cronbach's alpha values for FAD were .87 at T5, .88 at T6, and .87 at T7, all considered good to excellent values.

Parental Mental Health

Parental mental health was measured through the Hopkins Symptom Checklist 25 (HSCL-25; Mollica et al., 1987). This questionnaire is derived from the 90-item Symptom Checklist (SCL-90; Derogatis et al., 1974), and evaluates symptoms of anxiety and depression based on reports from the parents. The HSCL-25 is an effective screening method for assessing psychiatric symptoms of depression and anxiety. This instrument comprises two subscales: a 10-item subscale for anxiety and a 15-item subscale for depression. Respondents rate each item on a 4-point Likert scale, ranging from *not at all* to *extremely*. The questions pertain to the experiences of the past month, and examples of these items are "Suddenly scared for no reason", or "Feeling tense or keyed up". Items for depression and anxiety were averaged, as to have an overall score of parents' internalizing symptoms. Cronbach's alpha values for the HSCL-25 were .90 at T5, .90 at T6, and .90 at T7, all considered excellent values.

Data Analyses

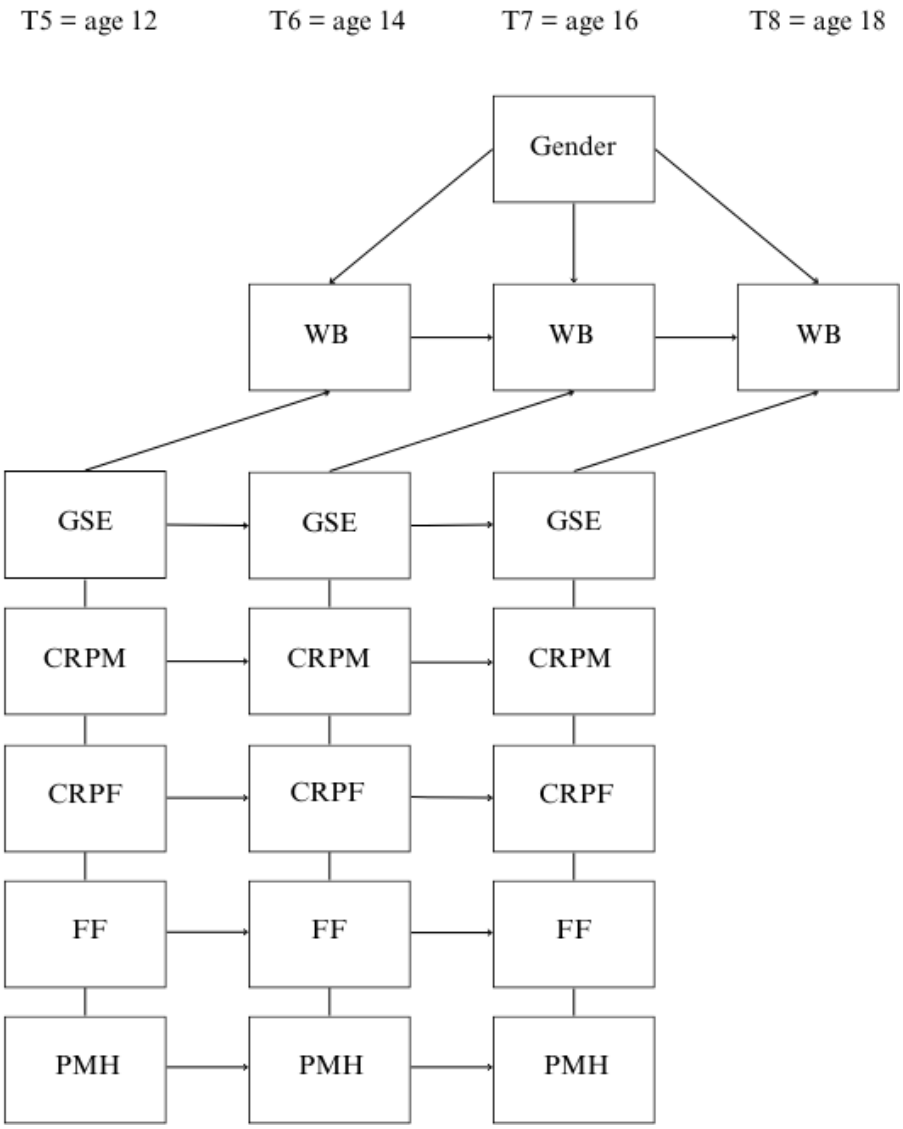
To examine the hypotheses, multivariate regression within the Structural Equation Modeling (SEM) framework was employed. All analyses were conducted together with my supervisor in Mplus 8.5 (Muthén & Muthén, 2017), using a robust maximum likelihood estimator that can handle non-normality. The original sample embodied a higher representation of children with potential mental health problems. Hence, probability weights were included in the analyses to address the oversampling of children with mental health issues. By weighting the variables, we arrived at population estimates. Missing data were handled by using a full information maximum likelihood (FIML) procedure, assuming that the data were missing at random (MAR; Ullmann, 2001).

To evaluate model fit, we employed the following indices: the χ^2 test, the root mean square error of approximation (RMSEA), comparative fit index (CFI), the Tucker-Lewis Index (TLI), and the standardized root mean square residual (SRMR). For RMSEA, values of .08 are considered acceptable, whilst values of .05 or below indicate good model fit. CFI/TLI values of .90 is considered acceptable, whilst a value of .95 or above is considered indicating good model fit. SRMR values of .10 indicated acceptable fit, and values of .05 or below indicate good model fit (Browne & Cudeck, 1992; Hu & Bentler, 1999; Kline, 2023).

In order to assess development in well-being (i.e., stability) across time periods, we analyzed whether earlier well-being (T6 and T7) could predict later well-being (T7 and T8, respectively) (i.e., autoregressive paths). We also checked for a possible sleeper-effect in the well-being variable, thereby partially accounting for measurement error. Therefore, we analyzed whether well-being (T6) could predict well-being (T8). In order to test the hypotheses, we analyzed the prospective effects of GSE, CRPM, and CRPF (at T5, T6, and T7) on subsequent well-being (at T6, T7 and T8, respectively). Family functioning, parental mental health, and gender were included in the model as covariates. To see whether family functioning and parental mental health have an effect on well-being at the different time periods, we allowed for autoregressive paths and analyzed whether family functioning and parental mental health (T5) could predict well-being (T6), and so on. All predictors were auto regressed, and all variables were correlated (Figure 2).

Figure 2

Conceptual Figure of the Analytical Model



Note. Well-being was regressed on all predictors from the prior timepoint (i.e., t-1), with correlations being allowed between these predictors. WB = well-being, GSE = global self-esteem, CRPM = conflicted relationship with parents (mother), CRPF = conflicted relationship with parents (father), FF = family functioning, PMH = parental mental health.

Results

Descriptive Analyses

Means and standard deviations for all study variables at ages 12, 14, 16, and 18 are presented in Table 2, whereas Table 3 shows the zero-order bivariate correlations between the variables. There were fewer participants responding to the measures of all the main variables (well-being, GSE, and CRP) for each passing time point (Table 2). Using omnibus Wald test, well-being significantly decreased for each passing time point (Wald = 17.821, $df = 2$, $p < .001$). The same trend was observed for GSE (Wald = 307.214, $df = 2$, $p < .001$). Regarding the responses from the CRPM (Wald = 19.584, $df = 2$, $p < .001$) and CRPF (Wald = 27.090, $df = 2$, $p < .001$) measures, there was a significant increase in mean scores for each passing time point.

A Pearson correlation coefficient was computed to evaluate the relation between well-being at all three time points and the predictor variables at all time points (see Table 3). Higher levels of well-being were correlated with higher levels of GSE and with lower levels of CRPM and CRPF at all time points. Notably, a strong positive correlation was found between GSE at age 16 and well-being at age 16. There was a significant but weak and negative relation between CRPM at age 16 and well-being at age 16. Higher levels of CRPF at age 14 were correlated with lower levels of well-being at age 14. The same relation was found between CRPF at age 16 and well-being at age 16. All other variables were also significantly related to well-being at all three time points, with the exceptions of family functioning at age 16 and well-being at age 14, parental mental health at age 16 with well-being at ages 14 and 18, and gender at age 18.

Table 2

Descriptive Statistics of the Study Variables

		Variable Scores			
Variable	*n*	*M*	*SD*	*Min*	*Max*
WB6	505	34.71	5.14	13	42
WB7	503	33.63	5.49	11	42
WB8	444	33.55	5.44	11	42
GSE5	505	3.59	0.44	1	4
GSE6	508	3.28	0.59	1	4
GSE7	489	3.08	0.62	1	4
CRPM5	509	11.73	4.03	6	29
CRPM6	506	12.44	4.29	6	26
CRPM7	500	12.83	4.50	6	30
CRPF5	506	11.38	4.04	6	28
CRPF6	502	11.98	4.13	6	29
CRPF7	492	12.38	4.55	6	29
FF5	514	3.43	0.39	2	4
FF6	514	3.39	0.39	1	4
FF7	514	3.31	0.39	2	4
PMH5	514	29.54	6.65	23	78
PMH6	514	30.59	7.27	24	69
PMH7	514	31.12	7.27	24	71
G	514	1.56_a		233_b	281_c

Note. WB = well-being, CRPM = conflicted relationships with parents (mother), CRPF = conflicted relationships with parents (father), GSE = global self-esteem, FF = family functioning, PMH = parental mental health. Gender was coded as 1 = male, 2 = female; a = mean, b = number of males, c = number of females.

Table 3

Zero-Order Bivariate Correlations Between Well-Being and Predictor Variables at All Three Time Points (N = 514)

	Well-Being Age 14	Well-Being Age 16	Well-Being Age 18
GSE Age 12	.26**	.22**	.15**
GSE Age 14	.67**	.42**	.29**
GSE Age 16	.37**	.69**	.43**
CRPM Age 12	-.21**	-.13**	-.14**
CRPM Age 14	-.27**	-.21**	-.16**
CRPM Age 16	-.17**	-.30**	-.21**
CRPF Age 12	-.14**	-.11*	-.13**
CRPF Age 14	-.26**	-.24**	-.22**
CRPF Age 16	-.15**	-.26**	-.18**
FF Age 12	.11**	.15**	.12**
FF Age 14	.16**	.14**	.15**
FF Age 16	.04	.13**	.12*
PMH Age 12	-.12**	-.12*	-.11**
PMH Age 14	-.13**	-.14**	-.09*
PMH Age 16	-.07	-.12*	-.05
Gender	-.12**	-.11*	-.03

Note. Weighted correlations with Pearson's Correlation Coefficient (*r*). ** <.01, *<.05. GSE = global self-esteem, CRPM = conflicted relationship with parents (mother), CRPF = conflicted relationship with parents (father), FF = family functioning, PMH = parental mental health. Gender was coded as 1 = male and 2 = female.

Main Analyses

The model includes four main variables: GSE, CRPM, CRPF, and well-being (Figure 3). In the regression analysis, the prospective effects of GSE (cfr. Hypothesis 1) and CRP (cfr. Hypothesis 2) at ages 12, 14, and 16 on well-being two years later (i.e., at ages 14, 16, and 18

respectively) were examined, while accounting for the influence of gender, family functioning, and parental mental health at each time point. The proposed SEM model demonstrated acceptable fit to the data, as indicated by several fit indices. The model produced a significant chi-square statistic ($\chi^2 = 199.06$, $df = 105$, $p < .000$), with an acceptable value of 1.90 (Hu & Bentler, 1999). The model also produced an acceptable SRMR value of .07; RMSEA value of .04; CFI value of .95; and a TLI value of .94.

The results are summarized in Table 4. Higher levels of CRPM at age 12 predicted lower levels of well-being at age 14. Higher levels of GSE at age 12 predicted higher levels of well-being at age 14. Parental mental health at age 12 and gender emerged as significant covariates in predicting well-being at age 14. Specifically, higher levels of parental mental health at age 12 exhibited a negative effect on well-being at age 14, while the negative effect of gender indicate that girls experienced lower levels of well-being compared to boys. However, family functioning did not demonstrate a significant predictive effect on well-being at this timepoint.

Moving forward to age 16, the results indicated that the only significant predictor for well-being was GSE at age 14, with a positive effect observed (see Table 4). Furthermore, higher levels of well-being at age 14 displayed a predictive effect (autoregression) on higher levels of well-being at age 16. CRP, family functioning, parental mental health at age 14, and gender, did not exhibit significant effects on well-being at this particular timepoint.

Similarly, higher levels of GSE at age 16 was the sole significant predictor for higher levels of well-being at age 18 (see Table 4). Additionally, higher levels of well-being at age 14 and well-being at age 16 (autoregressive and sleeper effects) predicted higher levels of well-being at age 18. Once again, CRP, family functioning, parental mental health, and gender did not yield significant effects on well-being at this timepoint.

As for the correlations within the analytical model, GSE at age 14 was positively correlated with WB at age 14 (β = .629, $p < .001$). The same positive correlation was found at age 16 (β = .638, $p < .001$). Furthermore, WB at age 14 was negatively correlated with both CRPM (β = -.196, $p < .001$) and CRPF (β = -.277, $p < .001$) at age 14. WB at age 16 was also negatively correlated with CRPM (β = -.262, $p < .001$) and CRPF (β = -.185, $p < .001$) at age 16. As for the correlations between the predictors, GSE at age 14 was negatively correlated with CRPM (β = -.240, $p < .001$) and CRPF (β = -.267, $p < .001$) at age 14. GSE at age 16 was also negatively correlated with both CRPM (β = -.177, $p < .001$) and CRPF (β = -.134, $p < .001$) at age 16.

Table 4

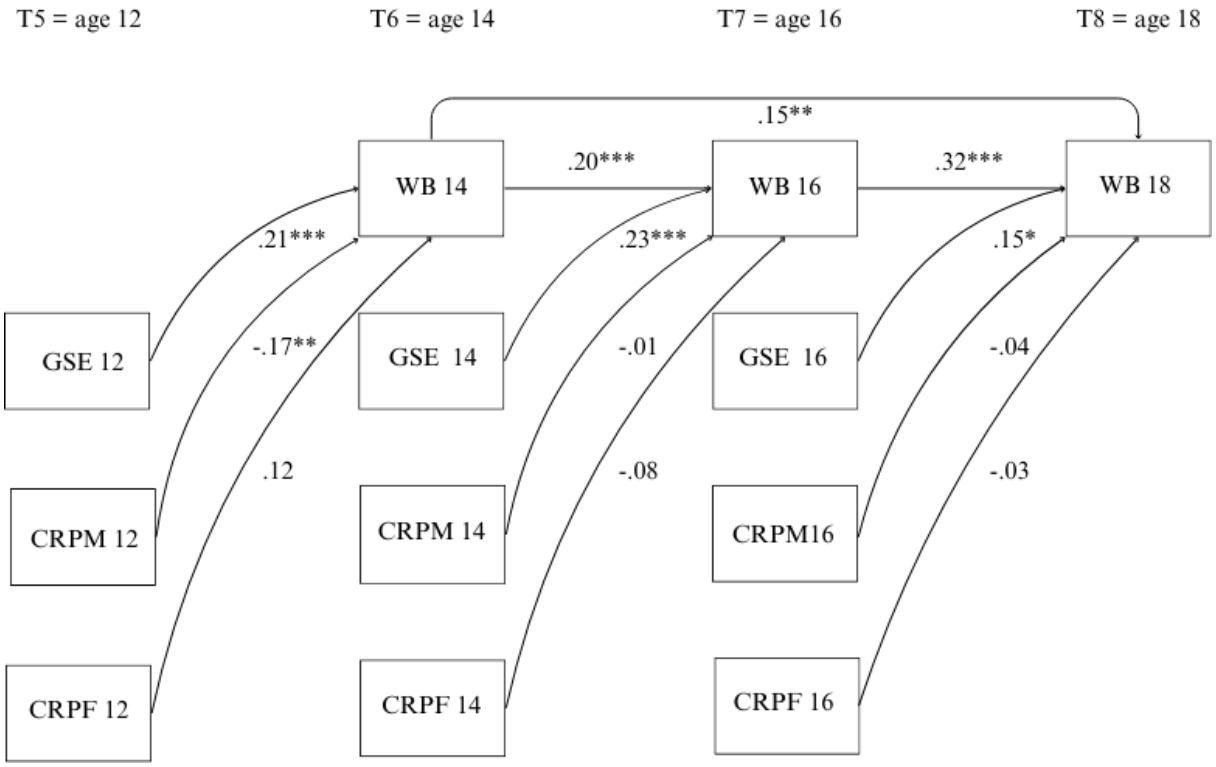
Standardized Estimates from a Structural Equation Model Predicting Well-Being at Ages 14, 16, and 18.

Predictors of Well-Being	β estimate	*p-value*
Well-being age 18		
Well-being age 16	.32	.000
Well-being age 14	.15	.005
GSE age 16	.15	.022
CRPM age 16	-.04	.574
CRPF age 16	-.03	.671
Family functioning age 16	.07	.236
PMH age 16	.02	.692
Gender	.03	.556
Well-being age 16		
Well-being age 14	.20	.000
GSE age 14	.23	.000
CRPM age 14	-.01	.897
CRPF age 14	-.08	.303
Family functioning age 14	.05	.160
PMH age 14	-.07	.054
Gender	.02	.547
Well-being age 14		
GSE age 12	.21	.000
CRPM age 12	-.17	.006
CRPF age 12	.18	.071
Family functioning age 12	-.00	.916
PMH age 12	-.07	.044
Gender	-.11	.011

Note. $N = 514$. CRPM = conflicted relationships with parents (mother), CRPF = conflicted relationships with parents (father), GSE = global self-esteem, PMH = parental mental health. Gender is coded as 1 = male, 2 = female.

Figure 3

Model of Main Results. GSE and CRP as Predictors of Well-Being at Ages 14, 16, and 18



Note. WB = well-being; CRPM = conflicted relationship with parents (mother); CRPF = conflicted relationship with parents (father); GSE = global self-esteem. Control variables that did not predict WB were excluded from this illustration, for simplification, as were the correlation paths. *$p < .05$. **$p < .01$. ***$p < .001$.

Discussion

The general purpose of this study was to examine the longitudinal effects of global self-esteem (GSE) and conflicted relationships with parents (CRP) on adolescent well-being from ages 14 to 18, while considering factors such as family functioning, parental mental health, and gender. This study aimed to fill the gap in the literature by providing longitudinal evidence on the associations between self-esteem, conflicted relationships, and adolescent well-being over time. By focusing on the development of well-being during adolescence, the study contributes valuable insights for theory and practice in adolescent psychology, with the

potential to inform interventions tailored to support adolescents' development and enhance their overall quality of life.

The main findings of this study indicated that the development of well-being in adolescents between the ages of 14 and 18 were significantly predicted by their relationship with their mothers (CRPM) and their own self-esteem (GSE). Specifically, CRPM at age 12 was found to have a negative predictive effect on well-being at age 14, whereas adolescent GSE at ages 12, 14, and 16 positively predicted their well-being at ages 14, 16, and 18 respectively.

According to the results of this study, adolescents' GSE consistently contributed positively to well-being throughout adolescence, indicating the importance of fostering positive self-perceptions for overall psychological health and functioning during this developmental period. As implied by numerous studies, enhancing self-esteem is seen as crucial for improving adolescents' overall quality of life, mental well-being, and happiness (Orth & Robins, 2014). Earlier levels of self-esteem is a longitudinal predictor for later adolescent well-being (Gomez-Baya et al., 2020; Katsantonis et al., 2023). This was also confirmed by this study, as GSE was the main significant predictor for well-being at all three time points.

Regarding the predictive effect of GSE on adolescent well-being, the Broaden-and-Build Theory of Positive Emotions (Fredrickson, 2001) could offer a theoretical explanation for this finding. Fredrickson (2001) proposed that positive emotions expand individuals' momentary thought-action possibilities, contributing to the development of enduring personal resources across various domains, from physical to intellectual to social and psychological. She posited that positive emotions play a key role in fueling and cultivating psychological resilience and enhancing emotional well-being by fostering flexible and creative thinking, facilitating coping mechanisms, and broadening attention and cognitive capacities. Regarding

self-esteem, it has been suggested that it may influence human behavior in various contexts, such as life events, social relationships, goal-setting, and motivation (Robins et al., 2001). Consequently, self-esteem could potentially regulate levels of adolescent well-being. Adolescents as an age group are thought to reflect a society's future productive powers, therefore their well-being may be highly important as it might encourage protectiveness and resilience (Burt, 2002).

The result of CRPM predicting later well-being suggests that the quality of the relationship between adolescents and their mothers plays a role in promoting their well-being during early adolescence, with negative effects persisting over time. The results showed CRPM at age 12 as a significant predictor for well-being at age 14, whereas CRPF did not have a significant predictive effect on well-being at the respective time points. Nevertheless, both the correlational analyses within the model and the zero-order bivariate correlational analyses found a negative (but weak) correlation between well-being at all ages and both CRPM and CRPF at all ages. A study conducted by Hadiwijaya et al. (2017) found that 14% of younger adolescents (age 12) reported conflicted relationships with their parents. This number increased to 29% mid adolescence (age 16) and decreased again to 10% later in adolescence (age 20). In comparing this study with the results from the current study, the strongest and significant correlational relationships between well-being and CRP (for both mother and father) were found at age 16, which can be categorized as mid adolescence. This is in line with the findings of Hadiwijaya et al. (2017), as their responding adolescents reported higher levels of conflict during mid adolescence compared to earlier and later stages of adolescence. Previous studies have highlighted variation in the frequency of conflict with different family members, in which adolescents report higher rates of conflict with mothers than they do with fathers (Laursen & Collins, 1994; Tucker et al., 2003). Conflict between adolescents and their mothers, especially mother–daughter conflict, tend to be more intense

than conflict between adolescents and fathers (Eisenberg et al., 2008). This is hypothesized to be a result of adolescents' relationships with their mothers tending to be closer than those with their fathers (Richardson et al., 1984). This could be a reason for why only conflict with the mother was significant. Why this result was significant at only one timepoint (at 14 years of age), might be partially explained by the findings by Hadiwijaya et al. (2017), in which parent-adolescent conflict showed to reach its peak during mid adolescence. It could also be explained by the limitation of the study not controlling for previous levels of well-being, as we did for later time points.

The fact that the results showed GSE to be of greater significance than CRP in predicting adolescent well-being, could be explained by GSE being an internal factor, whereas CRP is an external factor. This means that one could hypothesize that a trait that is part of one's personality such as self-esteem (Anusic & Schimmack, 2016), would have a larger effect on their subjective well-being than an external problem, such as conflicted relationships. Studies have found that self-esteem in terms of perceived mastery and dispositional optimism (considered internal factors) is positively related to adolescent well-being and happiness, and a positive relationship with their parents (considered an external factor) was also positively related to adolescent well-being and happiness, but the strength of the correlation was slightly weaker in the latter relation (Ben-Zur, 2003). GSE also tend to be a more stable trait (Orth & Robins, 2014), whereas conflict within the family can vary periodically (Silva et al., 2020).

Parental mental health at age 12 was a significant covariate in predicting well-being at age 14, which aligns with results from previous research (Giannakopoulos et al., 2009; Powdthavee & Vignoles, 2008). While many children with a mentally ill parent demonstrate resilience and thrive, others struggle. Consequently, comprehending the impact of parental mental illness on their children's development is crucial for mitigating the risk of internalizing

and externalizing issues (Van Loon et al., 2014). Studying factors that explain the relation between adolescent and parental mental health is therefore important, as these explanatory factors can contribute to the development of preventive interventions.

Although research on gender differences in adolescent well-being are generally inconclusive (Chen et al., 2020; Gilman & Huebner, 2003), this study's results of gender as a covariate in predicting well-being at age 14 were significant. As the significant effect of gender was negative, the results indicate that girls experience lower levels of well-being compared to boys. It is nevertheless worth mentioning that the effect was significant, but small. Similarly, the correlational analyses revealed significant, yet very weak, relationships between gender and well-being at ages 14 and 16, and a non-significant relationship between gender and well-being at age 18.

A frequently cited explanation in the literature regarding the origins of gender disparities in adolescent mental health suggests that boys tend to have greater psychological resources, such as mastery and self-esteem, offering protective effects on mental well-being (Powdthavee & Vignoles, 2008). Hence, these results imply that adolescent males might possess enhanced abilities in managing and adjusting to mental challenges compared to females (Cyranowski et al., 2000). Nevertheless, as this study controlled for levels of self-esteem, meaning that the effect of gender was independent of the effect of GSE, there must be another explanation connected to gender. This explanation might be, as previously noted, that boys might cope better, or are less vulnerable than girls, to negative life events. Consequently, one could hypothesize that boys, at the same age, might be more skilled in handling adverse emotional signals from parents more effectively than their female counterparts, resulting in a comparatively lesser impact on their overall life perception (Cyranowski et al., 2000).

Another perspective addresses the possibility of this disparity being related to pubertal development and different hormonal changes in boys compared to girls. Although the

literature rarely finds large gender disparities in adolescent well-being, there are studies that aim to explain the significant gender differences in depression. As children transition into adolescence, there is a noticeable increase in depression among girls (Morken et al., 2023; Salk et al., 2017). One explanation suggests that this could be due to girls experiencing more stress (Stress Exposure Model; Hankin et al., 2007), while another theory proposes that girls may become more susceptible to the effects of stress (Stress Reactivity Model; Hammen et al., 2008) compared to boys during adolescence. Morken et al. (2023) suggested that while girls and boys may experience similar levels of stress exposure, girls may be more affected by these stressors, contributing to the higher prevalence of depression among females (Morken et al., 2023). This aligns with the stress reactivity model, indicating that the impact, rather than the mere exposure, of stressors may play a significant role in explaining the increased vulnerability of girls to depression during adolescence. As girls tend to be more susceptible to stress and depressive symptoms, this could be an explanation for the gender disparities in well-being found in this study.

Non-significant results of family functioning might be partially caused by daily fluctuations and variation, that is not necessarily representative for the overall general level of functioning (Fosco & Lydon-Staley, 2020; Silva et al., 2020). Another aspect to consider is that the quality of family functioning was based only on parental reports, which might differ from adolescents' perception.

Another possible explanation for non-significant results for the family relevant variables such as family functioning and parental mental health (except for parental mental health at age 12 predicting well-being at age 14), might be the similarity between the variables. The main variable CRP might already capture the factor of conflict/communication of the family, and therefore the covariate family functioning does not provide additional effect on top of this. Research indicates that families with a mentally ill parent tend to experience

higher levels of conflict compared to those without (Sarigiani et al., 2003). In the correlational analyses, the weakest significant and non-significant relationships were also found between well-being and family functioning, and well-being and parental mental health. One could suggest that after controlling for conflict, the presumably significant effects of parental mental health might disappear (might be explained/mediated by conflict), but this is just a speculation.

As mentioned in the descriptive statistics of the study variables, there was a significant decrease in mean scores for both well-being and GSE for each passing time point. This is indicating a decrease in both well-being (from age 14 to 18) and self-esteem (from age 12 to 16). Conversely, the mean scores for both CRPM and CRPF increased significantly for each passing time point, indicating an increase in conflict with both parents from the adolescents were 12 to 16 years old. The increase in conflict with parents and the decline in well-being and self-esteem among these adolescents may stem from a complex interplay of developmental, relational, and contextual factors. One possible explanation is the inherent challenges and stressors associated with the developmental stage of adolescence. As adolescents navigate the transition to adulthood, they may face heightened levels of stress and conflict within familial relationships (Branje, 2018; Spear, 2009). Additionally, as adolescents strive for greater autonomy and independence, conflicts with parents over issues such as rules, boundaries, and decision-making may naturally escalate (La Guardia & Ryan, 2002). Since the correlational analyses of CRP and well-being only provided weak correlations, there might be other predictors that could hypothetically cause this change. One factor could be peer conflict, as being a larger contributor in predicting adolescent well-being than family conflict. Throughout adolescence, peer relationships becoming increasingly important (Hazan et al., 1994), and the quality of these peer relationships is particularly beneficial for adolescent well-being (Tomé et al., 2014). Some studies indicate that during adolescence, the

quality of peer relationships may surpass that of parental relationships in significance (Furman & Buhrmester, 1992). This suggests that the positive impacts of peer relationships on mental health may outweigh those of parental relationships (Hazan & Shaver, 1994).

Limitations

The present study's main strength is the utilization of data collected from multiple waves, collected from a large community sample. The combination of a longitudinal design and a large sample size offers numerous methodological advantages, such as enhancing statistical power, ensuring generalizability and stability of findings, and enhancing the ability to explore complex relationships, whilst accounting for individual differences. Unlike cross-sectional designs, longitudinal designs can study prospective relations, but one cannot draw causal conclusions. Even so, the results of this study should be viewed considering some limitations.

During the process of analyses, it was debated whether to include other covariates, such as parental marital status (divorce), socioeconomic status, and negative life events (SLE; stressful life events) but decided not to include these due to the already large number of variables in relation to the extent of this thesis, in addition to the variables producing non-significant results and debilitating the fitness of the model. Interparental conflict was also a variable of interest for a long time but was excluded as it was too similar to the variable CRP and family functioning. Nevertheless, one cannot exclude the possibility that we have not controlled for all confounding variables that could affect our results.

There are no data on well-being in the reports from TESS (T5), in which the children were 12 years old at that time point. This is a limitation because we do not control for autoregression from 12 to 14. If we had, we could not exclude that effects of variables at age 12 would be weaker.

For the variable CRP, the reports on the parent-adolescent relationships were only based on the adolescent's perception of the relationship, and not the parents' perception. There might be incongruence in how the two parts view the intensity and frequency of conflict in their relationship (Korelitz & Garber, 2016; Mastrotheodoros et al., 2020). It can therefore be considered a limitation within this study that the parents' reports on CRP were not included. Nevertheless, the parents' perception of the family was included in the covariate family functioning.

Analyses on data collected from children are often resulting in low effects, due to the fact that there are numerous complex factors that may affect children's mental and physical state (Spear & Kulbok, 2001). Adolescents often base their reported subjective well-being heavily on their current mental state (Cservenka et al., 2015). This tendency arises from their inclination to place significant emphasis on immediate events or emotions, assigning them greater importance in assessing their overall well-being compared to older individuals (Cservenka et al., 2015). The emotional impacts of puberty combined with the ongoing development of emotional self-regulation during adolescence (Bowers et al., 2011), could affect the adolescent's ability to report one's general mental state as correctly as possible (Duinhof et al., 2015). Inconsistent findings may, among other causes, be a result of this issue. The TESS is also a longitudinal study, which decreases the risk of this aspect, by measuring well-being at different stages in life. Nevertheless, research indicates that employing age-appropriate measures can result in valid and reliable self-report data. Specifically, interactive methods have been found to elicit accurate and dependable responses from children as young as eight years old (Deighton et al., 2014).

Furthermore, adolescents are being raised in increasingly diverse family settings. Murry and Lippold (2018) point out that the traditional notion of a family—married, heterosexual, two-parent households—no longer represents the majority, yet it continues to

serve as the standard against which other family arrangements are measured. Existing research has primarily focused on comparing single-parent (divorced or never-married) families, two-parent biological families, and stepfamilies (Smetana & Rote, 2019). However, there exists a multitude of other family configurations (Smetana & Rote, 2019). The prevalence of diverse family structures is on the rise, warranting further exploration into the dynamics of adolescent-parent relationships and parenting within these contexts. Research should also extend beyond mere comparisons of outcomes across different family types to investigate the underlying processes within each family structure that contribute to adolescent well-being (Murry & Lippold, 2018). Moreover, adolescents frequently undergo transitions as families—of various types—form, dissolve, and reconfigure, necessitating examination of the effects of these transitions on adolescent development and adjustment.

The study did not include explorations of reciprocal relationships, nor relationships on a within-person level. This means that the study did not examine mutual or bidirectional relationships between variables, nor did it analyze relationships at a within-person level over time. Without examining reciprocal relationships, researchers may miss out on understanding how variables influence each other over time and may limit the ability to accurately predict outcomes or behaviors (Farrell, 1994). Variables may interact in complex ways that are not captured when only examining one-directional relationships. This can lead to an incomplete or biased understanding of the underlying dynamics. Examining relationships at a within-person level allows for a deeper understanding of how individuals change over time. Without this analysis, researchers may miss important nuances in behavior or outcomes within individuals (Curran & Bauer, 2011).

There might also be other confounding variables which have not been accounted for in this study, such as genetics. Genetics play a crucial role in shaping individual differences in well-being and other psychological traits (Lee et al., 2020; Pluess, 2015; Rietveld et al.,

2013). Without accounting for genetic factors, it is difficult to isolate the specific effects of self-esteem and conflicted relationship with parents on adolescent well-being. Genetic predispositions may confound or interact with the variables under exploration, leading to biased or misleading results. Failure to control for genetic influences could lead to omitted variable bias (Wilms et al., 2021), where the observed relationships between variables may be attributed solely to self-esteem and conflicted parent relationships, when in fact genetic factors may be driving or moderating these associations.

Implications

Considering the growing body of evidence highlighting the significant real-world implications of self-esteem (Orth & Robins, 2014), the subject of self-esteem development holds substantial societal importance. Interventions in school settings could benefit from implementing mindful awareness practices to help children and adolescents develop resilience to manage multiple mental health risks, that could debilitate their self-esteem and general well-being (National Academies of Sciences & Medicine, 2019). Interventions to improve both well-being and self-esteem that may include elements from positive psychology, mindfulness serving as one example, have been found to work well (Shoshani & Steinmetz, 2014; Weare, 2013).

It is also recommended that future explorations of adolescent well-being should account for the multidimensional nature of familial conflict (Olatunji & Idemudia, 2021). Strategies aimed at improving parental mental health and influencing the behavior, attitudes, and conflict of caregivers can lead to better outcomes for children and adolescents (National Academies of Sciences & Medicine, 2019). These strategies aim to enhance parenting abilities and promote caregiver's mental, emotional, and behavioral health.

The primary objective of this study was to highlight key predictors influencing the development of adolescent well-being. Our findings underscore the significant role of GSE as

a positive predictor of well-being across all three examined time points. The results also showed a negative predictive effect of a conflicted adolescent-mother relationship on the adolescent's well-being. Overall, these findings shed light on the longitudinal associations between self-esteem, conflicted relationship with parents, and well-being across adolescence, highlighting the enduring significance of self-esteem in predicting well-being outcomes over time.

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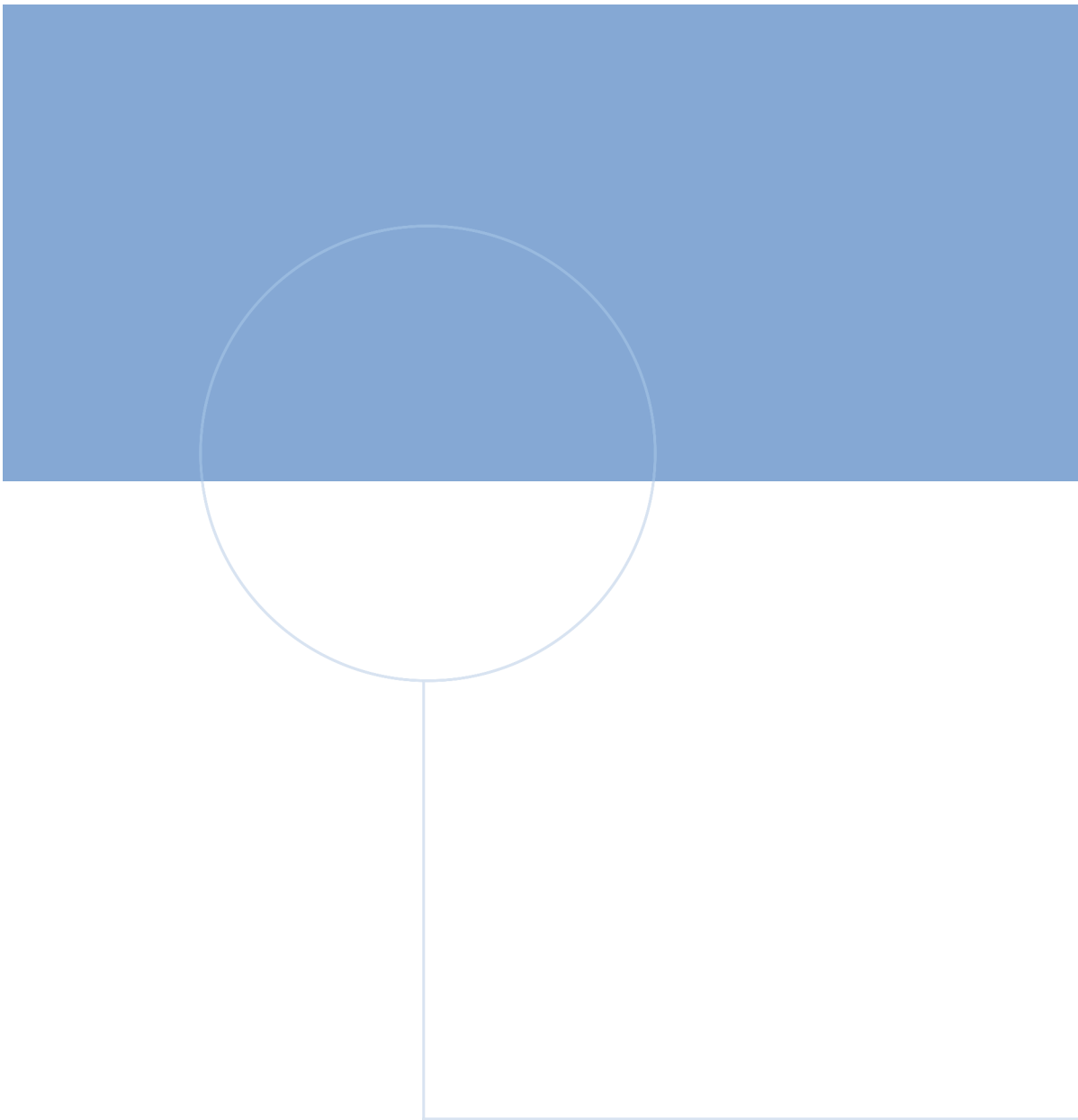
Appendix

Youth Well-Being Questionnaire

On a scale of 1 to 7 where '1' means completely happy and '7' means not at all happy, how do you feel about the following parts of your life?								
		TICK ONE BOX ON EVERY ROW						
		Completely happy						Not at all happy
		1	2	3	4	5	6	7
A	How do you feel about your schoolwork?							
B	How do you feel about the way you look?							
C	How do you feel about your family?							
D	How do you feel about your friends?							
E	How do you feel about the school you go to?							
F	How do you feel about your life as a whole?							

General Functioning Subscale of the Family Assessment Device

Item	
1.	Planning family activities is difficult because we misunderstand each other
2.	In times of crisis we can turn to each other for support
3.	We cannot talk to each other about the sadness we feel
4.	Individuals are accepted for what they are
5.	We avoid discussing our fears and concerns
6.	We can express feelings to each other
7.	There are lots of bad feelings in our family
8.	We feel accepted for what we are
9.	Making decisions is a problem for our family
10.	We are able to make decisions about how to solve problems
11.	We don't get along well together
12.	We confide in each other



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