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Contrasting Psychopathological Symptoms of Mothers and Fathers: A Study in Families of  
Children with Social Anxiety Disorder vs. Healthy Controls

vorgelegt von

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### **Abstract**

Previous research on Social Anxiety Disorder (SAD) largely focused on symptoms of mothers with children with SAD to understand the impact of symptoms burden on relevant internalizing outcomes. This study aimed to extend previous findings about the symptom burden of parents with children suffering from SAD by contrasting psychopathological symptoms of mothers and fathers of children with SAD and healthy controls (HC). Utilizing online questionnaires, this study involved 98 German-speaking parents ( $M_{age} = 45.99$ ,  $SD_{age} = 5.66$ ) to assess their self-reported depressive symptoms, social anxiety symptoms, and stress levels. To test potential disparities, *t*-tests were conducted among parents in the SAD and HC groups regarding those symptoms. In addition, assessments of potential variations in mothers and fathers within each respective group were conducted. Significant differences were observed between parents in the SAD and HC groups across all three examined symptom categories. However, no significant differences between mothers and fathers within either group for any of the three symptoms were found. These results fortify the notion to implement more effective therapy strategies for children with SAD that also respect the familial effects of mental illness.

*Keywords:* Social Anxiety Disorder (SAD), Parental Psychopathological Symptoms, Depressive Symptoms, Social Anxiety Symptoms, Stress Levels, Family Impact

## **Contrasting Psychopathological Symptoms of Mothers and Fathers: A Study in Families of Children with Social Anxiety Disorder vs. Healthy Controls**

Ten-year-old Sophia experiences overwhelming fear as she gives a presentation in front of her classmates. Leading up to the presentation, she struggles as thoughts of being ridiculed by her peers consume her mind. Her parents, deeply concerned about her anxiety, also feel the burden of her struggles. They go out of their way to help alleviate her anxiety, such as accompanying her to the library to gather presentation materials. Sophia's mother and father try their best to protect their daughter from situations that might trigger her anxiety, which impacts various aspects of their daily lives. For example, due to Sophia's fear of encountering peers, the father misses out on outdoor activities he would like to do with his family. Simultaneously, the mother's concerns for her daughter's well-being weigh heavily on her mind, making it challenging for her to maintain focus on her work. These circumstances underscore the considerable burden on the family. But does Sophia's mother perceive her child's disorder as a greater burden compared to her father or is it equivalent for both parents? At this moment, Sophia gazes at her classmate Anton, who confidently delivered his presentation without any concerns about his classmates' opinions. Unlike Sophia, he remains unaffected by their thoughts. During the preparation for their son's presentation, Anton's parents are able to continue pursuing their professions without any restrictions and engage in family activities together. But a similar question might be asked: Is the perception of Anton's status similar for both parents? For example, Anton's mother may be more stressed about child rearing than his father. The reciprocal relationship between parenting and parental mental health, such as stress levels, is worth investigating. In this context, the question arises as to how these effects differ among different types of parents, for example, comparing the parents of Sophia to the parents of Anton and examining whether their parents exhibit differences in symptomatology. To address these questions, the present study aims to contrast levels of depression, social anxiety, and stress between mothers and fathers of children diagnosed with social anxiety disorder. Additionally, the study compares levels of the same symptoms between mothers and fathers of children without social anxiety disorder who serve as the healthy control group. By examining these factors, the study's objective is to investigate potential differences in parental symptomatology and gender differences concerning their children's diagnosis of social anxiety disorder.

### **1. Social Anxiety Disorder (SAD)**

Compared to shyness and general social anxiousness, social anxiety disorder (SAD) refers to a more severe form of social anxiety that has pathological significance (Schmitz & Asbrand, 2020, Chapter 1). Symptoms of SAD are characterized by intense anxiety and insecurity in social interactions (e.g., engaging with others) and performance-related situations (e.g., public speaking; Schmitz & Asbrand, 2020, Chapter 1). People with SAD are scared of

making mistakes (e.g., stuttering) and being negatively evaluated in such situations (Beidel & Turner, 2007, Chapter 2; Bögels & Phares, 2008). They fear that their behavior could cause humiliation or embarrassment and therefore avoid interpersonal situations or endure these situations only with intense discomfort (Stein & Stein, 2008). The discomfort is often accompanied by physical symptoms (e.g., palpitations or trembling; Beidel & Randall, 1994), which can lead to pronounced avoidance tendencies towards the feared situations. One example of avoidance observed among affected children and adolescents is school refusal (Steil et al., 2011, Chapter 2). Another manifestation of avoidance is the use of safety behaviors like intentionally selecting a seating position in class that minimizes being noticed (Melfsen & Warnke, 2004, Chapter 31; Steil et al., 2011, Chapter 1). Safety behaviors serve as strategies to minimize anxiety and maintain a sense of control in feared situations (Schmitz & Asbrand, 2020, Chapter 1). At the same time, children and adolescents with SAD encounter difficulties in establishing and maintaining age-appropriate social relationships with trusted individuals (Ginsburg et al., 1998). This is primarily due to their symptoms and reliance on avoidance strategies, which often restrict their social interactions. As a result, SAD can cause significant impairment and create a heavy burden in various areas of life, including school and personal relationships (Ginsburg et al., 1998; Van Ameringen et al., 2003).

These behavioral observations are summarized in the diagnostic criteria in the DSM-V. The diagnostic criteria for SAD are listed in Appendix A. In its classification of SAD, the DSM-V does not distinguish between different age groups, but it does include supplementary considerations specifically designed for children (American Psychiatric Association, 2013, Section 2). For example, when assigning the DSM-V diagnosis to children and adolescents, it is important to consider that anxiety symptoms may arise not only in interactions with adults but also in interactions with peers (Melfsen & Warnke, 2004, Chapter 31). Furthermore, anxiety symptoms in children and adolescents with SAD may manifest differently than in adults, including behaviors such as crying, tantrums, or freezing.

### **1.1. Epidemiology of SAD in Childhood and Adolescence**

SAD is one of the most prevalent mental disorders in childhood and adolescence with estimates of the lifetime prevalence rate ranging from 9% (Burstein et al., 2011) to 11.2% (Beesdo-Baum & Knappe, 2012). The average age of onset for SAD falls within the transitional period between childhood and adolescence, typically occurring between 9 and 14 years of age (Beesdo-Baum & Knappe, 2012; Beidel et al., 1999). Furthermore, there are notable gender differences in the diagnosis of SAD between girls and boys, ranging from 44% to 70% for girls vs. 30% to 56% for boys (Beidel & Turner, 2007, Chapter 3; Last et al., 1992). The presence of SAD can also contribute to the development of other disorders (Rapee & Spence, 2004), for example, depression or substance abuse (Asbrand et al., 2022, Chapter 2).

## 1.2. Etiology of SAD

The development of SAD in a child is influenced by a multitude of factors and cannot be attributed solely to a single cause (Asbrand et al., 2022, Chapter 3; Elizabeth et al., 2006). The biopsychosocial model, widely used in the study of anxiety development, suggests that the development of SAD involves the interaction of various risk factors across biological, psychological, and social domains (Detweiler et al., 2014). Specifically, biological risk factors include genetic predispositions (Scaini et al., 2014) and temperament (Kagan et al., 1988), psychological risk factors include cognitive biases (e.g., Bögels & Zigterman, 2000), difficulties in social skills (Cartwright-Hatton et al., 2005), and emotional regulation (Aldao et al., 2010) and social risk factors include parenting behavior (e.g., McLeod et al., 2007) and experiences with peers or at school (e.g., achievement situations or bullying; Asbrand et al., 2022, Chapter 3). These risk factors, when combined, may have a greater impact on the development than any individual factor considered separately (Detweiler et al., 2014). Based on the case study described above, Figure 1 illustrates the factors influencing the development and maintenance of SAD according to the biopsychosocial model (Asbrand et al., 2022, Chapter 3; Schmitz & Asbrand, 2020, Chapter 5). In the following section, a comprehensive examination of the impact of parents is presented.

## 1.3. Parents' Internalizing Symptoms

To gain a more comprehensive understanding of SAD in childhood and adolescence, researchers have increasingly focused on exploring interpersonal factors (Spence & Rapee, 2016). Taking a biopsychosocial perspective allows us to recognize the interplay of these factors and provides valuable insights into the multifaceted nature of parental influence on SAD (see Figure 1).

However, it is important to note that prior research has predominantly focused on examining mothers with children diagnosed with SAD, leaving a significant research gap regarding fathers (e.g., Daundasekara et al., 2021; Gelfand et al., 1992). Furthermore, there is a lack of studies directly comparing the experiences of mothers and fathers in the context of children with SAD. In addition, limited research has been conducted on examining potential differences between mothers and fathers within a healthy control (HC) group. For instance, within the HC group, disparities between mothers and fathers may arise from their distinct roles and responsibilities within the family. These roles can influence their experiences and overall well-being (Pace & Shafer, 2015). Moreover, individual variations in personality traits, stress-coping mechanisms, and problem-solving strategies could lead to diverse responses to the family environment as previous research has shown that men and women can have different approaches to handling stress and managing challenges (Matud, 2004; Pace & Shafer, 2015). Given these limitations in the literature, it is crucial to address this gap and explore not only the differences between the experimental and control groups but also to

examine potential disparities in pathology between mothers and fathers within each group. Subsequently, a specific focus will be placed on examining depressive symptoms, social anxiety symptoms, and stress levels among parents. These three symptoms have been widely recognized as prevalent and influential factors that significantly impact parental well-being and overall family dynamics in families with SAD (Elizabeth et al., 2006; Spence & Rapee, 2016).

### **1.3.1. Depressive Symptoms in Parents**

The lifetime risk of developing depression in adults is estimated to be up to 30% (Kessler et al., 2012), with women being affected twice as often as men (Kessler, 2000). The highest rates of depression in women are in childbearing age, making it very likely that their children are exposed to their mother's depressive symptoms throughout infancy, childhood, and adolescence (Kessler, 1993). The latest research findings, exemplified by Lewis and colleagues (2011), indicate a robust link between parental depressive symptoms and anxiety symptoms in children. Parental depression is associated with the offspring's internalizing and externalizing problems (Colletti et al., 2009). For example, in several longitudinal studies, parental major depression was found to increase the child's risk of developing SAD. Furthermore, Beidel and Turner (1997) found in their study that children of depressed parents were more likely to develop an anxiety disorder than a depressive disorder. This suggests that the parents' symptoms are a significant risk factor for dysfunctional and emotional problems in their offspring (Biederman et al., 2001; Colletti et al., 2009). In fact, remission of maternal depression has been associated with a potential reduction in both the child's diagnoses and symptoms (Weissman et al., 2006).

Parenting behavior can also be influenced by the parents' depressive symptoms (Epkins & Harper, 2016). For example, depressed parents tend to show less warmth and greater rejection towards their offspring (Epkins & Harper, 2016). In addition, depressed mothers report more parenting stress, and daily hassles, and rate themselves lower than non-depressed mothers in having the competence to raise their offspring (Gelfand et al., 1992). Thus, parental depressive symptoms seem to increase the risk of developing SAD in children (Beidel & Turner, 1997).

However, recent studies indicate a bidirectional relationship between parent and child symptoms, suggesting that children's symptoms may also have an impact on parental well-being (e.g., Johnco et al., 2021). The child's depressive and anxious symptoms have been identified as potential risk factors for the development of parental depression (Johnco et al., 2021). Additionally, these symptoms can predict increases in maladaptive parenting behaviors (Pinquart, 2017), especially with the increasing age of the children (Wijsbroek et al., 2011). For example, adolescents who report high levels of anxiety symptoms tend to perceive their parents as becoming increasingly controlling, less sensitive, and more demanding over time (Wijsbroek et al., 2011). Likewise, Nelemans and colleagues (2014) found that child anxiety



significantly increases maternal criticism. Hence, research indicates that there is a reciprocal influence between the psychopathology of parents and their children.

### **1.3.2. Symptoms of Social Anxiety in Parents**

Research has shown that the rate of anxiety disorders in general is higher among children who have anxious parents (e.g., Fyer, 1995). While maternal anxiety disorder was found to significantly predict the presence of anxiety disorders in children, the association between paternal anxiety disorder and child anxiety disorder was not significant (McClure et al., 2001). However, it is conceivable that fathers in this study might have been less inclined than mothers to openly report symptoms of anxiety to interviewers. Anxious fathers, for instance, might have masked their symptoms through self-medication, potentially leading to meeting criteria for substance abuse instead of anxiety disorders (McClure et al., 2001). Similarly, the rate of anxiety disorders is also elevated among parents who have shy children or children who show signs of behavioral inhibition (e.g., Cooper & Eke, 1999). For instance, Last and colleagues (1987) found that the lifetime rate of anxiety disorders among mothers of anxious children was more than double compared to the mothers of healthy children. The rate of mental disorders in fathers of anxious children was found to be significantly higher compared to the relatives of healthy children. In summary, the presence of anxiety disorder in children is associated with an increased risk of anxiety disorder in both parents, particularly in mothers (Cooper et al., 2006). Moreover, research also indicates a bidirectional relationship between parental anxiety, particularly mothers, and child anxiety, with parental anxiety increasing the risk of child anxiety and vice versa.

Furthermore, it is important to note that parents' anxiety symptoms can have an impact on their parenting behaviors. Oftentimes, affected parents tend to exhibit an overprotective parenting style that is lacking in warmth (McClure et al., 2001). For example, anxious parents are more likely to have difficulties responding to their child's expressions of insecurity and are more likely to agree with and support their child's avoidant strategies compared to parents of children with low levels of anxiety (Rapee, 1997). Specifically, anxious fathers tend to show more controlling behavior compared to anxious mothers (Teetsel et al., 2014). This type of parenting behavior may be a response to their children's observable behaviors or an anticipation of negative outcomes for their children with anxiety disorders (McClure et al., 2001). As a result, parents may intervene protectively to help their children avoid those potential negative outcomes (McClure et al., 2001; Rapee, 1997). Consequently, the child is deprived of the opportunity to learn that fear diminishes with exposure (Lebowitz & Omer, 2013; Rapee, 1997; Shimshoni et al., 2019). Hence, parents with anxious symptoms exhibit overprotective and controlling parenting styles which can hinder the child's exposure to anxiety-provoking situations and impede their ability to learn adaptive coping skills.

### **1.3.3. Stress Levels in Parents**

The psychological stress arising from the demands of parenting has been consistently identified as a crucial factor contributing to the development of dysfunctional parent-child relationships and is a significant risk factor for both adult and child psychopathology (Deater-Deckard, 1998; Platt et al., 2016). For example, parental stress not only influences parenting behavior but also exerts a negative impact on the child's well-being (Deater-Deckard, 1998; Ritchie & Holden, 1998). Parenting stress is, furthermore, associated with poorer child adjustment at school, including lower academic achievement (Onatsu-Arvilommi et al., 1998). A child's SAD can be a source of stress for parents, thereby impacting their well-being (Gelfand et al., 1992).

Empirical evidence indicates a noteworthy association between high parental stress levels and the severity of their child's anxiety symptoms (Cho et al., 2021; Platt et al., 2016; Van Oort et al., 2010). It appears to be highly plausible that anxious children can elicit stress within their families. Conversely, children may develop anxiety as a consequence of being exposed to familial stress (Van Oort et al., 2010). Stress itself can also influence parental depression and anxiety. For example, a longitudinal study conducted by Daundasekara and colleagues (2021) found that the relationship between parental depression and child anxiety is mediated by parental stress.

In addition, research has shown that parenting stress is associated with a less favorable treatment outcome in children with anxiety problems (Crawford & Manassis, 2001), underscoring the significance of involving parents and addressing their symptoms in the treatment process. Thus, parental stress has consistently been recognized as a critical contributing factor to dysfunctional parent-child relationships and a significant risk factor for both adult and child psychopathology, with implications for anxiety symptoms and treatment outcomes. This impact highlights the need for a comprehensive investigation into the relationship between stress, depressive and anxiety symptoms of parents with children with SAD in order to achieve optimal treatment outcomes (Crawford & Manassis, 2001).

### **1.4. Hypotheses**

Previous research has indicated that mothers tend to experience greater caregiving burden and lower well-being compared to fathers when their child is dealing with a mental illness (e.g., Samadi & McConkey, 2014). Nonetheless, the impact of child mental disorders on fathers' health is often overlooked and receives limited attention in research (Samadi & McConkey, 2014). Therefore, the present study goes beyond the traditional focus on mothers (e.g., Last et al., 1987) and includes an investigation of fathers as well. By investigating the differences between the groups and genders, the study aims to shed light on the experiences faced by both mothers and fathers of children with SAD and contribute to a more comprehensive understanding of parental internalizing symptoms in the context of childhood

SAD. Based on the current state of research, the present study's focus on parental symptoms contributes to the understanding and treatment of SAD, ultimately aiming to promote better outcomes for both children and their parents.

Building upon the understanding of the etiology of SAD, parents play a significant role in the development and maintenance of their children's symptoms (see Figure 1). Hence, it is crucial to thoroughly examine and consider the influence of parents in the context of SAD. For this, the aim of this study is to examine potential differences in internalizing symptoms, specifically depressive symptoms, social anxiety symptoms, and stress levels, among parents of children between the ages of 9 and 14 (Beidel et al., 1999) who have been diagnosed with SAD compared to parents in a healthy control group whose children do not have SAD. Additionally, the study aims to explore whether there are gender differences in these internalizing symptoms within the groups, as previous research has suggested a higher prevalence of such symptoms among women (e.g., Kessler, 2000). The following hypotheses will be examined in this regard (see Figure 2):

H<sub>1</sub>: Parents in the SAD group report more depressive symptoms than parents in the HC group.

H<sub>1a</sub>: Within the SAD group, mothers report more depressive symptoms than fathers.

H<sub>1b</sub>: Within the HC group, mothers report more depressive symptoms than fathers.

H<sub>2</sub>: Parents in the SAD group report more symptoms of social anxiety than parents in the HC group.

H<sub>2a</sub>: Within the SAD group, mothers report more symptoms of social anxiety than fathers.

H<sub>2b</sub>: Within the HC group, mothers report more symptoms of social anxiety than fathers.

H<sub>3</sub>: Parents in the SAD group report higher stress levels than parents in the HC group.

H<sub>3a</sub>: Within the SAD group, mothers report higher stress levels than fathers.

H<sub>3b</sub>: Within the HC group, mothers report higher stress levels than fathers.

## 2. Methods

### 2.1. Research Design

Data for this study was collected between July 2021 and June 2023 as part of the German Research Foundation-funded project titled "Veränderung kognitiver Prozesse basierend auf internen und externen Signalen bei Kindern mit Sozialer Angststörung" (*engl.* Change in Cognitive Processes based on Internal and External Signals in Children with Social Anxiety Disorder), also known as "Gedankenkarussell: Das Kinderangstprojekt" (*engl.* Mind Carousel: The Child Anxiety Project). The project (project number: 413095700) was conducted at Humboldt-Universität zu Berlin. The study obtained ethical approval from the Ethics Committee of Albert-Ludwigs-Universität Freiburg. This study utilized cross-sectional

questionnaire datasets. The preregistration of the data analysis for this study was uploaded on June 20, 2023, using the Open Science Framework (Phan, 2023). The preregistration encompassed a comprehensive outline of the study rationale, the hypotheses, the methodology, the measures, and the sample size.

## **2.2. Sample**

Recruitment strategies included the distribution of flyers in schools, advertising through various media channels, and sending letters to 5,000 families of children and adolescents aged 9-14 in Berlin, Germany, randomly chosen from all families fitting these criteria. The personal data needed for this recruitment strategy were primarily obtained from a population register in Berlin. The participants were assessed using the Kinder-DIPS (Schneider et al., 2017) and through behavioral observations during the interview. The procedure of the study is described in the following section. Moreover, other established questionnaires were used, which measured social anxiety and general child psychopathology. Based on these measurements the children were divided into an experimental (SAD group) and a control group (HC group). Inclusion criteria for the SAD group required the presence of SAD as a primary disorder, while the HC group included individuals with no current or previous mental illness. Exclusion criteria for both SAD and HC groups included the presence and the suspected presence of autism spectrum disorders (due to the altered social interaction behavior associated with autism spectrum disorder, making it difficult to distinguish from SAD), acute suicide risk or a cognitive overall ability below an IQ of 80, estimated through the child's school type. Additionally, participants who were taking medications that could potentially influence the psychophysiological response in anxiety-inducing situations were excluded from the study.

The sample for this study consisted of 73 children aged 9-14 years and 121 parents, with 69 being mothers and 52 being fathers (see Figure 3). Based on the Kinder-DIPS, 40 children were assigned to the HC group, while the SAD group consisted of 33 children. To ensure the focus on cohabiting parents, single-parent households or cases where only one parent completed the questionnaire were excluded from the study ( $n = 23$ ). There were no homosexual couples identified within the sample (see Figure 3). The selected age range for children was based on the typical onset of SAD (Beidel et al., 1999). As a result, the final sample consisted of 98 parents, including 49 mothers and 49 fathers. Thus, in the HC group, there were 62 parents, comprising 31 mothers and 31 fathers. Whereas the SAD group consisted of 36 parents, with 18 mothers and 18 fathers. Further descriptive statistics are presented in Section 3.1.

After attending all appointments, the children received a gift voucher worth 60 euros and the parents received a compensation of 40 euros. Furthermore, children and adolescents diagnosed with SAD were offered the option of receiving cognitive behavioural-based group

psychotherapy at the Special Outpatient Clinic for Children, Adolescents, and Families at Humboldt-Universität zu Berlin.

### **2.3. Procedure**

Initially, individuals who were interested in participating in the study reached out to the research team either by email or phone. To determine if the child met the inclusion criteria for either of the two groups, a 10- to 20-minute telephone screening session was conducted with one parent (see Appendix B). Following that, the child and parents provided their written consent to participate by completing a consent form through LimeSurvey (Limesurvey GmbH. / LimeSurvey: An Open Source survey tool /LimeSurvey GmbH, Hamburg, Germany. URL <http://www.limesurvey.org>). All participants were provided with detailed written and verbal information about the study prior to their involvement and were informed about the risks associated with participation. Subsequently, participants were asked to complete diagnostic and research-related questionnaires and to provide demographic information using LimeSurvey on their computer at home. The data collection process was pseudonymized and allowed participants to pause or interrupt their responses at any time. For diagnostic purposes, several questionnaires were administered to the children, including the German version of the Strengths and Difficulties Questionnaire - Self-Report (Klasen et al., 2003), Social Anxiety Scale for Children - Self-Report (Melfsen & Warnke, 2011), Social Phobia and Anxiety Inventory for Children (Melfsen et al., 1999), and the Depression Inventory for Children and Adolescents (Keller et al., 2011). These questionnaires aimed to assess various aspects of the children's mental health and well-being. Parents were also asked to complete several questionnaires (see Figure 4), including the German version of Beck's Depression Inventory II (Hautzinger et al., 2006), Brief Symptom Inventory (Spitzer et al., 2011), Social Interaction Anxiety Scale (Consbruch et al., 2016), Social Phobia Inventory (Consbruch et al., 2016), Social Phobia Scale (Consbruch et al., 2016), Perceived Stress Scale (Klein et al., 2016), Strengths and Difficulties Questionnaire - Parent Report (Klasen et al., 2003), and Social Anxiety Scale for Children - Parent Report (Melfsen & Warnke, 2011). These questionnaires, along with demographic data, aimed to gather information about various aspects of the parents' mental health and their child's social anxiety. For this investigation, the focus is on three parents' questionnaires, namely Beck's Depression Inventory II, Social Phobia Inventory, and Perceived Stress Scale. To establish a diagnosis based on DSM-V criteria, separate interviews were conducted with both the parent and the child, resulting in a composite diagnosis (Kinder-DIPS; Schneider et al., 2017). Families were given the option to choose between conducting the interviews online or in person. The interview sessions lasted approximately 60 to 90 minutes each. In addition, the project included two one-site laboratory sessions, but as these are not relevant to the research presented here, they will not be discussed further.

## 2.4. Measures

### **2.4.1. Depressive Symptoms in Parents, measured with the Beck Depression Inventory-II (BDI-II; Hautzinger et al., 2006, original version: Beck et al., 1996)**

For the assessment of depressive symptoms of the parents, the German version of the Beck Depression Inventory-II (BDI-II; Hautzinger et al., 2006) was used. The inventory is based on the DSM-IV criteria and assesses cognitive, affective, and bodily symptoms of depression (Kühner et al., 2007). It consists of 21 items, where the respondent is asked to select one of four statements for each item that applies best to them (e.g., Sadness: 0 = *I do not feel sad*, 1 = *I feel sad much of the time*, 2 = *I am sad all the time*, and 3 = *I am so sad or unhappy that I can't stand it*). The interpretation of the results is as follows: The theoretical score range ranging from 0 to 8 indicates no depressive symptoms, 9 to 13 indicates minimal depressive symptoms, 14 to 19 indicates mild depressive symptoms, 20 to 28 indicates moderate depressive symptoms, and 29 to 63 indicate severe depressive symptoms (Kühner et al., 2007). The internal consistency, Cronbach's alpha, for the BDI-II in this sample was .91.

### **2.4.2. Symptoms of Social Anxiety in Parents, measured with the Social Phobia Inventory (SPIN; Consbruch et al., 2016, original version: Connor et al., 2000)**

The German version of the SPIN (Consbruch et al., 2016) was employed to assess the social anxiety of parents. The SPIN is a screening questionnaire for social anxiety in adulthood (Connor et al., 2000). The instrument comprises 17 items, which are specifically designed to cover three main factors related to social anxiety: Fear of social situations (e.g., "Parties and social events scare me"), avoidance of social situations (e.g., "I avoid talking to people I don't know"), and physiological symptoms of anxiety (e.g., "I am bothered by blushing in front of people"). Each item in the questionnaire is rated on a five-point rating scale, ranging from 0 (*not at all*) to 4 (*extremely*). By summing up the scores of all the items, the theoretical score range can range from 0 to 68 (Connor et al., 2000). A score  $\geq 25$  indicates the presence of SAD (Connor et al., 2000). The internal consistency, Cronbach's alpha, for the SPIN in this sample was .92.

### **2.4.3. Stress Levels in Parents, measured with the Perceived Stress Scale (PSS-10; Klein et al., 2016, original version: Cohen et al., 1983)**

To measure the perceived stress levels of parents the German version of the PSS-10 was utilized (Klein et al., 2016). The PSS-10 assesses the extent to which individuals have experienced life as unpredictable, uncontrollable, and overloaded during the past month (e.g. "In the last month, how often have you felt nervous and 'stressed'?"; Cohen et al., 1983). The questionnaire utilizes a five-point response scale, encompassing a range of options from 0 (*never*) to 4 (*very often*). The theoretical score range on the PSS-10 can range from 0 to 40. Elevated scores on the PSS-10 are indicative of heightened levels of perceived stress (Klein et al., 2016). However, it is crucial to note that the PSS-10 is not designed as a diagnostic

instrument and, as such, does not provide predetermined cut-off scores for classifying stress levels (Klein et al., 2016). The internal consistency, Cronbach's alpha, for the PSS-10 in this sample was .92.

## **2.5. Data Analysis**

Overall, the LimeSurvey questionnaires for diagnostics generated multiple datasets, including consent forms and email addresses, demographic information, questionnaires completed by children, and questionnaires completed by parents. For this study, the analysis focused solely on the questionnaires completed by parents and specifically examined the BDI-II, SPIN, and PSS-10. The data analysis was conducted via R (Version 4.2.2; R Core Team, 2022). The significance level for all tests was set at  $\alpha < .05$ . Furthermore, post-hoc power analyses were conducted for each hypothesis using G\*Power software (Version 3.1.9.7; Faul et al., 2007).

### **2.5.1. Analysis of Demographic Data**

The demographic data was analyzed by calculating the mean, standard deviation, and range for the age of the children and the parents. The demographic items were mandatory and thus had no missing values. For the gender variable, percentages were computed. To investigate discrepancies in gender, education, and household income between the HC and SAD groups,  $\chi^2$ -tests were performed for the parents. Therefore, the `chisq.test`-function from the base package of R was used.

### **2.5.2. Analyses Prior to the *t*-tests**

Firstly, the results of the individual questionnaires were examined by calculating the means, standard deviations, and ranges using the `describe`-function from the `psych`-package (Revelle, 2022). Additionally, the distribution of the results was inspected by generating bar plots, respectively. Next, the prerequisites for conducting a *t*-test (Bortz & Schuster, 2016, Chapter 8) were assessed for each questionnaire. To check the assumption of normal distribution of the examined symptoms, a visual examination was performed using a quantile-quantile plot (Q-Q plot) generated with the `qqnorm`-function from the base package of R. Additionally, a Shapiro-Wilk test was conducted, using the `shapiro.test`-function of the base package of R. To assess the homogeneity of variances, Levene's test was conducted using the `leveneTest`-function from the `car`-package (Fox & Sanford, 2023).

### **2.5.3. *t*-tests and Effect Sizes**

For comparing the group differences in questionnaire scores between SAD and HC parents (regardless of the gender of the parents;  $H_1$ ,  $H_2$ , and  $H_3$ ), independent *t*-tests were employed, specifically a Welch's *t*-test is conducted due to the unequal number of participants between the SAD and HC group (Bortz & Schuster, 2016, Chapter 8). This applied even when the Q-Q plot indicated a deviation from normal distribution and/or when the Shapiro-Wilk test yielded a significant result, as the *t*-test is generally regarded as highly robust to assumption

violations (Bortz & Schuster, 2016, Chapter 8). The "paired" parameter was set to FALSE as the groups were independent, and the "alternative" parameter was set to "greater" for one-sided testing. Depending on the results of the Levene's tests, the parameter "var.equal" was adjusted to either FALSE or TRUE, respectively. To compare groups within a specific diagnosis group ( $H_{1a}$ ,  $H_{1b}$ ,  $H_{2a}$ ,  $H_{2b}$ ,  $H_{3a}$ , and  $H_{3b}$ ), dependent  $t$ -tests were performed. These tests were computed using the  $t.test$ -function from the base package, with the parameter "paired" = TRUE. The "alternative" parameter was set to "greater" to accommodate one-sided testing. Similar to the previous scenario, depending on the results of the Levene's test, the parameter "var.equal" was set to either FALSE or TRUE. Additionally, a 90% confidence interval was estimated around each mean value. A total of nine  $t$ -tests were conducted. To address the issue of multiple testing and reduce the risk of Type I error (false positives), corrections were applied for each  $t$ -test using the Bonferroni correction method (Bortz & Schuster, 2016, Chapter 13). Thus, the reported  $p$ -values of the  $t$ -tests were adjusted according to this correction.

To evaluate the magnitude of differences in questionnaire results between the groups, the effect size was determined by utilizing the  $cohen.d$ -function from the  $effsize$ -package (Torchiano, 2020). This approach allowed for a comprehensive assessment of the effect sizes in addition to examining the significance of the  $t$ -tests (Bortz & Schuster, 2016, Chapter 7). The interpretation of the effect sizes followed the guidelines proposed by Cohen (Cohen, 1988, Chapter 2).

### 3. Results

#### 3.1. Analysis of Demographical Data

The age of the participating children ranged from 9 to 14 years ( $M_{age} = 12.02$ ,  $SD_{age} = 1.44$ , 62% girls, 38% boys). The demographic findings of the parents regarding age are displayed in Table 1. The age of the participating parents ranged from 33 to 66 years ( $M_{age} = 45.99$ ,  $SD_{age} = 5.66$ ). Regarding gender, an equal distribution was achieved since an equal number of mothers and fathers were included in this study. This balance was maintained within each group as well. In terms of education, the highest proportion of parents in the sample, accounting for 77.55% ( $n = 76$ ), held a university or college diploma. With regards to household income, most parents in the sample, comprising 52.58% ( $n = 51$ ), reported a monthly net income of 5,000 euros or higher. The results of the  $\chi^2$  tests indicated no significant gender differences between mothers and fathers in the HC and SAD groups,  $\chi^2(1) = 0$ ,  $p = 1$ . Regarding the educational level,  $\chi^2(5) = 4.66$ ,  $p = .392$ , and household income of parents,  $\chi^2(6) = 6.94$ ,  $p = .321$ , there were no significant differences between the HC and SAD groups.



### 3.2. Preliminary Analyses

#### 3.2.1. Depressive Symptoms in Parents

Table 2 displays the descriptive statistics for the BDI-II scores among the mothers in the SAD and HC group, while Table 3 provides the corresponding descriptive statistics for the fathers in the SAD and HC. Mothers with children diagnosed with SAD had a mean score of 11.94 ( $SD = 11.21$ ). In contrast, fathers with children diagnosed with SAD had a mean BDI-II score of 8.17 ( $SD = 6.50$ ). Mothers with children in the HC group had a mean BDI-II score of 4.77 ( $SD = 5.25$ ). Additionally, fathers with children in the HC group had a mean score of 4.06 ( $SD = 4.84$ ) on the BDI-II.

A visual examination using a Q-Q plot indicated a deviation from normal distribution in the BDI-II results. Additionally, the Shapiro-Wilk test yielded a significant result ( $W = .81$ ,  $p < .001$ ) leading to the rejection of the assumption of normal distribution. Additionally, the Levene's test yielded a non-significant result,  $F(15,33) = 0.74$ ,  $p = .727$ , suggesting that the assumption for homogeneity of variances was met.

#### 3.2.2. Symptoms of Social Anxiety in Parents

The descriptive statistics for the SPIN scores of mothers in both the HC and SAD groups are presented in Table 2, and Table 3 provides the SPIN scores for the fathers in both the HC and SAD groups. Mothers of children diagnosed with SAD had an average SPIN score of 14.44 ( $SD = 11.43$ ). Conversely, fathers of children diagnosed with SAD had an average SPIN score of 15.44 ( $SD = 11.71$ ). In the HC group, mothers had an average SPIN score of 7.13 ( $SD = 4.80$ ). Additionally, fathers in the HC group had an average SPIN score of 6.23 ( $SD = 6.67$ ).

Based on visual examination using a Q-Q plot, it was evident that the results of the SPIN questionnaire did not follow a normal distribution. This observation was further supported by the significant outcome of the Shapiro-Wilk test ( $W = .88$ ,  $p < .001$ ) indicating that the assumption of normal distribution was not met. The Levene's test did not yield a significant result,  $F(24,24) = 0.39$ ,  $p = .988$ , suggesting that there was evidence of homogeneity of variances.

#### 3.2.3. Stress Levels in Parents

Table 2 displays the descriptive statistics for the PSS-10 scores among the mothers in both the HC and SAD groups. Table 3 presents the PSS-10 scores for the fathers in both the HC and SAD groups. Mothers of children diagnosed with SAD had an average PSS-10 score of 19.94 ( $SD = 6.08$ ). Conversely, fathers of children diagnosed with SAD had an average PSS-10 score of 16.44 ( $SD = 5.72$ ). In the HC group, mothers had an average PSS-10 score of 14.13 ( $SD = 6.52$ ). Additionally, fathers in the HC group had an average PSS-10 score of 12.39 ( $SD = 4.40$ ).

Upon visual inspection using a Q-Q plot, it became apparent that the results of the PSS-10 questionnaire did not exhibit a normal distribution. This observation was further supported by the significant outcome of the Shapiro-Wilk test ( $W = .96, p = .005$ ) indicating the rejection of the assumption of normal distribution. Moreover, Levene's test yielded a non-significant result,  $F(19,29) = 1.35, p = .229$ , suggesting that the assumption of variance homogeneity was met.

### **3.3. *t*-tests and Effect Sizes**

#### **3.3.1. *Depressive Symptoms in Parents***

For depressive symptoms, the independent *t*-test revealed that parents with children in the SAD group reported significantly higher levels of depressive symptoms compared to parents with children in the HC group,  $t(96) = 3.92, p < .001$  (see Table 4). Consequently, the findings suggest that  $H_1$  can be confirmed. Furthermore, the results of the paired *t*-test indicated that there were no significant differences in the expression of depressive symptomatology between mothers and fathers within the SAD group,  $t(17) = 1.28, p = .972$  (see Table 5). This finding also holds true for the HC group,  $t(30) = 0.57, p = 1$  (see Table 5). Therefore,  $H_{1a}$  and  $H_{1b}$ , which predicted higher expression of depressive symptomatology in mothers within their respective groups, could not be confirmed.

An effect size of  $d = 0.82$  (large; Cohen, 1988, Chapter 2) was observed between parents of the SAD group and the HC group in terms of depressive level. The effect size between mothers and fathers within the SAD group was  $d = 0.41$  (small; Cohen, 1988, Chapter 2). The effect size between mothers and fathers in the HC group was  $d = 0.14$  (negligible; Cohen, 1988, Chapter 2).

#### **3.3.2. *Symptoms of Social Anxiety in Parents***

For symptoms of social anxiety, the results showed that parents in the SAD group reported significantly higher levels of social anxiety compared to parents in the HC group,  $t(96) = 4.76, p < .001$  (see Table 4). This finding supports hypothesis  $H_2$ . However, within the SAD group, there were no significant differences in social anxiety reported between mothers and fathers,  $t(17) = -0.27, p = 1$  (see Table 5). Similarly, within the HC group, there were no significant differences in social anxiety reported between mothers and fathers,  $t(30) = 0.80, p = 1$  (see Table 5). Therefore, based on the obtained results, hypotheses  $H_{2a}$  and  $H_{2b}$ , which postulated higher levels of social anxiety in mothers within their respective groups, could not be supported.

For symptoms of social anxiety, the effect size between parents of the SAD group and parents of the HC group was  $d = 0.99$  (large; Cohen, 1988, Chapter 2). Within the SAD group, the effect size between mothers and fathers was  $d = 0.10$  (negligible; Cohen, 1988, Chapter 2). In the HC group, the effect size between fathers and mothers was  $d = 0.16$  (negligible; Cohen, 1988, Chapter 2).

### 3.3.3. Stress Levels in Parents

Regarding the stress level, the findings indicated that parents in the SAD group reported significantly higher levels of stress compared to parents in the HC group,  $t(96) = 4.08$ ,  $p < .001$  (see Table 4). Therefore,  $H_3$  can be supported. Furthermore, within the SAD group, the results revealed that mothers did not report higher levels of stress compared to fathers,  $t(17) = 1.89$ ,  $p = .342$  (see Table 5). This pattern was consistent within the HC group as well, where mothers also did not report higher stress levels than fathers,  $t(30) = 1.40$ ,  $p = .774$  (see Table 5). Thus, the obtained results did not support hypotheses  $H_{3a}$  and  $H_{3b}$ , which predicted higher stress levels in mothers compared to fathers within their respective groups.

In terms of the stress level, the effect size between parents in the SAD group and parents in the HC group was  $d = 0.86$  (large; Cohen, 1988, Chapter 2). Within the SAD group, the effect size between mothers and fathers was  $d = 0.59$  (medium; Cohen, 1988, Chapter 2). For mothers and fathers in the HC group, the effect size was  $d = 0.31$  (small; Cohen, 1988, Chapter 2).

### 3.4. Post-hoc Power Analysis

The results of the post-hoc power analysis can be obtained in Table 6. A test strength of  $1-\beta = 0.80$  is recommended for the statistical analysis (Cohen, 1988, Chapter 2). The effect sizes presented in the post-hoc power analyses stem from the computations detailed in Section 3.3. While  $H_1$  ( $1-\beta = .99$ ),  $H_2$  ( $1-\beta = .99$ ), and  $H_3$  ( $1-\beta = .99$ ) displayed sufficient statistical power, the post-hoc power analyses revealed that achieving substantial statistical power within specific groups for certain  $t$ -tests was not feasible for certain effects. This was notable in the case of the dependent  $t$ -tests that compared symptoms of social anxiety between mothers and fathers ( $H_{2a}$ :  $1-\beta = .14$  and  $H_{2b}$ :  $1-\beta = .34$ ) or depressive symptoms within the HC group ( $H_{1b}$ :  $1-\beta = .29$ ). However, for  $H_{3a}$ , the power was sufficient ( $1-\beta = .97$ ). The power for  $H_{1a}$  ( $1-\beta = .78$ ) and  $H_{3b}$  ( $1-\beta = .78$ ) was close to being sufficient.

## 4. Discussion

The present study aimed to address the research gap regarding the symptoms experienced by parents with a child diagnosed with SAD compared to parents with a child without SAD, the HC group. To fulfill this purpose, parents of children who were categorized into either the SAD or HC group based on thorough diagnostic assessments of their child completed surveys regarding their levels of depressive symptoms, symptoms of social anxiety, and stress levels. Subsequently, the questionnaire responses were subjected to a comparative analysis. The hypothesis was posited that parents of children with SAD exhibit dissimilarities in the examined internalizing symptoms compared to parents in the HC group. Furthermore, it was postulated that distinctions in the internalizing symptoms investigated would emerge between mothers and fathers within each respective category. The analyses revealed that parents of children with SAD reported significantly higher levels of depressive

symptoms, social anxiety symptoms, and stress compared to parents in the control group. Surprisingly, gender differences in terms of depression, social anxiety, and stress levels were not found to be statistically significant.

#### **4.1. Depressive Symptoms in Parents**

The study found that parents in the SAD group reported higher levels of depressive symptoms compared to parents in the HC group ( $H_1$ ). The effect size of the differences between the two groups can be interpreted as large ( $d = .82$ ; Cohen, 1988, Chapter 2). This finding aligns with previous research, which has shown that parents of children diagnosed with SAD exhibit elevated levels of depressive symptomatology (Johnco et al., 2021; Lewis et al., 2011). This result may be attributed to the inherent challenges associated with parenting a child diagnosed with SAD (Gelfand et al., 1992; Pinquart, 2017). Such challenges encompass the responsibility of managing the child's anxiety, supporting its social interactions, and addressing its emotional needs (e.g., in the case of Sophia's parents whose daily lives were constrained by their daughter's anxiety disorder; Benito et al., 2015; O'Connor et al., 2020). These challenges may have enduring implications and contribute to the emergence of depressive symptomatology in parents (Benito et al., 2015).

Conversely to these unequivocal results, the present study did not find evidence for potential differences between mothers and fathers within the SAD and HC groups in depressive symptoms ( $H_{1a}$  and  $H_{1b}$ ). The effect size for the comparison between mothers and fathers in the SAD group can be considered small ( $d = .41$ ), indicating a modest difference in their responses (Cohen, 1988, Chapter 2). Conversely, when examining mothers and fathers in the HC group, the effect size can be deemed negligible ( $d = .14$ ), suggesting a minimal difference between their respective responses (Cohen, 1988, Chapter 2). Regarding  $H_{1a}$ , it can be theorized that both mothers and fathers in the SAD group might have experienced similar stressors related to their child's social anxiety disorder (Möller et al., 2015). Previous research suggests that having a child diagnosed with SAD can pose challenges and emotional demands for both parents, as they often share common concerns and responsibilities regarding their child's well-being (Flouri & Buchanan, 2003; Möller et al., 2016). These shared stressors can result in comparable levels of depressive symptoms for both mothers and fathers in the SAD group (Daundasekara et al., 2021). For  $H_{1b}$ , parents in the HC group may not face similar stressors and challenges (Herren et al., 2013) as their children do not have significant social anxiety symptoms (such as Anton's parents). Thus, the absence of significant stressors or difficulties might lead to similar levels of depressive symptoms for both genders. Mothers and fathers within the HC group do not encounter equivalent challenges as those raising children with a pathological disorder. Like parents in the SAD group, it can be inferred that they may confront analogous situations in their daily lives and assume comparable parental roles while encountering similar parental challenges.

## 4.2. Symptoms of Social Anxiety in Parents

As hypothesized, parents in the SAD group reported significantly higher levels of social anxiety symptoms than parents in the HC group ( $H_2$ ). Furthermore, the effect size between the two groups can be interpreted as large ( $d = .99$ ; Cohen, 1988, Chapter 2). These results are consistent with previous findings on social anxiety in parents with children diagnosed with SAD (Cooper et al., 2006; Last et al., 1987). In the context of the biopsychosocial model, the observed result can be attributed to a multitude of possible causes (see Figure 1). For SAD, the genetic component may play a significant role (Elizabeth et al., 2006). Environmental factors, such as the family environment, can also be influential (Caster et al., 1999), where parents in the SAD group inadvertently create conditions that reinforce or perpetuate social anxiety in their children (illustrated by the example of Sophia).

Nevertheless, the present study did not find evidence for significant differences in social anxiety symptoms between mothers and fathers within the SAD and HC groups ( $H_{2a}$  and  $H_{2b}$ ). In addition, the effect sizes for social anxiety between mothers and fathers were found to be negligible in both the SAD ( $d = .10$ ) and HC ( $d = .16$ ) groups (Cohen, 1988, Chapter 2). According to Lieb and colleagues (2000), the outcome might encompass parenting roles: The distinct roles and responsibilities that mothers and fathers have in parenting can impact how they experience and express social anxiety. Likewise, a study proposes that if parenting roles exhibit similarity within the SAD and HC groups, it might result in comparable levels of social anxiety experienced by both mothers and fathers (Fagan et al., 2014). An additional point is that parenting strategies used by mothers and fathers to support their children with social anxiety could be similar, contributing to parallel experiences of anxiety within the parent-child dyad (Garcia et al., 2021). Therefore, it is inferred that family dynamics, such as parent-child relationships and interactions, can affect social anxiety levels in both mothers and fathers, resulting in similar outcomes (Lieb et al., 2000; Pinquart, 2017).

## 4.3. Stress Levels in Parents

The present study also supports the hypothesis that parents in the SAD group report higher levels of stress compared to parents in the HC group ( $H_3$ ). The effect size can be interpreted as large ( $d = .86$ ; Cohen, 1988, Chapter 2). These findings align with previous research outcomes (e.g., Van Oort et al., 2010). Similar to parents in the SAD group who experience depressive symptoms, those parents with children with SAD may also encounter elevated stress levels due to the challenges they confront in social interactions and situations (Gelfand et al., 1992; Paster et al., 2009; Pinquart, 2017). Adding to this argument, parents in the SAD group might encounter heightened stress while handling their child's social anxiety: Concerns about their child's well-being, the potential impact of social anxiety on their child's development, and the search for appropriate support for their child may contribute to this additional stress (Calvocoressi et al., 1995; Cho et al., 2021).

In contrast to the unequivocal findings, the results regarding gender differences within each group only partially align with current perspectives on parental stress levels ( $H_{3a}$  and  $H_{3b}$ ). On the one hand, these hypotheses are not supported by the findings of this study. To explain these unexpected results, it can be theorized that similar stressors (Hasselberg et al., 2014) for both mothers and fathers in the HC and SAD groups are present. This similarity in daily life stressors may contribute to comparable stress levels between the mothers and fathers (Möller et al., 2015). Another reason for the present results might be that mothers and fathers in both groups employ similar coping strategies to manage stress, which could result in comparable reports of stress levels (e.g., Shimshoni et al., 2019). On the other hand, the effect size of the differences between mothers and fathers in the SAD group can be considered medium ( $d = .59$ ), while the effect size between mothers and fathers in the HC group can be considered small ( $d = .31$ ; Cohen, 1988, Chapter 2). Based on previous research findings, the substantial differences in stress levels observed between mothers and fathers in both the SAD and HC groups may be associated with their roles and responsibilities in parenting (Shaw, 2008). Notably, mothers frequently assume a significant share of these parenting responsibilities (Shaw, 2008). The additional workload and responsibilities may contribute to higher stress levels in both groups (Shaw, 2008). It is tenable to assume that the differences between mothers and fathers in stress levels are larger within the SAD group, given that parents in this group are dealing with the challenges posed by their child's disorder. However, the small but notable effect size on stress levels within the HC groups suggests that even in families without children with SAD, there may still be subtle variations in stress levels experienced by mothers and fathers.

#### **4.4. Limitations and Strengths**

The present study had both methodological limitations and strengths. First, it should be noted that the limited sample size may have hindered the detection of potential effects, resulting in restricted statistical power. This is indicated by the results of the post-hoc power analysis, especially when investigating gender differences regarding social anxiety symptoms within the SAD and HC group or gender differences in depressive symptoms within the HC group. The reduced sensitivity in detecting effects due to the sample size might have resulted in non-significant findings in the study, which could potentially become significant in future research with larger samples. Conversely, while the results for  $H_{1a}$ ,  $H_{3a}$ , and  $H_{3b}$  did not achieve statistical significance, they did exhibit substantial statistical power. This contributes to the study's body of knowledge as it reduces concerns about power posing a threat to internal validity (Onwuegbuzie & Leech, 2004).

Second, the data in this study are cross-sectional, precluding the formulation of causal statements of this study's results. Underlining this aspect is important because existing research indicates that the outcomes are open to interpretation from various angles. For

example, the father's social anxiety symptoms could have preceded the development of the child's social anxiety disorder, or vice versa. Thus, the current findings should be interpreted considering this perspective.

Third, the sample only consisted of heterosexual parents with a predominately high socio-economic status. This selective sample limits the external validity of the findings. Therefore, the inclusion of a more diverse range of parents, including those from different sexual orientations and socio-economic backgrounds, should be aimed in future research. Drawing from previous research, children of same-sex parents often face discrimination from their surroundings, which can negatively impact the child's and their parents' well-being (Stacey & Biblarz, 2001). Another aspect is that a low socio-economic status remains a significant risk factor for common disorders like social anxiety (Claes et al., 2023). Furthermore, it is noteworthy to observe that, during the sample selection process, a higher number of parents in the SAD group were excluded due to either being single parents or having only one parent who filled in the questionnaires. Speculatively, it can be assumed that single parents or couples where not both parents responded to the questionnaires might have unique characteristics or experiences that differ from those in two-parent households, potentially influencing the study results (e.g., Monna & Gauthier, 2008). For example, Louie and colleagues (2017) found that single parenting was associated with higher reported stress levels within the family and could further intensify stress among these parents. Due to the selection criteria for the SAD group, one should interpret the results with caution, as it was precisely these parents who were excluded from the present study.

Fourth, the data collection occurred predominantly during the COVID-19 pandemic, potentially influencing the reported internalizing symptoms, leading to higher-than-average scores across all groups (Spinelli et al., 2020). This circumstance can potentially restrict the generalizability of the study's findings. However, it is important to note that the degree of symptoms does not truly influence the contrast in symptoms, i.e., pure mean differences remain valid. Yet, these results should be interpreted with caution, as they could have been influenced by pandemic-related changes that might have impacted the observed differences.

Still, it can be argued that the present study successfully achieved its aim to compare parents with children with SAD and parents with children without SAD, with an equal number of mothers and fathers in each group comparison. Contrary to previous findings which neglected the equal representation of mothers and fathers, the present study allows for a comprehensive examination of both perspectives, providing valuable insights into targeted opportunities for a better familial support system. The biopsychosocial model underscores the influential role of parents in the development and maintenance of SAD in children. Under this premise, the present study contributes to this understanding by providing additional information on the internal experiences of fathers of children with SAD, including their self-

reported depressive and symptoms of social anxiety, and stress levels. Furthermore, the study's comparisons between mothers and fathers, especially those who share parenting responsibilities for the same child, pose additional evidence to the existing literature on SAD. An important finding of the study is that parents in the SAD group consistently reported higher levels of depressive and social anxiety symptoms, as well as higher stress levels, compared to parents in the HC group. Notably, another important finding of this study is that among the coparents who participated, there were no significant differences between mothers' and fathers' reports of their respective symptoms. A previous study suggests that both mothers and fathers may experience similar internal challenges related to their child's SAD, emphasizing the importance of considering both parental perspectives in understanding the impact of SAD on the family dynamic (e.g., Fagan et al., 2014). Nevertheless, judging from previous research that has often excluded fathers, this study stands as one of the pioneering efforts to comprehensively investigate specific reported internalizing symptoms in parents of children with and without SAD. This contributes to the expansion of clinical research's scope to encompass fathers in clinical trials (e.g., Teetsel et al., 2014).

#### **4.5. Future Directions in the Study of SAD and Broader Implications**

Concluding from the current findings, involving parents in the treatment of SAD appears to be highly advantageous. The present study sheds light on the internal experiences of parents, including fathers of children with SAD. As aforementioned, it is inferred that the inclusion of fathers is highly imperative for the development of targeted interventions, taking into account parent-child interactions and the etiology of SAD, as illustrated in the biopsychosocial model. This enhanced understanding of parental challenges and stressors creates opportunities for targeted support and interventions, particularly through family-centred therapy approaches, that can positively impact the well-being of both parents and their children (Büch et al., 2015, Chapter 2). Unsurprisingly, a previous review by Kunas and colleagues (2021) found a significant and adverse impact of parental psychopathology on cognitive-behavioural psychotherapy outcomes in anxious adolescents. However, the review neglected potential differences between maternal and paternal psychopathological influences. By adopting a whole-family approach that also acknowledges the differences between mothers and fathers, comprehensive interventions can be devised to cater to the requirements of all family members and foster a supportive family environment (Büch et al., 2015, Chapter 2). These strategies are thus intended to reinforce the child's treatment effect (Breinholst et al., 2012). Emphasizing social competence and providing parenting training can be particularly effective in this context (Schulte-Markwort & Bindt, 2006). The identification of higher levels of depressive, social anxiety symptoms, and stress among parents in the SAD group underscores the significance of early mental health interventions. Providing support for



parental mental health can have a positive cascading effect on the entire family unit, benefiting the child's well-being as well (Singleton, 2007).

The findings from the study pave the way for future research to explore additional factors that can influence the stress and well-being of parents and children in families dealing with SAD in which also the coparent should be included. There are several promising directions for further investigations, including longitudinal studies, family dynamics, and examining the effectiveness of interventions targeting the whole family. Considering the cross-sectional data in this study, longitudinal studies, in particular, hold great potential to shed light on the evolving nature of parental burden and child well-being over time. Future research can gain a more comprehensive understanding of families' experiences and needs throughout different stages of the SAD journey. The approach of longitudinal investigations enables the exploration of bidirectional associations between parents and children in terms of their symptoms. In addition, it would be, for example, intriguing to explore how mothers and fathers in both the SAD and HC groups differ from each other regarding stress in terms of physiological measurements. Examining physiological markers may provide deeper insights into the potential underlying mechanisms (e.g., Asbrand et al., 2017) contributing to these differences between mothers and fathers in their stress responses within the context of SAD and the control group.

## **5. Conclusion**

By contrasting the psychopathological symptoms of mothers and fathers of children with and without SAD, the present study provides valuable insights into the internalizing symptoms experienced by parents, of children with and without SAD. The results reveal that parents of children with SAD report higher levels of depressive symptoms, symptoms of social anxiety, and stress compared to parents of children without SAD. Notably, significant differences in the reported depressive and symptoms of social anxiety as well as stress levels between mothers and fathers within the SAD group and HC group could not be found, indicating a shared experience within the parent-child dyad. Yet, the study, considering the above-mentioned limitations, underscores the importance of targeted interventions to support parents navigating SAD in their children. Adopting a whole-family can have a positive cascading effect on parental mental health, family well-being, and the therapeutic outcomes of the child. Sophia and Anton each bring their own experiences to the table, and as a result, their parents navigate distinct circumstances. Acknowledging the profound influence of these parents is crucial, not only to ensure Sophia's success in her presentation but also to support Anton's journey.

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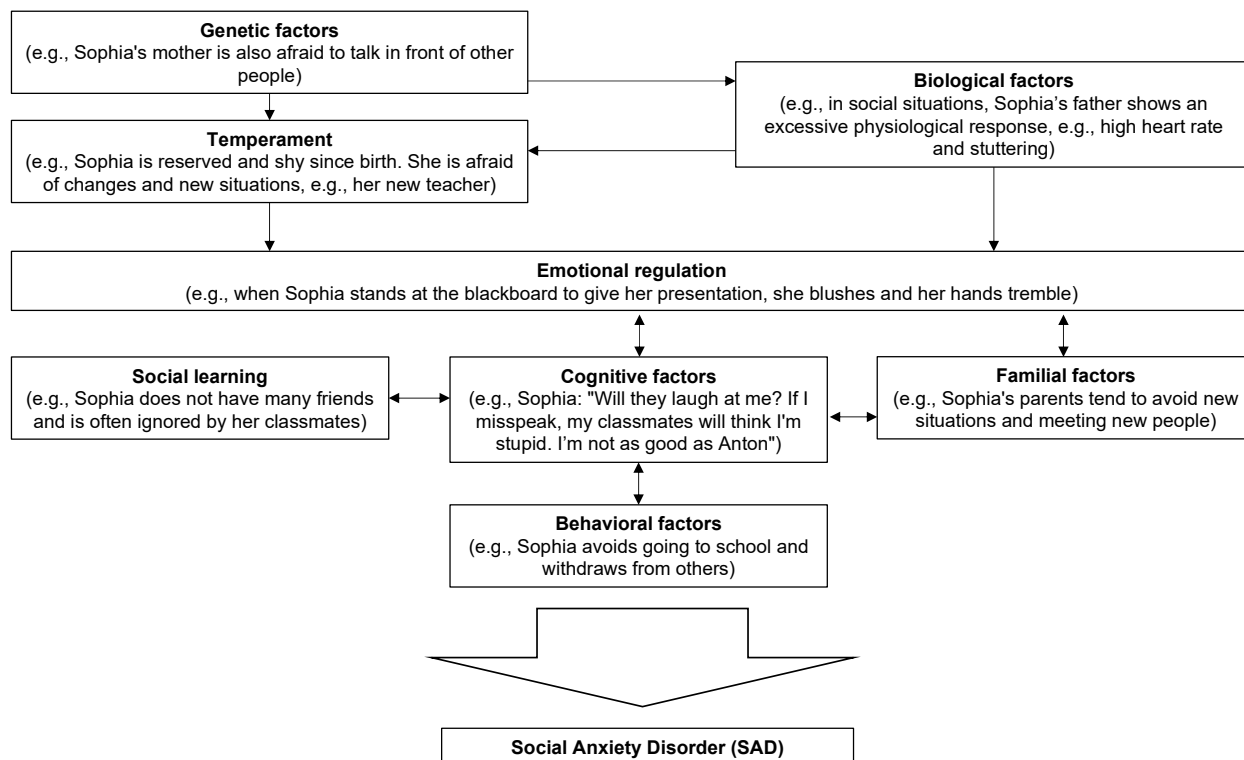
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## Figures

**Figure 1**

*Biopsychosocial Model of Social Anxiety Disorder (SAD) in Childhood and Adolescence*



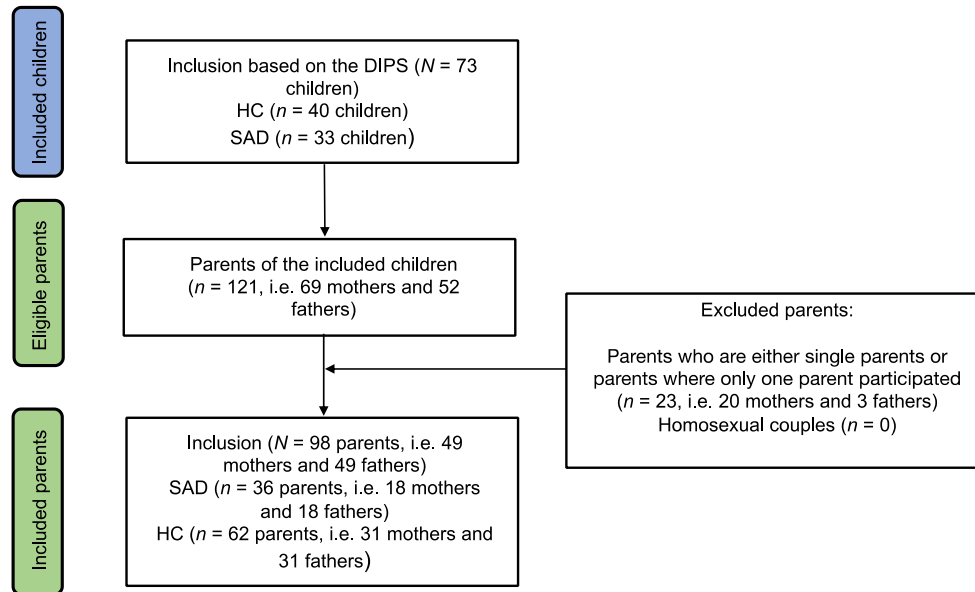
*Note.* Adapted from *Soziale Angststörung im Kindes- und Jugendalter* [Social Anxiety Disorder in childhood and adolescence] (p.70), by J. Schmitz & J. Asbrand, 2020, Kohlhammer Verlag.

**Figure 2***Model of the Hypotheses*

	Mothers	Fathers
Children in SAD group (e.g. Sophia)	e.g. Sophia's mother	e.g. Sophia's father
Children in HC group (e.g. Anton)	e.g. Anton's mother	e.g. Anton's father

*Note.* The green color coding of the model represents hypotheses  $H_1$ ,  $H_2$ , and  $H_3$  ( $SAD > HC$ ). The orange color coding corresponds to hypotheses  $H_{1a}$ ,  $H_{1b}$ ,  $H_{2a}$ ,  $H_{2b}$ ,  $H_{3a}$  and  $H_{3b}$  ( $mothers_{SAD} > fathers_{SAD}$  or  $mothers_{HC} > fathers_{HC}$ ). SAD = Social Anxiety Disorder; HC = Healthy Control.

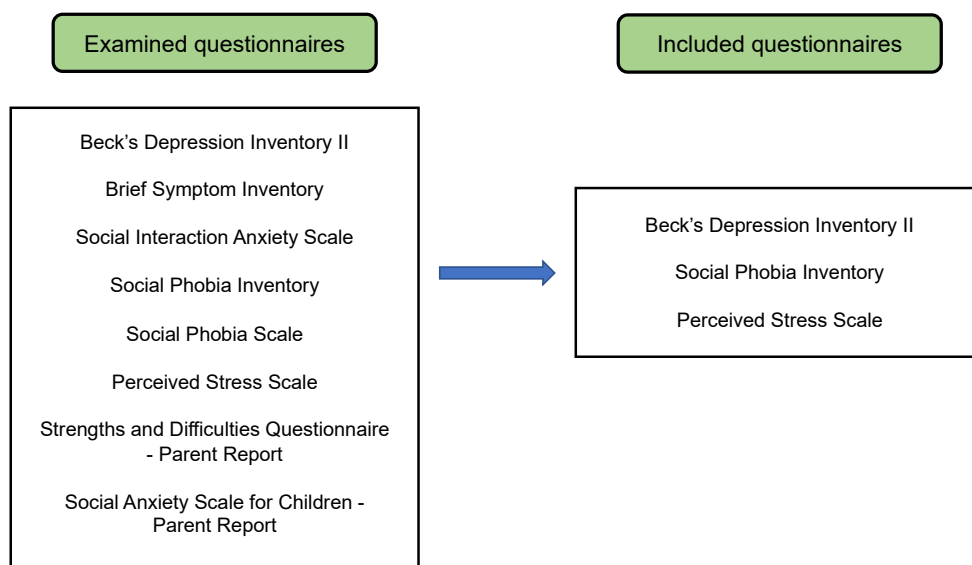


**Figure 3***Flowchart of the Selection Process*

*Note.* Flowchart depicting the number of participants at each step of the selection process for suitable participants. SAD = Social Anxiety Disorder; HC = Healthy Control.

**Figure 4**

*The Examined and Included Questionnaires Completed by the Parents*



*Note.* The participants completed the questionnaires in a single session. Nevertheless, only Beck's Depression Inventory II, the Social Phobia Inventory, and the Perceived Stress Scale questionnaires were analyzed in this study.

## Tables

**Table 1**

*Descriptive Statistics of the Ages (in years) of Parents in the SAD and HC Groups*

Group	<i>n</i>	<i>M</i>	<i>SD</i>	<i>Mdn</i>	<i>Min</i>	<i>Max</i>	<i>Range</i>	<i>SE</i>
Parents	98	45.99	5.66	46	33	66	33	0.57
SAD	36	45.47	5.44	45.5	33	57	24	0.91
Mothers	18	44.22	5.68	45	33	55	22	1.34
Fathers	18	46.72	5.03	46.5	38	57	19	1.18
HC	62	46.29	5.81	46	35	66	31	0.74
Mothers	31	44.77	4.52	45	36	52	16	0.81
Fathers	31	47.81	6.60	48	35	66	31	1.18

*Note.* *N* = 98. SAD = Social Anxiety Disorder; HC = Healthy Control.

**Table 2***Descriptive Statistics for the BDI-II, SPIN, and PSS-10 Completed by Mothers*

Questionnaire	<i>n</i>	<i>M</i>	<i>SD</i>	<i>Mdn</i>	<i>Min</i>	<i>Max</i>	<i>Range</i>	<i>SE</i>
SAD								
BDI-II <sup>a</sup>	18	11.94	11.21	8	0	29	29	2.64
SPIN <sup>b</sup>	18	14.44	11.43	13	0	39	39	2.69
PSS-10 <sup>c</sup>	18	19.94	6.08	21	9	31	22	1.43
HC								
BDI-II <sup>a</sup>	31	4.77	5.25	3	0	18	18	0.94
SPIN <sup>b</sup>	31	7.13	4.80	7	0	22	22	0.86
PSS-10 <sup>c</sup>	31	14.13	6.52	12	4	28	24	1.17

*Note.* *N* = 98. SAD = Social Anxiety Disorder; HC = Healthy Control; BDI-II = Beck's Depression Inventory II; SPIN = Social Phobia Inventory; PSS-10 = Perceived Stress Scale.

<sup>a</sup> The theoretical score range ranged from 0 to 63. <sup>b</sup> The theoretical score range ranged from 0 to 68. <sup>c</sup> The theoretical score range ranged from 0 to 40.

**Table 3***Descriptive Statistics for the BDI-II, SPIN, and PSS-10 Completed by Fathers*

Questionnaire	<i>n</i>	<i>M</i>	<i>SD</i>	<i>Mdn</i>	<i>Min</i>	<i>Max</i>	<i>Range</i>	<i>SE</i>
SAD								
BDI-II <sup>a</sup>	18	8.17	6.50	7.50	0	22	22	1.53
SPIN <sup>b</sup>	18	15.44	11.71	14.50	0	44	44	2.76
PSS-10 <sup>c</sup>	18	16.44	5.72	17.50	7	26	19	1.35
HC								
BDI-II <sup>a</sup>	31	4.06	4.84	2	0	17	17	0.87
SPIN <sup>b</sup>	31	6.23	6.67	3	0	24	24	1.20
PSS-10 <sup>c</sup>	31	12.39	4.40	13	3	23	20	0.79

*Note.* *N* = 98. SAD = Social Anxiety Disorder; HC = Healthy Control; BDI-II = Beck's Depression Inventory II; SPIN = Social Phobia Inventory; PSS-10 = Perceived Stress Scale.

<sup>a</sup> The theoretical score range ranged from 0 to 63. <sup>b</sup> The theoretical score range ranged from 0 to 68. <sup>c</sup> The theoretical score range ranged from 0 to 40.

**Table 4**

*Welch's t-test Results Contrasting Parents in the SAD and HC Groups (Independent Sample) in Terms of Depressive Symptoms, Social Anxiety Symptoms, and Stress Level*

Questionnaire	SAD		HC		<i>t</i>	<i>df</i>	<i>p</i> <sup>a</sup>	Cohen's <i>d</i>
	<i>M</i>	<i>M</i> 90%CI	<i>M</i>	<i>M</i> 90%CI				
BDI-II	10.06	[7.46, 12.65]	4.42	[3.35, 5.48]	3.92	96	<.001	.82
SPIN	14.94	[11.73, 18.16]	6.68	[5.45, 7.90]	4.76	96	<.001	.99
PSS-10	18.19	[16.48, 19.91]	13.53	[12.07, 14.44]	4.08	96	<.001	.86

*Note.* SAD = Social Anxiety Disorder; HC = Healthy Control; BDI-II = Beck's Depression Inventory II; SPIN = Social Phobia Inventory; PSS-10 = Perceived Stress Scale.

<sup>a</sup> The reported *p*-values of the one-tailed *t*-tests have been adjusted according to the Bonferroni correction.

**Table 5**

*Dependent t-tests Results Contrasting Mothers and Fathers Within the SAD and HC Groups in Terms of Depressive and Social Anxiety Symptoms, and Stress Levels*

Questionnaire	<i>Mothers</i>		<i>Fathers</i>		<i>t</i>	<i>df</i>	<i>p</i> <sup>a</sup>	<i>Cohen's d</i>
	<i>M</i>	<i>M</i> 90%CI	<i>M</i>	<i>M</i> 90%CI				
SAD								
BDI-II	11.94	[7.35, 16.54]	8.17	[5.50, 10.83]	1.28	17	.972	.41
SPIN	14.44	[9.76, 19.13]	15.44	[10.64, 20.25]	-0.27	17	1	.10
PSS-10	19.94	[17.45, 22.44]	16.44	[14.10, 18.79]	1.89	17	.342	.59
HC								
BDI-II	4.77	[3.17, 6.38]	4.06	[2.59, 5.54]	0.57	30	1	.14
SPIN	7.13	[5.67, 8.59]	6.23	[4.19, 8.26]	0.80	30	1	.16
PSS-10	14.13	[12.14, 16.12]	12.39	[11.05, 13.73]	1.40	30	.774	.31

*Note.* SAD = Social Anxiety Disorder; HC = Healthy Control; BDI-II = Beck's Depression Inventory II; SPIN = Social Phobia Inventory; PSS-10 = Perceived Stress Scale.

<sup>a</sup> The reported *p*-values of the one-tailed *t*-tests have been adjusted according to the Bonferroni correction.

**Table 6***Post-hoc Power Analysis for the Hypotheses*

Hypothesis	Power analysis			1- $\beta$
	$\alpha$	Cohen's $d$	$N$	
H <sub>1</sub>	.05	.82	98 <sup>a</sup>	.99
H <sub>1a</sub>	.05	.41	36 <sup>b</sup>	.78
H <sub>1b</sub>	.05	.14	62 <sup>c</sup>	.29
H <sub>2</sub>	.05	.99	98 <sup>a</sup>	.99
H <sub>2a</sub>	.05	.10	36 <sup>b</sup>	.14
H <sub>2b</sub>	.05	.16	62 <sup>c</sup>	.34
H <sub>3</sub>	.05	.86	98 <sup>a</sup>	.99
H <sub>3a</sub>	.05	.59	36 <sup>b</sup>	.97
H <sub>3b</sub>	.05	.31	62 <sup>c</sup>	.78

*Note.* For hypotheses H<sub>1</sub>, H<sub>2</sub>, and H<sub>3</sub>, post-hoc power analyses were conducted for independent *t*-tests (one-tailed), while for hypotheses H<sub>1a</sub>, H<sub>1b</sub>, H<sub>2a</sub>, H<sub>2b</sub>, H<sub>3a</sub>, and H<sub>3b</sub>, post-hoc power analyses for dependent *t*-tests (one-tailed) were performed. A test strength of 1- $\beta$  = 0.80 is recommended for the statistical analysis (Cohen, 1988).

<sup>a</sup> $N = n_{SAD} + n_{HC}$ . <sup>b</sup> $N = n_{SAD\ mothers} + n_{SAD\ fathers}$ . <sup>c</sup> $N = n_{HC\ mothers} + n_{HC\ fathers}$ .



## Appendix A

### Diagnostic Criteria of SAD according to DSM-V

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General diagnostic criteria of social anxiety disorder (SAD) according to DSM-V

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- A) Marked fear or anxiety about one or more social situations in which the individual is exposed to possible scrutiny by others. Examples include social interactions (e.g., having a conversation, meeting unfamiliar people), being observed (e.g., eating or drinking), and performing in front of others (e.g., giving a speech).
  - B) The individual fears that he or she will act in a way or show anxiety symptoms that will be negatively evaluated (i.e., will be humiliating or embarrassing; will lead to rejection or offend others).
  - C) The social situations almost always provoke fear or anxiety
  - D) The social situations are avoided or endured with intense fear or anxiety.
  - E) The fear or anxiety is out of proportion to the actual threat posed by the social situation and to the sociocultural context.
  - F) The fear, anxiety, or avoidance is persistent, typically lasting for 6 months or more.
  - G) The fear, anxiety, or avoidance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.
  - H-J) The anxiety or avoidance cannot be explained solely by the effects of substances, a physical illness, or another mental illness.
- 

*Note.* Adapted from *Diagnostic and Statistical Manual of Mental Disorders: DSM-5* (5th ed., p.104-107), by American Psychiatric Association, 2013, American Psychiatric Association.

## Appendix B

### Telephone Screening

#### Einleitende Worte

Hier ist ... vom Kinderforschungsprojekt an der Humboldt-Universität zu Berlin. Schön, dass Sie und Ihr Kind Interesse haben, an unserer Studie teilzunehmen. Haben Sie jetzt ca. 10 bis 20 Minuten Zeit und etwas Ruhe, dass ich Ihnen bereits einige Fragen zu Ihrem Kind stellen und Infos zu unserer Studie geben kann? Ansonsten können wir gerne einen neuen Telefontermin vereinbaren.

- ggf. neuer Telefontermin: \_\_\_\_\_

#### Kontakt

Zuerst interessiert mich: Wie sind Sie auf unsere Studie aufmerksam geworden?

- aufmerksam geworden durch: \_\_\_\_\_

#### Mitteilung

☐ wenn Eltern bereits Infos zur Studie nennen: Sie wissen ja schon einiges über unsere Studie. Genau, ... [mit Text fortfahren:]

☐ wenn Eltern noch keine Infos zur Studie nennen: Ok. Ich möchte Ihnen gerne kurz die wichtigsten Infos zur Studie geben. [mit Text fortfahren:]

- In unserer Studie wollen wir untersuchen, was Kinder mit sozialen Ängsten von Kindern ohne sozialen Ängsten unterscheidet. Dazu untersuchen und vergleichen wir beide Gruppen.
- Die Daten werden anonym behandelt; niemand außerhalb des Projektteams erfährt Ihren Namen oder den Ihres Kindes.
- Wenn Sie und Ihr Kind an allen Studienterminen teilgenommen haben, bekommen Sie als Dankeschön eine Aufwandsentschädigung und Ihr Kind einen Gutschein. [Höhe auf Nachfrage nennen: 40€ für Eltern, 60€ Gutschein für Kind]
- Für die Teilnahme gibt es allerdings bestimmte Kriterien. Ein Kriterium ist, dass Ihr Kind entweder eine soziale Angststörung hat oder noch nie eine psychische Erkrankung hatte. Um das festzustellen, machen wir zu Beginn eine gründliche Diagnostik. Hierzu möchten wir Ihnen jetzt am Telefon ein paar erste Fragen zum Verhalten Ihres Kindes stellen. Dadurch können wir schon grob prüfen, ob Ihr Kind in unsere Studie passen könnte. Nur falls es passen könnte, würden wir Sie und Ihr Kind zu einer ausführlichen Diagnostik einladen. So können wir den Aufwand für Sie und Ihre Familie möglichst geringhalten, falls eine Teilnahme doch nicht möglich sein sollte.
- Sind Sie damit einverstanden?

☐ Wenn nein:

- Grund notieren: \_\_\_\_\_
- Vielen Dank, dass Sie sich kurz Zeit genommen haben.

☐ Wenn ja:

- Super. Ich möchte Ihnen jetzt einige Fragen stellen, um festzustellen, ob für Ihr Kind eine Teilnahme am Forschungsprojekt in Frage kommt.

### Allgemeines

Zuerst habe ich ein paar generelle Fragen zu Ihrem Kind. Wie heißt Ihr Kind und wie alt ist es?

- *Name:* \_\_\_\_\_
- *Alter:* \_\_\_\_\_
- *Geschlecht:* ☐ m ☐ w ☐ d

Welche Schule besucht Ihr Kind?

- *Schule:* \_\_\_\_\_

☐ *wenn Förderschule:*

- *Grund notieren:* \_\_\_\_\_
- *wenn V. a. IQ <80* ☐ *Ablehnung:* Leider können Sie und Ihr Kind dann an unserer Studie nicht teilnehmen. Die Kinder sollen in der Studie einige Aufgaben lösen, die für manche Kinder sehr schwierig sein können. Wir möchten, dass Ihr Kind sich auch bei uns wohl fühlt und die Aufgaben gut lösen kann. In der Forschung gibt es daher strenge Kriterien. Wir freuen uns jedoch sehr über Ihr Interesse an unserem Projekt. Vielen Dank, dass Sie sich die Zeit genommen haben.

In welche Klasse geht Ihr Kind?

- *Klasse:* \_\_\_\_\_

### Psychopathologie

Als nächstes habe ich einige Fragen zu Schwierigkeiten oder Auffälligkeiten, die manche Kinder haben können und würde gerne wissen, wie das auf Ihr Kind zutrifft. Daher interessiert mich zuerst die Frage:

- Glauben Sie, Ihr Kind gehört zu den ängstlichen oder den nicht ängstlichen Kindern? ☐ SAD ☐ HC

1.	<p>Generelle Frage</p> <p>Gab es bei Ihrem Kind zu irgendeiner Zeit schon einmal größere Probleme oder Schwierigkeiten, die belastend waren?</p> <p><input type="checkbox"/> <i>Wenn ja:</i> Waren Sie deswegen bereits mit Ihrem Kind bei einem:r Psychotherapeut:in oder Psychiater:in?</p> <p><input type="checkbox"/> <i>Wenn ja:</i> Welche Diagnose/n hat Ihr Kind erhalten?</p>	<p>Ja <input type="checkbox"/> Nein <input type="checkbox"/></p> <p>Ja <input type="checkbox"/> Nein <input type="checkbox"/></p> <p>Vor-Diagnose:</p>
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2.	<p>ADHS (F90.x)</p> <p>Fällt Ihnen manchmal auf, dass Ihr Kind sehr unruhig ist oder es ihm schwerfällt, aufmerksam zu sein?</p> <p><input type="checkbox"/> Wenn ja: Wie oft tritt das Verhalten auf? 1=selten 2=manchmal 3=oft 4=sehr oft</p> <p><input type="checkbox"/> Wenn ja: Ist Ihr Kind wegen dieser Unruhe und Unkonzentriertheit schon einmal medikamentös behandelt worden?</p>	<p>Ja <input type="checkbox"/> Nein <input type="checkbox"/></p> <p>Häufigkeit:</p> <p>Ja <input type="checkbox"/> Nein <input type="checkbox"/></p>
3.	<p>LRS/Dyskalkulie (F81.x)</p> <p>Leidet Ihr Kind unter einer Lese-/ Rechtschreib- oder Rechenschwäche?</p> <p><input type="checkbox"/> Wenn ja: Wurde diesbezüglich eine Diagnose gestellt?</p>	<p>Ja <input type="checkbox"/> Nein <input type="checkbox"/></p> <p>Ja <input type="checkbox"/> Nein <input type="checkbox"/></p>
4.	<p>Störung mit oppositionellem Trotzverhalten (F91.3)</p> <p>Kommt es <u>sehr häufig</u> vor, dass Ihr Kind trotzig ist und Sie oder es seine:ihre Geschwister ärgert?</p>	<p>Ja <input type="checkbox"/> Nein <input type="checkbox"/></p>
	<p><input type="checkbox"/> Wenn ja: In welchen Situationen tritt dieses Verhalten gehäuft auf? (Beispiele beschreiben lassen)</p>	
5.	<p>Störung des Sozialverhaltens (F91.1/F91.2)</p> <p>Zeigt Ihr Kind aggressives Verhalten oder ist es ungehorsam anderen Personen gegenüber? Damit meine ich Verhaltensweisen wie z. B. stehlen, in Schlägereien verwickelt sein oder von Zuhause weglaufen.</p> <p><input type="checkbox"/> Wenn ja: Wie oft tritt das Verhalten auf? 1=selten 2=manchmal 3=oft 4=sehr oft</p>	<p>Ja <input type="checkbox"/> Nein <input type="checkbox"/></p> <p>Häufigkeit:</p>
6.	<p>Depressive Störungen (F32.x/F33.x)</p> <p>Ist Ihr Kind manchmal über eine längere Zeit hinweg ganz traurig oder auch ganz ärgerlich, gereizt und unzufrieden?</p> <p>Hat Ihr Kind schon mal über längere Zeit das Interesse an Dingen verloren, die es sonst gerne macht?</p> <p><input type="checkbox"/> Wenn ja: Wie lange dauert/e dieser Zustand an?</p> <p><input type="checkbox"/> Wenn ja: Wie sehr denken Sie, fühlt sich Ihr Kind dadurch beeinträchtigt? 1=ein wenig 2=mäßig 3=schwer 4=massiv beeinträchtigt</p>	<p>Ja <input type="checkbox"/> Nein <input type="checkbox"/></p> <p>Ja <input type="checkbox"/> Nein <input type="checkbox"/></p> <p>Zeitspanne:</p> <p>Beeinträchtigung:</p>
7.	<p>Störung mit Trennungsangst (F93.0)</p> <p>Hat Ihr Kind große Angst sich von Ihnen oder anderen Bezugspersonen zu trennen, z. B. wenn es abends einmal alleine zu Hause bleiben soll oder wenn es bei einem:r Freund:in übernachten soll?</p>	<p>Ja <input type="checkbox"/> Nein <input type="checkbox"/></p>

	<p>Hat es dann große Angst, Ihnen oder ihr:ihm selbst könnte in dieser Zeit etwas zustoßen?</p> <p><input type="checkbox"/> <i>Wenn ja:</i> Wie stark fühlt sich Ihr Kind durch diese Ängste in ihrem:seinem Leben beeinträchtigt?  1=ein wenig    2=mäßig    3=schwer    4=massiv beeinträchtigt</p>	<p>Beeinträchtigung:</p>
8.	<p>Panikstörung (F41.0)  Kam es schon mal vor, dass Ihr Kind innerhalb kurzer Zeit große Angst bekommen hat?</p> <p><input type="checkbox"/> <i>Wenn ja:</i> Hat Ihr Kind dabei Empfindungen wie z. B. Herzklopfen, Zittern oder Schwindel?</p> <p><input type="checkbox"/> <i>Wenn ja:</i> Wie sehr fühlt sich Ihr Kind durch diese Angst in seinem Leben beeinträchtigt?  1=ein wenig    2=mäßig    3=schwer    4=massiv beeinträchtigt</p>	<p>Ja <input type="checkbox"/>    Nein <input type="checkbox"/></p> <p>Ja <input type="checkbox"/>    Nein <input type="checkbox"/></p> <p>Beeinträchtigung:</p>
9.	<p>Soziale Angststörung (F40.10)  Zeigt Ihr Kind Angst in Situationen, in denen es auf fremde Personen – auch Gleichaltrige – trifft?</p>	<p>Ja <input type="checkbox"/>    Nein <input type="checkbox"/></p>
10.	<p>Soziale Angststörung (F40.10)  Hat Ihr Kind Angst davor, im Mittelpunkt der Aufmerksamkeit zu stehen oder sich peinlich oder beschämend zu verhalten, z. B. wenn es vor der Klasse etwas lesen oder vortragen muss oder vor fremden Menschen spricht?</p>	<p>Ja <input type="checkbox"/>    Nein <input type="checkbox"/></p>
11.	<p>Soziale Angststörung (F40.10)  Vermeidet Ihr Kind Situationen, in denen es im Zentrum der Aufmerksamkeit steht oder in denen die Angst besteht, sich peinlich oder erniedrigend zu verhalten?</p>	<p>Ja X    Nein <input type="checkbox"/></p>
12.	<p>Generalisierte Angststörung (F41.1)  Macht Ihr Kind sich häufig große Sorgen? Mehr Sorgen, als es sich eigentlich machen müsste?</p> <p><input type="checkbox"/> <i>Wenn ja:</i> Wie sehr fühlt Ihr Kind sich durch diese Sorgen/Ängste in seinem Leben beeinträchtigt?  1=ein wenig    2=mäßig    3=schwer    4=massiv beeinträchtigt</p>	<p>Ja <input type="checkbox"/>    Nein <input type="checkbox"/></p> <p>Beeinträchtigung:</p>
13.	<p>Enuresis (F98.0)  Hat Ihr Kind mit 5 Jahren oder irgendwann danach noch tagsüber oder nachts eingenässt?</p> <p><input type="checkbox"/> <i>Wenn ja:</i> Wie häufig?</p> <p><input type="checkbox"/> <i>Wenn ja:</i> Wie sehr fühlt sich Ihr Kind durch diese Angst in seinem Leben beeinträchtigt?    1=ein wenig    2=mäßig    3=schwer    4=massiv beeinträchtigt</p>	<p>Ja <input type="checkbox"/>    Nein <input type="checkbox"/></p> <p>Häufigkeit:</p> <p>Beeinträchtigung:</p> <p>Zeitraum:  &lt; 3 Monate <input type="checkbox"/></p>

	<input type="checkbox"/> <i>Wenn ja:</i> Über welchen Zeitraum? <input type="checkbox"/> <i>wenn HC: bei &gt;2x/Woche und mind. 3 konsekutive Monate</i> <i>Ausschluss</i>	$\geq 3$ Monate <input type="checkbox"/>
14.	Gibt es oder gab es schon mal andere psychische Beschwerden oder Auffälligkeiten bei Ihrem Kind?	

### Somatik + Medikation

Leidet Ihr Kind an einer körperlichen Krankheit? Ja ☐ Nein ☐

☐ *Wenn ja:*

- Welche? \_\_\_\_\_
- ggf.: Welche Beeinträchtigungen entstehen daraus?  
\_\_\_\_\_

Nimmt Ihr Kind regelmäßig Medikamente? Ja ☐ Nein ☐

☐ *Wenn ja:*

- Welche? \_\_\_\_\_
- Verzichtet es zwischendurch auf diese Medikamente bzw. wäre es möglich, einmal keine Medikamente zu nehmen? Ja ☐ Nein ☐
- *Im Team besprechen, ob Teilnahme möglich ist.*

Ist Ihr Kind aktuell oder war Ihr Kind schon mal in psychotherapeutischer oder psychiatrischer Behandlung?

Ja ☐ Nein ☐

☐ *Wenn ja:*

- Welche (VT/AP/TP/andere)? \_\_\_\_\_
- Mit welcher Diagnose? \_\_\_\_\_
- Wie lange bzw. wie viele Sitzungen bisher? \_\_\_\_\_
- *bei früherer Therapie:* Wie lange liegt die Therapie zurück?  
\_\_\_\_\_

### ☐ wenn Ablehnung

Leider gibt es einige Punkte, die gegen eine Teilnahme Ihres Kindes an unserer Studie sprechen. Dazu gehört/gehören: ... *[individuelle Punkte nennen, aber grob bleiben]*. Es ist für unsere Studie wichtig, dass nur die Diagnose einer sozialen Angststörung oder keine psychische Erkrankung vorliegt. Daher können wir Sie leider dieses Mal nicht in unsere Studie aufnehmen. Falls Sie in Zukunft Interesse an unseren Studien haben sollten, können Sie sich gerne mit Ihrer Emailadresse in unseren Verteiler eintragen. Wir danken Ihnen für Ihr Interesse und die Zeit, die Sie sich genommen haben.

☐ *Falls Beschwerden vorhanden und bisher keine Therapie bzw. weitere Teilnahme in unserem Projekt, folgende Empfehlung geben:*

- Falls Sie sich eine Beratung wegen der genannten Probleme wünschen, empfehle ich Ihnen, sich an die:den Kinderärzt:in oder an eine der Beratungsstellen Ihres Bezirks zu wenden. Über berlin.de können Sie nach psychosozialen Beratungsstellen suchen.
- Bei uns finden psychotherapeutische Behandlungen nur mit einem Fokus auf Angststörungen statt. *[wenn andere Angststörung als Soziale Angststörung vorliegen könnte:]* Melden Sie sich gerne unter der Nummer der Ambulanz bei uns: 030 2093 9355. *[sonst]* Falls Sie überlegen, Ihr Kind bei einem:r Kinder- und Jugendpsychotherapeut:in vorzustellen, können Sie bei Ihrer Krankenkasse nach einer Liste über Kinder- und Jugendpsychotherapeut:innen in Ihrer Umgebung anfragen.

#### ☐ wenn Unsicherheit

Vielen Dank, dass Sie sich die Zeit genommen haben, die Fragen zu beantworten. Ich würde gerne mit meinem Team Rücksprache halten und werde Sie danach nochmal anrufen, ob Sie und Ihr Kind an unserer Studie teilnehmen können. Wann kann ich Sie gut erreichen?

- *Rückrufwunsch:* \_\_\_\_\_

Sollten wir Sie und Ihr Kind in unsere Studie eingeschlossen werden, dann findet die ausführliche Diagnostik ... *[weiter bei Abschlussfragen]*

#### ☐ wenn starke Hinweise auf keine psychische Störung (HC) oder auf soziale Angststörung (SAD) bestehen

Vielen Dank, dass Sie sich die Zeit genommen haben, die Fragen zu beantworten. Sie haben einige Punkte genannt, die Hinweise geben, dass Ihr Kind an der Studie teilnehmen kann. Ich möchte Sie und Ihr Kind daher gerne zu einer ausführlichen Diagnostik einladen.

Zunächst werden wir Ihnen die für die Studie wichtigen Unterlagen per E-Mail zusenden. Diese enthalten Informationen zur Studie, Einwilligungserklärungen für Sie und Ihr Kind und Links zu Fragebögen, die Sie und Ihr Kind einfach online ausfüllen können.

*[bei unsicherem V. a. SAD:]* Nachdem Sie die Fragebögen ausgefüllt haben, prüfen wir die Antworten und senden Ihnen dann Terminvorschläge für die Online-Diagnostik zu, falls Ihr Kind voraussichtlich teilnehmen kann.

*[bei klarem Einschluss:]* Sie finden darin auch Vorschläge für mögliche Diagnostik-Termine.

Die Diagnostik findet ... *[weiter bei Abschlussfragen]*

#### Abschlussfragen

... nach Möglichkeit online über den Videodienst Zoom [Alternative bei Datenschutzsorgen: BigBlueButton, ggf. sprechstunde.online] statt. So können Sie und Ihr Kind bequem von zu Hause aus teilnehmen. Haben Sie einen oder mehrere PCs oder Laptops mit Webcam zu Hause, über den Sie und Ihr Kind teilnehmen können?

- *PC/Laptop mit Webcam:*     ☐ 1     ☐ 2     ☐ Nein

☐ *wenn nein:* Ich halte nochmal Rücksprache mit dem Team und rufe Sie dann nochmal zurück, wie wir den Diagnostiktermin umsetzen können. *[mit Team Rücksprache halten]*

Wären Sie grundsätzlich damit einverstanden, falls ggf. ein:e Praktikant:in bei dem Online-Termin mit dabei ist?

☐ Ja ☐ Nein

Gibt es Besonderheiten im Sorgerecht? Leben Sie zum Beispiel getrennt oder geschieden?

Ja ☐ Nein ☐

☐ *wenn ja:*

- Für die Teilnahme an unserer Studie müssen beide sorgeberechtigten Elternteile einwilligen. Nur wenn beide sorgeberechtigten Elternteile die Einverständniserklärung unterschrieben haben, können Sie und Ihr Kind an unserer Studie teilnehmen.

Bei den Terminen vor Ort messen wir zusätzlich das Blickverhalten Ihres Kindes. Daher möchten wir schon mal wissen: Leidet Ihr Kind an einer Sehschwäche oder Sehstörung?

- *Sehschwäche/-störung:* ☐ Ja ☐ Nein

☐ *wenn ja:*

- Wie  viele  Dioptrien?/Welche  Beschwerden?:

☐ *wenn über (-)0.5 Dioptrien:* Kann Ihr Kind mit Kontaktlinsen teilnehmen? ☐ Ja

☐ Nein

☐ *wenn nein:* „kein Eyetracking“ vermerken

☐ *wenn ja:* Für die beiden Labortermine sollte Ihr Kind Kontaktlinsen tragen.

### Organisatorisches

Benötigen Sie oder Ihr Kind einen barrierefreien Zugang, falls Sie zu unseren Labortermine kommen sollten?

Ja ☐ Nein ☐

☐ *falls ja: mit Team Rücksprache halten bzgl. Testungsräumen*

Unsere Studie ist kostenlos und wird nicht mit den Krankenkassen abgerechnet. Es besteht dennoch ggf. die Möglichkeit einer anschließenden Behandlung in unserer Spezialambulanz für Kinder, Jugendliche und Familien. Daher interessiert uns: Ist Ihr Kind gesetzlich oder privat versichert?

→ *Wenn gesetzlich versichert und Verdacht auf SAD:* Hätten Sie Interesse an einer Gruppentherapie für Ihr Kind?

→ *Wenn privat versichert:* Vielen Dank. Aktuell bieten wir in unserer Ambulanz leider nur Therapien für Kinder und Jugendliche an, die gesetzlich versichert sind.

*Bei Nachfrage Infos zur Gruppentherapie:*

- Gruppentherapie, 12 Sitzungen (a 100min)
- Kindzentrierter Ansatz; Elternabende sind optional (wird noch mit Julia abgesprochen)
- Gruppen werden nach Alter eingeteilt
- 5 Kinder und 2 Therapeuten
- Voraussichtlich Dienstagnachmittag (100 min)
- Kennenlernen; Psychoedukation; Selbstbeobachtungen; Angst- und Mutmachergedanken; Rollenspiel / SKT-Training; Exposition; Abschluss
- Angebot aber nur bei Indikation



### Abschluss

Haben Sie im Moment noch Fragen zu unserem Projekt? Wir schicken Ihnen alle Infos nochmal ausführlich zu. Sie können Sie auch gerne nochmal bei uns melden oder die Fragen bei dem nächsten Termin *[bzw. Rückruf]* stellen. *[Fragen ggf. klären]*

*[prüfen, ob alle Infos für den Kontaktbogen (siehe nächste Seite) beantwortet sind; sonst ggf. erfragen]*

☐ *bei sicherem Einschluss:*

- Wir schicken Ihnen dann in den nächsten Tagen ein Schreiben mit weiteren Informationen zur Studie und Links zu den Fragebögen zu. Wenn wir alle Unterlagen zurück haben, kontaktiere ich Sie für einen Diagnostiktermin..

☐ *bei Unsicherheit oder sonstigem Rückruf:* Wann sind Sie gut erreichbar, damit wir Sie zurückrufen können?

- *vereinbarter Termin Rückruf:* \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ *Uhrzeit:* \_\_\_\_:\_\_\_\_

Vielen Dank, dass Sie sich die Zeit genommen haben, die Fragen zu beantworten. Wir freuen uns über Ihr Interesse an unserer Studie!

### Sonstige Bemerkungen

Name Kontaktperson: \_\_\_\_\_ Straße: \_\_\_\_\_

Name Kind: \_\_\_\_\_ Ort: \_\_\_\_\_

Geburtsdatum: \_\_\_\_\_ Tel.: \_\_\_\_\_

E-Mail: \_\_\_\_\_