

Course and Prediction of Emotional and Behaviour Problems in Adopted Children in Germany in the First Years After Placement

Inaugural-Dissertation

zur Erlangung des Doktorgrades der Philosophie

an der Ludwig-Maximilians-Universität

München

vorgelegt von

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aus Ebersdorf

2025

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Tag der mündlichen Prüfung: 17. Februar 2025

dedicated to

ARTHUR and STEFFEN

Acknowledgements

"None of us is a clean sheet of paper. Everyone is carrying their baggage."

(unknown author)

Finalising this dissertation took nearly a decade, starting from my very first steps in the field of adoption research in 2015, which involved countless mistakes, excessive demands, and surprises, but also moments of inspiration and unexpected discoveries. I want to take this opportunity to express my immense gratitude to all those who have given me invaluable support and assistance during this time.

I want to express my utmost gratitude to my research supervisor, Prof. Dr. Sabine Walper, for her sincere and appreciative support, valuable advice, and the establishment of indispensable exchange formats between doctoral candidates and other researchers. I would also like to thank Prof. Dr. Heinz Kindler, who integrated research on adoptive families into his research section and always maintained his clear and professional perspective.

Furthermore, I am deeply grateful for the support from my wonderful mentor, colleague, and friend, Dr. Ina Bovenschen, who motivated and inspired me. Thank you for including me in the DJI and particularly in the EFZA family, and thank you for all the practical and emotional support at each step of this dissertation and my career as a young researcher. Writing every paper together as co-authors immensely shaped me personally and professionally.

Thank you to all my amazing colleagues at the DJI, particularly to Selina Kappler on whom I could always count and who supported and accompanied me through stressful project phases and the hardest times of my life. My thanks also go to Paul Bränzel, Janin Zimmermann, Annabel Zwönitzer, Sabine Heene, Andrea Martin, and all the students who contributed to the study's success.

My thanks also goes to all the participating adoption agencies and adoptive families, who spent their valuable time taking part in this research project and who do an amazing job with the aim to improve the life of the most vulnerable children in our society.

I would like to thank my parents, brother, and sister for believing in me, for putting up with my moods in stressful times, and for convincing me that I could achieve whatever I want. Mum and Dad, thank you for having raised me in an environment full of love and peace and given me resilience, ambition, and strength. I would also like to thank my friends for their support, in particular Maike Wohlfarth and Dr. Theresa Manges for proofreading the draft of this dissertation.

Finally, my heartfelt gratitude goes to my beloved husband, Steffen and my son, Arthur. My dear, I wish you could have been here to go these final steps with me, celebrate this achievement, and enjoy the regained time after finalising this dissertation. I hope you look proudly at me from wherever you are now. Thank you for your unconditioned love, patience, humour, and serenity. I will always carry you in my heart! Arthur, my sweetheart, thank you for being so patient with your mum being busy all the time, writing something in her notebook that must have seemed totally useless from your child's perspective. I hope that I can always be the mum you need – not to prevent every challenge and adversity but to guide you through the difficult moments in your life with all the love, warmth, and grace I have. I sincerely love you!

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Abbreviations

ACE	Adverse Childhood Experiences
ANOVA	Analysis of Variance
APQ	Alabama Parenting Questionnaire
CBCL	Child Behavior Checklist
DJI	Deutsches Jugendinstitut e.V.
EFZA	Expertise- und Forschungszentrum Adoption
FASD	Fetal Alcohol Spectrum Disorder
PSI	Parenting Stress Index
RPQ	Relationship Problems Questionnaire
SDQ	Strengths and Difficulties Questionnaire

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Abstract

Background and study aim. Adoption is often described as an effective intervention for children who cannot remain within their birth families. A wide range of studies have demonstrated that most adopted children are well-adjusted but preadoptive adversity and parental factors can increase the likelihood of emotional and behavioural problems. The present doctoral thesis aimed to investigate the course of adopted children's emotional and behaviour problems and to examine the impact of both preadoptive and postadoptive factors. The analyses further focused on the use of postadoption support and the unmet needs of adoptive families.

Methods. Data were derived from a nationwide longitudinal survey of adoptive families in Germany involving $N = 257$ adopted children (198 domestic adoptions, 59 intercountry adoptions). Wave 1 was conducted between 2016 and 2017; Wave 2 was conducted between 2020 and 2021. The SDQ was used as the major outcome measure assessing emotional and behaviour problems in adopted children. The assessment of preadoptive experiences included a sum score for pre- and perinatal risks, the experience of maltreatment and neglect, and the number of placement changes before adoption. Postadoption variables assessed adoptive parents' parenting behaviour, parenting stress, psychological distress, and parental self-efficacy. The use of and satisfaction with postadoption support services in and outside of adoption agencies was assessed exploratory.

Results. The results of four research articles showed that most adopted children are well-adjusted, and significant differences between nationally and internationally adopted children were found, particularly for behaviour problems at Wave 1. Increases in overall emotional and behaviour problems were found from Wave 1 to Wave 2, and clinical range problems in adopted children persisted from Wave 1 to Wave 2. A strong impact of preadoptive adversity on adopted children's emotional and behaviour outcomes at Wave 1 was found, but concerning Wave 2, adoptive parents' psychological distress and self-efficacy became more important in influencing the child's outcomes. The majority of adoptive families used postadoption support from adoption agencies and external services, but parental and child-related difficulties did not predict support use consistently.

Discussion. The predominantly positive outcomes for adopted children and adoptive parents within the present work confirm the suitability of adoption as an effective intervention. However, the level of emotional and behaviour problems increased as children got older and early clinical range problems increased the risk for ongoing difficulties. With regard to potential predictors, adopted children's prior experiences are particularly crucial for their level of emotional and behaviour problems at an early stage after adoption, but the impact of parental factors increased over time. Furthermore, adoptive families are willing to use postadoption support services offered by adoption agencies and external services, but the services used did not necessarily correspond to the individual needs of the families. Implications for research, policy, and practice are discussed.

General Introduction

Adoption has been part of social and family life for centuries (Brodzinsky & Palacios, 2023). Its aim is to find a new home for children who cannot live with their biological families. Adoption is usually considered an effective intervention (Holloway, 1997; van Ijzendoorn & Juffer, 2006), and research findings confirmed that adoption can offer new possibilities for children who cannot live in their birth families (Hoksbergen, 1999; Kumsta et al., 2015; Selwyn & Quinton, 2004; Triseliotis, 2002; van Ijzendoorn & Juffer, 2006). The top priority of every adoption is the best interest of the child and finding the most suitable family in which a child can experience lasting care, permanence, and stability. However, adoption goes along with unique tasks, and it is the duty of adoptive parents to accompany and support their adopted children in their development (Palacios, Adroher, et al., 2019). This path is not always easy: decades of adoption research have shown that, compared to nonadopted children, adopted children tend to be more affected by early adverse life experiences and show more emotional and behaviour problems in their psychological adjustment (Juffer & van Ijzendoorn, 2005). This poses significant challenges for all people involved in the adoption process – including adoptive parents, the child welfare system, and biological parents.

This doctoral thesis focuses on the development of adopted children in Germany and specifically examines the level, course, and predictors of emotional and behaviour problems within four empirical research articles. The introduction elucidates on existing evidence from prior studies on this topic. In the discussion, the empirical results gained through the present work will be summarised, put into a broader perspective, and further research and practical implications will be discussed.

Types of Adoption

Firstly, the type of adoption depends on the degree of kinship between the child and the adopters. It can be differentiated between stepparent adoptions, adoptions by a relative, and nonrelative adoptions (Bovenschen, Bränzel, Dietzsch, et al., 2017), with most research addressing nonrelative adoptions. Secondly, domestic (or national) and intercountry (or international) adoptions can be differentiated based on the child's residence before placement. The social systems of the countries where children are adopted

differ greatly, as do the children's preadoptive experiences. For example, domestic adoptions in the US or the UK are primarily adoptions from care, whereas children in other countries are usually adopted as infants without multiple out-of-home placements before adoption (Pösö et al., 2021). Concerning intercountry adoptions, various studies have shown that children adopted from Eastern European countries had mainly lived in orphanages under extremely inadequate conditions before adoption. Due to these experiences of deprivation, these children showed large developmental delays, symptoms of inhibited and disinhibited attachment, as well as a high number of clinical internalising and externalising symptoms (van den Dries et al., 2009). However, these findings have limited generalisability to adopted children from other sending countries.

Current Trends and Challenges in Adoption Practices

Referring to the number of adoptions, a clear trend can be observed in Germany in the last decades: the number of annual adoptions fell by 25% from 5,072 adoptions in 2004 to 3,601 in 2023 (Statistisches Bundesamt, 2024). Moreover, data revealed that especially nonrelative adoptions decreased over time (2023: 24% ($n = 837$) nonrelative adoptions). Intercountry adoptions represent only about one-third of nonrelative adoptions (2023: 12% ($n = 102$)).

The reasons for the declining adoption numbers can be found primarily in societal and political circumstances. On the one hand, there are fewer adoptable children as a result of the growing availability of contraception and abortion, as well as the lower social stigma of single parenthood. Furthermore, child welfare practices in many Western countries have increased social programs supporting biological parents to keep their children (Brodzinsky & Palacios, 2023). The practice of intercountry adoption also changed profoundly after the agreement of the Hague Adoption Convention in 1993, aimed at preventing the abduction, sale, and trafficking of children (Selman, 2015). Following this agreement, sending countries are called to support domestic placements of children who cannot remain in their birth families. Furthermore, adoption bans by some countries or improvements in national child welfare systems in sending countries have also contributed to the decline in the number of intercountry adoptions worldwide. Furthermore, the number of couples waiting for a child

has also declined due to advances in reproductive medicine and the legalisation of surrogacy abroad as an alternative way of starting a family (I. G. Cohen & Chen, 2010).

Internationally, researchers reported a growing proportion of adopted children beyond the first years of life with so-called special needs, often due to early adversity before being adopted (Selman, 2015). Nevertheless, this does not entirely apply to Germany, where more than two-thirds of children are adopted under the age of three (2023: 71%) or even enter the adoptive family as infants straight from the hospital a few days after birth (Statistisches Bundesamt, 2024). In contrast to other Western countries, the proportion of adoptions from care is relatively small (2023: foster care: 36%; institutional care: 8%).

Development of Adopted Children

Numerous studies worldwide have examined the development of adopted children, adolescents, and adults (for a summary see Brodzinsky & Palacios, 2023). Despite the stigma of adoption and the greater probability of adverse initial life conditions, the majority of adopted children are well-adjusted in most areas of functioning and even show better developmental outcomes after adoption than children who remain in adverse circumstances, such as orphanages or maltreating homes (van Ijzendoorn et al., 2020). Adoption is often described as a turning point, as adopted children recover tremendously in all domains in contrast to children remaining in institutional or foster care (Berlin et al., 2011; Jiménez-Morago et al., 2015; Pérez et al., 2011; van Ijzendoorn & Juffer, 2006). Concerning developmental delays and physical growth, adopted children show an impressive catch-up even after severe deprivation before placement (Gunnar et al., 2001; Ivey et al., 2021; van Ijzendoorn et al., 2007; van Ijzendoorn & Juffer, 2006). Recovery was observed, in particular, in the first postplacement years for those placed at a younger age and with less adversity (Canzi et al., 2017; Palacios et al., 2011). However, when examining the presence of clinically relevant symptoms, international findings demonstrated that adopted children are more likely than other children to have attachment problems, developmental delays, and learning difficulties (Brown et al., 2017; Juffer & van Ijzendoorn, 2005; van den Dries et al., 2009; van der Vegt et al., 2009). In addition to the investigation of physical development, executive functioning, and attachment behaviour, examining

emotional and behaviour problems is still one of the most important topics in adoption research.

Frequency and Severity of Emotional and Behaviour Problems

According to findings summarised in two meta-analyses, most nationally and internationally adopted children are well-adjusted (Bimmel et al., 2003; Juffer & van Ijzendoorn, 2005). Nevertheless, research has recognised that, compared with their nonadopted peers, adopted children show more problems in the clinical range (Behle & Piquart, 2016; Haugaard, 1998; Sharma et al., 1996). Another review (R. Barroso et al., 2017) and another meta-analysis (Askeland et al., 2017), both including more recent publications, provided evidence that internationally adopted children and adolescents have more externalising problems than their nonadopted peers growing up with biological parents. In contrast, this effect was not consistently found for internalising problems. In particular, adopted children are at greater risk of displaying behaviour problems, such as oppositional or conduct disorders (Behle & Piquart, 2016; Paine, Fahey, et al., 2021). In line with these findings, externalising behaviour problems were significantly greater in anonymously adopted children beyond the age of four years than in nonadopted children in Austria (Kernreiter et al., 2020). Internalising or emotional problems, such as anxiety or depression, were less frequent but still at a concerning level compared with children and adolescents in the overall population (Bimmel et al., 2003; Brown et al., 2017; Juffer & van Ijzendoorn, 2005; Rosnati et al., 2008; Wierzbicki, 1993). When examining factors contributing to emotional and behaviour problems, early adversity has been identified as crucial for the psychological development of adopted children and adolescents (Juffer et al., 2011).

Course of Emotional and Behaviour Problems

An interdisciplinary team of researchers and experts in the field of adoption described adoption as a lifelong experience (Palacios, Adroher, et al., 2019). Most longitudinal studies illustrated that initially presented severe emotional and behaviour problems are enduring and persist even years after placement (Ahn et al., 2015; Finet et al., 2020; Paine, Perra, et al., 2021; Tan et al., 2016). Paine, Fahey, et al. (2021) reported higher scores for internalising

and externalising problems in children adopted from public care than in the general population in the UK, and these problems did not improve over a four-year postplacement study period. Children adopted from foster care in a longitudinal study by Nadeem et al. (2017) also showed a high stability or even an increase in externalising problems in the clinical or borderline range. Persistent externalising problems were also reported in a small US sample of internationally adopted school-aged children (Helder et al., 2016). In a study by Finet et al. (2020), children adopted from institutional or foster care in China to the Netherlands presented relatively low but stable levels of behaviour problems even nine years after adoption. The results of Tan et al. (2016) consistently indicate stable low frequencies of externalizing behaviour problems in adopted Chinese children over a study period of six years. Similarly, Ahn et al. (2015) reported low and stable levels of internalising problems in a sample of domestically adopted children aged five to ten years in South Korea.

However, there is also evidence that some problems can arise or increase later in life, for example, when children enter kindergarten or school (Ahn et al., 2015; Tan et al., 2016). Such transitions usually go along with growing demands and expectations and already present considerable challenges in normative development. Regarding the additional challenges for adopted children, Brodzinsky (1993) stated that there is an increase in adjustment problems in adopted children beginning at the age of six or seven years due to the children's growing understanding of what adoption is and means to a child. Consistent with this assumption, several longitudinal studies with primarily internationally adopted children found increasing levels of behaviour problems from early childhood to adolescence (N. Cohen & Farnia, 2011; Stams et al., 2000; Verhulst & Versluis-Den Bieman, 1995). In contrast, Ahn et al. (2015) discovered a decrease in externalising behaviour problems from the age of seven years onwards. Similarly, a Canadian longitudinal study of international adoptees reported that behaviour problems decreased during adolescence (C. Smith et al., 2018). With regard to emotional problems, in a longitudinal study of internationally adopted girls from China, Tan et al. (2016) found an increase in clinical-range internalising problems around transitioning into school and adolescence. In a three-year follow-up study by Helder et al. (2016), the frequency of internalizing problems was also found to increase over time in late-placed internationally adopted children.

In summary, recent findings on the development of psychosocial adjustment in adopted children are very heterogeneous. While a substantial number of studies have

demonstrated a manifestation of early clinical range problems over time, other studies have reported an increase or decrease in emotional and behaviour problems over time. Furthermore, there seem to be sensitive periods or specific circumstances in which psychosocial functioning has a relatively high probability of improving or becoming impaired, but the variations are huge. Consequently, more longitudinal studies are crucial to understand the course of emotional and behaviour problems in adopted children.

Factors Affecting Emotional and Behaviour Problems

The risk protection model is a well-established and evidence-based theory in developmental psychopathology and helps to explain inter- and intraindividual variations between children regarding developmental and psychological outcomes (Masten et al., 1990; Rutter, 1987; Werner, 1993). According to this model, individual trajectories result from an interplay of risk and protective factors. Risk factors are defined as conditions that increase the probability of maladaptive outcomes and usually precede them in time. A protective factor can mitigate a risk factor's negative effect and thus reduce the probability of adverse outcomes despite the presence of a risk factor. Risk and protective factors can be present at different levels. They may originate in the child (e.g., intelligence, temperament, self-efficacy, social competence), in the family environment (e.g., support, parenting behaviour, siblings) or in the broader social environment (e.g., social support, daily stressors) (Masten & Reed, 2002). Children showing healthy development after adversity demonstrate resilience, defined as: "the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances" (Masten et al., 1990). Based on this approach, emotional and behavioural outcomes of adopted children emerge as the product of risk and protective factors before and after placement in an adoptive family.

Research has further shown that a single factor may be insufficient to explain negative psychological outcomes, but an accumulation of multiple risks might derail the adjustment of adopted children (Jiménez-Morago et al., 2015; Roskam & Stievenart, 2014). Assuming that relevant factors for the children's adjustment can be found in early experiences and the postadoption environment, it seems promising to analyse pre- and postadoption factors contributing to different levels of and changes in adoptees' emotional and behaviour

problems over time. Gaining more knowledge about these effects might help to reduce uncertainties and prejudices among prospective adoptive parents and to improve individual support mechanisms in the postadoption environment.

Domestic vs. Intercountry Adoption

Most studies in the field included either children adopted through intercountry or children adopted through domestic adoptions, making reliable comparisons between the two groups hardly possible. The first published meta-analysis of studies including adopted children demonstrated that domestic adoptees tend to present more behaviour problems than international adoptees (Juffer & van Ijzendoorn, 2005). Given the high percentage of adoptions from care among domestic adoptions in some countries, such as the U.S. or the UK, one explanation is that past studies often included nationally adopted children with a high number of placement changes and an accumulation of multiple risks. In contrast, few studies have focused on children with less preadoptive adversity and nationally adopted children at a younger age, so the existing evidence has limited generalisability to nationally adopted children in Germany.

However, evidence from other studies demonstrates more difficulties for internationally adopted children. Referring to intercountry adoptions after the worldwide transformation due to the Hague Convention, internationally adopted children are usually older, have more special needs, and have an elevated risk for emotional or behaviour difficulties (Pinderhughes et al., 2013). Additionally, adoption across borders often goes along with the loss of culture, language, and a part of one's identity (Gindis, 2019), which represent additional risk factors for children's development. Consistently in a recent study with late-adopted adolescents in Italy, the authors found higher Child Behaviour Checklist (CBCL) total scores and externalising behaviour problems in internationally adopted children, but this was not the case for internalising problems (Pace et al., 2022).

In light of these contrasting results from prior studies and meta-analyses, considering the type of adoption as an isolated factor is not sufficient to explain the level and extent of emotional and behaviour problems in adopted children. Given the great variety of social and societal circumstances within and between countries and the great differences between

care systems, the interplay of preadoption experiences might be a better indicator of the ongoing development than the origin of a child.

Preadoption Adversity

Before being placed in an adoptive family, many adopted children are exposed to early adversity. Life-course studies in the general population have demonstrated that the cumulative impact of adverse childhood experiences (ACEs), including neglect, deprivation, abuse, interparental violence, and living with a mentally ill family member, plays a crucial role in children's physical development and psychosocial adjustment (Felitti et al., 1998; Oh et al., 2018). According to the developmental cascade framework described by Calkins and Bell (2010), early adversity may have an ongoing impact on children's well-being, even after a child has been placed in a stable and secure environment. Consistent with this model, the results from a meta-analysis indicate that adverse preadoption experiences put adopted children at increased risk for later emotional and behaviour problems (Juffer & van Ijzendoorn, 2005). With regard to emotional and behaviour problems in adopted children, the following risk factors have particular relevance: age at placement, pre- and perinatal risks, deprivation, maltreatment, and multiple placements.

Age at Placement. In the history of adoption research, many studies included age at placement as an indicator or proxy for adverse experiences before adoption and examined it as a possible predictor for later adjustment outcomes (Gagnon-Oosterwaal et al., 2012; Gleitman & Savaya, 2011; Juffer & van Ijzendoorn, 2005; Miller, L., Chan, W. et al., 2009; Reinoso & Forns, 2010; Rosnati et al., 2008; Tan et al., 2007). Findings on the impact of age at placement have been heterogeneous (for an overview, see meta-analysis from Juffer & van Ijzendoorn, 2005) and have demonstrated that age at placement is likely to be entangled with the duration and severity of preadoptive adversity. In more recent studies, Ahn et al. (2015) included age at adoption as an indicator of adverse experiences and although this risk factor significantly affected the initial level of problems, no effect on the course of behaviour problems was found. Helder et al. (2016) found a significant association between older age at placement and detrimental outcomes for adoptees in their study with internationally adopted children at school age. Despite these findings, this factor is not sufficient for explaining different outcomes and can be only used as a proxy index for preadoption adversity, indicating that more time spent in a harmful environment or out-of-

home care increases the risk for deprivation, neglect, and experiences of maltreatment (Cederblad et al., 1999; Tan & Marfo, 2016).

Pre- and Perinatal Circumstances. Empirical evidence indicates that pre- and perinatal risk factors deleteriously affect children's physical, emotional, cognitive, and social development (Tien et al., 2020). The incidence of Fetal Alcohol Spectrum Disorder (FASD) has been found to be above 50% for adoptees from Eastern Europe and above 25% among children in out-of-home care in the United States (Popova et al., 2023). Adoptive parents' fears of unexpected outcomes and problems can make it challenging to find a placement for children exposed to such risk factors (Goldman & Ryan, 2011). However, the consequences of gestational drug and alcohol exposure and birth complications on adopted children's behavioural outcomes have received less attention in adoption research. Findings of the few studies regarding postadoptive psychological outcomes for drug- or alcohol-exposed children are inconsistent. Barth and Needell (1996) and Barth (1991) observed that there is no significantly greater acceleration in problem behaviour for drug-exposed children than for adoptees without drug-exposition. Goldman and Ryan (2011) reported that alcohol, tobacco, and other drug exposure influenced children's preadoption functioning, but after adoption, the negative effects did not persist over time. More recent studies have also demonstrated that the impact of prenatal drug and alcohol exposure on adoptees' emotional and behavioural functioning declines over time (Blake et al., 2022; Tung et al., 2020), which contrasts with the apparent association between exposure to drugs and alcohol in utero and behaviour problems found in prior studies with adopted youth (Ji et al., 2010; Simmel et al., 2001). Regarding perinatal circumstances, a meta-analysis of nonadopted samples by Bhutta et al. (2002) indicated that preterm-born children are at risk of developing externalising and internalising behaviour because they show an increased level of inattention and/or hyperactivity symptoms at school age. Furthermore, continuous maternal stress and mental health problems during pregnancy are crucial risk factors for children's socioemotional development (Madigan et al., 2018), but to date, studies of adopted children have not focused on this factor separately.

Experience of Deprivation and Different Forms of Maltreatment¹. A comprehensive number of studies have shown that children who experienced severe deprivation in their

¹ The term maltreatment used in the present work summarises physical/sexual/emotional abuse and physical/emotional neglect based on the description by Cicchetti and Toth (2005). However, in the

first years or months (e.g., in institutional care) are at increased risk for the development of externalising behaviour problems (Juffer & van Ijzendoorn, 2007; Tan & Marfo, 2016; Wiik et al., 2011). Further research consistently demonstrated an increased probability of emotional and behaviour problems for individuals with preadoptive physical and sexual abuse or emotional and physical neglect (Cui & Liu, 2020). However, the effects and patterns differ depending on the children's age at study assessment and included measures. Externalising problems were significantly predicted by a history of abuse and neglect in a sample of younger children adopted from foster care, whereas no significant impact on internalising problem scores was found (Nadeem et al., 2017). In a US study comparing internationally adopted children from Romania and nationally adopted children, the most important predictor of children's behaviour was the experience of early adversity, including abuse or institutionalization, before adoption (Groza & Ryan, 2002). In another study with adoptees living in California (Simmel, 2007), the impact of abuse and neglect on emotional and behaviour problems after adoption from care was most evident two and four years after placement. However, it showed no significance eight years after placement. Furthermore, in adopted youth with preadoptive experiences of neglect, Ji et al. (2010) reported an increased risk for depression but not for behaviour problems. Physical neglect or abuse before adoption have also been found to predict internalising problems in school-aged Chinese girls adopted to the United States but not in earlier or later developmental stages (Tan et al., 2016). Additionally, in a longitudinal study including children adopted from care, the findings indicate a long-lasting effect of preadoptive risks (e.g., placement instability, exposure to maltreatment/neglect) on adoptees' internalising problems (Blake et al., 2022). One of the few published studies with no significant effect between adverse preadoption experiences such as maltreatment and neglect and behaviour problems was conducted among a group of Chinese children adopted to the Netherlands (Finet et al., 2020).

Placement Instability. There is a small body of research that has included the number of placements before adoption as a distinct predictor of adoptees' emotional and behaviour problems. In the study conducted by Simmel (2007) with adopted children from care, placement in multiple foster homes predicted behaviour problems postadoption (see also Neil et al. (2020) for similar findings). The findings from two longitudinal studies consistently

literature, there are inconsistencies in the use of the term, particularly regarding emotional neglect. Therefore, the first research article in the results section included the more nuanced term maltreatment/neglect for one of the study variables.

demonstrated that a greater number of placements before adoption was associated with persistent emotional and behaviour problems (Lewis et al., 2007; van der Vegt et al., 2009). Another prospective longitudinal study with nationally adopted children also found a persistent negative impact of higher numbers of moves on adoptees' internalising and externalising symptoms (Paine, Fahey, et al., 2021).

Parent-related Factors

As not all adopted children with a disadvantageous preadoptive history show persistent emotional and behaviour problems, researchers have raised the question of which factors may buffer or increase the negative effects of preadoptive adversity on adopted children's adjustment (Ji et al., 2010; Simmel, 2007). It is assumed that adoption itself represents a protective factor by placing a child in a nurturing postadoption environment after the experience of adverse initial life conditions. Therefore, a growing number of studies have empirically examined the potential role of the adoptive family environment, particularly the influence of parental factors, on psychological outcomes in children after placement (Balenzano et al., 2018; Duncan et al., 2021; Ji et al., 2010; Simmel, 2007; Whitten & Weaver, 2010). Processes within the adoptive family are crucial for adoptees' development (Palacios, Adroher, et al., 2019), and over time, postadoption factors might even have a greater impact on children's psychosocial outcomes than preadoptive factors (Duncan et al., 2021).

Parenting Behaviour. The role of parenting has been widely studied in normative samples, highlighting the crucial and enduring impact of positive and negative parenting practices on a child's healthy development (M. A. Barnett et al., 2010; Boeldt et al., 2012; Reuben et al., 2016). Negative practices include hostile behaviour such as harsh, negative, and intrusive interactions and inconsistent behaviour of parents toward their children. Conversely, functional practices include positive interactions, parental warmth, sensitive, nurturing, and responsive behaviour toward the child. Several studies have demonstrated that a postadoption environment characterised by parental warmth contributes to a reduction in externalising and internalising problems in early childhood (Audet & Le Mare, 2011; Lawler et al., 2017; Paine, Perra, et al., 2021). Child-centred parenting has been found to predict advantageous behaviour outcomes in adopted children (Kriebel & Wentzel, 2011).

Furthermore, parental sensitivity in early childhood, particularly exerted by adoptive mothers, predicts attachment security and psychosocial adjustment in middle childhood (Stams et al., 2002) and adolescence (M. A. Barnett et al., 2010; Jaffari-Bimmel et al., 2006; Stams et al., 2002; van der Voort et al., 2014). Positive parenting after the adoption was found to be beneficial for behavioural outcomes and positive peer relationships of postinstitutionalized adopted children (Pitula et al., 2017) and postadoption adjustment of internationally adopted children (Balenzano et al., 2021). One correlational study also examined the role of mindful parenting of Portuguese adoptive parents and reported its impact on children's emotional and behavioural difficulties across ages (Rodrigues et al., 2024). Conversely, authoritarian parenting toward children adopted internationally from Romanian orphanages predicted more inattention and overactivity over time (Audet & Le Mare, 2011). Based on transactional models of development, some studies have investigated the mutual association between children's behaviour and parenting and thereby also shed light on the impact of children's behaviour on parenting practices (Combs-Ronto et al., 2009; Lawler et al., 2017; C. L. Smith et al., 2004).

Parenting Stress. The transition to adoptive parenthood is accompanied by unique developmental tasks (Canzi et al., 2019; Palacios & Sánchez-Sandoval, 2006), making adoptive parents particularly vulnerable to stress. Although some studies have reported that adoptive parents experience higher levels of parenting stress than biological parents (McGlone et al., 2002; Paley et al., 2006; Rijk et al., 2006), other investigations have found average or lower levels of adoptive parents' stress compared with normative samples (Bird et al., 2002; Ceballo et al., 2004; Judge, 2003; Levy-Shiff et al., 1991; Palacios & Sánchez-Sandoval, 2006). Prior studies demonstrated that adoptive parents' stress is related to adopted children's emotional and behaviour problems (Groza & Ryan, 2002; McGlone et al., 2002; Tan et al., 2012) and effects are expected to be bidirectional, such that parenting stress might influence children's psychosocial adjustment and vice versa (Deater-Deckard et al., 1996; Woodman et al., 2015). Examining causal effects has shown that parenting stress can be a reaction to the demands of the child (Canzi et al., 2019; León et al., 2015; Palacios & Sánchez-Sandoval, 2006). However, some studies have demonstrated that the ability of parents to manage stress influences their caregiving capacity and parenting behaviour (Abidin, 1992; Webster-Stratton, 1990) and consequently fosters children's adjustment (Groza & Ryan, 2002; Ji et al., 2010; Simmel, 2007).

Mental Health Problems. Adoptive parents are confronted with additional challenges before, during, and after the adoption of a child, representing potential stress factors for their mental well-being. However, adoptive parents mainly showed low, nonclinical levels of depressive and anxiety symptoms and psychological distress in prior studies (Anthony et al., 2019b; Foli et al., 2016; Lavner et al., 2014; Senecky et al., 2009). Surprisingly, the prevalence of postadoption depression is comparable to that of postpartum depression in biological parents, even if the underlying mechanisms are different with regard to the hormonal system (Foli et al., 2016). Research in normative samples has demonstrated that parental mental health problems, such as depression and anxiety, increase the likelihood of emotional and behaviour problems in adopted children (Kingston & Tough, 2014). Findings from primarily correlational studies indicate that parental depressive symptoms are significantly associated with more internalising problems in adopted children at different ages (Brooker et al., 2014; Goldberg & Smith, 2013). Additionally, findings by Brooker et al. (2014) suggest that adoptive parents' anxiety symptoms are possible predictors of adoptees' internalising behaviour. Further evidence has been presented by Anthony et al. (2019) on the stability of anxiety and depression scores, but knowledge about the longitudinal effect on children's emotional and behaviour problems is still lacking.

Apart from these few findings regarding the impact of adoptive parents' mental health problems on children's adjustment, hardly any empirical evidence about the impact of positive aspects of parental mental health is available. However, research involving normative samples highlights the importance of protective parental factors like self-efficacy. Parental self-efficacy refers to the parents' beliefs about their ability and capacity to parent a child (Coleman & Karraker, 2000). This feeling of competence has also been identified as a meaningful variable influencing children's emotional and behavioural outcomes, directly and indirectly, through parenting behaviour (Jones & Prinz, 2005). The potential role of parental self-efficacy as a protective factor has not yet been examined in adoptive families.

Interplay of Preadoptive Adversity and Postadoptive Parental Characteristics

Positive experiences can potentially mitigate the effect of early adversity on children's outcomes (Hou et al., 2022). In the field of adoption research, few studies have examined parenting as a moderator or mediator between adverse childhood experiences before

adoption and the level of later internalising or externalising problems. Kriebel and Wentzel (2011) found a significant effect of adoptive parents' child-centred parenting on adoptees' behaviour, buffering the negative impact of preadoption cumulative risks. Further studies demonstrated that low adoptive parenting quality (Pitula et al., 2017) and less supportive parental behaviour (Soares et al., 2019) moderated the association between early adversity and adoptees' later problems. Moreover, Anthony et al. (2019a) reported in a follow-up study with national adoptees that parental warmth moderated the association between adverse childhood experiences and later internalising symptoms in adopted children. Additionally, the results of Balenzano et al. (2021) indicate that mothers' positive parenting mediated the relationship between cumulative preadoptive adversity and adoptees' adjustment.

Moreover, in two longitudinal studies with internationally adopted children, parenting stress was found to act as a mediator between early physical risk factors (weight/height ratio, neurological characteristics) and the behavioural outcomes of internationally adopted children at school age (Gagnon-Oosterwaal et al., 2012) and in adolescence (C. Smith et al., 2018), showing that preadoption adversity increased parenting stress and that higher levels of parenting stress led to more problematic behaviour in adopted children.

Postadoption Needs and Support

The preceding sections have shown that adoptive families face multiple challenges, and findings from international studies demonstrated that adoptive families need more professional support than nonadoptive families (Brand & Brinich, 1999; N. Cohen et al., 1993; Juffer & van Ijzendoorn, 2005; Penner, 2023). Within and outside the child welfare system, many types of services and support are available for adoptive parents and their children, ranging from group meetings led by social workers of the adoption agencies to parenting training, counselling or mental health treatments (Merritt & Ludeke, 2020; Penner, 2023).

The short- and long-term support needs of adoptive families are diverse and may arise from adoption-specific concerns related to identity development (Brodzinsky, 2014; Dunbar & Grotevant, 2004), communication about adoption (Balenzano et al., 2018; Grotevant et

al., 2013), or contact with birth family members in the case of open adoptions (Dunbar et al., 2006). Adoptive parents may also need professional support in dealing with discrepancies between their expectations and the reality of their family life (Goldberg et al., 2021; Santos-Nunes et al., 2018) and in dealing with the often self-generated pressure to be perfect parents (McKay & Ross, 2010; Pinderhughes et al., 2015), which contributes to psychological distress and negative parenting behaviour. Families with children who have experienced deprivation prior to adoption, abuse/neglect or several placements are particularly in need of support as the children are at greater risk for mental health problems, developmental delays, and learning difficulties (Brown et al., 2017; Juffer & van Ijzendoorn, 2005; Lee et al., 2020; van den Dries et al., 2009; van der Vegt et al., 2009). Furthermore, support needs may particularly arise from the higher prevalence of severe emotional and behaviour problems found in nationally and internationally adopted children, and research has indeed shown that adoptees are more likely to be referred to mental health services (Brand & Brinich, 1999; Sharma et al., 1996). Moreover, reasons for the greater referral of adoptees to mental health services can also be found in adoptive parents' greater sensibility for children's problems and higher willingness to seek help (B. C. Miller et al., 2000; Warren, 1992). In a longitudinal study, Wind et al. (2007) found that the need for specialised services and support for adoptive families increases over time due to growing challenges. Particularly, the transition to adolescence seems to be a period of exceedingly increased challenges, as indicated in research on adoption breakdown (Palacios, Rolock, et al., 2019). Consistently, Waid and Alewine (2018) found in their study on post-adoption support needs of adoptive parents in the U.S. that parents first sought help when the child was, on average, 12 years old.

With regard to the effect of postadoption support, findings from prior studies indicated that flexible and easily accessible postadoption services and interventions for all family members contribute to psychological well-being in both adopted children and adoptive parents (Atkinson et al., 2013; Palacios, Rolock, et al., 2019; S. Smith & Howard, 1999), ensuring the stability of adoptive placements (Palacios, Rolock, et al., 2019) and thus contributing to the long-term success of adoptions (Penner, 2023). Conversely, a lack of postadoption support may result in negative adoption outcomes (Santos-Nunes et al., 2018). Furthermore, international research findings also showed that the needs of adoptive families are not adequately met, as there is a lack of appropriate support services or the

existing services do not sufficiently cover the unique situation of adoptive families (Atkinson et al., 2013; Brodzinsky, 2015).

Research Questions and Hypotheses

To date, various studies worldwide have examined the psychological development of adopted children. When assessing children's emotional and behaviour problems, most studies relied on a correlational design. They focused on a specific point in time, either directly after adoption or later in life, whereas only a limited number of studies have investigated the course over time. Furthermore, some pre- and postadoptive factors have been examined extensively (such as preadoptive maltreatment and postadoptive parenting behaviour), whereas other domains remain understudied (such as prenatal factors and parental mental health). Additionally, the existing evidence cannot be easily transferred to other regional contexts owing to the differences in child welfare and political systems. In Germany, research on adoptive families has been a relatively neglected issue throughout recent decades, and empirical findings have emerged chiefly from qualitative studies. Gaining more knowledge through standardised and quantitative approaches helps illuminate the complexity and challenges faced by adoptive families with the aim of enhancing interventions for those in need.

In the present work, the following questions were addressed to understand better the course and dynamics of adopted children's emotional and behaviour problems:

Research Question I: To what extent do adopted children show emotional and behaviour problems in the first years after placement? Based on existing evidence, we hypothesise that mean symptom scores increase from Wave 1 to Wave 2.

Research Question II: Do children adopted through domestic and intercountry adoption differ in terms of emotional and behaviour problems? It is assumed that internationally adopted children show more problems due to their older age at placement and prolonged exposure to preadoptive adversity.

Research Question III: What effects do preadoptive factors have on the level and course of emotional and behaviour problems in adopted children? It is hypothesised that preadoptive factors (experience of maltreatment, pre- and perinatal risks, various

placement changes before adoption) predict the extent and changes in problem scores of adopted children.

Research Question IV: How are children's behaviour, adoptive parents' parenting, adoptive parents' mental health, and parenting stress related across time? As prior research refers to bidirectional associations between children's and parental factors, both directions are expected to be significant.

Research Question V: How do potential predictors interact, and to what extent do postadoptive factors (adoptive parents' mental health, parenting behaviour, and self-efficacy) buffer or exacerbate preadoptive adversities over time? Parenting stress, mental health problems, and negative parenting practices are expected to accumulate early risk factors, whereas self-efficacy and positive parenting practices are expected to mitigate their impact.

Research Question VI: Which postadoption support services do adoptive families use, which factors facilitate the use of support services, and which unmet support needs do adoptive parents report? These research questions are exploratory.

General Methods

The data assessments included in the present work were part of two research projects at the German Youth Institute (German: Deutsches Jugendinstitut e.V., DJI) in Munich. The first wave was realised as a subproject of the German Research Center on Adoption (German: Expertise- und Forschungszentrum Adoption, EFZA) funded by the German Federal Ministry for Family Affairs, Senior Citizens, Women and Youths². The second wave was realised as an in-house project of the DJI. The study was approved by the German Psychological Society (approval ID BovenschenIna2019-12-20VA).

Study Design and Procedure

This prospective study used a longitudinal design with two waves. The data used were obtained from a survey of adoptive families in Germany. All participants in the present study were recruited via local adoption agencies. In order to address an important source of bias, the research team contacted all public and private adoption agencies in Germany ($n = 450$). They were asked to share the study information with all adoptive families who adopted a child between 2014 and 2016 or when a child was placed with prospective adoptive parents within this period (and the adoption was not yet completed). The exact number of contacted adoptive families at Wave 1 was unknown due to this recruitment procedure. Therefore, response rates could not be calculated, and it could not be determined if the sample of the current study was representative for the overall population of adoptive families in Germany. However, the study sample is comparable to adoptions in Germany in terms of various characteristics (Statistisches Bundesamt, 2024): the type of adoption, the gender of adopted children, and the children's age at placement.

² The EFZA was initiated with the aim of developing recommendations for a reform of the adoption legislation. The project focused on exploring the interplay of German adoption policies and legislation, examining current recruitment practices, assessment, and pre- and postadoption support for adoptive parents, children, and birth parents. The researchers reviewed national and international research findings, initiated empirical studies, and endorsed discussions with experts, stakeholders, and practitioners in the field.

The assessment of Wave 1 was conducted between May 2016 and February 2017. If the participating families gave consent at Wave 1 to be contacted again for future research, they were asked to participate at Wave 2 in 2020. The second assessment was then conducted between March 2020 and April 2021. The average period between Waves 1 and 2 was 42.08 months ($SD = 1.90$, range = 37 – 48 months). A total of 136 families participated at Wave 2. Consequently, the attrition rate of the subsample from Wave 1 to Wave 2 was 52.9%. Adopted children of families who completed the first assessment but dropped out by follow-up did not differ from the participants in the final sample in terms of sociodemographic data and study variables. The reasons for not returning the questionnaire were unknown primarily due to a lack of response after several attempts to contact the participants (via letter, mail or phone). In some cases, participation failed due to a change in the address used in Wave 1 ($n = 22$), breakdown of the adoption process ($n = 1$), or lack of time/overload reported by the parents ($n = 4$). Participation was voluntary, and adoptive parents were informed that their participation would not influence any services they or their children received. After the adoptive parents consented to participate, they were asked to complete the study questionnaires (online or paper-pencil surveys at Wave 1 and paper-pencil surveys at Wave 2).

Participants

The overall sample at Wave 1 consisted of $N = 257$ participating families with one adopted child per family (126 boys, 130 girls). The characteristics of adopted children are presented in Table 1. 59 children were adopted through intercountry adoption, and 198 were adopted nationally. The children had been placed in their adoptive home between birth and 104 months of age (mean age at placement $M = 10.21$, $SD = 17.66$), with more than half of them (55.7%) within the first month after birth. At Wave 1, the mean age of the adopted children was 37.79 months ($SD = 26.51$, range 0–145 months), and at Wave 2, the average was 82.76 months ($SD = 26.46$, range 44–175 months). On average, the children had been living in their adoptive homes for 27.36 months at Wave 1 ($SD = 18.92$, range = 0–112 months).

Table 1*Characteristics of Adopted Children*

	overall	domestic adoptions	intercountry adoptions
Mean age (months) at placement <i>M</i> (<i>SD</i>)	10.21 (17.66)	3.24 (10.01)	33.36 (17.90)
Mean age (months) at Wave 1 <i>M</i> (<i>SD</i>)	37.79 (26.51)	30.28 (21.24)	62.85 (27.13)
Mean age (months) at Wave 2 <i>M</i> (<i>SD</i>)	82.76 (26.46)	74.18 (20.23)	106.54 (27.38)
Mean duration in adoptive family at Wave 1 <i>M</i> (<i>SD</i>)	27.36 (18.92)	26.85 (17.75)	29.07 (22.48)
Mean duration in adoptive family at Wave 2 <i>M</i> (<i>SD</i>)	69.82 (17.79)	69.81 (14.60)	69.85 (24.78)
Per cent female	50.8	52.3	45.8

Note. $N = 257$, $n_{\text{domestic}} = 198$, $n_{\text{intercountry}} = 59$. M = mean, SD = standard deviation.

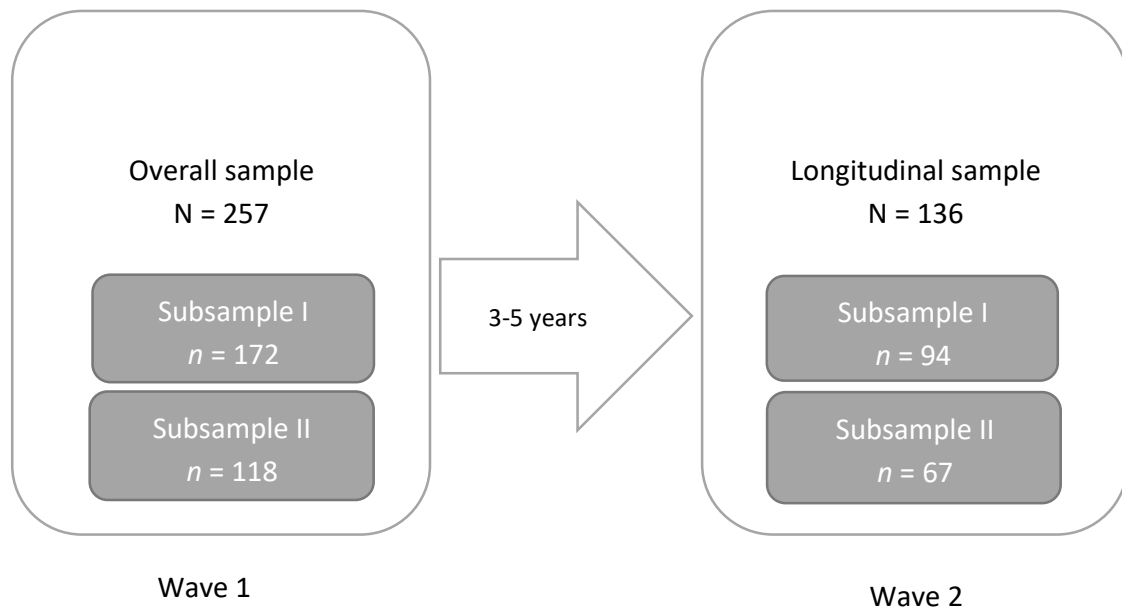
The main caregivers who participated in the study were primarily adoptive mothers (Wave 1: 91.8%; Wave 2: 92.6%). The characteristics of adoptive parents are presented in Table 2. The age of the main caregiver ranged between 23 and 57 years at Wave 1, with means of 39.79 years ($SD = 5.36$) for adoptive mothers and 43.58 years ($SD = 4.82$) for adoptive fathers. At Wave 2, the mean age of the main caregiver was 43.53 years ($SD = 5.50$), with 43.19 years ($SD = 5.31$) for adoptive mothers and 48.75 years ($SD = 6.09$) for adoptive fathers. Nearly all adoptive parents were married (Wave 1: 98.0%; Wave 2: 99.3%), and the mean duration of partnership at Wave 1 was 14.42 years ($SD = 5.61$) and 17.98 years ($SD = 5.42$) at Wave 2. Most of the adoptive parents had a high socioeconomic status: the monthly income per family ranged between 2,400€ and 10,000€ (Wave 1: $M = 5,752.65$ €, $SD = 9,392.41$; Wave 2: $M = 5,501.03$ €, $SD = 1,967.48$), and 58.2 % of the main caregivers had a university degree. In 64.7% of the families, only one child lived in the family at Wave 1, and in 48.9%, only one child lived in the family at Wave 2. 6.7% ($n = 17$) of the participating families had biological children at Wave 1, and 9.1% ($n = 12$) had biological children at Wave 2.

Table 2*Characteristics of Adoptive Parents*

	overall	Adoptive mothers	Adoptive fathers
Mean age (years) at placement <i>M (SD)</i>	37.55 (4.96)	37.23 (4.92)	41.33 (3.77)
Mean age (years) at Wave 1 <i>M (SD)</i>	39.79 (5.36)	39.48 (5.29)	43.58 (4.82)
Mean age (years) at Wave 2 <i>M (SD)</i>	43.53 (5.50)	43.19 (5.31)	48.75 (6.09)
Per cent with university degree	58.2	57.1	66.7
Employment at Wave 1	59.0	57.9	95.3
Employment at Wave 2	89.5	88.8	100.0

Note. $N = 257$, $n_{\text{domestic}} = 198$, $n_{\text{intercountry}} = 59$. M = mean, SD = standard deviation.

Owing to the child's age restrictions of the measures included in the questionnaire (>23 months for the SDQ; >35 months for the APQ), different subsamples were used for specific analyses in each research article (Figure 1).

Figure 1*Overall sample and subsamples used for data analyses*

Measures

All study variables were assessed via parents' report. Sociodemographic information included sex, age at assessment, and age at placement of both adopted children and adoptive parents.

Emotional and behaviour problems of the adopted children were assessed in both waves via the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997), which the adoptive parents completed. The Relationship Problems Questionnaire (RPQ; Minnis et al., 2013) was used to screen symptoms of the inhibited and disinhibited subtypes of *reactive attachment disorder*.

Experiences of maltreatment (including different forms of abuse and neglect) before adoption were assessed based on the Maltreatment Classification System developed by D. Barnett et al. (1993). *Pre- and perinatal risk factors* reported by the adoptive parents included prenatal maternal psychopathology, maternal substance abuse during pregnancy (alcohol and drugs), and premature birth or low birth weight (<2500 g). Parents reported on the number of placement changes before adoption to assess *placement stability*.

The German version (Reichle & Franiek, 2009) of the Alabama Parenting Questionnaire (APQ; Frick, 1991) was used to assess adoptive parents' *parenting*. Adoptive parents' *parenting stress* was assessed via the parent domain of the German version of the Parenting Stress Index (PSI; Abidin, 1995; Tröster, 2011). A short version of the Brief Symptom Inventory (BSI; Derogatis & Fitzpatrick, 2004; Spitzer et al., 2011) was used to assess adoptive parents' self-perceived *psychological distress*. Additionally, the parents were asked to respond to the 4-item *Perceived Stress Scale (PSS-4; S. Cohen & Williamson, 1988)*, which measures the degree to which situations in an individual's life are appraised as stressful. *Self-efficacy* in relation to the child's challenging behaviour was assessed via a questionnaire developed by Hastings and Brown (2002).

Postadoption support was assessed with a list of support services (e.g., support services of adoption agencies, psychotherapy, counselling, physiotherapy, and speech therapy), and adoptive parents were asked to rate their satisfaction with postadoption support and to report problems and unmet needs in open response categories.

General Results and Author's Contributions

The results reported within this doctoral thesis are based on four research articles drafted and submitted between 2019 and 2023.

General contributions to the research articles

I, Fabienne Hornfeck, worked as a research associate within the EFZA team during the study period from 2015–2017. I was therefore involved in the preparation of questionnaires, recruitment of participants, and data assessment at Wave 1. At Wave 2, I was further involved in the adaptation of the follow-up questionnaire. I was responsible for data cleaning and management before the major data analyses. I conducted the statistical analyses of the four research articles and was responsible for drafting and correcting the manuscripts for journal submission and resubmission after peer review. Additionally, I presented the results of the study at various meetings and national and international conferences to researchers, practitioners, and politicians. Table 4 provides an overview of the authors' contributions regarding the research articles included in this work.

Table 4

Overview of author contributions to the research articles included in this doctoral thesis

Research article	Study concept and design Wave 1	Study concept and design Wave 2	Data acquisition Wave 1	Data acquisition Wave 2	Statistical analysis	Manuscript drafting	Manuscript revision
<i>Research Article 1</i>	IB, HK, JZ		IB, AZ, FH , SH, JZ, SK		FH	FH	FH
<i>Research Article 2</i>	IB, HK, JZ	IB, SK, FH	IB, AZ, FH , SH, JZ, SK	SK, IB	FH , IB	IB, FH	IB, FH , SK
<i>Research Article 3</i>	IB, HK, JZ	IB, SK, FH	IB, AZ, FH , SH, JZ, SK	SK, IB	FH	FH , IB, SK	FH , IB, SK
<i>Research Article 4</i>	IB, HK, JZ	IB, SK, FH	IB, AZ, FH , SH, JZ, SK	SK, IB	FH	FH	FH

Note. The contributions of the doctoral candidate of this thesis are in bold. AZ = Annabel Zwönitzer; **FH** = **Fabienne Hornfeck**; HK = Heinz Kindler; IB = Ina Bovenschen; JZ = Janin Zimmermann; SH = Sabine Heene; SK = Selina Kappler.

Research Article I. Emotional and behavior problems in adopted children. The role of early adversities and adoptive parents' regulation and behavior (*published*)

The first research article aimed at examining the level of emotional and behaviour problems in adopted children and analysed the influence of children's preadoptive history and adoptive parents' characteristics on their psychosocial adjustment (Research questions I, II, III, and V). A correlational design was used, including data of $n = 172$ adoptive families from Wave 1 and the following variables: the SDQ total difficulties score and subscales, preadoptive factors (number of pre- and perinatal risks, experience of maltreatment/neglect, number of placement changes before adoption), and postadoptive factors (stress regulation based on a composite score of the BSI, PSS-4, and self-efficacy questionnaire; APQ positive parenting scale).

The analyses revealed that 12.5% of the adopted children showed emotional and behaviour problems in the clinical range (domestic adoptions: 10.7%, intercountry adoptions: 16.1%). Regarding the subscales, higher prevalences were mainly found for the externalising domains hyperactivity (14.8%), peer problems (14.3%), and conduct problems (20.7%). No significant differences in means or prevalence rates were found between nationally and internationally adopted children, except for emotional and conduct problems.

Significant bivariate associations with the SDQ overall score were found for age at placement, the number of pre- and perinatal risks, experiences of maltreatment/neglect, adoptive parents' stress regulation and positive parenting. A stepwise hierarchical regression model revealed that the SDQ total difficulties score was significantly predicted by preadoptive risk factors (with prenatal risk and maltreatment/neglect being significant predictors) and parental stress regulation difficulties. No significant effect was found for positive parenting or interaction terms. Furthermore, a binary logistic regression model was conducted with the SDQ categorisation (clinical vs. nonclinical) as dependent variable and a sum score based on the four potential risk factors (3 preadoptive factors, 1 postadoptive factor) as predictor. The results indicated that increases in the number of risk factors were associated with a greater likelihood of children scoring in the clinical range of emotional and behaviour problems.

Research Article II. Relations between Children's and Parents' Behavior in Adoptive Families – A Longitudinal Analysis (*published*)

The second research article focused on examining the mutual relationship between children's and parents' behaviour (Research question IV) in cross-lagged analyses, including data gathered in both waves ($n = 67$ adoptive families). The following variables were included: the SDQ total difficulties score and SDQ subscales, the PSI, and the APQ scales for positive parenting, inconsistent parenting, and authoritarian parenting.

With regard to the SDQ total difficulties score, 8.9% (Wave 1) and 22.5% (Wave 2) of the adopted children fell within the clinical range, and no significant differences were found between nationally and internationally adopted children. Parenting stress was in the clinical range for 26.3% and 24.5% of the parents for the two waves, respectively. Children's behaviour problems were highly stable over time, and a significant increase in emotional and behaviour problems was found from Wave 1 to Wave 2. The variables assessing adoptive parents' behaviour and stress also correlated significantly between both waves, but significant decreases in mean scores were found only for the APQ scale authoritarian parenting.

Within Wave 1, strong associations were found between children's emotional and behaviour problems and inconsistent parenting. Furthermore, SDQ scores at Wave 1 significantly predicted inconsistent parenting at Wave 2, even when controlling for parenting behaviour at Wave 1 via partial correlations. Similar associations between both waves were found for the SDQ scores and positive parenting, but partial correlations resulted in marginally significant effects across time. At Wave 2, SDQ scores and positive parenting were significantly associated. Conversely, no significant effects were found for the third scale of authoritarian parenting and the SDQ scores. Moreover, parenting stress and SDQ scores were significantly associated within both waves, and over time, SDQ scores affected parenting stress significantly even after controlling for PSI scores at Wave 1, but not vice versa.

Research Article III. Postadoption support of adoptive families: a descriptive analysis of adoptive families in Germany (*accepted, in press*)

This research article examined the use of postadoption support by adoptive parents provided by adoption agencies and external services (Research question VI). It analysed descriptive data across both waves, including a sample of $n = 136$ adoptive families. The results showed that 91.1% of the adoptive parents used services offered by adoption agencies and that 78.5% used external support services (for further information, see Table 3), mainly services for developmentally delayed children (such as occupational and speech therapy). In contrast, family-related therapy and counselling services were accessed less often (28.9%). Moreover, 94.1% of the adoptive families were in contact with other adoptive families in the postadoption phase.

Table 3

Use of support services by adoptive families

	n	%
Adoption agencies	123	91.1
Counselling	45	33.6
External services for adults	13	9.7
Family-related services	39	28.9
Psychotherapy for children/youth	20	14.9
External services for developmentally delayed children	82	61.2
Other external services	19	15.2

Note. $N = 136$.

Binary logistic regression analyses with the different support services as outcomes were conducted, and the following child- and parent-related variables were included as predictors: child's age, adoption type, child's trauma symptoms at Wave 1, child's developmental delays, child's mental health (emotional and behaviour problems, attachment disorders), and parenting stress. Any of these factors did not significantly predict the use of support services from adoption agencies. Family-related support services were especially used when parenting stress was high. Other services for adults and psychotherapy for children and youth were particularly used in families with older children. The lack of associations found between the use of support services and children's mental health outcomes revealed that a substantial proportion of adoptive families in need did not use appropriate clinical services.

A total of 33.8% of the adoptive families reported unmet support needs and 22.6% reported difficulties finding adequate services. The participants described barriers to accessing services because of long distances and a lack of local structures and adoption-competent services. Unmet needs were reported significantly more often by parents with greater parenting stress and worse children's mental health outcomes.

Research Article IV. Longitudinal development and risk factors of emotional and behavioral problems in adopted children (*under review, second revision*)

The final research article aimed to investigate the course of children's emotional and behaviour problems and examined the impact of both preadoptive and postadoptive factors (Research questions I - V). To answer these research questions, the SDQ was again used as outcome measure, and several pre- and postadoption factors were included as associated factors and predictors: number of placement changes, pre- and perinatal risks, experiences of maltreatment, adoptive parents' psychological distress, and adoptive parents' perceived self-efficacy. Data from $n = 94$ adoptive families was included within the analyses.

A significant increase in the SDQ total difficulties score was found from Wave 1 to Wave 2, similar to the findings for the subscales of emotional problems, hyperactivity, and conduct problems. Analyses of the frequencies of clinically relevant total difficulties scores revealed that 6.4% of the adopted children showed emotional and behaviour problems in the clinical range at Wave 1 and 19.1% at Wave 2. In most cases (80.4%), the total difficulties score remained stable below the clinical cut-off. With regard to differences between domestic and intercountry adoptions, internationally adopted children scored significantly higher on the total difficulties score at Wave 1.

Concerning the mean scores of adoptive parents' psychological distress and self-efficacy at both waves, the results revealed a significant increase in adoptive parents' psychological distress and a significant decrease in parental self-efficacy from Wave 1 to Wave 2. The parental factors were significantly associated with the SDQ total difficulties score within both waves. However, longitudinally, a significant path remained only between parental self-efficacy at Wave 1 and children's SDQ scores at Wave 2 after calculating partial correlations.

Two hierarchical multiple regression models with the SDQ total difficulties score at Waves 1 and 2 as dependent variables were conducted with a stepwise inclusion of pre- and postadoption factors. In the final model for Wave 1, age at placement and parental self-efficacy were significant predictors of emotional and behaviour problems. The second regression model revealed that emotional and behaviour problems at Wave 1 and adoptive parents' psychological distress and self-efficacy at Wave 2 significantly predicted emotional and behaviour problems at Wave 2. In additional repeated-measures ANOVA, no interaction effects were found for experiences of maltreatment and parental psychological distress or parental self-efficacy.

General Discussion

The research articles included in this doctoral thesis aimed to examine emotional and behaviour problems in adopted children in Germany and the impact of pre- and postadoption factors on these outcomes. The investigations originated from two research projects conducted at the DJI in Munich and comprised the largest known survey of adopted families in Germany at the time of publication of the present work. The findings were presented in four research articles published in or submitted to one national and three international scientific journals.

Extent and course of emotional and behaviour problems in adopted children

The assessment of adopted children's emotional and behaviour problems via parent reports was conducted twice, on average, two and six years after the child was placed in the adoptive family. The frequency of clinically relevant problems varied between 6.5% and 12.5% at Wave 1 and 19.4% and 22.5% at Wave 2. The results from these screenings are in line with those of numerous previous studies (Bimmel et al., 2003; Finet et al., 2020; Juffer & van Ijzendoorn, 2005), which revealed that most adopted children are well-adjusted and do not show clinical levels of emotional and behaviour problems. The frequency of SDQ total difficulties scores in the clinical range was still comparable to the prevalence of emotional and behaviour problems in nonclinical samples, which varies between 5% and 26%, depending on the methods used (Brauner & Stephens, 2006; Perren et al., 2006). In particular, the incidence of clinically relevant problems at Wave 1 was comparable to findings in the normative sample of the German KIGGS study (Baumgarten et al., 2018). Moreover, compared with children raised in foster or institutional care (Jiménez-Morago et al., 2015; Pérez et al., 2011) or adopted children in prior studies (Hoksbergen et al., 2004; Rosnati et al., 2008), emotional and behaviour problems in the given study sample were less frequent. This result is encouraging and may be explained by the fact that most adoptees in Germany are placed within the first months after birth. Hence, only a few adoptees were exposed to early risk factors, such as maltreatment or deprivation, before being adopted. Furthermore, the positive outcomes of adopted children in the study sample might also be explained by the stabilizing and protective environment of adoptive families (Bimmel et al.,

2003; Juffer & van Ijzendoorn, 2005) and indicate that adoption indeed is a successful intervention for children who cannot be raised by their birth parents.

However, when examining the subscales of the SDQ, some results of the scales covering externalising problems point in a more problematic direction. Notably, the comparably high number of children with conduct problems (20.7% at Wave 1 and 37.6% at Wave 2) and hyperactivity (14.8% at Wave 1) is concerning. These findings concur with the literature showing that adopted children are more likely to show severe behaviour problems, even if the majority of adopted children are well-adjusted (Brown et al., 2017; Juffer & van Ijzendoorn, 2005; van der Vegt et al., 2009).

Concerning the stability of adoptees' psychosocial adjustment, the findings of this study revealed a high persistence of emotional and behaviour problems over time, emphasising that children with emotional and behaviour problems at an early stage also present these problems later in childhood. Previous studies with adopted children have also shown that specifically behaviour problems are highly stable (Ahn et al., 2015; Finet et al., 2020; Paine, Fahey, et al., 2021; Tan & Marfo, 2016), and a meta-analysis has consistently demonstrated that emotional and behaviour problems in internationally adopted children persist into adolescence and young adulthood (Askeland et al., 2017). Research Article IV further revealed that each child with SDQ scores in the clinical range at Wave 1 also scored in the clinical range at Wave 2. Although these analyses refer only to a very small number of children (n=6), this finding is particularly alarming and indicates that adopted children with early adjustment problems tend to show persistent behaviour problems. This result is in contrast to the general finding that half of the children and adolescents in Germany with early mental health problems recover over time (Baumgarten et al., 2018). Furthermore, when the SDQ scores at Wave 1 were analysed as predictor of the SDQ scores at Wave 2, higher scores at the first assessment were the best predictor for higher scores four years later, even when other variables were included in the regression model. This finding is in line with the findings of Tan et al., who support the assertion that early clinical range problems increase the odds of subsequent problems. According to the negative chain reactions described by Rutter (1987), early risk exposure influences the initial level of children's behaviour problems, leading to potentially problematic interactions with others, creating an additional risk for subsequent behaviour problems. These findings highlight the importance of early identification and support systems for adoptive families.

Moreover, the analyses revealed an overall increase in emotional and behaviour problems in adopted children within the first six years after placement in an adoptive family. Prior studies have reported various different patterns of change in internalising and externalising behaviour problems. Several studies demonstrated that older adoptees presented more problems than younger adoptees, especially during important transition periods (Ahn et al., 2015; Brodzinsky & Schechter, 1990; Tan et al., 2016). Many of the children in the present sample transitioned into school between the waves which might have been a critical period causing more adjustment problems. Furthermore, the significant increase in emotional and behaviour problems over time might also be explained by a growing understanding of adoption and its implications for identity development (Brodzinsky, 1993). Moreover, the second wave was partly conducted in the first months of the COVID-19 pandemic, and the restrictions in Germany beginning in March 2020 led to a problematic and highly distressing situation for many families (Bujard et al., 2021). In order to examine the longitudinal course of adoptees' emotional and behaviour problems independently from times of crisis and to gather more information about different trajectories over time, conducting another wave with the participating families is crucial.

Domestic vs. intercountry adoptions

One of the major strengths of the present work is the inclusion of both domestic and intercountry adoptions in one study. When comparing the results of all four research articles, we did not find a consistent pattern of differences in children's emotional and behaviour problems between domestic and intercountry adoptions. At an early stage after placement at Wave 1, the analyses in Research Articles I, III, and IV showed significantly higher scores for internationally adopted children in terms of the SDQ total difficulties score, particularly for peer problems and emotional problems. However, some of the associations were marginally significant. This tendency for internationally adopted children to show more problems aligns partly with the findings from Pace et al. (2022), where the type of adoption predicted externalizing problems and total problem scores. An explanation for this result might be found in the greater impact of preadoptive experiences within the first months and years after placement. In the present sample, nationally and internationally adopted children differed significantly in their preplacement experiences, with internationally adopted children being older at placement and having more often a history

of neglect, abuse, deprivation, and multiple placement changes (see Research Article IV). The preadoptive characteristics of children included in this sample are, therefore, comparable to internationally adopted children in Germany and worldwide (Pinderhughes et al., 2013; Statistisches Bundesamt, 2024). These differences might have contributed to more emotional and behaviour problems in internationally adopted children at Wave 1 – even if these effects were minor and inconsistent across all analyses. However, the results at Wave 2 indicate that the impact of preadoptive experiences decreased over time, as no significant differences in the extent of emotional and behaviour problems were found between nationally and internationally adopted children anymore, on average, six years after placement. In line with previous studies (Canzi et al., 2017; Palacios et al., 2011), these findings demonstrate that early adversity became less critical in adoptees' ongoing life and development, providing evidence for a catch-up in terms of emotional and behaviour problems, especially for internationally adopted children despite a disadvantaged preadoptive history. This again emphasises the protective effect of adoption as an intervention for children who cannot be raised by their biological parents.

The role of early adverse experiences

The findings in the four articles confirmed the impact of preadoptive risks on the psychosocial adjustment of adopted children, as already demonstrated in various studies (Ji et al., 2010; Nadeem et al., 2017; Tan et al., 2007). In prior longitudinal studies, it was reported that preadoption experiences might have a long-lasting effect on the later adjustment of adoptees (R. Barroso et al., 2017; Blake et al., 2022). Therefore, Research Articles I and IV focused on the role of early adversity on children's emotional and behaviour problems, particularly concerning pre- and perinatal circumstances, experiences of preadoptive maltreatment, and the number of out-of-home placements before adoption. Our approach of including various potential preadoptive risk factors allowed for analyses of the unique role and differential impact of each factor.

In line with prior findings, the results of Research Article I confirmed the effect of pre- and perinatal risk factors on later emotional and behaviour problems (Bhutta et al., 2002; Goldman & Ryan, 2011; Hille et al., 2001; Ji et al., 2010; Madigan et al., 2018; Simmel et al., 2001). The number of prenatal risks was a meaningful predictor of the level of emotional and behaviour problems at Wave 1, even when other pre- and postadoption

factors were taken into account. That means that children exposed to drugs or alcohol in utero, children exposed to maternal stress during pregnancy, and children born preterm or with low birth weight displayed more emotional and behaviour problems after placement in an adoptive family. Surprisingly, this finding could not be replicated in the smaller sample used in Research Article IV, neither for Wave 1 nor for Wave 2.

Furthermore, the number of placement changes was not significantly related to emotional and behaviour problems at Wave 1 (see bivariate correlations in Research Articles I and IV). This result is in line with the literature indicating that multiple placements do not necessarily have to be a risk factor for later development (Barber & Delfabbro, 2003; van der Vegt et al., 2009) and demonstrating that the quality of the preplacement conditions might affect children's development independently from the number of placement changes. In contrast, a significant bivariate association between the number of placement changes and SDQ scores was found at Wave 2, confirming prior findings of a negative impact of multiple placements on later development (Lewis et al., 2007; van der Vegt et al., 2009). However, no substantial contribution was found anymore when this factor was entered into the regression model together with other more influential factors. These inconsistent findings within one study suggest that the quality of care might be more relevant for the well-being and ongoing development than the sole number of placement changes and disruptions. Moreover, the results must be interpreted cautiously because of the small number of children with multiple placements in this study.

Finally, the findings concerning the impact of preadoptive abuse and neglect were more consistent across the research articles. A substantial number of children experienced these forms of adversity before placement (up to 31.0%). Concerning the bivariate associations between emotional and behaviour problems and the indicators used for the experience of maltreatment, significant results have been found across all the research articles and waves. The experience of maltreatment before adoption was even the most important predictor of emotional and behaviour problems at Wave 1 when it was examined together with other relevant factors within a regression model. Consequently, compatible with the findings in the literature (Juffer & van Ijzendoorn, 2007; Nadeem et al., 2017), our results indicate that these conditions can have a deleterious effect on the adjustment of adopted children, even after placement in a stable environment. However, longitudinal analyses revealed that the predictive power of preadoptive adversity decreased over time,

as demonstrated in Research Article IV. Hence, the longitudinal development and change of these problems were not linked to preadoption adversity, contrary to what was reported in prior studies (Merz & McCall, 2010; Paine, Fahey, et al., 2021). Other investigations in the field also found no (continuing) effect of preadoption experiences on further behaviour problems, even if they were present at an earlier stage (Ahn et al., 2015; Finet et al., 2020; Tan et al., 2016). These findings are encouraging, as they demonstrate a high potential for recovery and resilience in adopted children despite their disadvantaged starting conditions (Canzi et al., 2017; Ivey et al., 2021; Palacios et al., 2011; Palacios et al., 2014; van Ijzendoorn et al., 2007).

The mutual influence of adopted children and adoptive parents

The family environment is one of the most important factors shaping a child's development after placement in an adoptive family (Duncan et al., 2021; Palacios, Adroher, et al., 2019). Despite a variety of positive and overwhelming feelings, the transition to parenthood, specifically through adoption, can be challenging (Deater-Deckard, 2004, 2005) and implies unique tasks that can cause stress. However, the findings presented in Research Articles I, II and IV revealed a relatively low level of parental problems at Wave 1 in terms of parenting stress, self-efficacy, and mental health problems. These results are in line with findings reporting that adoptive parents' mental health is comparable to that of non-adoptive parents or even better (Anthony et al., 2019b; Foli et al., 2016; Lavner et al., 2014; Palacios & Sánchez-Sandoval, 2006; Rijk et al., 2006; Sánchez-Sandoval & Palacios, 2012; Senecky et al., 2009). However, concerning longitudinal changes, adoptive parents experienced a meaningful increase in psychological distress and a significant decrease in self-efficacy between both waves, as shown in Research Article IV. Furthermore, the levels of adoptive parents' psychological distress and self-efficacy were found to be highly stable between both waves, indicating that parents with more problems at Wave 1 also reported more difficulties four years later. These findings underscore the importance of early identification of adoptive parents with mental health problems. The reasons for the substantial increase in and persistence of parental problems might be diverse and need further examination. However, these results indicate that adoptive parents are confronted with constantly increasing challenges as their children grow up, and the growth in parental mental health problems might also be a reaction to increased children's problems.

Furthermore, prior studies (Warren, 1992) have discussed a greater sensitivity of adoptive parents to recognise particularly externalising problems in their children, so their impaired mental health may be linked to the recognition of increased behaviour problems in their children. This assumption aligns with findings from prior studies indicating that the associations between parents' and children's well-being are bidirectional or even transactional (Duncan et al., 2021). Our results confirm the patterns described in recent research (Combs-Ronto et al., 2009; Judge, 2003; Patterson, 2002) in that parental factors and children's adjustment mutually influence each other. Correlational analyses within both assessment waves revealed that more emotional and behaviour problems in adopted children were associated with more parenting stress, more psychological distress, and less parental self-efficacy in adoptive parents.

However, a differentiated analysis of parental factors in Research Articles I, II, and IV revealed a more heterogeneous picture. With regard to the impact of mental health aspects of adoptive parents on children's emotional and behavioural adjustment, the analyses of a sum score for parental stressregulation difficulties in Research Article I (including adoptive parents' psychological distress, self-efficacy, and perceived stress at Wave 1) resulted in a meaningful impact on children's adjustment early after placement in line with prior studies (Hails et al., 2018; Kernreiter et al., 2020). Furthermore, adoptive parents' psychological distress alone became especially important for children's emotional and behaviour problems at Wave 2, as demonstrated in Research Article IV. Surprisingly and in contrast to the finding in Research Article I, no significant association was found between parents' psychological distress and SDQ scores at Wave I in Research Article IV. However, it should be noted that the samples included in both research articles differed in size which could have led to diverging results regarding Wave 1. In terms of parenting stress measured with the PSI, the cross-lagged panel models in Research Article II confirmed the findings of most prior studies identifying the characteristics of children as predictors of parenting stress (N. E. Barroso et al., 2018) but did not support the causal effect of parenting stress on children's outcomes.

Moreover, the regression analyses in Research Article IV identified a meaningful impact of adoptive parents' initial level of self-efficacy on children's emotional and behaviour problems at both waves. Thus, parental self-efficacy may play an essential role as a protective factor for the healthy development of adopted children, which is in line with

findings on parental self-efficacy in nonadoptive families (Jones & Prinz, 2005). Interestingly, this was the only included parental mental health variable with a longitudinal effect on children's adjustment. However, as this is one of the first studies examining adoptive parents' self-efficacy, further research is needed to replicate these findings.

Associations between children's emotional and behaviour problems and parenting behaviour were part of the analyses in Articles I and II. Significant bivariate correlations were mainly found within the waves (for the SDQ overall difficulties score and positive parenting/inconsistent parenting at Wave 1, and for the SDQ overall difficulties score and positive parenting at Wave 2), indicating a mutual influence between children's and parents' behaviours. However, when examining the potential predictive role of parenting on children's emotional and behaviour problems, no substantial contribution were found anymore for parenting behaviour as a predictor, neither in cross-lagged analyses (Research Article II) nor in the regression model (Research Article I). These results contrast with prior studies demonstrating the significant impact of parenting behaviour on children's adjustment (Anthony et al., 2019a; Combs-Ronto et al., 2009; C. L. Smith et al., 2004). These discrepancies might be explained by the aspect that parenting behaviour could have had a particular impact on child behaviour during the first months after placement but not later, so the study period might not have covered the relevant stages. Furthermore, the small effects can also be explained by a low variance of parenting behaviour within the sample of adoptive parents, given the strict selection process of prospective adoptive parents with potentially more advantaged parenting skills than in normative samples (Kohne et al., 2023). However, the findings of Research Article II highlight the child effect indicating that is the child's behaviour shapes parenting behaviour in line with a small number of studies reporting this causal direction (Combs-Ronto et al., 2009; Lawler et al., 2017; C. L. Smith et al., 2004). This effect might be explained by adoptive parents' lack of competencies in dealing with children's challenging behaviour but also by unmet expectations about adoptive parenthood (Brodzinsky & Pinderhughes, 2002). Specifically, when the child shows persistent challenging behaviour, adoptive parents might withdraw from the child leading to a reduction in positive, consistent parenting behaviour.

Interactions between pre- and postadoptive factors

Pre- and postadoption experiences cannot be considered separately, as a child's development is the result of the interplay between these circumstances. Based on our analyses of pre- and postadoptive factors, the results indicate that children's prior experiences are particularly crucial for their level of emotional and behaviour problems at an early stage after adoption but that the impact of parental factors increases over time with the consolidation of the family and evolving challenges for adoptive families (see also the systematic review of Duncan et al. (2021) supporting this conclusion).

In addition to the separate examination of preadoption experiences and parental factors postplacement, possible interactions and cumulative effects between these factors were analysed. In contrast to what was reported in the literature on the buffering effect of parental factors on the development of adopted children who experienced early adversity (Ji et al., 2010; Simmel, 2007), no interactions were found between the pre- and postplacement factors included in the present work. Thus, indicators of parental mental health (mainly psychological distress and self-efficacy) contributed to the psychosocial adjustment of adopted children independently from children's experiences in the past. However, a notable finding of the analyses in Research Article I was that as the number of risk factors increased, the likelihood of showing severe emotional and behaviour problems increased from 0% (no risk factors present) to 50% (four risk factors present), indicating that each additional type of pre- or postadoptive risk has the potential to increase the likelihood of problems regarding the psychosocial development of adopted children (Jiménez-Morago et al., 2015; Roskam & Stievenart, 2014), which can be a challenging and demanding task for parents and practitioners.

Use of postadoption support

The persistence and growing prevalence of psychological problems in children and parents in a small but substantial proportion of adoptive families imply an inherent need for continuous postadoption support (Lawler et al., 2017). In Research Article III, the question concerning the use of postadoption support was addressed and analysed in relation to adopted children's problems and parenting stress. Although there was no obligation for the provision of postadoption support by law at the time of study assessment, it was found that

more than 90% of adoptive families remained in contact (at least once) with the adoption agency after adoption. However, the data did not provide information about the intensity of this contact, but it can be assumed that adoptive families can be reached via this path to provide them with the support they need. This finding is particularly important, as international studies have demonstrated that the use of postadoption services is associated with decreased emotional and behaviour problems in children, more effective and satisfactory parenting, and a decreased likelihood of adoption instability or breakdown (Palacios, Rolock, et al., 2019; S. Smith & Howard, 1999). Most adoptive families also reported having used external services since the placement of the adopted child within their family. On the one hand, the overall high willingness to use support services inside and outside of adoption agencies might be explained by the challenges and problems adoptive parents face after the placement of a child within their family. On the other hand, it might also be consistent with a referral bias explained in the literature based on a greater sensitivity to their children's difficulties after the often long and selective preparation and adoption process (Warren, 1992). Furthermore, higher family income and education levels are also associated with greater help-seeking (Zima et al., 2000), and the families in the current sample were highly homogeneous regarding these sociodemographic characteristics.

Among the support outside of adoption agencies, services for developmentally delayed children were most frequently used, such as physiotherapy, speech therapy or occupational therapy. This result indicates that adoptive families might be susceptible to their children's developmental difficulties and demonstrate their high propensity to seek help in this area of difficulties. In contrast, only a few families used external family-related or parent-related counselling services, and only the use of family-related services was associated with higher levels of parenting stress. This finding is astonishing given the greater number of severe emotional and behaviour problems and parenting stress at Wave 2. The discrepancy between the level of difficulties and the use of support services can indicate a lack of suitable services for these specific problems (Atkinson et al., 2013; Penner, 2023). Moreover, this discrepancy was also described by Harris-Waller et al. (2016), who reported either a barrier to recognition of raised stress levels or reluctance to seek help for these difficulties, in contrast to help-seeking behaviour in the case of more evident difficulties related to children's developmental delays. The extensive preparation process of adoptive

parents and long waiting periods before the placement of a child might nourish unrealistic expectations toward themselves and their adopted children (Foli et al., 2012; Mullin & Johnson, 1999). Consequently, adoptive parents may be reluctant to utilise postadoption services, believing that doing so reflects some level of failure on their part.

With regard to the age of the children and the type of adoption as predictors for postadoption service use, hardly any significant associations have been found despite the higher levels of emotional and behaviour problems found for older children and children adopted through intercountry adoption. This discrepancy highlights a support gap, especially for families with internationally adopted children, which may partly be explained by the structural problems of agencies for intercountry adoptions, which are often located far away from families and are currently facing financial shortages (Bovenschen, Bränzel, Heene, et al., 2017).

The analyses of families' unmet needs indicate that one-third of adoptive families wished to receive more postadoption support and additional services, such as workshops about adoption-specific topics and more exchange groups with other adoptive families. The beneficial effect of group support from other adoptive parents and group interventions have also been reported in prior studies, indicating that it helps parents cope with the challenges they face (Hartinger-Saunders et al., 2015; Schoemaker et al., 2020; Viana & Welsh, 2010). Some parents also reported a lack of local services and adoption-competent external services. These findings concur with prior studies conducted in the U.S. (Atkinson & Gonet, 2007; Atkinson et al., 2013) and underscore the importance of disseminating knowledge about the specific challenges of adoptive families across support systems (S. L. Smith, 2010).

Implications for Policy, Practice, and Research

This study provides further insight into the well-being of adopted children and adoptive parents in Germany and allows conclusions for adoption policies, practices, and future research. Understanding the occurrence and course of emotional and behaviour problems remains essential to ensure the healthy development of adoptees and to decrease the risk of disruptions and adoption breakdowns. The predominantly positive outcomes for adopted children and adoptive parents confirm the suitability of adoption as an effective intervention within the child welfare system, contributing to the stability and positive

development of adopted children. However, the findings also support the frequently highlighted need for a long-term perspective on adoption that extends beyond the early stages after placement and show that adoptive families may require support throughout childhood, adolescence, and adulthood (Brodzinsky, 2014; Penner, 2023; Selwyn, 2017).

The research articles included in this work demonstrated a strong impact of preadoptive adversity on adopted children's emotional and behaviour outcomes in the first months and years after placement. Educating prospective parents about the association between adverse experiences and the adjustment problems they may encounter should thus be an essential part of comprehensive preadoption preparation (Kemmis-Riggs et al., 2018) to ensure that they are well-informed about the challenges they may face after the placement of a child (Berry et al., 1996). Subsequently, at the point of placement, adoptive parents must be provided with full and appropriate information about available preadoption experiences (whenever possible), which can help them to better understand their child. Furthermore, the study results concerning the increase in and persistence of adopted children's emotional and behaviour problems highlight the importance of addressing these problems as soon as possible. Prevention and early interventions are essential, as early adverse experiences and behaviour problems of adopted children also increase the risk of adoption disruptions (Coakley & Berrick, 2007).

Moreover, adoptive parents need strategies to support their children's recovery from adverse experiences and training to cope with their children's emotional and behaviour problems (Hoksbergen et al., 2004; L. C. Miller et al., 2022). Schoemaker et al. (2020) summarised clinical interventions to improve parenting quality and demonstrated that interventions are particularly effective in improving sensitive parenting and in reducing parenting stress and children's behaviour problems. As a prevention strategy, adoption agencies may extend training for prospective parents to strengthen their skills, such as cognitive flexibility and other stress management capacities, so that parents can be responsive to the child even if it shows challenging or provoking behaviour.

The study further demonstrated that most adoptive families used postadoption services in one way or another. However, they also reported high dissatisfaction and a need for more adoption-competent services. Support needs may arise, on the one hand, from questions and difficulties that originate in normative developmental tasks of children and youth (such as challenges regarding separation processes, friends, and sexual identity) and,

on the other hand, from adoption-specific challenges (curiosity and the search for one's origins, and contact with one's birth family). In order to meet the individual needs of adoptive families and ensure placement stability and well-being of all family members, postadoption support and services must be easily available and accessible. Given the great willingness of adoptive families to stay in contact with their adoption agencies after adoption, these places could be the first point of reference in terms of continuous postadoption support. However, this is particularly challenging in small towns or rural areas and when the adoption is realised through an adoption agency located far away. Considering the challenges of nearly all social services, the obligation to provide postadoption support might be undermined by a lack of resources in adoption agencies and other services. An important task for policy and practitioners is to reflect on whether and to what extent local service structures can be maintained or expanded or whether other forms of postadoption support should be strengthened (e.g., online support and cooperation between child and youth welfare services). The improvement of transregional networking and cooperation between adoption agencies and other support services could help meet the needs of families despite limited resources and could also be used to disseminate adoption-specific knowledge to other services (Bovenschen, Bränzel, Heene, et al., 2017). Moreover, international studies reported that services are more likely to be accepted when help-seeking is perceived as a strength rather than a failure by adoptive parents (Palacios, Adroher, et al., 2019) and when adoptive parents are aware that psychological distress due to parenting a child is not an exception but encountered by many families. In this sense, adequate preadoption preparation is a critical factor in endorsing postadoption service use by adoptive parents if necessary (Reilly & Platz, 2003; Wind et al., 2007).

The findings of the present work also provide directions for future studies in the field. Methodologically, future studies should try to realise multi-informant approaches, especially those that include self-reports of children and youth. The exclusive assessment of study variables through parent reports is a major limitation of the present study, but other approaches were not applicable because of the young age of the children at Wave 1 and the residence of the participating families. In further studies, more detailed information should also be included through clinical assessments of children's socioemotional difficulties to obtain reliable diagnoses of psychological problems. Further longitudinal studies with multiple waves are needed to enable more complex analyses and, in particular, to examine

longitudinal trajectories of adopted children's psychosocial adjustment and possible interactions between pre- and postadoption factors. Future studies should also focus on the type and frequency of postadoption support services used by adoptive parents and identify factors that increase the use of services by families with greater difficulties. Moreover, evidence-based interventions for adoptive families must be implemented and evaluated in empirical studies to facilitate successful support mechanisms.

Conclusions

The research articles included in this work are based on the currently largest longitudinal survey of adoptive families in Germany. In line with the existing body of literature on adoption research, the overall findings demonstrate that adoption can be an effective intervention for children who cannot remain within their biological families. The focus on children's emotional and behaviour problems revealed an overall well-adjusted group of adoptees in the first six years after placement in an adoptive family. However, adoption also represents a lifelong experience and emotional and behaviour problems may increase over the first years after placement, and severe difficulties in the beginning tend to persist. Early clinical range problems increased the likelihood of subsequent problems, thereby underscoring the necessity for early identification.

Regarding the role of early adverse experiences and their widely studied impact on psychological outcomes, the study findings confirmed the influence of prenatal and preadoptive risk factors on emotional and behaviour problems, especially in the first months and a few years after placement. However, as time progressed, the postadoptive environment and particularly the relation between children and their adoptive parents became more important. On the one hand, children's emotional and behaviour problems were affected by adoptive parents' psychological distress and perceptions of self-efficacy even across waves, demonstrating that parents with high levels of psychological well-being might influence adoptive children's adjustment positively independently of preadoption conditions. On the other hand, parenting behaviour and parenting stress were significantly affected by children's emotional and behaviour problems across the two waves.

These findings have important implications for the preparation of prospective parents and postadoption support and provide indications on how to enhance protective

factors within adoptive families. It is crucial to prepare prospective parents to cope with their children's challenging behaviours and motivate them early to seek professional support if necessary. The analyses of service use after adoption showed that adoptive families are willing to use postadoption support services offered by adoption agencies and external services, but the services used did not necessarily correspond to the individual needs of the families. Moreover, families wished to find more adoption-competent services. It can, therefore, be concluded that successful postadoption support needs to be easily accessible, flexible, and individualised on the basis of the constantly changing needs of all members within an adoptive family.

Zusammenfassung

Theoretischer Hintergrund

Die Adoption eines Kindes geht für alle Beteiligten – Adoptivkind, Herkunftseltern und Adoptiveltern – mit besonderen Chancen und Herausforderungen einher. Die internationale Forschungsliteratur belegt eindrücklich, dass sich adoptierte Kinder und Jugendliche altersentsprechend entwickeln (Juffer & van Ijzendoorn, 2012), Rückstände erfolgreich aufholen und teilweise sogar eine bessere psychosoziale Entwicklung aufweisen als Kinder und Jugendliche in anderen Formen der Fremdunterbringung (Ivey et al., 2021; van Ijzendoorn et al., 2020; van Ijzendoorn & Juffer, 2006). Im Bereich von klinisch relevanten psychischen Problemen sind Adoptierte dennoch überrepräsentiert und leiden häufiger unter Bindungsstörungssymptomen, kognitiven Problemen oder emotionalen und Verhaltensproblemen (Brown et al., 2017; Juffer & van Ijzendoorn, 2005; van den Dries et al., 2009).

Die vorliegende Arbeit fokussiert sich auf den Bereich der emotionalen und Verhaltensprobleme, die aus dem Zusammenspiel von Risiko- und Schutzfaktoren entstehen, aufrechterhalten werden oder auch abgemildert werden können (Juffer & van Ijzendoorn, 2005). Besonders bei Kindern, die pränatalen Risikofaktoren ausgesetzt waren, die vor der Adoption Deprivationserfahrungen gemacht haben, vernachlässigt oder misshandelt wurden oder mehrere Betreuungswechsel erfahren haben, treten internalisierende und externalisierende Probleme vermehrt auf (Ji et al., 2010; Paine, Fahey, et al., 2021; Simmel et al., 2001). Bisherige Studien zeigen aber auch, dass der Einfluss solcher negativen Vorerfahrungen mit der Zeit abnimmt und das neue Umfeld zunehmend an Bedeutung für die Entwicklung gewinnt (Simmel, 2007; Soares et al., 2019; Tan et al., 2016). Die Adoptiveltern spielen dabei eine entscheidende Rolle und können durch die Gesaltung eines stabilen, fürsorglichen Umfelds, einer guten Stresstoleranz und positivem Elternverhalten Belastungen der Kinder abpuffern (Hou et al., 2022; Kriebel & Wentzel, 2011). Frühere Untersuchungen liefern aber auch Belege dafür, dass sich Eltern und Kinder wechselseitig beeinflussen (Gagnon-Oosterwaal et al., 2012; C. Smith et al., 2018) und Belastungen auf Seiten der Adoptivkinder häufig auch mit einem erhöhten Stress- und Belastungsniveau von Adoptiveltern assoziiert sind (McGlone et al., 2002; Paley et al., 2006; Rijk et al., 2006). Zudem scheinen emotionale und Verhaltensprobleme bei Adoptivkindern während entscheidender Übergangsphasen in der Entwicklung verstärkt aufzutreten, z.B.

am Übergang zur Schule oder aber auch einhergehend mit der Identitätsentwicklung vor dem Hintergrund des Adoptiertseins (Brodzinsky, 1993; Tan et al., 2016). Befunde zum Verlauf dieser Schwierigkeiten sind jedoch inkonsistent und weisen einerseits auf einen Rückgang (Ahn et al., 2015; C. Smith et al., 2018) und andererseits auf einen Anstieg von Problemen über die Zeit hinweg hin (Helder et al., 2016; Tan & Marfo, 2016; Verhulst & Versluis-Den Bieman, 1995). Recht eindeutig ist hingegen in den wenigen Längsschnittstudien zu emotionalen und Verhaltensproblemen bei Adoptierten die hohe Stabilität von klinisch auffälligem Verhalten, auch wenn es sich bei dieser Gruppe um eine Minderheit handelt (Ahn et al., 2015; Finet et al., 2020; Paine, Perra, et al., 2021; Tan et al., 2016).

Die Adoptivfamilien benötigen infolge der erhöhten Belastung mehr professionelle Unterstützung bzw. nehmen häufiger therapeutische Behandlungsangebote und sonderpädagogische Hilfen in Anspruch (Brand & Brinich, 1999; N. Cohen et al., 1993; Juffer & van Ijzendoorn, 2005; Penner, 2023). Internationale Forschungsbefunde belegen, dass eine professionelle Begleitung nach einer Adoption die Entwicklung der Kinder und das Wohlbefinden der Adoptiveltern positiv beeinflusst (Atkinson et al., 2013; Palacios, Rolock, et al., 2019; S. Smith & Howard, 1999). Es gibt aber auch Hinweise darauf, dass die Bedarfe von Adoptivfamilien oft nicht ausreichend gedeckt werden, da es keine entsprechenden Unterstützungsangebote gibt oder die vorhandenen Angebote die besondere Situation von Adoptivfamilien nicht bzw. zu wenig berücksichtigen (Atkinson et al., 2013; Brodzinsky, 2015).

Die vorliegende kumulative Dissertation fasst die Ergebnisse aus vier Forschungsartikeln zusammen und beschäftigt sich mit den folgenden Forschungsfragen: (1) In welchem Ausmaß zeigen Adoptivkinder in Deutschland emotionale und Verhaltensprobleme und wie entwickeln sich diese in den ersten Jahren nach der Adoption? (2) Welchen Einfluss haben negative Vorerfahrungen auf das Ausmaß und den Verlauf von emotionalen und Verhaltensproblemen bei Adoptivkindern? (3) Wie beeinflussen sich Belastungen und Verhalten von Adoptivkindern und Adoptiveltern wechselseitig? (4) Wie wirken negative Vorerfahrungen und Elternvariablen bei der Vorhersage von emotionalen und Verhaltensproblemen der Adoptivkinder zusammen? (5) Welche Unterstützungsangebote nehmen Adoptivfamilien nach einer Adoption in Anspruch und wo ergeben sich ungedeckte Bedarfe?

Studiendesign, Teilnehmende und Methoden

Die in dieser Arbeit enthaltenen Forschungsartikel basieren auf der derzeit größten Längsschnittbefragung von Adoptivfamilien in Deutschland, die im Rahmen von zwei Forschungsprojekten am DJI durchgeführt wurde. Die erste Befragungswelle T1 mit 257³ Adoptivfamilien war Teil der empirischen Studien des Expertise- und Forschungszentrum Adoption (EFZA) von Mai 2016 bis April 2017 statt und wurde vom BMFSFJ gefördert. Die zweite Befragungswelle T2 mit noch 136 teilnehmenden Familien war Teil eines institutionellen Forschungsprojekts und fand zwischen März 2020 und Februar 2021 statt. Befragt wurden ausschließlich die Adoptiveltern und die vorliegende Arbeit beinhaltet die Analysen der Fragebögen der Hauptbezugspersonen (ca. 92% Adoptivmütter). Bei den Kindern handelte es sich zum ersten Befragungszeitpunkt mehrheitlich um aus dem Inland adoptierte Kinder (77%; $n = 198$). Im Durchschnitt waren die Adoptierten zum Zeitpunkt der Aufnahme in die Adoptivfamilie 10,21 Monate alt ($SD = 17,66$). Zum ersten Befragungszeitpunkt lag das Durchschnittsalter bei 37,79 Monaten ($SD = 26,51$) und zum zweiten Befragungszeitpunkt bei 82,76 Monaten ($SD = 26,46$). Bei der Befragung wurden standardisierte Erhebungsinstrumente zur Erfassung von emotionalen und Verhaltensproblemen der Kinder (mittels SDQ), negativen Vorerfahrungen (pränatale Risiken, Misshandlung und Vernachlässigung, Betreuungswechsel), Elternstress, Elternverhalten und zur psychischen Gesundheit der Adoptiveltern verwendet. Außerdem wurde die Nutzung von Unterstützungsangeboten nach der Adoption erfragt.

Zentrale Ergebnisse

Im ersten Forschungsartikel (Hornfeck et al., 2019) flossen die Informationen von $n = 172$ Adoptivfamilien zu T1 ein. Bei 12,5% der Adoptivkinder wurden emotionale und Verhaltensprobleme im klinischen Bereich festgestellt (Inlandsadoption: 10,7%, Auslandsadoption: 16,1%). Eine Regressionsanalyse mit dem SDQ-Gesamtwert als abhängiger Variable und negativen Vorerfahrungen und Elternvariablen als Prädiktoren ergab, dass die emotionalen und Verhaltensprobleme signifikant durch pränatale Risikofaktoren, Missbrauchs- oder Vernachlässigungserfahrungen und elterlicher Stressregulation vorhergesagt wurden. Eine binäre logistische Regressionsanalyse zeigte

³ Aufgrund der Altersbeschränkungen der eingesetzten Methoden wurden in den Forschungsartikeln die entsprechenden Teilstichproben einbezogen.

zudem, dass sich mit steigender Anzahl an Risikofaktoren auch die Wahrscheinlichkeit für klinisch auffällige emotionale und Verhaltensprobleme erhöhte.

Im zweiten Forschungsartikel (Bovenschen et al., 2023) wurde eine Teilstichprobe von $n = 67$ Familien zu beiden Befragungszeitpunkten betrachtet. Emotionale und Verhaltensprobleme in klinisch relevantem Ausmaß zeigten sich in dieser Teilstichprobe bei 8,9% der Adoptivkinder zu T1 und bei 22,5% zu T2. Signifikante Zusammenhänge ergaben sich im Querschnitt zwischen den Auffälligkeiten der Kinder und inkonsistentem sowie positivem Elternverhalten. Durch Partialkorrelationen zeigte sich zudem, dass die SDQ-Gesamtwerte der Kinder zu T1 inkonsistentes Elternverhalten zu T2 signifikant vorhersagten. Signifikante Zusammenhänge ergaben sich auch zwischen den SDQ-Werten und elterlichem Stress, sowohl innerhalb der beiden Befragungszeiträume als auch in der Wirkrichtung von den emotionalen und Verhaltensproblemen der Kinder zu T1 auf den elterlichen Stress zu T2.

Der dritte Forschungsartikel (Hornfeck et al., in press) berücksichtigte die komplette Längsschnitt-Stichprobe von $n = 136$ Adoptivfamilien. Die Ergebnisse zeigten, dass über 90% der Adoptiveltern nach einer Adoption Angebote der Adoptionsvermittlungsstellen in Anspruch nahmen. Angebote externer Fachstellen wurden von 78,5% der teilnehmenden Adoptiveltern in den ersten fünf Jahren nach der Adoption genutzt. Das betraf vor allem Angebote zur Entwicklungsförderung im Falle von Entwicklungsverzögerungen bei den Kindern. Familienbezogene Therapie- und Beratungsangebote wurden deutlich seltener und eher bei elterlichen Belastungen genutzt. Die Befunde deuten zudem darauf hin, dass ein substantieller Anteil von Adoptivfamilien von Belastungen berichtete, aber keine Unterstützungsangebote externer Fachstellen wahrnahm und sich mehr adoptionsspezifisches Wissen bei diesen wünschte.

Im vierten Forschungsartikel (Hornfeck et al., under review) wurden ebenfalls die Längsschnittdaten analysiert, jedoch von einer Teilstichprobe von $n = 94$ Adoptivkindern. Es zeigte sich ein signifikanter Anstieg der SDQ-Gesamtwerte sowie des Anteils klinisch auffälliger Werte für emotionale und Verhaltensprobleme von T1 zu T2. Regressionsanalysen mit dem SDQ-Gesamtwert als Zielvariable zeigten, dass emotionale und Verhaltensprobleme zu T1 durch das Aufnahmealter und das Selbstwirksamkeitserleben der Adoptiveltern vorhergesagt wurden. Zu T2 wurde das

Problemausmaß der Kinder am besten durch den SDQ-Wert zu T1 und die psychische Belastung sowie das Selbstwirksamkeitserleben der Adoptiveltern zu T2 vorhergesagt.

Interpretation der Ergebnisse und Implikationen für Politik, Praxis und Forschung

Im Einklang mit bisherigen Studien zeigen die Ergebnisse der vier Forschungsartikel, dass eine Adoption eine wirksame Intervention für Kinder sein kann, die aus unterschiedlichsten Gründen nicht in ihren Herkunftsfamilien aufwachsen können (Holloway, 1997; van Ijzendoorn & Juffer, 2006). Die Analysen zur Einschätzung von emotionalen und Verhaltensproblemen ergaben, dass sich die meisten Adoptivkinder in den ersten sechs Jahren nach der Aufnahme in eine Adoptivfamilie altersentsprechend entwickeln und keine klinisch relevanten emotionalen und Verhaltensprobleme zeigten. Beim Vergleich zwischen aus dem Inland und aus dem Ausland adoptierten Kindern zeigten sich heterogene Befunde mit einer leichten Tendenz zu mehr Verhaltensproblemen bei aus dem Ausland adoptierten Kindern. Die Ergebnisse weisen jedoch auch darauf hin, dass emotionale und Verhaltensprobleme insgesamt mit der Zeit zunehmen (N. Cohen & Farnia, 2011; Stams et al., 2000; Verhulst & Versluis-Den Bieman, 1995) und klinisch bedeutsame Symptomausprägungen in einem frühen Stadium häufig auch über die Zeit hinweg bestehen bleiben. Frühe Auffälligkeiten, wie beispielsweise Hyperaktivität erhöhen die Wahrscheinlichkeit späterer Probleme und unterstreichen damit, wie wichtig Maßnahmen zur Früherkennung sind.

Im Hinblick auf die Rolle negativer Vorerfahrungen bestätigen die Studienergebnisse den derzeitigen Forschungsstand zum Einfluss pränataler und präadoptiver Risikofaktoren auf die Entwicklung von emotionalen und Verhaltensproblemen (Ji et al., 2010; Juffer & van Ijzendoorn, 2007; Nadeem et al., 2017), wobei der Effekt insbesondere in den ersten Monaten und Jahren nach der Aufnahme in die Adoptivfamilie zu finden ist. Mit fortschreitender Zeit scheint jedoch das neue Umfeld und insbesondere die Beziehung zwischen Kindern und ihren Adoptiveltern immer wichtiger zu werden. Bei den Analysen innerhalb des ersten Messzeitpunkts zeigte sich, dass die kind- und elternbezogenen Variablen miteinander assoziiert sind. Welche Wirkrichtung diesem Zusammenhang allerdings zugrunde liegt, kann aus den Analysen nicht erschlossen werden. Im Längsschnitt wiesen die Analysen hingegen eher darauf hin, dass das Erziehungsverhalten und der Erziehungsstress der Adoptiveltern von den emotionalen und Verhaltensproblemen der Kinder beeinflusst werden. In den Regressionsanalysen wurde darüber hinaus deutlich, dass

Adoptiveltern die psychosoziale Entwicklung der Adoptivkinder trotz schwieriger Bedingungen vor der Adoption positiv beeinflussen können, wenn sie über ein hohes Maß an psychischem Wohlbefinden und Selbstwirksamkeitserleben verfügen.

Diese Erkenntnisse geben wichtige Anhaltspunkte für die Vorbereitung künftiger Adoptiveltern und die Unterstützung nach einer Adoption. Es ist von entscheidender Bedeutung, angehende Adoptiveltern auf den Umgang mit möglicherweise herausfordernden Verhaltensweisen ihrer Kinder vorzubereiten und sie frühzeitig zu motivieren, bei Bedarf professionelle Unterstützung in Anspruch zu nehmen (Kemmis-Riggs et al., 2018). Das Wissen darüber, welchen Einfluss negative Vorerfahrungen haben, aber auch, wie wichtig das Wohlbefinden und das Verhalten der Adoptiveltern für die Entwicklung der Kinder sind, sollte ein fester Bestandteil in der Vorbereitung von Adoptiveltern sein. Die Analysen des Inanspruchnahmeverhaltens von Hilfen zeigten, dass Adoptivfamilien bereit sind, nach der Adoption Unterstützungsangebote von Adoptionsvermittlungsstellen und externen Diensten zu nutzen, die in Anspruch genommenen Dienste jedoch noch nicht ausreichend den individuellen Bedürfnissen der Familien entsprechen. Daraus ergeben sich vielfältige Ansatzpunkte für Veränderungen und Anpassungen auf politischer und praktischer Ebene, wie zum Beispiel der Ausbau von digitalen Angeboten, bessere Kooperation zwischen den Diensten und die Vermittlung von mehr adoptionsspezifischem Wissen an externe Beratungs- und Behandlungsstellen.

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Appendix A. Research articles of the cumulative dissertation

Research Article I. Emotional and behavior problems in adopted children. The role of early adversities and adoptive parents' regulation and behavior.

Hornfeck, Fabienne; Bovenschen, Ina; Heene, Sabine; Zimmermann, Janin; Zwoenitzer, Annabel & Kindler, Heinz (2019): Emotional and behavior problems in adopted children. The role of early adversities and adoptive parents' regulation and behavior. *Child Abuse and Neglect*, 98. [doi: 10.1016/j.chiabu.2019.104221](https://doi.org/10.1016/j.chiabu.2019.104221)

Contribution:

Ina Bovenschen, Janin Zimmermann and Heinz Kindler contributed to the study's conception and design. Material preparation, recruitment of participants, and data collection were conducted by Annabel Zwönitzer, Fabienne Hornfeck, Sabine Heene, Selina Kappler and Janin Zimmermann. Analyses were performed by Fabienne Hornfeck and Ina Bovenschen. The first draft of the manuscript was written by Fabienne Hornfeck, and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Research Article II. Relations between Children’s and Parents’ Behavior in Adoptive Families – A Longitudinal Analysis

Bovenschen, Ina[#]; Hornfeck, Fabienne[#]; Kappler, Selina (2023): Relations between Children’s and Parents’ Behavior in Adoptive Families – A Longitudinal Analysis. *Adoption Quarterly*, 26(4), 364-388. [doi: 10.1080/10926755.2023.2198520](https://doi.org/10.1080/10926755.2023.2198520)

[#] Ina Bovenschen and Fabienne Hornfeck contributed equally to this paper.

Contribution:

All authors contributed to the study’s conception and design. Material preparation, recruitment of participants, and data collection at Wave 1 were conducted by Annabel Zwönitzer, Fabienne Hornfeck, Sabine Heene, Selina Kappler, and Janin Zimmermann. Material preparation and data collection at Wave 2 was conducted by Selina Kappler and Ina Bovenschen. Analyses were performed by Fabienne Hornfeck and Ina Bovenschen. The first draft of the manuscript was written by Ina Bovenschen and Fabienne Hornfeck, and Selina Kappler commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Research Article III. Inanspruchnahme von Unterstützungsangeboten nach der Aufnahme eines Adoptivkindes – Eine deskriptiv-explorative Untersuchung von Familien mit Fremdadoptionen in Deutschland.

Post-adoption support of adoptive families: a descriptive analysis of adoptive families in Germany

Hornfeck, Fabienne; Bovenschen, Ina & Kappler, Selina (2025). Inanspruchnahme von Unterstützungsangeboten nach der Aufnahme eines Adoptivkindes – Eine deskriptiv-explorative Untersuchung von Familien mit Fremdadoptionen in Deutschland. *Psychologie in Erziehung und Unterricht*, 72, 4-19. [doi: 10.2378/peu2025.art02d](https://doi.org/10.2378/peu2025.art02d)

Contribution:

All authors contributed to the study's conception and design. Material preparation, recruitment of participants, and data collection at Wave 1 were conducted by Annabel Zwönitzer, Fabienne Hornfeck, Sabine Heene, Selina Kappler, and Janin Zimmermann. Material preparation and data collection at Wave 2 was conducted by Selina Kappler and Ina Bovenschen. Analyses were performed by Fabienne Hornfeck. The first draft of the manuscript was written by Fabienne Hornfeck, and Ina Bovenschen, and Selina Kappler commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Research Article IV. Longitudinal development and risk factors of emotional and behavioral problems in adopted children.

Hornfeck, Fabienne; Bovenschen, Ina & Kappler, Selina (second revision). Longitudinal development and predicting factors of emotional and behavior problems in adopted children. *Journal of child and Family Studies*.

Contribution:

All authors contributed to the study's conception and design. Material preparation, recruitment of participants, and data collection at Wave 1 were conducted by Annabel Zwönitzer, Fabienne Hornfeck, Sabine Heene, Selina Kappler and Janin Zimmermann. Material preparation and data collection at Wave 2 was conducted by Selina Kappler and Ina Bovenschen. Analyses were performed by Fabienne Hornfeck. The first draft of the manuscript was written by Fabienne Hornfeck, and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.