Carl von Ossietzky University Oldenburg and Liverpool John Moores University

Master of Education Program Special Educational Needs and English

MASTER DISSERTATION

Risk and Protective Factors Associated With Parental Separation and Divorce of Pupils: A Systematic Review

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Abstract

Objective: Teachers should use risk and protective factors that influence the adjustment of children's mental health after legal guardians' as well as parents' separation or divorce (PSOD) to adjust the school environment to prevent mental health issues. The purpose of this study is to provide this knowledge and propose corresponding changes to the school environment.

Methods: A systematic review on this association is conducted which searches for quantitative articles from 2005 to 2022 to produce strong guidance. Four databases are searched with keywords that yield 1453 results. 10 of these studies are included in the analysis.

Results: Five group patterns of risk and protective factors are identified. They are used to propose changes to the school environment such as awareness and communication training for consulting teachers, resilience and coping training especially for younger pupils as well as providing time for play and a sense of achievement so that pupils can focus their attention on other aspects and pupils and parents can activate protective resources. To consult early, schools should provide sex education which deals with healthy relationships so that pupils realize unhealthy patterns in their parents' relationship and complement this with different communication channels for parents and pupils for a low barrier offer of help.

Conclusion: The findings suggest incorporating the proposed changes to provide a school environment that lets pupils develop their mental health amidst the effects of PSOD. Further research should develop a guideline so that the proposed changes can easily be applied. Moreover, future research should investigate how a drop in pupils' learning outcomes can be prevented and how a response-to-intervention-model (RTI) can incorporate both this and the findings of this study.

1 Introduction

The Carl von Ossietzky University Oldenburg is situated in the regional state of Lower Saxony in the north of Germany. There, the school legislation comprises the special educational foci learning, language, mental development, physical and motor development, vision, hearing as well as emotional and social development according to §4 II s. 3 Niedersächsisches Schulgesetz (Lower Saxony School Legislation). Emotional and social development includes the fields of parental education, school education, consultation, and rehabilitation (Carl von Ossietzky University Oldenburg, 2021a). The author could work with several children as a trainee teacher and during internships at several primary schools during which some children show offensive or abusive behaviors, some children become quiet and withdrawn while others fall behind in their learning performance. The subjective perception is that the reasons are manyfold and often neither the multi-professional team nor the school management could provide an informed approach to school education, parental education, and consultation for the child in this context. Moreover, some children have to suffer from legal guardians' or parental separation or divorce (PSOD), poverty, the fear of deportation, the fear of infection from Covid-19, quarantines, lockdowns, as well as physical and emotional violence which have soared amidst the current pandemic (García & Otheguy, 2017, p. 1; Garrity & Guerra, 2015, p. 250ff.; Liu et al., 2020, p. 348; Martínez, 2016, p. 2; Statistisches Bundesamt [Federal Office for Statistics], 2021a). In 2018, an average of 6% of pupils in OECD (Organization for Economic Cooperation and Development) countries reported always feeling sad (OECD, 2018, p. 16). In Germany, 5790 children under 15 years got hospitalized in 2017 for depression (Statistisches Bundesamt [Federal Office for Statistics], 2019). A mental health issue such as depression is likely to negatively affect pupils' learning outcomes with an effect size of Cohens d = -0,29 according to a meta-analysis conducted by Hattie which is close to a medium effect size (Cohen, 1992, p. 157; Corwin Visible Learning Plus, n.d.). Moreover, an existing or emergent mental health issue in pupils can lead to inconsistent school attendance which negatively influences the learning outcome in school (DeSocio & Hootman, 2004, p. 189). The World Health Organization (WHO) defines mental health as enabling "people to realize their potential, cope with the normal stresses of life, work productively, and contribute to their communities" (2013, p. 5) while mental health is an essential part of the overall health and is not just an absence of mental disorders (World Health Organization, 2018). This definition seems to focus on working adults who deal

with normal life stressors. An age-appropriate definition for the mental health of pupils is that "mental health includes their emotional, psychological and social well-being and affects how they reach developmental milestones, learn healthy social skills, develop sound family and peer relationships, develop a sense of identity and positive self-esteem and learn resilience and coping with stress" (Tillmann et al., 2018, p. 958). The level of mental health of young people is determined by their socialization as well as psychological and genetic factors (World Health Organization, 2018). There is a vast array of risks that negatively affect mental health and what makes this topic impactful is that "poor mental health is associated with rapid social change, stressful work conditions, gender discrimination, social exclusion, unhealthy lifestyle, physical ill-health and human rights violations" (World Health Organization, 2018). That is why children enjoy certain rights that aim to protect their mental health such as the right to protection of their mental and social development (United Nations, 2017, p. 9). This aims to protect humans in a very critical and vulnerable period in their lives where they are granted the right "to special care and assistance" (United Nations, 2015, p. 52). The age range in which one is considered to be a child and to enjoy these protections is neither defined in the 'Declaration of the Rights of the Child' nor in the 'Universal Declaration of Human Rights' whereas the 'United Nations Convention on the Rights of the Child' which is ratified by Germany since 1992 specifies that a person has to be below 18 years old (Humanium, n.d.; The Federal Government, 2019; United Nations, 2015; 2017, p. 4). This paper uses the term pupil to refer to humans who must attend school that are between 6 and 18 years old while applying the rights that are granted to children. Therefore, psychological issues that might occur in adults are not a focus of this study. The views of children need to be respected and weighted appropriately in decision-making processes depending on their age and maturity to foster their development (United Nations, 2017, p. 4f.). The reason for this is that children "should grow up […] in an atmosphere of happiness, love, and understanding" (United Nations, 2017, p. 3). The constitution of Germany does not specifically discuss the role of children's rights to this day. However, the federal government of Germany aims to change that as it is planned to extend article 6 of the constitution by a second paragraph which should state that the child's best interests are to be considered (Die Bundesregierung [The Federal Government], 2021). The rights of the children to mental health and right to special care and assistance are one major mission of school manage-

ment and professionals in schools (United Nations, 2017, p. 4). Not anymore is the transfer of knowledge the teacher's main role because emergent technologies can be utilized for that and a teacher of the present and future has to be a coach and a mentor who knows their pupils as a person and who can foster a relationship according to Programme for International Student Assessment (PISA) chief Schleicher (RedaktionsNetzwerk Deutschland [EditorialStaffNetwork Germany], 2021, 01:58 - 02:06). The protection of pupils' mental development (United Nations, 2017, p. 9) and their right "to special care and assistance" (United Nations, 2015, p. 52) is interpreted as a call for action for school managements, professional teachers, and special educational needs (SEN) teachers whose training includes the emotional and social development of pupils (Carl von Ossietzky University Oldenburg, 2021a) to use evidence-based prevention strategies to foster pupils' mental health. Although this training does not specify dealing with traumatic experiences such as PSOD (Carl von Ossietzky University Oldenburg, 2021b), it seems important to focus on PSOD as a risk factor for the mental health of pupils as it is "one of the most stressful life-changing events that any human being could experience" (Du Plooy & Van Rensburg, 2015, p. 491). The rate of first marriage dissolvements climbs from almost 85,000 in 1950 to an all-time high of close to 214,000 divorces in 2003 while there are still about 144,000 divorces in 2020 in Germany (Statistisches Bundesamt [Federal Office for Statistics], 2022a). Of these 144,000 divorces, more than 119,000 children are involved in this process (Statistisches Bundesamt [Federal Office for Statistics], 2021c). To put this into perspective, there close to 11,000,000 pupils in Germany in 2021/22 (Statistisches Bundesamt [Federal Office for Statistics], 2022b) and the effects of the Covid-19 pandemic on the number of divorces are not clear yet (Statistisches Bundesamt [Federal Office for Statistics], 2021b). Moreover, separations are not included in this statistic so even more pupils are affected. These factors are crucial to justify that this master dissertation focuses on children's mental health after PSOD and not their learning outcomes. The number of divorces in Germany signals that there is a sense of urgency for teachers to prevent and intervene professionally as well as responsibly based on the current scientific consensus on this topic. Structured intervention programs for parents are successful at reducing risks for mental health problems in pupils (Wolchik et al., 2002, p. 1874). However, the WHO recognizes that prevention is more effective than intervention to achieve mental health which is seen as being essential to achieving overall health

(World Health Organization, 2013, p. 5). Therefore, this dissertation focuses on prevention. The WHO demands that schools prevent mental health issues where possible with strategies that are informed by strong evidence (World Health Organization, 2013, p. 5). That is why this dissertation undertakes the endeavor to produce strong research findings on how mental health issues in pupils can be prevented by creating an appropriate school environment which consists of an adaptation of information channels, parental involvement, and awareness as well as staff composition, skillset, and awareness training.

This chapter offers an insight into the author's motivation to pursue this project, the magnitude and severity of this topic, the justification for the focus on mental health and PSOD, and why there is a need for evidence-based prevention in schools. Chapter 2 discusses how PSOD affects the mental health of pupils to set the context for understanding the reality they live in and the challenges they must go through. In chapter 3 the research question is built with consideration for helpful tools to assist in this process which guides the aims of the following chapters. Chapter 4 is the method section in which section 4.1 discusses an appropriate and strong research design (World Health Organization, 2013, p. 5). Section 4.2 details the focus of the literature search which is the basis for the selection criteria which are used in the databases to retrieve the studies and exclude all papers that do not fit the purpose of this dissertation in section 4.3. After this, section 4.4 discusses which method is appropriate to synthesize the data of the included studies which are displayed in section 4.5. Section 4.6 documents how many studies are excluded at each stage of the selection process. The included studies are synthesized in chapter 5 in which section 5.1 prepares the synthesis process by extracting important study characteristics and relevant data. This is necessary to conduct the synthesis in section 5.2 in which emerging patterns are detected, put into groups, and their explanatory power for the context of this paper evaluated. The results that validity need to be contrasted with context-appropriate research data in section 5.3 so that practical implications of all emerging patterns can be discussed in chapter 6. Chapter 7 critically reflects if the methods used in this paper are appropriate to answer the research question presented in chapter 3. Suggestions for future research to enhance this field of knowledge are given in chapter 8 to conclude this paper.

2 Effects of Parental Separation or Divorce on Mental Health of Children

Children that grow up in orphanages are on average 0.4 standard deviations (SD) shorter in height, leg/torso ratio, and head volume than controls and they show increased levels of the stress marker cortisol in their saliva (Valge et al., 2021, p. 276). An early maternal separation also leads to oxidative stress in children which increases the risk of developing mental health issues (Schiavone et al., 2015, p. 1407). High levels of stress can also be found in adults who experience traumatic PSOD in childhood (Bloch et al., 2007, p. 516) as well as when the mother leaves the child in an unknown room for three minutes as part of the strange situation test (Ainsworth et al., 2015, pp. xxiii, 115). In the strange situation test, 12-to-20-month-old infants are subjected to different so-called episodes in some of which the infant is left alone or left with a stranger in an unknown room for 3 minutes each (Ainsworth et al., 2015, p. 115). All these examples have in common that children feel left alone by their parents or that infants feel left alone primarily by their mother which evolutionary represents a survival situation (Ainsworth et al., 2015, p. 249; Fraley & Shaver, 2016, p. 41). In a stressful situation, playing as an exploratory behavior is ceased and the stress levels measured by cortisol levels in the saliva go up (Ibid.). In this instance, children will seek their parents' proximity as a secure base when they are securely attached to their parents so that they feel safe resuming their playtime (Ibid.). However, not all children are securely attached to their parents. Children can have a secure attachment in which they feel safe seeking comfort when their parent returns in the strange situation test when parents prove to be a secure base (Ainsworth et al., 2015, pp. 17f., 115, 249). When parents do not reliably prove to be a secure base, their children can have an insecure-ambivalent attachment which means that they show ambivalent behaviors when the parent returns or they can have an insecure-avoidant attachment which can be identified when the child shows little emotion and no urge to seek the parents proximity when the parent returns despite still having high-stress levels (Ainsworth et al., 2015, p. 17f.). A child has a disorganized attachment representation when he or she shows tense movements such as shoulder hunching or tensely moving the head which signals parental neglect or abuse (Ibid.). The strange situation test shows that leaving a child alone or with a stranger for three minutes each increases their stress levels significantly irrespective of their attachment pattern because it represents a survival situation (Ainsworth et al., 2015, pp. 17f., 115; Fraley & Shaver, 2016, p. 41). It also shows that children can reduce their stress levels and resume playing after seeking comfort when they see their parents as a

secure base (Ainsworth et al., 2015, pp. 17f., 249). PSOD also represents the threat that a parent leaves the child which makes it a very stressful situation that is associated with poor mental health outcomes (Cipric et al., 2020, p. 113; Du Plooy & Van Rensburg, 2015, p. 491). When parents or legal guardians divorce or separate, children tend to blame themselves to take responsibility which is a survival mechanism to limit long-term separation from parents (Fraley & Shaver, 2016, p. 41; Grollman & Grollman, 1977, p. 36; Kay-Flowers, 2019, p. 258). In contrast to this, sometimes the notion in parents prevails that they can hide problems from their children to protect them (Halpenny et al., 2008, p. 10). However, when parents do not cope well with the divorce, some children realize this and feel that they have to take care of their parents even though it is not their responsibility (Moxnes, 2003, p. 142; Spremo, 2020, p. S353). Children with a secure attachment also benefit in the case of PSOD as they adjust better due to higher resilience and because their parents are a secure base for them (Ainsworth et al., 2015, p. 249; Faber & Wittenborn, 2010, p. 89). As not all children are securely attached, some children feel "that their parents damaged their lives, not by divorcing, but by failing to divorce in the proper manner" (Smart, 2006, p. 168). This indicates that some PSODs have huge negative repercussions for some while others find more healthy ways to interact in the new family, solve conflicts, and foster the relationship between parents and the child (Vanassche et al., 2010, p. 1). All in all, the tendency is that „children and adult offspring of separated parents are overrepresented in the mental health system" (D'Onofrio & Emery, 2019, p. 100). One of these possible mental health issues that can manifest after PSOD is that children show bodily stress disorder (Hilderink et al., 2013, p. 1) or somatoform symptoms as it is categorized in the International Classification of Diseases (ICD-11) which are defined as recurring physical signs of illness (Vesterling & Koglin, 2020, p. 1). Although a systematic review is not able to establish a connection, this specific field of knowledge does not seem to be investigated exhaustively (Thorgaard et al., 2018, p. 220; Vesterling & Koglin, 2020, p. 9). A different potential concern for the mental health of pupils after PSOD is that the sleep quality declines (Bergström et al., 2015, p. 771; Leve et al., 2011, p. 9f.; Rudd et al., 2019, p. 7; Troxel et al., 2014, p. 1). A randomized controlled trial "provides strong evidence that insomnia is a causal factor in […] mental health problems" (Freeman et al., 2017, p. 749). There are more potential mental health issues children can face after PSOD such as parental alienation syndrome which refers to a child having an "abnormal, maladaptive behavior (refusal to have a relationship with a

loving parent) that is driven by an abnormal mental state (the false belief that the rejected parent is evil, dangerous, or unworthy of love)" (Bernet & Baker, 2013, p. 99). The effects of parental alienation syndrome during childhood carry on to adulthood where it can lead to "depression and anxiety symptoms, a higher risk of psychopathology, lower self-esteem and self-sufficiency, […] higher alcohol and drug use rates, parental relationship difficulties, insecure attachment, lower life quality, higher divorce rates, feelings of loss, abandonment and guilt" (Miralles et al., 2021, p. 1). Moreover, bipolar disorder is associated with negative life events such as PSOD (Jaworska-Andryszewska & Rybakowski, 2016, p. 989). According to ICD-11, it is "an episodic mood disorder defined by the occurrence of one or more manic or mixed episodes. A manic episode is an extreme mood state […], a mixed episode is […] the presence of several prominent manic […] episodes" (World Health Organization, 2022). More potential harm comes in the form of internalizing problems such as anxiety and depression and externalizing problems such as aggression and rule-breaking behavior which can precede PSOD (Robbers et al., 2011, p. 311; Strohschein, 2005, p. 1298). This is a selection of potential risks involved when children must deal with PSOD. More applicable mental health issues and the impact this has and how to prevent them are discussed in chapter 6. The following chapter 3 discusses the research question which guides the structure and the aim of this paper.

3 Research Question

Before one starts the tedious task of conducting a systematic review, it is sensible to check beforehand whether there are existing systematic reviews on this particular topic or current plans laid out to undertake this task (Goagoses & Koglin, 2020, p. 147). Therefore, the Cochrane Database of Systematic Reviews (Cochrance Library, 2021) and PROSPERO (National Institute for Health Research, n.d.) are searched on 02.12.2021 which yield no suitable results. Because these databases focus on medical literature, the Web of Science Core Collection is also searched for reviews that tackle risk and protective factors in PSOD. This search also does not yield any appropriate results. Therefore, it is deemed to be necessary to enhance the field of literature by conducting this systematic review to generate strong evidence (World Health Organization, 2013, p. 5). A systematic review requires a research question so that an evidence claim can be produced (Gough et al.,

2017, p. 25; Soilemezi & Linceviciute, 2018, p. 2). The researcher then examines relationships to provide explanations (Rojon & Saunders, 2012, p. 60). Developing an answerable review question is a challenging and important task that is essential to find relevant information which requires "a clearly defined, well-structured question" (Davies, 2011, p. 75). The following master dissertation aims to analyze and synthesize quantitative findings for risk and protective factors associated with PSOD to prevent a decline in pupils' mental health. For a review question, it is suggested to ask 'what' to describe and to ask 'why' to explain relationships to guide the review process (Rojon & Saunders, 2012, p. 60). Initially, it is unimportant to ask why certain risk and protective factors are associated with PSOD. To support pupils in their mental health, one needs to ask what those factors are so teachers can avoid or use them while collaborating with pupils. Therefore the review question asks 'what' but not 'why' (Rojon & Saunders, 2012, p. 60). Research should be relevant and give practitioners guidance on how to professionally prevent mental health issues in pupils (Chalmers & Glasziou, 2009, p. 1343). Therefore, this paper focuses on giving guidance on how the school environment can be changed to prevent mental health issues in children before PSOD. This needs to reflect in a clear and well-formulated research question with a specific objective to contextualize the study into the current field of research (Rojon & Saunders, 2012, p. 55). Reviewers are advised to use a mnemonic strategy such as PICOD, CHIP, SPICE, ECLIPSE, CIMO, and SPIDER which are abbreviations for topics to consider for the research question and they are used to determine whether the review question is "clear, focused and answerable" (Soilemezi & Linceviciute, 2018, p. 2f.). These mnemonics are mainly developed for use in the medical literature and therefore this paper assembles different components of mnemonic strategies into a new mnemonic strategy that is suitable for this paper (Gough et al., 2017, p. 131). This tailored strategy may not be too narrow when the field is not well researched (Soilemezi & Linceviciute, 2018, p. 4). To find out if this is the case, a scoping search is run on The Web of Science on 05.01.2022 (Soilemezi & Linceviciute, 2018, p. 4) which reveals that the field is well-researched, so a narrow research question with a corresponding narrow mnemonic strategy is built. It tightens the focus and is appropriate for this paper as the mental health concepts are pre-specified in the field of research and the impact of this research is instrumental rather than enlightening (Gough et al., 2017). The corresponding mnemonic strategy is called SCCRAPTT and is described in the following table.

Table 1: Mnemonic Strategy SCCRAPTT

Setting	School
Client Group	Pupils who are 6 to <18 years old
Context	Mental health
Research type	Quantitative
Aid	Protective factors
Professionals involved	Teachers and SEN teachers
Threat	Risk factors
Time preference	Prevention

This strategy helps to craft "a clearly defined, well-structured question" (Davies, 2011, p. 75) which is outlined below.

Research question: What does quantitative research tell us about which risk and protective factors are associated with parental divorce or separation of pupils that can be considered by teachers and particularly SEN teachers in school to prevent mental health issues in pupils who are 6 to <18 years old?

Answering this question constitutes the groundwork to build a guideline that can teachers and SEN teachers can use to prevent mental health issues in pupils before PSOD. The construction of this guideline is not part of this paper because it would exceed the limits of this work.

4 Method

4.1 Research Design

It is suggested to produce strong evidence as part of an action plan to achieve mental health for the overall health of people (World Health Organization, 2013, p. 5). Therefore, it is advisable to use a strong research design such as a systematic review as it is more comprehensive and the evidence claims are very robust (Gough et al., 2017, p. 23). The left part in figure 1 down below shows that systematic reviews used to be seen as the peak of the evidence pyramid whereas nowadays they are described as "a lens through which evidence is viewed" (Murad et al., 2016, p. 126).

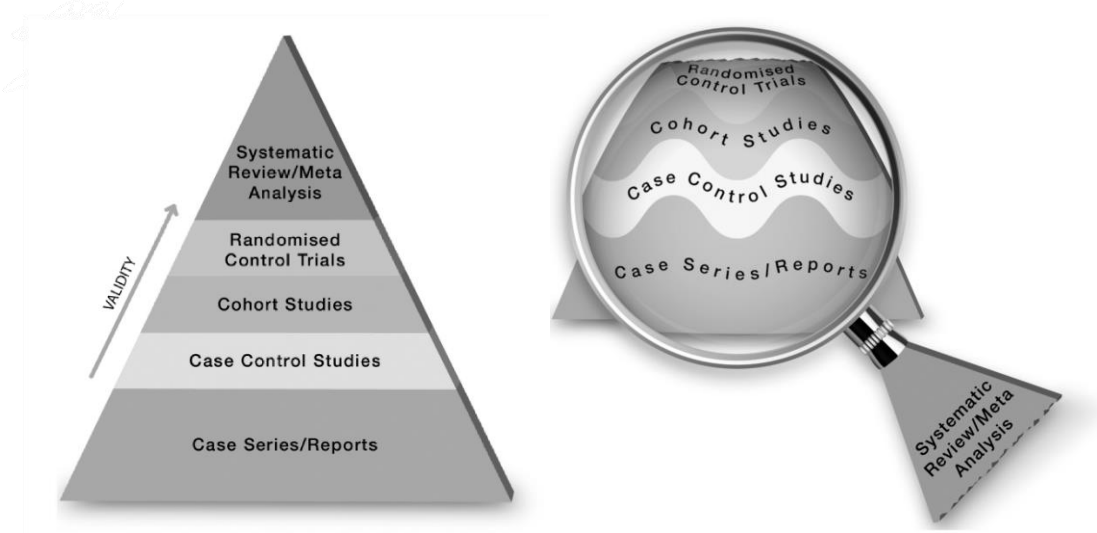

Figure 1: Previous and Current Evidence Pyramid

(Murad et al., 2016, p. 126)

Systematic reviews dissect and synthesize existing evidence and can therefore take research designs with more or with less validity into account, combine and strengthen the relevance of findings because it provides context, and offer a more comprehensive picture for policy decisions (Gough et al., 2017, p. 22f.; Murad et al., 2016; Verbeek et al., 2012, p. 282). That is why this master dissertation conducts a systematic review which needs to follow certain criteria to have good explanatory power. This master dissertation follows the rules of a measurement tool to assess the methodological quality of systematic reviews (AMSTAR) which aids researchers to judge the quality of such reviews (Shea et al., 2007). AMSTAR suggests systematic reviews use an a priori design which means that the research question and the inclusion criteria are established beforehand (Shea et al., 2007, p. 5) which is respected as the research question in chapter 3 and the inclusion criteria in table 10 in chapter 4.2 are defined before the literature search. Moreover, AMSTAR proposes two independent data extractors and a procedure for disagreements (Shea et al., 2007, p. 5). This proposition cannot be met as it would breach the rules of §21 I Prüfungsordnung für die Fachmasterstudiengänge (examination rules for the master program) of the University of Oldenburg that master dissertations are to be written independently. The third suggestion is that a comprehensive literature research is conducted that consists of two or more electronic databases, the search terms, the search strategy, and the references in the studies should be reviewed (Shea et al., 2007, p. 5). Four databases are employed in two languages, and corresponding search strings are provided in

chapter 4.3. References in the studies are checked after studies are excluded through a title, abstract and full-text screening which is admissible to reduce workload (Gough et al., 2017, p. 140f.). Even though it is recommended that studies are included when they are not published yet (Shea et al., 2007, p. 5), this paper decides against that because only peer-reviewed articles are accepted as a form of quality assessment (Gough & Newman, 2020, p. 13). A list of included and excluded studies should be provided (Shea et al., 2007, p. 5). This requirement is not fulfilled as it would exceed the limits of this work. Included studies are presented in chapter 4.5 in table 11. Another prerequisite is that important characteristics are provided (Shea et al., 2007, p. 5) which is available in chapter 5.1 in table 12. For randomized double-blind placebo-controlled trials a method assessment should be provided (Shea et al., 2007, p. 5). However, this master dissertation does not plan to only include this research design. There is no systematic quality appraisal in this master dissertation. The reason for this is discussed in chapter 4.2. Recommendations are supposed to reflect the scientific quality of the findings (Shea et al., 2007, p. 5) which takes place in chapter 6. For pooled results, it is mandatory to assess whether study results are combinable (Shea et al., 2007, p. 5). Because this master dissertation does not pool results to combine data in a meta-analysis but compares results, no such assessment is undertaken. An assessment of the publication bias is suggested to be provided (Shea et al., 2007, p. 5). The publication bias describes that studies are more likely to be published when they show an effect rather than no effect which "yields overestimated effects and may suggest the existence of non-existing effects" (Van Aert et al., 2019, p. 1). A meta-analysis of 83 meta-analyses and 499 systematic reviews suggests that there is a mild publication bias in medicine and psychology (Ibid.). Because of this fact and the fact that assessments for the publication bias such as a funnel plot are not sufficient when there are not a lot of studies to analyze (Gough et al., 2017, p. 279), this master dissertation does not conduct an assessment for publication bias as it is expected to find few studies that meet the inclusion criteria due to the narrow focus of the research question defined in chapter 3 (Gough et al., 2017, p. 25). However, the impact of the publication bias is considered in the results in chapter 6. The conflict of interest in this systematic review as well as all included studies should be acknowledged (Shea et al., 2007, p. 5). There is no funding for this master's dissertation so there is no conflict of interest declared. Potential conflicts of interest for the included studies are presented in chapter 4.5 in table 11 and

discussed in chapter 5.3. The following chapter 4.2 discusses the focus of the systematic search as well as the databases and languages that are used to search for literature.

4.2 Focus of Systematic Search

This search is limited to quantitative findings. The reason is that qualitative findings develop a hypothesis and quantitative findings test hypotheses which makes quantitative findings more reliable (Bortz & Döring, 2007, p. 30ff.). Moreover, qualitative "narratives are multi-layered, often revealing ambivalence and contradictions" (Smart, 2006, p. 155). As this paper aims to compare similar findings, it only accepts quantitative findings which are a solid basis for analyzing them. It might seem advantageous to only include very strong research designs such as randomized controlled trials (Gough et al., 2017, p. 27). However, there is some concern this design goes from being "a high standard to being the only standard" (Kaplan et al., 2011, p. 1). For example, there is a dietary intervention that helps 47 people with multiple sclerosis (MS) drastically reduce the frequency and severity of their symptoms (Swank, 1953, p. 92). Even the 3.5-year and the 5.5-year follow-up in which more patients are added show great benefits as well as the 20-year, the 34-year and the 50-year follow-up do in which the symptoms are significantly reduced but only if patients stick to the diet (Swank, 1953, p. 642f.; 1955, p. 634f.; 1970, p. 473; Swank & Dugan, 1990, p. 39; Swank & Goodwin, 2003, p. 162). This dietary intervention remains "the most effective treatment" against MS (Kadoch, 2012, p. 405). However, the prestigious Cochrane Collaboration addresses this case series but does not consider the data because it is not a randomized controlled trial (Farinotti et al., 2012, pp. 1-16). Even in an update, the researchers conclude that dietary interventions do little to help patients with MS for the same reason (Parks et al., 2020, pp. 34-96). To showcase what it means to insist on randomized placebo-controlled crossover trials in systematic reviews, researchers investigate the effectiveness of using a parachute after leaving an aircraft mid-flight (Smith & Pell, 2003, p. 1459). Interestingly, they state that there are no existing randomized controlled trials on this topic so they conclude that those who always push for the "holy grail" of evidence "need to come down to earth with a bump" (Smith & Pell, 2003, p. 1460). Therefore, this master dissertation considers all quantitative research designs so that relevant and helpful findings are not excluded.

For this review, the databases ‘Web of Science Core Collection’, ‘ERIC’, ‘PubMed’, and ‘FIS Bildung’ are searched using English and German keywords in a search string (Goagoses & Koglin, 2020, p. 157). Spanish and French search strings are not developed because translating them into English would stretch the limited resources allocated to this master dissertation because the author lacks a sufficient competence level in Spanish and French. Otherwise, the author might unintentionally search for different concepts because terms and phrases are not always translatable word by word (Bedenlier et al., 2020, p. 122f.). This focus on English and German literature introduces bias to the review but it is deemed to be sufficient to use two languages to retrieve relevant information (Goagoses & Koglin, 2020, p. 150). Accordingly, the next chapter shows the search strings for four databases in English and German in tables 2 to 9 and the mandatory study selection criteria in table 10 (Gough et al., 2017, p. 116f.). In an earlier version of the search strings the date is set to 2010 and later. Because not enough research could be identified, it is permissible to conduct a second search which is performed on 28.01.2022 that includes studies from 2005 onwards (Centre for Reviews and Dissemination, 2009, p. 15).

4.3 Study Selection Criteria

This chapter documents search operators and search terms with the applicable search options for the databases ERIC, FIS, Web of Science, and PubMed in tables 2 to 9 which can therefore be replicated (Gough et al., 2017, p. 134ff.). Search terms are broad to include as many appropriate articles as possible because terms and definitions used in studies can vary substantially from each other (Zawacki-Richter et al., 2020, p. xii).

Table 2: Search String ERIC English

Operator	**Search term**	**Search option**
	Student* OR Pupil* OR school* OR child* OR teen* OR youth OR girl OR boy	All fields
AND	Risk* OR protect* OR vulner* OR resilienc*	All fields
AND	Divorce OR “parental separation”	All fields
AND	“quality of life” OR “quality-of-life” OR QOL OR “Q-O-L” OR externali* OR internali* OR somat* OR “bodily stress disorder*” OR depressi* OR “conduct disorder*” OR anxiety OR “parental alienation syndrome” OR PAS OR “parental relationship distress” OR CAPRD	All fields
Limit to:		Peer reviewed

After this date…	December 31, 2004	
Language	English; German	

Table 3: Search String ERIC German

Operator	**Search term**	**Search option**
	Schüler* OR Kind* OR Jugendliche* OR Lerne* OR Schul* OR Teenage* OR Mädchen OR Jung*	All fields
AND	Risiko* OR Schutz* OR vulnerab* OR Resilie*	All fields
AND	Scheid* OR Trenn* OR Ehescheid* OR Ehetrenn*	All fields
	Lebensqualität OR "quality of life" OR "quality-of-life" OR QOL OR "Q-O-L" OR externali* OR internali* OR somato* OR "körperliche Belastungsstörung*" OR Depressi* OR Verhaltens* OR Angststörung* OR "elterliches Entfremdungssyndrom" OR PAS OR parental alienation syndrome OR "Eltern-Kind-Entfremdung" OR "Eltern Kind Entfremdung" OR "parental relationship distress" OR CAPRD OR "elterliche Beziehungsstörung" OR "elterlicher Beziehungsstress"	
Limit to:		Peer reviewed
After this date…	December 31, 2004	
Language	English; German	

Table 4: Search String FIS English

Operator	**Search term**	**Search option**
	Student OR Pupil OR school OR child OR teen OR youth OR girl OR boy	Free text
AND	Risk OR protection OR vulnerability OR resilience	Free text
AND	Divorce OR "parental separation"	Free text
AND	quality of life OR "quality-of-life" OR QOL OR "Q-O-L" OR externalise OR internalise OR somatoform OR bodily stress disorder OR depression OR conduct disorder OR anxiety OR parental alienation syndrome OR PAS OR parental relationship distress OR CAPRD	Free text
AND	>=2005	Year
Language	English, German	

Table 5: Search String FIS German

Operator	Search term	Search option
	Schüler OR Kind OR Jugendlicher OR Lernender OR Schule OR Teenager OR Mädchen OR Junge	Free text
AND	Risiko OR Schutz OR Vulnerabilität OR Resilienz	Free text
AND	Scheidung OR Trennung OR Ehescheidung OR Ehetrennung	Free text
AND	Lebensqualität OR quality of life OR "quality-of-life" OR QOL OR "Q-O-L" OR externalilisieren OR internalisieren OR somatoform OR körperliche Belastungsstörung OR Depression OR Verhaltensauffälligkeit OR Angststörung OR elterliches Entfremdungssyndrom OR PAS OR parental alienation syndrome OR "Eltern-Kind-Entfremdung" OR Eltern Kind Entfremdung OR partenal relationship distress OR CAPRD OR elterliche Beziehungsstörung OR elterlicher Beziehungsstress	Free text
AND	>=2005	Year
Language	English, German	

Table 6: Search String Web of Science English

Operator	Search term	Search option
	Student* OR Pupil* OR school* OR child* OR teen* OR youth OR girl OR boy	Topic
AND	Risk* OR protect* OR vulner* OR resilienc*	Topic
AND	Divorce OR "parental separation"	Topic
AND	"quality of life" OR "quality-of-life" OR QOL OR "Q-O-L" OR externali* OR internali* OR somat* OR "bodily stress disorder*" OR depressi* OR "conduct disorder*" OR anxiety OR "parental alienation syndrome" OR PAS OR "parental relationship distress" OR CAPRD	Topic
Timespan	Custom year range	2005-01-01 to 2022-12-31

Table 7: Search String Web of Science German

Operator	Search term	Search option
	Schüler* OR Kind* OR Jugendliche* OR Lerne* OR Schul* OR Teenage* OR Mädchen OR Jung*	Topic
AND	Risiko* OR Schutz* OR vulnerab* OR Resilie*	Topic
AND	Scheid* OR Trenn* OR Ehescheid* OR Ehetrenn*	Topic

AND	Lebensqualität OR “quality of life” OR “quality-of-life” OR QOL OR “Q-O-L” OR externali* OR internali* OR somato* OR “körperliche Belastungsstörung*” OR Depressi* OR Verhaltens* OR Angststörung* OR “elterliches Entfremdungssyndrom” OR PAS OR parental alienation syndrome OR “Eltern-Kind-Entfremdung” OR “Eltern Kind Entfremdung” OR “partenal relationship distress” OR CAPRD OR “elterliche Beziehungsstörung” OR “elterlicher Beziehungsstress”	Topic
Timespan	Custom year range	2005-01-01 to 2022-12-31

Table 8: Search String PubMed English

Operator	**Search term**	**Search option**
ADD	Student* OR Pupil* OR school* OR child* OR teen* OR youth OR girl OR boy	All Fields
AND	Risk* OR protect* OR vulner* OR resilienc*	All Fields
AND	Divorce OR “parental separation”	All Fields
AND	“quality of life” OR “quality-of-life” OR QOL OR “Q-O-L” OR externali* OR internali* OR somat* OR “bodily stress disorder*” OR depressi* OR “conduct disorder*” OR anxiety OR “parental alienation syndrome” OR PAS OR “parental relationship distress” OR CAPRD	All Fields
AND	2005 to Present	Date - Publication

Table 9: Search String PubMed German

Operator	**Search term**	**Search option**
ADD	Schüler* OR Kind* OR Jugendliche* OR Lerne* OR Schul* OR Teenage* OR Mädchen OR Jung*	All Fields
AND	Risiko* OR Schutz* OR vulnerab* OR Resilie*	All Fields
AND	Scheid* OR Trenn* OR Ehescheid* OR Ehetrenn*	All Fields
AND	Lebensqualität OR “quality of life” OR “quality-of-life” OR QOL OR “Q-O-L” OR externali* OR internali* OR somato* OR “körperliche Belastungsstörung*” OR Depressi* OR Verhaltens* OR Angststörung* OR “elterliches Entfremdungssyndrom” OR PAS OR parental alienation syndrome OR “Eltern-Kind-Entfremdung” OR “Eltern Kind Entfremdung” OR “partenal relationship distress” OR	All Fields

	CAPRD OR “elterliche Beziehungsstörung” OR “elterlicher Beziehungsstress”	
AND	2005/01/01 to Present	Date – Publication

To retrieve relevant studies, it is necessary to select studies by defining selection criteria which comprise inclusion and exclusion criteria (Goagoses & Koglin, 2020, p. 149f.; Gough et al., 2017, p. 116f.). The research question has a narrow focus, therefore the selection criteria should be equally narrow (Gough et al., 2017, p. 71). Additionally, the number of participants is determined to be $n \geq 30$ as this is sufficient to produce a standard distribution in quantitative studies (Bortz & Döring, 2007, p. 411). Studies must also be peer-reviewed. To investigate the issue of this paper, studies published in 2005 and later are included to exclude study results that might be outdated. In an earlier search, this date is set to 2010 which yields only 8 results after exclusion. That is why a second search is performed which sets the date to 2005 which yields 10 results after exclusion (Centre for Reviews and Dissemination, 2009, p. 15). There is no further amendment to the date after this because it would run the risk of finding outdated studies (Gough et al., 2017, p. 35). Moreover, the search includes pupils who are between the ages of 6 to 18 years. As described in chapter 1, this cutoff has the positive aspect that it limits possible mental health issues due to the exclusion of adults. This might introduce borderline cases for which a protocol should is developed (Siddaway et al., 2019, p. 766). It is decided to include borderline cases in which an age range is given when the standard deviation with a 95% confidence interval is half of the difference between the given age and 18 or 6 years old. So, for an age range from 7.0 to 17.0 years (CI 95%) the standard deviation may not exceed 0.5 years. Because this paper focuses on risk and protective factors, they are part of the inclusion criteria. Only mental health issues in pupils which arise from PSOD are regarded, so divorce or separation represents another inclusion criterion. Specifically, externalizing and internalizing problems, quality-of-life, depression, conduct disorder, anxiety, depression, parental alienation syndrome, children affected by parental relationship distress, and resilience are mental health topics of concern. Quantitative studies are included, and qualitative studies are excluded. This paper also excludes studies whose sole focus is on learning outcomes because the focus of this paper is mental health issues. Also, studies that focus only on legal requirements are excluded. These selection criteria can be viewed in table 10 down below.

Table 10: Selection Criteria

Selection criteria			
Inclusion criteria	**Reason for inclusion**	**Exclusion criteria**	**Reason for exclusion**
Quantitative research	Evidence more robust because explanatory and related to sample	Qualitative research	Evidence is explorative and related to cases
n≥30	Central boundary theorem (Bortz & Schuster, 2010, p. 411)	Systematic review or meta-analysis	This research is a systematic review that uses quantitative data
2005	current state of research	Sole focus on learning	Not an aim of this research
Peer review	Reduce bias (Bortz & Schuster, 2010, p. 33)	Sole focus on legal requirements	Not an aim of this research
Pupils under the age of 18	Aim of this research	Sole focus on court decisions	Not an aim of this research
Risk and protective factors	Aim of this research	Sole focus on mental health of parents or legal guardians	Not an aim of this research
Parental divorce or separation	Aim of this research	PSOD group mixed with controls	No distinction possible
Negative consequences of PSDO on mental health (externalizing and internalizing behavioral problems, conduct disorder, QoL, parental alienation syndrome, children affected by parental relationship distress, anxiety, depression & lack of resilience)	Aim of this research, more than one possible mental health issue to be expected	Sole focus on long-term effects into adulthood	Focus on pupils under 18
Empirical	Data transparent	Overview of literature	Sample & design not transparent

4.4 Synthesis Method

Meta-analyses and systematic reviews or meta-analyses and large trials that follow afterward that attempt to answer the same question can show different findings (Leizorovicz et al., 1992, p. 913; LeLorier et al., 1997, p. 536; Nurmohamed et al., 1992, p. 152) which is due to bias in the analyzed studies (Higgins et al., 2011, p. 4). Therefore it seems to be reasonable to assess the risk of bias to determine the robustness of findings in the included articles (Goagoses & Koglin, 2020, p. 154; Gough et al., 2017, p. 193). Popular tools to assist in this process are the Cochrane risk of bias tool, NHLBI, and STROBE (Goagoses & Koglin, 2020, p. 154). However, those tools exist to analyze randomized controlled trials in health sciences (Goagoses & Koglin, 2020, p. 155). Moreover, other tools such as GRADEpro, Metamap PubMed, Rcttagger, Robot Reviewer, MAGICApp, and GRADEpro GDT (Gough et al., 2017, pp. 195-200) also aim to assess the quality of medical literature (GRADE working group, 2020; MAGIC Evidence Ecosystem Foundation, 2020; Treweek et al., 2013, p. 1f.). Therefore, these tools are inappropriate for the context of this paper as it aims to analyze studies with various other research designs in medical and social sciences. Therefore, a risk of bias assessment is not carried out. This is in line with about 10% of systematic reviews which do not perform risk of bias assessments of the included literature (Katikireddi et al., 2015, p. 189). Even when it is carried out, it often does not influence the process of the synthesis (Katikireddi et al., 2015, p. 194). According to some researchers, this might not be an issue in configurative reviews as they do not need to use a risk of bias assessments as quality control (Gough et al., 2012, p. 3). Instead, one can either decide to value study contributions or to avoid bias by conducting a risk of bias assessment (Gough et al., 2012, p. 3). To decide, if a risk of bias assessment is useful, this paper must decide for a specific type of synthesis first. To synthesize the evidence of the primary studies, it is required to rebuild the data into a new whole (Gough et al., 2017, p. 225f.; Strike & Posner, 1983, p. 346). For this synthesis, there are different approaches available to rebuild the data (Gough et al., 2017). This paper employs a narrative synthesis that uses text to describe and combine findings (Goagoses & Koglin, 2020, p. 154; Popay et al., 2006, p. 5). However, some scholars advocate that this term is not useful as all syntheses are some kind of narrative synthesis (Gough et al., 2017, p. 229f.). To add nuance, this paper opts for a synthesizing theory (Gough et al., 2017; Pound & Campbell, 2015, p. 57). Why this type of synthesis is helpful to conduct this systematic review and others are avoided can be read in the following table 11.

Table 11: Synthesis Method

Name	Key aspects	Decision	Reason	Source
Thematic summary	combine qualitative with quantitative findings	No	Only quantitative findings in this review	(Gough et al., 2017, p. 229ff.)
Framework synthesis	A priori design which changes with the researcher becoming familiar with literature – qualitative & quantitative findings	No	Only quantitative findings in this review	(Gough et al., 2017, p. 231f.)
Thematic synthesis	combine qualitative with quantitative findings with interpretative or realist perspective	No	Only quantitative findings in this review	(Barnett-Page & Thomas, 2009, p. 1; Gough et al., 2017, p. 235)
Meta-ethnography	1st: Find corresponding results 2nd: find non-corresponding results 3rd: explain difference	No	Mostly, results not expected to be non-corresponding	(Gough et al., 2017, p. 240; Noblit et al., 1988, p. 37f.)
Synthesizing theory	1st: extract relevant results 2nd: find corresponding results and join them 3rd: refine this process by interrogating for more theoretical insight	Yes	Join corresponding results for more insight is exactly the plan	(Gough et al., 2017; Pound & Campbell, 2015, p. 57)
Realist synthesis	Uncover hidden mechanisms in interventions	No	Intervention and hidden phenomena are not a concern	(Gough et al., 2017, p. 246)
Meta-narrative synthesis	Uncover meta-narratives in primary research	No	Meta-narratives are not a concern	(Gough et al., 2017, p. 249)
Mixed methods	Used when it is necessary to analyze an array of different primary research	No	Primary research findings and research designs are not expected to be vastly different from each other	(Gough et al., 2017, p. 250)

As this work uses a synthesizing theory as a configurative approach, there is no risk of bias assessment necessary because it is hard to determine what quality in this context means and how it would affect the synthesis process (Gough et al., 2017, p. 244f.). Additionally, one might conclude that it is beneficial for the quality of the synthesis to find highly homogenous studies. However, studies in social sciences tend to be more heterogeneous which can be seen as an opportunity to find commonalities where they are not expected (Gough et al., 2017, p. 86). To analyze the literature retrieved from the four scientific databases described in this chapter, it is useful to use a citation management program (Gough et al., 2017, p. 129). All citations are imported to EndNote 20 and then exported to Microsoft Excel to go through the process of title, abstract, and full-text screening of the primary research. The next section presents all included studies after excluding irrelevant studies through this process.

4.5 Included Studies

Table 12: Included Studies

Authors (year)	**Title**	**Journal**	**Funding / Conflict of interest**
Bachar, E., Stein, D., Canetti, L. & Gur, E. (2008)	Surgery and parental separation as potential risk factors for abnormal eating attitudes-longitudinal study	European Eating Disorder Review	No source of funding reported
Oldehinkel, A. J., Ormel, J. V., De Winter, A. F. & Verhulst, F. C. (2008)	Parental Divorce and Offspring Depressive Symptoms: Dutch Developmental Trends during Early Adolescence	Journal of Marriage and Family	Netherlands Organization for Scientific Research and Health Research and Development, Social Sciences Council, Sophia Foundation for Medical Research, Dutch Ministry of Justice, and participating universities
Chung, Y. & Emery, R. (2010)	Early Adolescents and Divorce in South Korea: Risk, Resilience, and Pain	JOURNAL OF COMPARATIVE FAMILY STUDIES	No source of funding reported
M. Sentse, J. Ormel, R. Veenstra, F. C. Verhulst	Child temperament moderates the impact of	Journal of Family Psychology	No source of funding reported

and A. J. Oldehinkel (2011)	parental separation on adolescent mental health: The trails study		
J. M. Weaver, J. M. & Schofield, T. J. (2015)	Mediation and moderation of divorce effects on children's behavior problems	Journal of Family Psychology	United States Department of Health & Human Services, National Institutes of Health, NIH Eunice Kennedy Shriver National Institute of Child Health & Human Development
Perales, F., Johnson, S. E., Baxter, J., Lawrence, D. & Zubrick, S. R. (2017)	Family structure and childhood mental disorders: new findings from Australia	SOCIAL PSYCHIATRY AND PSYCHIATRIC EPIDEMIOLOGY	Authors state no conflict of interest, Australian Research Council, Australian Government – Department of Health & Ageing
O'Hara, K. L., Sandler, I. N., Wolchik, S. A. and Tein, J. Y. (2019)	Cooing in context: The effects of long-term relations between interparental conflict and coping on the development of child psychopathology following parental divorce	DEVELOPMENT AND PSYCHOPATHOLOGY	United States Department of Health & Human Services, National Institutes of Health, NIH National Institute of Mental Health
Sorek, Y. (2019)	Children of divorce evaluate their quality of life: The moderating effect of psychological processes	CHILDREN AND YOUTH SERVICES REVIEW	Authors declare no conflict of interest, so source of funding reported
Penttinen, R., Hakko, H., Riipinen, P., Isohookana, R. & Riala, K. (2020)	Associations of Adverse Childhood Experiences to Smoking and Nicotine Dependence Among Adolescent Psychiatric Inpatients	COMMUNITY MENTAL HEALTH JOURNAL	Authors declare no conflict of interest, so source of funding reported

Sorek, Y. (2020)	Grandparental and overall social support as resilience factors in coping with parental conflict among children of divorce	CHILDREN AND YOUTH SERVICES REVIEW	Authors declare no conflict of interest, so source of funding reported

4.6 PRISMA Flowchart

The following master dissertation uses a PRISMA flowchart (Preferred Reporting Items for Systematic reviews and Meta-Analyses) (Page et al., 2021, p. 8) to report how many and at which stages studies are excluded (Gough et al., 2017, p. 111).

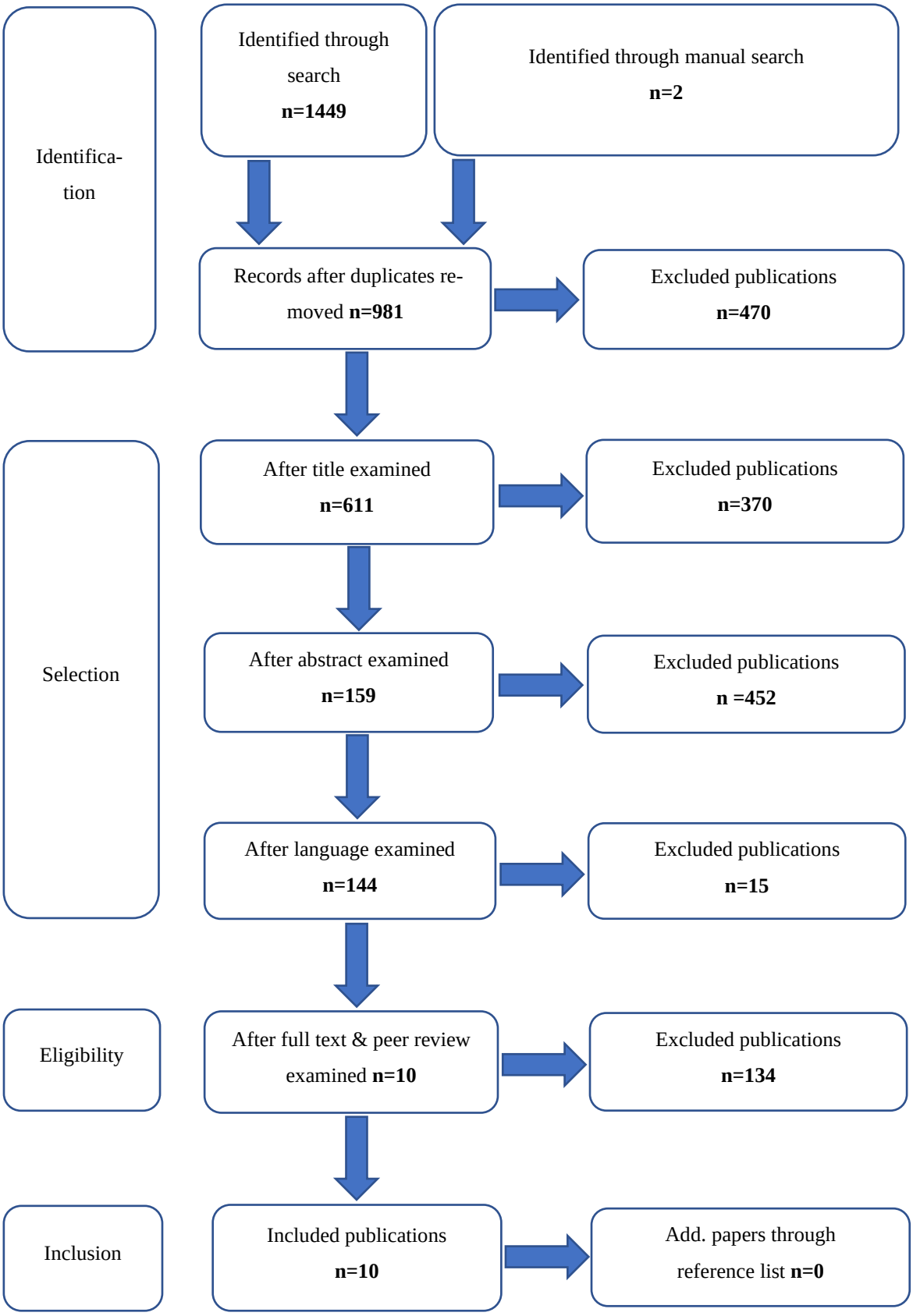

Figure 2: PRISMA Flowchart

(Page et al., 2021, p. 8)

5 Synthesis of Included Studies

5.1 Synthesis Preparation

In this synthesis preparation, an initial codebook is created to ensure that all relevant pieces of information are extracted and no irrelevant data is presented (Centre for Reviews and Dissemination, 2009, p. 21; Goagoses & Koglin, 2020, p. 151). Because it is not clear yet where commonalities lie in the data that is to be extracted, the initial codebook is broad. Information that proves to be irrelevant during the following stages of the review can be left out later. Pieces of information to be extracted for the synthesis preparation are authors, year, and the country where the study participants are tested. Moreover, the research design, sample age, sample size, and the region or institution where participants are tested are of concern. The relation to mental health and its definition is vital as well as the risk and protective factors that can be identified. It is also important to investigate which diagnostic tests are used, the scale of those tests, the scores, who reports the test, the validity in the studied sample, and if lower or higher scores are preferable. The extracted characteristics of each of the 10 studies can be viewed in table 13 down below.

Table 13: Synthesis Preparation

Authors (year) & country	**Design & aim of research**	**Sample**	**Relation to mental health**	**Relevant outcome**		
				Risk & protective factors	**Diagnostic instrument**	**Scores**
Bachar et al. (2008) Israel	Longitudinal Effect of parental separation or divorce & surgery on eating disorders	School not stated Age: **12.6** (SD=0.6) to **16.5** (SD=0.5) n=**2206**	**Eating disorder** defined as "abnormal attitudes about food, weight and eating habits" (p. 444)	**Risk:** PSOD <6 years ago **Protective:** PSOD ≥6 years ago	EAT-26[a] → Child-report Tested every year from 7th to 11th grade α=.84; scale from 0 to 52[b]; lower is better EDI-2[b] → Child-report Tested every year from 7th to 11th grade α=.83 (total) or .75 to .90 (subscales); scale from 0 to 182[c]; lower is better	PSOD <6 years ago: correlation coefficient **0.335**; SD=0.117; p<.01 PSOD ≥6 years ago: correlation coefficient **-0.106**; SD=0.102; p is not significant PSOD <6 years ago: correlation coefficient **0.304**; SD=0.116; p<.01 PSOD ≥6 years ago: correlation coefficient **-0.023** points; SD=0.109; p is not significant

Oldehinkel et al. (2008) Netherlands	Longitudinal Investigate „association between parental divorce and depressive symptom changes during early adolescence and […] patterns […] for boys and girls" (p. 284)	Five municipalities in the north (urban & rural) Age: **10 to 15** (T1: 10 to 12 & T2: 12 to 15) n=**2149**	**Depressive symptoms** defined as "depressed mood, anhedonia, loss of energy, feelings of worthlessness and guilt, suicidal ideation, sleep problems, and eating problems" (p. 287)	**Risk:** Being a boy at age ~10 Being a girl at age ~12 to 15 **Protective:** Being a girl at age ~10 Being a boy at age ~12 to 15	Affective → Problem Scale from YSR[d] Child-report chart scores imprecise α: .72 to .77; scale from 0 to 26; lower is better Affective → Problem Scale from CBCL[e] Parent-report Chart scores imprecise α=.68 to .73; scale from 0 to 26; lower is better	Girls: Age (depr. symptoms) Age 10 **(3.8)**, 11 **(4.1)**, 12 **(4.4)**, 13 **(4.7)**, 14 **(5.0)**, 15 **(5.3)** Boys: Age (depr. symptoms) Age 10 **(4.2)**, 11 **(3.9)**, 12 **(3.6)**, 13 **(3.3)**, 14 **(2.9)**, 15 **(2.6)** p<.05 Girls: Age (score) Age 10 **(2.80)**, 11 **(2.75)**, 12 **(2.70)**, 13 **(2.65)**, 14 **(2.60)**, 15 **(2.55)** Boys: Age (score) Age 10 **(3.25)**, 11 **(2.9)**, 12 **(2.6)**, 13 **(2.3)**, 14 **(1.9)**, 15 **(1.6)** p<.05
Chung et al. (2010)	Prospective closed cohort	Four middle schools in Seoul &	**Psychological adjustment** defined as in-	**Risk:** Being a girl	Withdrawal → subscale of internalizing scale from YSR[d, f]	Divorced (girls): **3.73**; SD=2.51; p<.05 Divorced (boys): **3.28**; SD=2.66; p<.05

South Korea	"assess both general psychological adjustment and indices of emotional pain in a sample of South Korean children with different family living arrangements" (p. 856)	Gyeonggi Provence Age: **12 to 15** n=454 **198** in divorce group; 256 in control group Data collected in March 2005 & May 2006	ternalizing, externalizing problems & self-esteem; internalizing problems defined as withdrawal, somatization & anxiety / depression; externalizing problems not defined **Emotional pain** defined as fear of abandonment & perception of loss **Quality of parent-child relationships**	Living with father **Protective:** Being a boy Living with mother	Child-report scale from 0 to 20; lower is better Somatization → subscale of internalizing scale from YSR[d, f] Child-report Scale from to 0 to 21; lower is better Anxiety & Depression → from subscale of internalizing scale from YSR[d, f] Child-report scale from to 0 to 21; lower is better	 Divorced (girls): **4.40**; SD=3.61; p<.005 for divorced; p<.001 for girls Divorced (boys): **2.92**; SD=2.63; p<.005 for divorced; p<.001 for boys Divorced (girls): **8.20**; SD=6.25; p<.005 for divorced; p<.001 for girls Divorced (boys): **5.96**; SD=5.05; p<.005 for divorced; p<.001 for boys

			defined as attachment security, warmth & supervision		Attachment → security (to residential parent & step-parent if existent – only higher score is presented) Child-report α=.81; test & scale not stated; higher is better Warmth → from Parental Behavior Inventory[g] α=.89 (fathers) & .88 (mothers); scale from 10 to 40; higher is better	Divorced (girls): **41.30**; SD=7.08; p<.05 Divorced (boys): **43.31**; SD=6.54; p<.05 Divorced living with fathers: **17.31**; SD=4.39; p<.05 Divorced living with mothers: **18.56**; SD=3.76; p<.05
Sentse et al. (2011)	Longitudinal Investigate "whether	Rural & urban areas in the north	**Internalizing problems** defined as having symptoms of	**Risk:** Internalizing: high fearfulness	Scale → Fearfulness from EATQ-R[h] α=.63	Fearfulness as predictor for T3 internalizing problems: Low fearfulness: B=**-0.10**; p<.32 (not significant) High fearfulness: B=**0.24**; p<.05

Nether-lands	child tempe-rament (ef-fortful con-trol and fear-fulness) moderates the impact of parental sep-aration on specific mental health do-mains" (p. 97)	Age: **11.09** (SD=0.55) at T1 **to 16.27** (SD=0.73) at T3 n=**1274**	anxiety & de-pression **Externalizing problems** de-fined as show-ing behavior of rule-breaking & delinquency	Externali-zing: low ef-fortful con-trol **Protective:**	lower correla-tion is better Scale → Effortful control from EATQ-R[h] α=.86; lower correla-tion is better Internalizing & externalizing problems meas-ured with CBCL[e] & YSR[d] α not stated	Controlled for internalizing problems at T1, gender & cooccurrence of prob-lems Effortful control as predictor of T3 externalizing problems: Low effortful control: B=**0.42**; p<.01 High effortful control: B=**0.09**; p=.44 (not significant) Controlled for externalizing problems at T1, gender & cooccurrence of prob-lems
Weaver et al. (2015) U.S.A.	Longitudinal	Families recruited after child's birth at hospitals in Little Rock, AR; Irvine, CA;	**Internalizing problems** de-fined as being anxious, de-pressed, with-drawn & hav-ing somatic complaints	**Risk:** Young age (~7 years) Internalizing & Externa-lizing: less sensitive mother	CBCL[e] for mother report Scale not stated; lower is better TRF[e] for teacher report Scale not stated; lower is better	Internalizing problems (mother report): α=.79; p=.036 More sensitive mother: Grade 2 (**46.125**), 3 (**45.25**), 4 (**44.75**), 5 (**44.25**), 6 (**43.875**), 7 (**43.75**), 8 (**43.75**), 9 (**43.875**) Less sensitive mother: Grade 2 (**46.625**), 3 (**45.125**), 4 (**45.875**), 5 (**44.875**), 6 (**44.625**), 7 (**44.75**), 8 (**44.625**), 9 (**44.75**) Externalizing problems (mother report): α=.79; p=.013

		Lawrence, KS; Boston, MA; Philadelphia, PA; Pittsburgh, PA; Charlottesville, VA; Morganton, NC; Seattle, WA; and Madison, WI Age: 1 month to 15 years therefore, only children from grade 2 & up considered ~**7 to 15 years**	**Externalizing problems** defined as rule-breaking & aggressive behavior	Externalizing: lower IQ in child Internalizing: lower family income Internalizing: higher maternal depression Internalizing & Externalizing: worse home environment **Protective:** Old age (~15 years)		more sensitive mother: Grade 2 (**45.875**), 3 (**44.375**), 4 (**43.625**), 5 (**43.125**), 6 (**42.625**), 7 (**42.375**), 8 (**42.25**), 9 (**42.5**) less sensitive mother: Grade 2 (**45.875**), 3 (**45.0**), 4 (**44.5**), 5 (**44.0**), 6 (**43.75**), 7 (**43.625**), 8 (**43.5**), 8 (**43.5**), 9 (**43.5**) Externalizing problems (mother report): α=.79; p=.013 child lower IQ: Grade 2 (**48.125**), 3 (**47.375**), 4 (**46.875**), 5 (**46.625**), 6 (**46.375**), 7 (**46.375**), 8 (**46.625**), 9 (**46.875**) child higher IQ: Grade 2 (**47.875**), 3 (**47.5**), 4 (**46.75**), 5 (**46.375**), 6 (**46.25**), 7 (**46.25**), 8 (**46.375**), 9 (**46.5**) Externalizing problems (teacher report): α=.79; p<.001 child lower IQ: Grade 2 (**56.375**), 3 (**56.625**), 4 (**56.5**), 5 (**56.125**), 6 (**55.625**) child higher IQ: Grade 2 (**56.125**), 3 (**56.25**), 4 (**56.125**), 5 (**55.875**), 6 (**55.375**) Effect sizes of mediated models of parental divorce through indirect pathways (p<.05): Mediated by family income: α not stated **0.02** for internalizing teacher report

		n=**104** (number of children considered is lower due to grade re-striction)		Middle age (~11 years old) Internalizing & Externa-lizing: more sensitive mother Externaliz-ing: higher IQ in child Interna-liz-ing: higher family in-come Internalizing & externa-lizing: lower maternal de-pression		Mediated by maternal depression: α not stated **0.02** for internalizing teacher report; **0.93** for internalizing mother report; **0.73** for externalizing mother report mediated by maternal sensitivity: α=.79 **0.04** for internalizing teacher report; **0.06** for externalizing teacher report; **0.43** for internalizing mother report; **0.96** for externalizing mother report mediated by home environment: α=.84 **0.09** for internalizing teacher report; **0.10** for externalizing teacher report; **1.46** for externalizing mother report

				Internalizing & Externalizing: better home environment		
Perales et al. (2017) Australia	Retro-spective closed cohort "relationships between family structure and childhood mental disorders" in relation to "cognitive and socio-emotional outcomes" (p. 423)	National survey Age: 4 to 17; restricted to **12 to 17**) n=6310 (n=3334 for 4 to 11 years & n=**2976** for 12 to 17 years)	**Mental disorders** defined as "social phobia, separation anxiety disorder, generalised anxiety disorder, obsessive-compulsive disorder, major depressive disorder, attention-deficit/hyperactivity disorder, and conduct disorder" (p. 423)	**Risk:** Anxiety disorder: PSOD <5 years ago Major depressive disorder: PSOD <2 years ago ADHD: PSOD 2 to 5 years ago Conduct disorder: PSOD 5 to 10 years ago	NIMH-DISC IV[i] → Parent report α not stated; scale not stated; lower is better	Anxiety disorder: PSOD less than 2 years (**14.1**; 95% CI 6.1 to 22.0), 2 to 5 years (**14.6**; 95% CI 6.7 to 22.5), 5 to 10 years (**10.8**; 95% CI 6.6 to 15.1), >10 years (**11.3**; 95% CI 7.1 to 15.4) Major depressive disorder: PSOD less than 2 years (**13.7**; 95% CI 5.7 to 21.7), 2 to 5 years (**8.6**; 95% CI 2.9 to 14.4), 5 to 10 years (**7.6**; 95% CI 3.9 to 11.2), >10 years (**9.3**; 95% CI 5.8 to 12.8) ADHD: PSOD less than 2 years (too few to report), 2 to 5 years (**14.3**; 95% CI 7.2 to 21.4), 5 to 10 years (**9.3**; 95% CI 4.8 to 13.8), >10 years (**10.1**; 95% CI 6.4 to 13.7) Conduct disorder: PSOD less than 2 years (too few to report), 2 to 5 years (too few to report), 5 to 10 years (**3.5**; 95% CI 0.5 to 6.5), >10 years (**5.2**; 95% CI 1.9 to 8.5)

				Any disorder: PSOD up to 5 years ago **Protective:** Anxiety disorder: PSOD >5 years ago Major depressive disorder: PSOD >2 years ago ADHD: PSOD >5 years ago Conduct disorder:		Any disorder (one or more): PSOD less than 2 years (**22.7**; 95% CI 13.1 to 32.2), 2 to 5 years (**24.6**; 95% CI 15.5 to 33.8), 5 to 10 years (**21.6**; 95% CI 15.6 to 27.6), >10 years (**21.3**; 95% CI 16.2 to 26.4)

				PSOD >10 years ago Any disorder: PSOD >5 years ago		
O'Hara et al. (2019) U.S.A.	Longitudinal with "baseline (T1), posttest (T2), three-month follow-up (T3), six-month follow-up (T4), and six-year follow-up (T5)" (p. 8) "(1) identifying trajectories of post-	Children in a large metropolitan U.S. city[m] Age: **9 to 12** (at T1) 15 to 18 (at T5), therefore T5 only for comparison n=**240** (n=148 for Low De-	**Mental health problems** defined as internalizing & externali-zing problems	**Risk:** Short time since divorce (<2 years) or young age (9 to <12)	CBCL[e] → mother report Scale not stated; α=.74 to .88 for T1 to T5	Low Decreasing group: Internalizing problems at T1: **56.20** (SD=9.05) Internalizing problems at T5: **51.11** (SD=9.58) Externalizing problems at T1: **54.40** (SD=8.15) Externalizing problems at T5: **49.82** (SD=9.96) High Decreasing group: Internalizing problems at T1: **59.31** (SD=9.99) Internalizing problems at T5: **53.81** (SD=8.42) Externalizing problems at T1: **55.76** (SD=9.13) Externalizing problems at T5: **50.66** (SD=9.55)

	divorce interparental conflict over time and factors that predict differential trajectories of conflict, 2) assessing the relations between trajectories of conflict over time and psychopathology of children, and 3) assessing how children's coping prospective-ly predicts the develop-	creasing, n=71 for High Decreasing 6 n=21 for High Increasing; therefore, High Increasing left out)				

	ment of psy-cho-pathol-ogy" for children after PSOD (p. 7)					
Sorek (2019) Israel	Cross-sec-tional survey "implica-tions of di-vorce on children's quality of life" (p. 1)	Region not stated Age: **7 to 17** (aver-age: 12.9; SD=2.57) n=**122**	**Quality of life (QoL)** defined as own & par-ent evaluation of children's well-being (positive life aspects)	**Risk:** Parental con-flict Children's self-blame in divorce & conflict Feeling caught be-tween par-ents Increase in conflict in-tensity be-tween mar-riage & question-	Overall Life Satisfaction (OLS)[j] Child-report α not stated Happy Last Two Weeks (HLTW)[j] Child-report α not stated Personal Well-Being Index – School Children (PWI-SC)[k] Child-report α=0.89	Correlation coefficients: higher is better Correlation between child's perception of conflict intensity[m] & OLS[j]: B=**-0.61**; SD=0.20; p<0.003 Correlation between child's perception of conflict intensity[m] & SLSS[l]: B=**-0.37**; SD=0.08; p<0.001 Correlation between gap in mother's perception of conflict intensity at ques-tionnaire completion & during marriage[n] & SLSS[l]: B=**-0.15**; SD=0.07; p<0.029 Correlation between caught between parents[m] & OLS[j]: B=**-0.51**; SD=0.22; p<.019 Correlation of between caught between parents[m] & HLTW[n]: B=**-0.84**; SD=0.33; p<.013 Correlation between caught between parents[m] & PWI-SC[k]: B=**-0.40**; SD=0.17; p<.023

				naire completion Higher age **Protective:** Active coping with parental conflict (defined as "actions initiated by the children to cope with the difficulty they feel as a result of interparental conflict") (p. 2) Lower age	Student Life Satisfaction Scale (SSLS)[l] Child-report α=0.87 Child's perception of conflict intensity (selected items from CPIC[m]) Child-report α not stated Intensity of parental conflict mothers' perception: Gap in mother's perception of conflict intensity at questionnaire completion and during marriage (selected items	Correlation between caught between parents[m] & SLSS[l]: B=**-0.21**; SD=0.08; p<.006 Correlation between self-blame in divorce & conflict[m] & OLS[j]: B=**-0.49**; SD=0.22; p<.029 Correlation between self-blame in divorce & conflict[m] & HLTW[j]: B=**-0.56**; SD=0.26; p<.038 Correlation between self-blame in divorce & conflict[m] & PWI-SC[k]: B=**-0.40**; SD=0.15; p<.008 Correlation between self-blame in divorce & conflict[m] & SLSS[l]: B=**-0.30**; SD=0.08; p<.001 Correlation between active coping with conflict[m] & OLS[j]: B=**0.89**; SD=0.21; p<.001 Correlation between active coping with conflict[m] & HLTW[j]: B=**0.86**; SD=0.25; p<.001 Correlation between active coping with conflict[m] & PWI-SC[k]: B=**0.47**; SD=0.15; p=.002

					from Lumer[n]) α=0.80 Child's feelings of being caught between parents (amended scale from CPIC[m]) α=0.64 Self-blame for divorce & conflict (scale from CPIC[m]) Child-report α=0.71 Active coping with conflict (scale from CPIC[m]) Child-report α not stated	Correlation between active coping with conflict[m] & SLSS[l]: B=**0.27**; SD=0.08; p<.001 Correlation between time since divorce & SLSS[l]: B=**-0.17**; SD=0.08; p=.042 Correlation between self-blame[m] & SLSS[l]: B=**-0.20**; SD=0.08; p=.018 Correlation between mother's perception of gap in conflict intensity[n] x self-blame[m] & SLSS[l]: B=**0.20**; SD= 0.07; p=.007 Correlation between child's age & OLS[j]: low score means low age is protective B=**-0.60**; SD=0.19; p=.003 Correlation between children's perceived conflict intensity[m] & active coping with conflict[m] & OLS[j]: B=**0.75**; SD=0.21; p<.001 Correlation between child's perception of conflict intensity[m] x active coping[m]: B=**0.47**; SD=0.17; p=.009

						Correlation between child's age & OLS[j]: low score means low age is protective B=**-0.70**; SD=0.19; p<.001 Correlation between children's feelings of being caught between parents[m] & active coping with conflict[m] & OLS[j]: B=**0.82**; SD=0.19; p<.001 Moderating variables: higher is better Self-blame[m] as a moderating variable between mothers' perceived gap in conflict intensity[n] & SLSS[l]: Low self-blame: **3.8** for conflict decreased & **4.0** for conflict increased High self-blame: **3.7** for conflict decreased & **3.3** for conflict increased (chart scores imprecise) Children's active coping[m] as moderating variable between their perceived conflict intensity[m] & OLS[j]: High active coping: **8.9** for perceived low conflict & **9.1** for perceived high conflict Low active coping: **8.3** for perceived low conflict & **6.9** for perceived high conflict (chart scores imprecise)

						Children's active coping[m] as a moderating variable between children's perception of being caught between parents[q] & SLSS[l]: High active coping: **8.5** for low caught in between parents & **9.7** for high caught in between parents Low active coping: **8.2** for low caught in between parents & **6.8** for high caught in between parents (chart scores imprecise)
Penttinen et al. (2020) Finland	Retrospective closed cohort Association of adverse childhood experiences (ACEs) & regular smoking / nicotine dependence	Admitted to inpatient care in Oulu University Hospital Age: **13 to 17** n=**508**	**Regular smoking** defined as smoking ≥ 1 cigarette per day **Nicotine dependence** (ND): moderate ND defined as 3 to 5 points on a 0 to 9 scale with yes and no answers; high ND defined as	**Risk:** Being a girl **Protective:** Being a boy	K-SADS-PL[o] → α not stated mFTQ[p] → α not stated	Boys: Divorce not significantly related to regular smoking; no metrics stated) Girls: Divorce significantly related to regular smoking (p=.001; no further metrics stated) Boys: Divorce not significantly related to nicotine dependence (no metrics stated) Girls: Divorce significantly related to nicotine dependence (p=.003; no further metrics stated)

			6 to 9 points on a 0 to 9 scale			
Sorek (2020) Israel	Cross-sectional survey how risk & resilience factors are related to quality of life of children of divorce	Region not stated Age: **7 to 17** (average: 12.9; SD=2.57) n=**122**	**Quality of life (QoL)** defined as own & parent evaluation of children's well-being (positive life aspects)	**Risk:** Parental conflict Feeling caught between parents Increase in conflict intensity between marriage & questionnaire completion **Protective:** Closeness to grandparents	Overall life Satisfaction (OLS)[j] Child-report α not stated Happy Last Two Weeks (HLTW)[j] Child-report α not stated Personal Well-Being Index – School Children (PWI-SC)[k] Child-report α=0.89 Student Life Satisfaction Scale (SSLS)[l] Child-report α=0.87	Correlation coefficients: Correlation between child's perception of conflict intensity[m] & OLS[j]: B=-**0.61**; SD=0.20; p=0.003 Correlation between child's perception of conflict intensity[m] & SLSS[l]: B=-**0.37**; SD=0.08; p<0.001 Correlation between gap in mother's perception of conflict intensity at questionnaire completion & during marriage[n] & SLSS[l]: B=-**0.15**; SD=0.07; p=0.029 Correlation between caught between parents[m] & OLS[j]: B=-**0.51**; SD=0.22; p=.019 Correlation of between caught between parents[m] & HLTW[j]: B=-**0.84**; SD=0.33; p=.013 Correlation between caught between parents[m] & PWI-SC[k]: B=-**0.40**; SD=0.17; p=.023 Correlation between caught between parents[m] & SLSS[l]: B=-**0.21**; SD=0.08; p=0.006

				Open discourse with grandparents about divorce[v] Active coping with conflict (defined as "actions initiated by the children to cope with the difficulty they feel as a result of interparental conflict") (p. 2)	Closeness to grandparents (based on questionnaire[q]) Child-report Scale not stated α=0.89 Open discourse with grandparents about divorce (based on Soliz[r]) Child-report Scale not stated α=0.90 Overall social support (closeness to grandparents[q] & open discourse with grandparents about divorce[r])	Correlation between caught between parents[m] & OLS[j]: B=**-0.63**; SD=0.18; p<.001 Correlation between caught between parents[m] x closeness to grandparents[q] & OLS[j]: B=**0.56**; SD=0.20; p<.01 Correlation of sense of closeness to grandparents[q] as moderator between children's sense of being caught between parents[m] & OLS[j]: Low closeness to grandparents: **9.2** for low caught between parents & **6.8** for high caught between parents High closeness to grandparents: **8.9** for low caught between parents & **8.8** for high caught between parents (chart scores imprecise; p not stated) Correlation between overall social support[q, r] & OLS[j]: B=**0.82**; SD=0.18; p<.001 Correlation between closeness to grandparents[r] & OLS[j]: B=**0.72**; SD=0.18; p<.001 Correlation between overall social support[q, r] & HLTW[j]: B=**1.01**; SD=0.21; p<.001

					Child-report Scale not stated Child's perception of conflict intensity (selected items from CPIC[m]) Child-report Intensity of parental conflict mothers' perception: Gap in mother's perception of conflict intensity at questionnaire completion and during marriage (selected items from Lumer[n]) α=0.80	Correlation between overall social support[q, r] & PWI-SC[k]: B=**0.59**; SD=0.12; p<.001 Correlation between closeness to grandparents[r] & PWI-SC[k]: B=**0.37**; SD=0.13; p<.01 Correlation between overall social support[q, r] & SLSS[l]: B=**0.24**; SD=0.07; p<.01 Correlation between closeness to grandparents[q] & SLSS[l]: B=**0.19**; SD=0.08; p<.05 Correlation between being caught between parents[m] & SLSS[l]: B=**-0.34**; SD=0.07; p<.001 Correlation between caught between parents[m] x closeness to grandparents[r]: B=**0.21**; SD=0.08; p<.01 Correlation of closeness to grandparents[r] as moderator between being caught between parents[m] & SLSS[l]: Low closeness to grandparents: **4.3** for low caught between parents & **3.2** for high caught between parents High closeness to grandparents: **4.1** for low caught between parents & **3.8** for high caught between parents (chart scores imprecise; p not stated)

					Child's feelings of being caught between parents (amended scale from CPIC[m]) α=0.64 Self-blame for divorce & conflict (scale from CPIC[m]) Child-report α=0.71 Active coping with conflict (scale from CPIC[m]) Child-report α not stated	Correlation between time since divorce & OLS[j]: B=**-0.61**; SD=0.20; p<.01 Correlation between mothers' perceived gap in conflict intensity[n] & OLS[j]: B=**-0.58**; SD=0.20; p<.01 Correlation between gap in mother's perception x open discourse with grandparents & OLS[j]: B=**0.65**; SD=0.20; p<.01 Correlation of open discourse with grandparents[r] as moderator between gap in mothers' perception of conflict intensity[n] & OLS[j]: Limited discourse: **9.5** for conflict decreased & **7.1** for conflict increased; B=**-1.23**; p<.001 Open discourse: **8.4** for conflict decreased & **8.5** for conflict increased; B=**0.08**; p<.785 (not significant)

a (Garner et al., 1982)
b (Eating Attitudes LLC, 2021)
c (Garner, 1991)
d (Achenbach, 1991)

e (Achenbach & Edelbrock, 1991)

f (Oh et al., 2001)

g (Huh, 2000)

h (Putnam et al., 2001)

i (Fisher et al., 1993; Shaffer et al., 2000)

j (Rees et al., 2013)

k (Cummins et al., 2003)

l (Huebner, 1991)

m (Grych et al., 1992)

n (Lumer, 1998)

o (Ambrosini, 2000; Kaufman et al., 1997)

p (Prokhorov et al., 1996)

q (Attar-Schwartz et al., 2009)

r (Soliz, 2008)

All studies that are examined adhere to the central boundary theorem which states that a sample of a quantitative study needs to be n≥30 to be able to be representative of a population (Bortz & Schuster, 2010, p. 411) as the number of participants ranges from n=104 in Weaver et al. (2015) to n=2149 in Oldehinkel et al. (2008). When subgroups are considered and control group participants are not counted, not all samples are sufficient in this regard as O'Hara (2019) presents one subgroup where the sample size is 21, therefore this subgroup is not analyzed. Only score that are significant (p>.05) are extracted unless insignificant scores serve the purpose to compare with the opposite group such as in terms of gender in Penttinen et al. (2020). Data is extracted even when the validity is lower than α=.70 and when the scale of the diagnostic test is not known. These facts and their influence on the explanatory power are discussed in chapter 5.3. The next section 5.2 merges corresponding results in table 14. Non-corresponding results are left out in this section but still discussed in section 5.3 to not falsify the data.

5.2 Synthesis

To be able to find and present patterns that emerge from the primary research, study findings are grouped (Siddaway et al., 2019, p. 767). Therefore, this synthesis groups similar study results and describes them according to the pattern that becomes visible through risk and protective factors. Given that this paper dissects only 10 studies, it is advisable to not split study findings into too tiny groups (Verbeek et al., 2012, p. 285). That is why factors such as the country, region, or the design of studies do not play a role in grouping risk and protective factors.

Table 14: Synthesis

Group	Authors (year) & country	Study design	Relevant age of participants & sample size	Relevant relation to mental health	Risk factor	Protective factor	Diagnostic instrument	Relevant scores	Unifying elements in risk & protective factors
Group 1	Chung et al. (2010) South Korea	Prospective closed cohort	12 to 15 n=198	**Psychological adjustment** defined as internalizing, externalizing problems & self-esteem; internalizing problems defined as withdrawal, somatization & anxiety / depression; externalizing problems not defined **Quality of parent-child relationships** defined as attachment security,	Being a girl at age 12 to 15	Being a boy at age 12 to 15	Withdrawal → subscale of internalizing scale from YSR[d, f] Child-report scale from 0 to 20; lower is better; α=.88 to .89 Somatization → subscale of internalizing scale from YSR[d, f] Child-report Scale from to 0 to 21; lower is better; α=.88 to .89 Anxiety & depression → from subscale of internalizing scale from YSR[d, f] Child-report	Divorced (girls): **3.73**; SD=2.51; p<.05 Divorced (boys): **3.28**; SD=2.66; p<.05 Divorced (girls): **4.40**; SD=3.61; p<.005 for divorced; p<.001 for girls Divorced (boys): **2.92**; SD=2.63; p<.005 for divorced; p<.001 for boys Divorced (girls): **8.20**; SD=6.25; p<.005 for divorced; p<.001 for girls	Children aged ~13 to ~15: being a girl as a risk factor & being a boy as a protective factor

Group 1				warmth & super-vision			scale from to 0 to 21; lower is better; α=.88 to .89 Attachment security → (to residential parent & step-parent if existent – only higher score is presented) Child-report α=.81; test & scale not stated; higher is better	Divorced (boys): **5.96**; SD=5.05; p<.005 for divorced; p<.001 for boys Divorced (girls): **41.30**; SD=7.08; p<.05 Divorced (boys): **43.31**; SD=6.54; p<.05	Children aged ~13 to ~15: being a girl as a risk factor & being a boy as a protective factor
	Oldehinkel et al. (2008) Netherlands	Longitu-dinal	10 to 15 n=2149	**Depressive symp-toms** defined as "depressed mood, anhedonia, loss of energy, feelings of worthlessness and guilt, suicidal idea-tion, sleep prob-lems, and eating problems" (p. 287)	Being a girl at age ~12 to 15	Being a boy at age ~12 to 15	Affective Problem → Scale from YSR[d] Child-report chart scores imprecise α: .72 to .77; Scale from 0 to 26; lower is better Affective Problem → Scale from CBCL[e] Parent-report Chart scores imprecise	Girls: Age (depr. symptoms) Age 10 **(3.8)**, 11 **(4.1)**, 12 **(4.4)**, 13 **(4.7)**, 14 **(5.0)**, 15 **(5.3)** p<.05 Boys: Age (depr. symptoms) Age 10 **(4.2)**, 11 **(3.9)**, 12 **(3.6)**, 13 **(3.3)**, 14 **(2.9)**, 15 **(2.6)** p<.05 Girls: Age (score) Age 10 **(2.80)**, 11 **(2.75)**, 12 **(2.70)**, 13 **(2.65)**, 14 **(2.60)**, 15 **(2.55)** p<.05	

Group 1							α=.68 to .73; scale from 0 to 26; lower is better	Boys: Age (score) Age 10 **(3.25)**, 11 **(2.9)**, 12 **(2.6)**, 13 **(2.3)**, 14 **(1.9)**, 15 **(1.6)** p<.05	Children aged ~13 to ~15: being a girl as a risk factor & being a boy as a protective fac-
	Penttinen et al. (2020) Finland	Retro-spective closed co-hort	13 to 17 n=508	**Regular smoking** defined as smoking ≥ 1 cigarette per day **Nicotine depend-ence** (ND): mode-rate ND de-fined as 3 to 5 points on a 0 to 9 scale; high ND defined as 6 to 9 points on a 0 to 9 scale	Being a girl at age 13 to 17	Being a boy at age 13 to 17	K-SADS-PL[o] → α not stated mFTQ[p] → α not stated	Boys: Divorce not significantly related to regular smoking; no metrics stated) Girls: Divorce significantly related to regular smoking (p=.001; no fur-ther metrics stated) Boys: Divorce not significantly related to nicotine dependence (no metrics stated) Girls: Divorce significantly related to nicotine dependence (p=.003; no further metrics stated)	

Group 2	Bachar et al. (2008) Israel	Longitudinal	12.6 (SD=0.6) to 16.5 (SD=0.5) n=2206	**Eating disorder** defined as "abnormal attitudes about food, weight and eating habits" (p. 444)	PSOD <6 years ago	PSOD ≥6 years ago	EAT-26[a] → Child-report Assessed every year from 7th to 11th grade α=.84; scale from 0 to 52[b]; lower is better EDI-2[b] → Child-report Assessed every year from 7th to 11th grade α=.83 (total) or .75 to .90 (subscales); scale from 0 to 182[c]; lower is better	PSOD <6 years ago: correlation **0.335**; SD=0.117; p<.01 PSOD ≥6 years ago: correlation **-0.106**; SD=0.102; p is not significant PSOD <6 years ago: correlation **0.304**; SD=0.116; p<.01 PSOD ≥6 years ago: correlation **-0.023** points; SD=0.109; p is not significant	PSOD 2 years ago or less is a risk factor
	Perales et al. (2017) Australia	Retrospective closed cohort	12 to 17 n=2976	**Mental disorders** defined as "social phobia, separation anxiety disorder, generalized anxiety disorder, obsessive-compulsive disorder, major depressive disorder, attention-	Anxiety disorder: PSOD <5 years ago Major depressive disorder: PSOD <2 years ago	Anxiety disorder: PSOD >5 years ago Major depressive disorder: PSOD >2 years ago	NIMH-DISC IV[i] → Parent report α not stated; scale not stated; lower is better	Anxiety disorder: PSOD less than 2 years (**14.1**; 95% CI 6.1 to 22.0), 2 to 5 years (**14.6**; 95% CI 6.7 to 22.5), 5 to 10 years (**10.8**; 95% CI 6.6 to 15.1), >10 years (**11.3**; 95% CI 7.1 to 15.4) Major depressive disorder: PSOD less than 2 years (**13.7**; 95% CI 5.7 to 21.7), 2 to 5 years	

Group 2				deficit/hyperactivity disorder, and conduct disorder" (p. 423)	ADHD: PSOD 2 to 5 years ago Conduct disorder: PSOD 5 to 10 years ago Any disorder: PSOD up to 5 years ago	ADHD: PSOD >5 years ago Conduct disorder: PSOD >10 years ago Any disorder: PSOD >5 years ago		(**8.6**; 95% CI 2.9 to 14.4), 5 to 10 years (**7.6**; 95% CI 3.9 to 11.2), >10 years (**9.3**; 95% CI 5.8 to 12.8) ADHD: PSOD less than 2 years (too few to report), 2 to 5 years (**14.3**; 95% CI 7.2 to 21.4), 5 to 10 years (**9.3**; 95% CI 4.8 to 13.8), >10 years (**10.1**; 95% CI 6.4 to 13.7) Conduct disorder: PSOD less than 2 years (too few to report), 2 to 5 years (too few to report), 5 to 10 years (**3.5**; 95% CI 0.5 to 6.5), >10 years (**5.2**; 95% CI 1.9 to 8.5)	PSOD 2 years ago or less is a risk factor
	O'Hara et al. (2019) U.S.A.	Longitudinal	9 to 12 n=240	**Mental health problems** defined as internalizing & externalizing problems	Short time since divorce (<2 years) or young age (9 to <12)		CBCL[e] → mother report Scale not stated; α=.74 to .88 for T1 to T5	Low Decreasing group: Internalizing problems at T1: **56.20** (SD=9.05) Internalizing problems at T5: **51.11** (SD=9.58) Externalizing problems at T1: **54.40** (SD=8.15)	

Group 2								Externalizing problems at T5: **49.82** (SD=9.96) High Decreasing group: Internalizing problems at T1: **59.31** (SD=9.99) Internalizing problems at T5: **53.81** (SD=8.42) Externalizing problems at T1: **55.76** (SD=9.13) Externalizing problems at T5: **50.66** (SD=9.55)	PSOD 2 years ago or less is a risk factor
Group 3	Sentse et al. (2011) Netherlands	Longitu-dinal	11.09 (SD=0.55) at T1 to 16.27 (SD=0.73) at T3 n=1274	**Internalizing problems** defined as having symptoms of anxiety & depression **Externalizing problems** defined as showing behavior of rule-breaking & delinquency	high fearfulness low effortful control		Scale Fearfulness → from EATQ-R[h] α=.63 lower correlation is better Scale Effortful control → from EATQ-R[h] α=.86;	Fearfulness as predictor for T3 internalizing problems: Low fearfulness: B=**-0.10**; p<.32 (not significant) High fearfulness: B=**0.24**; p<.05 Controlled for internalizing problems at T1, gender & cooccurrence of problems Effortful control as predictor of T3 externalizing problems:	High quality of own resources as a protective factor & vice versa

							lower correlation is better Internalizing & externalizing problems measured with CBCL[e] & YSR[d] α not stated	Low effortful control: B=**0.42**; p<.01 High effortful control: B=**0.09**; p=.44 (not significant) Controlled for externalizing problems at T1, gender & cooccurrence of problems	
Group 3	Weaver et al. (2015) U.S.A.	Longitu-dinal	~7 to 15 years n=104	**Externalizing problems** defined as rule-breaking & aggressive behavior	Child: → lower IQ	Child: → higher IQ	CBCL[e] for mother report → Scale not stated; lower is bet-ter TRF[e] for teacher report → Scale not stated; lower is bet-ter	Externalizing problems (mother report): α=.79; p=.013 child lower IQ: Grade 2 (**48.125**), 3 (**47.375**), 4 (**46.875**), 5 (**46.625**), 6 (**46.375**), 7 (**46.375**), 8 (**46.625**), 9 (**46.875**) child higher IQ: Grade 2 (**47.875**), 3 (**47.5**), 4 (**46.75**), 5 (**46.375**), 6 (**46.25**), 7 (**46.25**), 8 (**46.375**), 9 (**46.5**) Externalizing problems (teacher report): α=.79; p<.001 child lower IQ: Grade 2 (**56.375**), 3 (**56.625**), 4 (**56.5**), 5 (**56.125**), 6 (**55.625**) child higher IQ:	High quality of own resources as a protective factor & vice versa

								Grade 2 (**56.125**), 3 (**56.25**), 4 (**56.125**), 5 (**55.875**), 6 (**55.375**)	
Group 3	Sorek (2019) Israel	Cross-sectional survey	7 to 17 average: 12.9; SD=2.57 n=122	**QoL** defined as own & parent evaluation of children's well-being (positive life aspects)		Active → coping with parental conflict (defined as "actions initiated by the children to cope with the difficulty they feel as a result of interparental conflict" (p. 2)	Overall Life Satisfaction (OLS)[j] Child-report α not stated Happy Last Two Weeks (HLTW)[j] Child-report α not stated Personal Well-Being Index – School Children (PWI-SC)[k] Child-report α=0.89 Student Life Satisfaction Scale (SSLS)[l] Child-report α=0.87 Child's perception of conflict intensity (selected items from CPIC[m]) Child-report	Correlation between active coping with conflict[m] & OLS[j]: B=**0.89**; SD=0.21; p<.001 Correlation between active coping with conflict[m] & HLTW[j]: B=**0.86**; SD=0.25; p<.001 Correlation between active coping with conflict[m] & PWI-SC[k]: B=**0.47**; SD=0.15; p=.002 Correlation between active coping with conflict[m] & SLSS[l]: B=**0.27**; SD=0.08; p<.001 Correlation between children's perceived conflict intensity[m] & active coping with conflict[m] & OLS[j]: B=**0.75**; SD=0.21; p<.001	High quality of own resources as a protective factor & vice versa

Group 3							α not stated Child's feelings of being caught between parents (amended scale from CPIC[m]) α=0.64 Active coping with conflict (scale from CPIC[m]) Child-report α not stated	Correlation between children's feelings of being caught between parents[m] & active coping with conflict[m] & OLS[j]: B=**0.82**; SD=0.19; p<.001 Moderating variables: higher is better Children's active coping[m] as moderating variable between their perceived conflict intensity[m] & OLS[j]: High active coping: **8.9** for perceived low conflict & **9.1** for perceived high conflict Low active coping: **8.3** for perceived low conflict & **6.9** for perceived high conflict (chart scores imprecise) Children's active coping[m] as a moderating variable between children's perception of being caught between parents[q] & SLSS[l]:	High quality of own resources as a protective factor & vice versa

Group 3								High active coping: **8.5** for low caught in between parents & **9.7** for high caught in between parents Low active coping: **8.2** for low caught in between parents & **6.8** for high caught in between parents (chart scores imprecise)	High quality of own resources as a protective factor & vice versa
Group 4	Weaver et al. (2015) U.S.A.	Longitudinal	~7 to 15 years n=104	**Internalizing problems** defined as being anxious, depressed, withdrawn & having somatic complaints **Externalizing problems** defined as rule-breaking & aggressive behavior	Low → family income Less → sensitive mother	High → family income More → sensitive mother	TRF[e] for teacher report Scale not stated; lower is better CBCL[e] for mother report Scale not stated; lower is better	Effect sizes of mediated models of parental divorce through indirect pathways ($p<.05$): Mediated by family income: α not stated 0.02 for internalizing teacher report Internalizing problems (mother report): $\alpha=.79$; $p=.001$ More sensitive mother: Grade 2 (**46.125**), 3 (**45.25**), 4 (**44.75**), 5 (**44.25**), 6 (**43.875**), 7 (**43.75**), 8 (**43.75**), 9 (**43.875**) Less sensitive mother:	High quality & availability of family & extended family resources as a protective factor & vice versa

Group 4					Higher → maternal depression	Lower → maternal depression		Grade 2 (**46.625**), 3 (**45.125**), 4 (**45.875**), 5 (**44.875**), 6 (**44.625**), 7 (**44.75**), 8 (**44.625**), 9 (**44.75**) Externalizing problems (mother report): α=.79; p=.022 more sensitive mother: Grade 2 (**45.875**), 3 (**44.375**), 4 (**43.625**), 5 (**43.125**), 6 (**42.625**), 7 (**42.375**), 8 (**42.25**), 9 (**42.5**) less sensitive mother: Grade 2 (**45.875**), 3 (**45.0**) , 4 (**44.5**), 5 (**44.0**), 6 (**43.75**), 7 (**43.625**), 8 (**43.5**), 8 (**43.5**), 9 (**43.5**) Effect sizes of mediated models of parental divorce through indirect pathways (p<.05): Mediated by maternal depression: α not stated **0.02** for internalizing teacher report; **0.93** for internalizing mother report; **0.73** for externalizing mother report	High quality & availability of family & extended family resources as a protective factor & vice versa

Group 4					Worse → home environment	Better → home environment		Effect sizes of mediated models of parental divorce through indirect pathways (p<.05): Mediated by home environment: α=.84 **0.09** for internalizing teacher report; **0.10** for externalizing teacher report; **1.46** for externalizing mother report	High quality & availability of family & extended family resources as a protective factor & vice versa
	Sorek (2019) Israel	Cross-sectional survey	7 to 17 (average: 12.9; SD=2.57) n=122	**QoL** defined as own & parent evaluation of children's well-being (positive life aspects)	Parental → conflict Increase → in conflict intensity between marriage & question-		Overall Life Satisfaction (OLS)[j] Child-report α not stated Happy Last Two Weeks (HLTW)[j] Child-report α not stated Student Life Satisfaction Scale (SSLS)[l] Child-report α=0.87	Correlation between child's perception of conflict intensity[m] & OLS[j]: B=**-0.61**; SD=0.20; p<0.003 Correlation between child's perception of conflict intensity[m] & SLSS[l]: B=**-0.37**; SD=0.08; p<0.001 Correlation between gap in mother's perception of conflict intensity at questionnaire completion & during marriage[n] & SLSS[l]: B=**-0.15**; SD=0.07; p<0.029	

Group 4					naire completion		Child's perception of conflict intensity (selected items from CPIC[m]) Child-report α not stated Intensity of parental conflict mothers' perception: Gap in mother's perception of conflict intensity between questionnaire completion and during marriage (selected items from Lumer[n]) α=0.80		High quality & availability of family & extended family resources as a protective factor & vice versa
	Sorek (2020) Israel	Cross-sectional survey	7 to 17 (average: 12.9; SD=2.57) n=122	**QoL** defined as own & parent evaluation of children's well-being (positive life aspects)	Parental conflict Gap in mother's perception of conflict intensity between marriage & question-	Overall social support (Closeness to grand-parents & open discourse with grand-parents about divorce)	Overall life Satisfaction (OLS)[j] Child-report α not stated Happy Last Two Weeks (HLTW)[j] Child-report α not stated	Correlation coefficients: higher is better Correlation between child's perception of conflict intensity[m] & OLS[j]: B=**-0.61**; SD=0.20; p=0.003 Correlation between child's perception of conflict intensity[m] & SLSS[l]:	

Group 4					naire completion	Closeness to grandparents Open discourse with grandparents about divorce	Personal Well- Being Index – School Children (PWI-SC)[k] Child-report α=0.89 Student Life Satisfaction Scale (SSLS)[l] Child-report α=0.87 Closeness to grandparents (based on questionnaire[q]) Child-report Scale not stated α=0.89 Open discourse with grandparents about divorce (based on Soliz[r]) Child-report Scale not stated α=0.90 Overall social support (closeness to grandparents[q] & open	B=**-0.37**; SD=0.08; p<0.001 Correlation between gap in mother's perception of conflict intensity at questionnaire completion & during marriage[n] & SLSS[l]: B=**-0.15**; SD=0.07; p=0.029 Correlation between mothers' perceived gap in conflict intensity[n] & OLS[j]: B=**-0.58**; 0.20; p<.01 Correlation between overall social support[q, r] & OLS[j]: B=**0.82**; SD=0.18; p<.001 Correlation between overall social support[q, r] & HLTW[j]: B=**1.01**; SD=0.21; p<.001 Correlation between overall social support[q, r] & PWI-SC[k]: B=**0.59**; SD=0.12; p<.001	High quality & availability of family & extended family resources as a protective factor & vice versa

Group 4							discourse with grandparents about divorce[r]) Child-report Scale not stated α not stated Intensity of parental conflict mothers' perception: Gap in mother's perception of conflict intensity at questionnaire completion and during marriage (selected items from Lumer[n]) α=0.80 Child's feelings of being caught between parents (amended scale from CPIC[m]) α=0.64 Active coping with conflict (scale from CPIC[m]) Child-report α not stated	Correlation between overall social support[q, r] & SLSS[l]: B=**0.24**; SD=0.07; p<.01 Correlation between closeness to grandparents[r] & OLS[j]: B=**0.72**; SD=0.18; p<.001 Correlation between closeness to grandparents[r] & PWI-SC[k]: B=**0.37**; SD=0.13; p<.01 Correlation between closeness to grandparents[q] & SLSS[l]: B=**0.19**; SD=0.08; p<.05 Open discourse with grandparents[r] as moderator between gap in mothers' perception of conflict intensity[n] & OLS[j]: Limited discourse: **9.5** for conflict decreased & **7.1** for conflict increased; B=**-1.23**; p<.001	High quality & availability of family & extended family resources as a protective factor & vice versa

Group 4								Open discourse: **8.4** for conflict decreased & **8.5** for conflict increased; B=**0.08**; p<.785 (not significant) Scale not stated; higher is better	
Group 5	Oldehinkel et al. (2008) Netherlands	Longitudinal	10 to 15 n=2149	**Depressive symptoms** defined as "depressed mood, anhedonia, loss of energy, feelings of worthlessness and guilt, suicidal ideation, sleep problems, and eating problems" (p. 287)	Young age in boys (~10)	Old age in boys (~15)	Affective Problem → Scale from YSR[d] Child-report chart scores imprecise α: .72 to .77; scale from 0 to 26; lower is better Affective Problem → Scale from CBCL[e] Parent-report Chart scores imprecise α=.68 to .73; scale from 0 to 26; lower is better	Boys: Age (depr. symptoms) Age 10 **(4.2)**, 11 **(3.9)**, 12 **(3.6)**, 13 **(3.3)**, 14 **(2.9)**, 15 **(2.6)** p<.05 Boys: Age (score) Age 10 **(3.25)**, 11 **(2.9)**, 12 **(2.6)**, 13 **(2.3)**, 14 **(1.9)**, 15 **(1.6)** p<.05	Mental health problems decreasing with higher age & increasing with younger age
	O'Hara et al. (2019) U.S.A.	Longitudinal	9 to 12 n=240		Short → time since divorce (<2 years) or young to middle		CBCL[e] → mother report Scale not stated; α=.74 to .88 for T1 to T5	Low Decreasing group: Internalizing problems at T1: **56.20** (SD=9.05) Internalizing problems at T5: **51.11** (SD=9.58)	

Group 5					aged age (9 to <12) for both sexes			Externalizing problems at T1: **54.40** (SD=8.15) Externalizing problems at T5: **49.82** (SD=9.96) High Decreasing group: Internalizing problems at T1: **59.31** (SD=9.99) Internalizing problems at T5: **53.81** (SD=8.42) Externalizing problems at T1: **55.76** (SD=9.13) Externalizing problems at T5: **50.66** (SD=9.55)	Mental health problems decreasing with higher age & increasing with younger age
	Weaver et al. (2015) U.S.A.	Longitu-dinal	~7 to 15 years n=104		Young age (~7 years) problems going up with de-creasing age from grade 2 to 9 for both sexes	Old age (~15 years) problems going down with increasing age from grade 2 to 9 for both sexes	CBCL[e] for mother report Scale not stated; lower is bet-ter TRF[e] for teacher report Scale not stated; lower is bet-ter	Internalizing problems (mother report): More sensitive mother: α=.79; p not stated unequivocally Grade 2 (**46.125**), 3 (**45.25**), 4 (**44.75**), 5 (**44.25**), 6 (**43.875**), 7 (**43.75**), 8 (**43.75**), 9 (**43.875**); p not stated unequivocally Less sensitive mother: α=.79	

Group 5					Young age (~7 years); problems going up with de-creasing age from grade 6 to 3 for both sexes	Middle age (~11 years old); problems going down with increasing age from grade 3 to 6 for both sexes		Grade 2 (**46.625**), 3 (**45.125**), 4 (**45.875**), 5 (**44.875**), 6 (**44.625**), 7 (**44.75**), 8 (**44.625**), 9 (**44.75**) Externalizing problems (mother report): more sensitive mother: α=.79; p not stated unequivocally Grade 2 (**45.875**), 3 (**44.375**), 4 (**43.625**), 5 (**43.125**), 6 (**42.625**), 7 (**42.375**), 8 (**42.25**), 9 (**42.5**) less sensitive mother: α=.79; p not stated unequivocally Grade 2 (**45.875**), 3 (**45.0**), 4 (**44.5**), 5 (**44.0**), 6 (**43.75**), 7 (**43.625**), 8 (**43.5**), 8 (**43.5**), 9 (**43.5**) Externalizing problems (mother report): child lower IQ: α not stated; p not stated unequivocally Grade 2 (**48.125**), 3 (**47.375**), 4 (**46.875**), 5 (**46.625**), 6 (**46.375**),	Mental health problems decreasing with higher age & increasing with younger age

Group 5								7 (**46.375**), 8 (**46.625**), 9 (**46.875**) child higher IQ: α not stated; p not stated unequivocally Grade 2 (**47.875**), 3 (**47.5**), 4 (**46.75**), 5 (**46.375**), 6 (**46.25**), 7 (**46.25**), 8 (**46.375**), 9 (**46.5**) Externalizing problems (teacher report): child lower IQ: α not stated; p not stated unequivocally: Grade 2 (**56.375**), 3 (**56.625**), 4 (**56.5**), 5 (**56.125**), 6 (**55.625**) child higher IQ: α not stated un-equivocally Grade 2 (**56.125**), 3 (**56.25**), 4 (**56.125**), 5 (**55.875**), 6 (**55.375**)	Mental health problems decreasing with higher age & increasing with younger age

a (Garner et al., 1982)

b (Eating Attitudes LLC, 2021)

c (Garner, 1991)

d (Achenbach, 1991)

e (Achenbach & Edelbrock, 1991)

f (Oh et al., 2001)

g (Huh, 2000)

h (Putnam et al., 2001)

i (Fisher et al., 1993; Shaffer et al., 2000)

j (Rees et al., 2013)

k (Cummins et al., 2003)

l (Huebner, 1991)

m (Grych et al., 1992)

n (Lumer, 1998)

o (Ambrosini, 2000; Kaufman et al., 1997)

p (Prokhorov et al., 1996)

q (Attar-Schwartz et al., 2009)

r (Soliz, 2008)

5.3 Synthesis Refinement

The synthesis refinement is a process in which the synthesis findings from chapter 5.2 are interrogated for more theoretical insight (Pound & Campbell, 2015, p. 57). This step can either take place as a meta-analysis or as a narrative synthesis depending on the comparability in the included primary research (Verbeek et al., 2012, p. 284). A meta-analysis is used when the quantified measures of study results are comparable so that is reasonable to calculate a combined effect size (Borenstein et al., 2007, p. 86f.; Zawacki-Richter et al., 2020, p. vi). However, the synthesis shows that the primary studies use different mental health concepts, and diagnostic instruments; some studies use correlation data while others use absolute scores which makes it hard to calculate a combined effect size. That is why this synthesis refinement employs a narrative synthesis instead (Verbeek et al., 2012, p. 285) which is a generic phrase for conducting a synthesis that uses text and words to summarize and explain findings by putting them into context with current findings (Goagoses & Koglin, 2020, p. 154; Gough et al., 2017, p. 231f.; Popay et al., 2006, p. 5; Snilstveit et al., 2012, p. 414). The drawback of conducting a narrative synthesis is a lack of standardization in its methods and formal guidance (Barnett-Page & Thomas, 2009, p. 3; Mays et al., 2005, p. 5) which represents a weakness. However, as a meta-analysis does not seem feasible, this paper conducts a narrative summary because it uses the groups of risk and protective factors identified in chapter 5.2 not simply to select and order evidence but to interpret and reflect them by putting the findings into context with the current scientific literature (Dixon-Woods et al., 2005, p. 47). Existing research findings that present a counterexample are presented and acknowledged to reflect the fact that the process of advancing a field of knowledge is nonlinear (Baumeister & Leary, 1997, p. 318). In this section, all scores are statistically significant unless otherwise stated.

In table 12 it becomes apparent that being a girl is a risk factor and being a boy is a protective factor. This represents group 1. This pattern can be found in three of the analyzed studies and represents group 1. In Chung et al. (2010) and Oldehinkel et al. (2008) the age in which this pattern is visible ranges from 12 to 15 years while in Penttinen et al. (2020) this is apparent between the ages of 13 to 17. A synthesizing theory finds corresponding results and joins them (Gough et al., 2017; Pound & Campbell, 2015, p. 57). That is why this paper finds a pattern in an age range where all three studies overlap

which is ~13 and ~15 years. In Chung et al. (2010) the withdrawal subscale of the internalizing scale of the translated Korean version of the Youth Self Report (YSR) ranges from 0 to 20 possible points whereas lower scores are preferable (Achenbach, 1991; Oh et al., 2001). Girls in this study score 3.73 points (SD=2.51) while boys score a lower and therefore better 3.28 points (SD=2.66) on average which makes for a difference of 0.45 points. The somatization subscale of the internalizing scale of the YSR ranges from 0 to 21 (Achenbach, 1991; Oh et al., 2001) on which girls score 4.40 (SD=3.61) points and boys score a lower and better 2.92 points (SD=2.63) which represents a difference of 1.48 points on average. The anxiety and depression subscale of the internalizing scale from the YSR ranges from 0 to 21 (Achenbach, 1991; Oh et al., 2001). Girls score 8.20 (SD=6.25) and boys score 5.96 points (SD=5.05) on this scale on average. The difference is 0.91 points. Cronbach's Alpha scores range from .88 to .89 for withdrawal, somatization as well as anxiety, and depression. The attachment security is measured by an unknown test and therefore has an unknown scale which makes it hard to judge the magnitude of the difference in scores. However, the Cronbach's Alpha is .81 and is, therefore, a good validity (Bortz & Döring, 2007, p. 707f.). Girls score 41.30 points (SD=7.08), and boys score a higher and better 43.31 points (SD=6.54) which is a difference of 2.01 points. Because Chung et al. (2010) test 12- to 15-year-old students it can be said that according to the test scores being a girl is a risk factor for and being a boy is a protective factor against developing a mental health issue. The magnitude of these differences is not high as the difference in scores is 0.45 points for the withdrawal subscale which ranges from 0 to 20, 1.48 points for the somatization subscale which ranges from 0 to 21, and 2.01 points for attachment security has an unknown scale. In the latter instance, a 2.01-point difference can be deemed to be tiny in proportion when it is considered that the average scores for boys and girls both exceed 41 points. Moreover, the standard deviation exceeds the calculated differences in all cases which shows that the spread in scores is so wide that students should be assessed individually rather than solely relying on the pattern found in this primary study (Gough et al., 2017, p. 261). Cronbach's Alpha scores are high enough to not present an issue. Chung et al. (2010) do not report their source of funding which makes it impossible to judge conflict of interests. In Oldehinkel et al. (2008) the self-reported affective problem scale of the YSR which measures depressive symptoms ranges from 0 to 26 points (Achenbach, 1991). Cronbach's Alpha scores range from .72 to .77 and are therefore in the acceptable range (Bortz & Döring, 2007, p. 707f.).

Girls at the age of 12 score 4.4 points and boys score a better and lower 3.6 at the same age. The pattern that boys show fewer depressive symptoms continues until the age of 15 at which girls score 5.3 and boys 2.6 points. The parent-reported affective problem scale of the CBCL which also measures depressive symptoms ranges from 0 to 26 (Achenbach & Edelbrock, 1991). Cronbach's Alpha scores range from .68 which is slightly below the acceptable range to .73 which is an acceptable score (Bortz & Döring, 2007, p. 707f.). Girls at the age of 12 score 2.70 and boys score a lower and therefore better 2.6 points. This gap widens with growing age until girls score 2.55 and boys 1.60 points at the age of 15. All scores being used from Oldehinkel et al. (2008) are approximations because the chart does not provide exact values. This study tests children between the age of 10 to 15. The pattern that being a boy is a protective and being a girl is a risk factor could be found in children between the ages of ~12 to 15. The magnitude of this finding is also not high as both the parent and the self-rated scale go from 0 to 26 points while the highest spread between gender is 2.7 points at the age of 15 for the self-rated YSR (Achenbach, 1991). This shows that for Oldehinkel et al. (2008) differences between girls and boys between the age of ~12 to 15 exist but they are minute. Cronbach's Alpha scores are either acceptable or slightly below the acceptable range which needs to be considered by contrasting this with complementary research data. Oldehinkel report several sources of funding from official authorities or universities of the Netherlands. That is why there is no obvious conflict of interest. Penttinen et al. (2020) investigate regular smoking and nicotine dependence (ND) in teenagers between the age of 13 to 17. Regular smoking or ND in 13- to 17-year-old pupils is seen as a relation to the mental health for this dissertation. The reason for this is that according to code 6C4A of ICD-11 "nicotine is a highly potent addictive compound and is the third most common psychoactive substance" (World Health Organization, 2021). Moreover, in Germany, the use of tobacco products is not allowed for people under the age of 18 according to §10 I Jugendschutzgesetz (youth protection legislation). This makes the use of tobacco products between the age of 13 to 17 an illegal use of highly addictive drugs that threatens the emotional, psychological, and social well-being of these pupils (Tillmann et al., 2018, p. 958) and is therefore considered related to mental health. This study finds that measured with the K-SADS-PL (Ambrosini, 2000; Kaufman et al., 1997) PSOD is not significantly related to regular smoking in boys, but it is significantly related in girls. Furthermore, measured with the

mFTQ (Prokhorov et al., 1996) PSOD is again not significantly related to nicotine dependence in boys but in girls. Moderate ND is defined as 3 to 5 points and high ND is defined as 6 to 9 points on a 0 to 9 scale. No further metrics are stated and there is no differentiation of the level of ND in girls and boys. What can be extracted from the little data this study provides is that boys between the age of 13 to 17 do not significantly develop ND or smoke regularly whereas girls do tend to significantly develop ND or become regular smokers after PSOD. However, from this little data, it is impossible to produce an informed judgment on the degree of the gender differences in the association between PSOD and ND as well as regular smoking. It is unclear how reliable this data is because the study also does not provide Cronbach's Alpha scores. Penttinen et al. (2020) declare no conflict of interest. However, they also do not report a source of funding which makes this statement impossible to disprove. Overall, this means that the group 1 pattern in those three studies narrows down to being a girl as a risk factor and being a boy as a protective factor against developing a mental health issue following PSOD for teenagers aged between ~13 and ~15 years. In Chung et al. (2010) the attachment security is measured with an unknown test accompanied by an unknown scale, and their source of funding is not reported. In Oldehinkel et al. (2008) the Affective Problem Scale from CBCL (Achenbach & Edelbrock, 1991) Cronbach Alpha scores range from a substandard .68 to an acceptable .73 (Bortz & Döring, 2007, p. 707f.). Also, in Penttinen et al. (2020) there is no scale and no validity scores reported. Moreover, there is no data available on how PSOD is related to regular smoking and nicotine dependence other than p values. Therefore, this paper checks the group 1 pattern with other research data. To evaluate the extent that being a girl as a risk factor and being a boy as a protective factor poses to the mental health of teens in this age group, other research is consulted to check the plausibility. Penttinen et al. (2020) provide almost no data to back up their claims that PSOD is significantly related to regular smoking and nicotine dependence in girls aged 13 to 17 years. Similar results could be found as high interparental conflict is associated with higher alcohol use in girls between the ages of 12 to 18 years old in Flanders, Belgium (Vanassche et al., 2014, p. 128). However, when it comes to tobacco use it seems that it is mediated by "background variables for girls and role pattern variables for boys" (Vanassche et al., 2010, p. 23). This means that boys with a smoking peer group have a higher chance of smoking whereas girls have a higher chance of smoking when there is an unpleasant family climate and a high peer pressure to smoke (Ibid.). More recent research acknowledges

that smoking is also influenced by peer smoking, absence of the father, economic hardships, and abuse (Lindstrom & Rosvall, 2020, p. 1). It becomes apparent that teenagers and adults are more likely to smoke when they have experienced a PSOD in their childhood independent of their age at the time of PSOD (Lindstrom & Rosvall, 2020, p. 8f.). However, a cross-sectional study design such as in this study does not rule out confounding factors the way a longitudinal design would (Lindstrom & Rosvall, 2020, p. 9). As low academic achievement and parents living separately correlate with a higher incidence of smoking in teenagers (Doku et al., 2020, p. 1), it would be interesting to investigate causal relations as it is unclear which factor causes what outcome (Bortz & Schuster, 2010, p. 159f.). The data of Oldehinkel et al. (2008) signals that for girls at the age of ~12 to 15 years old PSOD increases the risk of developing depressive symptoms. This relation is only partially identifiable between the ages of 10 to 11. However, some CBCL scores are slightly below the acceptable range and the differences in scores are minute. Therefore, further insight is needed. Other researchers find while developing a major depressive episode and being female correlate with each other, the underpinning mechanisms are still unknown (Whitaker et al., 2021, p. 1). Concerning age, researchers find that girls have higher rates of major depressive disorder after puberty and lower rates before puberty among Danish subjects (Wesselhoft, 2016, p. 19). About 90% of pupils have started puberty at the age of 11 and close to 100% at the age of 13 (Lee et al., 2001, p. 83). Therefore, these findings partially overlap with data in Oldehinkel et al. (2008) as they only find consistently higher rates of depressive symptoms among pupils between 12 and 15, not between 10 and 11 years old. However, other researchers argue that the risk of developing depression is attributable to familial risk for depression and is only slightly associated with PSOD (Vousoura et al., 2012, p. 718). This finding is also in line with the findings of Oldehinkel et al. (2008) where the highest average depressive symptom score is 5.3 on a scale from 0 to 26. It must be kept in mind that individual values could be higher but are not presented in this study. From the data of Chung et al. (2010), it can be extracted that being a girl at the age of 12 to 15 is a risk factor for the psychological adjustment and the quality of parent-child relationships after PSOD. Parent-child relationships are limited to attachment security in this instance as there is only reliable data available for this. The attachment security scale and the source of funding are unknown. Therefore, further research findings are considered. Good relationships with parents are important as mothers from divorced families are more likely to use parenting styles that

lead to lower attachment security for their children (Nair & Murray, 2005, p. 245). The fact that all scales in Chung et al. (2010) are child reported opens the possibility that boys report problems differently than girls. Indeed, boys tend to be less communicative about their problems which in turn means they have fewer resources to cope with PSOD (Flowerdew & Neale, 2003, p. 155). This learned behavior is part of children's socialization as boys are encouraged to act tough, play with different toys and receive less input from mothers after asking an emotional question (Kindlon & Thompson, 1999, p. 15; Lee & Ludington, 2016, p. 501; Mercurio, 2003, p. 256). However, it is unclear whether this lack of communication of own problems translates to better test scores. The repercussions of PSOD in 16- and 32-year-old people lead to the conclusion that only females are negatively affected when it comes to psychological problems and problems in their interpersonal relationships (Huurre et al., 2006, p. 256f.). These concepts remain undefined in this study. When 9- to 16-year-old pupils are investigated for their latent emotion regulation defined as an adaptive process that attempts to regulate emotions, it becomes clear that girls tend to score higher at a young age and lower at a high age compared to boys (Sanchis-Sanchis et al., 2020, p. 1). This again signals that it is appropriate to limit the group 1 pattern to ~13-to-15-year old pupils as there is some evidence to support the idea that being a girl tends to be a small risk factor for developing a mental health issue after PSOD as this age is after the onset of puberty for most individuals (Lee et al., 2001, p. 83). Another study also finds that being a girl at the time of PSOD proves to be a risk factor (Schmidtgall et al., 2000, p. 149). However, this paper cannot establish a relationship between the age of PSOD and symptoms of depression (Ibid.). The reason for this might be that study participants are 18 years or older at the time of the investigation (Ibid.). Therefore, the pattern found in group 1 is seen as being reliable. So, this pattern is deemed to be applicable and can therefore be used to discuss corresponding preventive measures in school in chapter 6.

Table 12 shows that more time elapsed since PSOD is a protective factor and vice versa. This group 2 pattern can be found in three of the analyzed studies which represent group 2. In Bachar et al. (2008) it becomes apparent that a PSOD that is 6 or more years ago is beneficial for adjusting and PSOD less than 6 years ago is detrimental for developing an eating disorder. An eating disorder is defined as having "abnormal attitudes about food, weight and eating habits" (Bachar et al., 2008, p. 444). The EAT-26 (Garner et al., 1982)

is used to determine that PSOD that is less than 6 years ago correlates with developing an eating disorder (0.335; SD=0.117) while PSOD that is 6 years ago or longer does not correlate with developing an eating disorder (-0.106; SD=0.102; not significant). Fittingly the EDI-2 (Eating Attitudes LLC, 2021) is used to report similar results. PSOD that is less than 6 years ago correlates with developing an eating disorder (0.304; SD=0.117) whereas PSOD that is 6 years ago or more does not (-0.023; SD=0.109; not significant). Overall, the pattern becomes clear in Bachar et al. (2008) that PSOD that is 6 years ago or more is beneficial and PSOD that is less than 6 years ago is a risk factor for developing an eating disorder. Cronbach's Alpha scores range from .84 for EAT-26 to .83 for EDI-2 or .75 to .90 for its subscales. Therefore the validities range from acceptable to very good and can therefore be considered trustworthy (Bortz & Döring, 2007, p. 707f.). Nonetheless, the results are contrasted with data from other research to find consistencies or inconsistencies. Bachar et al. (2008) report no source of funding which means that a potential conflict of interest cannot be judged. They report an age range with a 95% CI which makes it unclear if some study participants reach 18 years of age. However, this borderline case is acceptable as the standard deviation does not exceed half of the difference between the highest age range and 18 years of age (Siddaway et al., 2019, p. 766). Perales et al. (2017) investigate whether the time since PSOD influences the development of mental disorders defined as "social phobia, separation anxiety disorder, generalized anxiety disorder, obsessive–compulsive disorder, major depressive disorder, attention-deficit/hyperactivity disorder, and conduct disorder" (Perales et al., 2017, p. 432). They use the NIMH-DISC- IV (Fisher et al., 1993; Shaffer et al., 2000) to evaluate if the time since PSOD influences the severity of these conditions. Lower scores are favorable. However, the authors do not provide data on the reliability or the scale of the diagnostic test which makes it hard to judge the validity and the magnitude of these findings. For anxiety disorders in which PSOD is less than 2 years ago children score an average of 14.1 points (95% CI 6.1 to 22.0), 14.6 points (95% CI 6.7 to 22.5) for PSOD that is 2 to 5 years ago, 10.8 points (95% CI 6.6 to 15.1) for PSOD that is 5 to 10 years and 11.3 points (95% CI 7.1 to 15.4) for PSOD that is more than 10 years ago. This shows that PSOD less than 6 years ago has more negative influence than PSOD more than 6 years ago. For major depressive disorder PSOD less than 2 years results in 13.7 points (95% CI 5.7 to 21.7), with PSOD 2 to 5 years ago it averages 8.6 points (95% CI 2.9 to 14.4), PSOD 5 to 10 years ago leads to 7.6 points (95% CI 3.9 to 11.2) and PSOD more than 10 years ago results in

9.3 points (95% CI 5.8 to 12.8). To conclude, a major depressive disorder is more likely to develop when the PSOD is less than 2 years ago compared to more than 2 years ago. For ADHD there are too few cases to report when PSOD is less than 2 years ago. When it is 2 to 5 years ago it scores 14.3 points on average (95% CI 7.2 to 21.4), PSOD that is 5 to 10 years results in 9.3 points (95% CI 4.8 to 13.8), and PSOD more than 10 years ago averages 10.1 points (95% CI 6.4 to 13.7). Overall, these results signify that the repercussions of PSOD are less severe when it occurred more than 5 years ago rather than 2 to 5 years ago. All those findings from Perales et al. (2017) combined show that the more time elapsed since PSOD the less risk there is to develop an anxiety disorder, major depressive disorder, or ADHD and vice versa. However, in all cases, the scores increase from 5 to 10 years to more than 10 years ago since PSOD. That means that up to 5 years ago since PSOD a higher time since PSOD seems favorable and after that, scores slightly increase from 5 to 10 years to more than 10 years even though they do not reach the same levels as 2 to 5 years ago or less than 2 years ago in any case. To summarize, this means that according to the results in Perales et al. (2017) PSOD results in more severe risk of developing a mental health issue when the divorce is less than 2 years ago compared to 2 years ago or more where there are enough cases to report. Regarding ADHD one can only compare data from 2 to 5 years and up. When the data for 2 to 5 years is compared to 5 to 10 years ago since PSOD for ADHD it becomes apparent that a shorter time since PSOD is still a risk factor. This is also the case for anxiety disorder but not for major depressive disorder. This pattern needs to be viewed considering the missing Cronbach's Alpha score for the NIMH-DISC IV which makes it unclear how reliable those findings are. Perales et al. (2017) are funded by Australian authorities and state no conflict of interest. Therefore, it is assumed that there is no conflict of interest. The participants in O'Hara et al. (2019) are 9 to 12 years old at T1 and 15 to 18 years old at T5 six years later. Because T5 exceeds the age restriction set by this master dissertation, it is only used to showcase that a short time since PSOD raises the risk of developing a mental health issue and no statement is made to describe the teenagers who are 15 to 18 years old. O'Hara et al. (2019) use the concept of mental health problems and define them as internalizing and externalizing problems. They identify different trajectories and put them into groups. For this purpose, only two groups are of interest. The Low Decreasing group is comprised of pupils that start with low internalizing as well as low externalizing problems and these problems decrease from T1 to T5. The High Decreasing group consists of pupils

that start with high scores in internalizing and externalizing problems that also decrease from T1 to T5. The scale of the CBCL (Achenbach & Edelbrock, 1991) is not stated and makes interpretation of the results once again difficult to facilitate. The Low Decreasing group shows the following internalizing problems at T1: 56.20 points (SD=9.05) and at T5: 51.11 points (SD=9.58). Moreover, externalizing problems at T1 are 54.40 points (SD=8.15) and 49.82 points (SD=9.96) at T5. In the High Decreasing group internalizing problems at T1 are 59.31 points (SD=9.99) and 3.81 points (SD=8.42). Externalizing problems for the same group are 55.76 points (SD=9.13) at T1 and 50.66 points (SD=9.55) at T5. All scores of the Low Decreasing and the High Decreasing group show that the level of internalizing and externalizing problems is higher when the PSOD is recent. In this case, pupils at T1 experienced PSOD 2 years prior or less. Cronbach's Alpha scores range from .74 to .88 for T1 and T5 respectively which represents an acceptable to good validity. O'Hara et al. (2019) are funded by authorities of the U.S.A. and it is therefore assumed that they have no conflict of interest. Overall, in Bachar et al. the risk factor for developing a mental issue is when the PSOD is less than 6 years ago while it seems protective when it is 6 years ago or longer. In Perales et al. (2017) results vary depending on the specific mental health issue. However, it can be said that PSOD that is less than 2 years ago is a risk factor where there are enough cases to report. Because results vary between ADHD, major depressive disorder, and anxiety disorder when 2 to 5 years ago since PSOD is compared to 5 to 10 years ago, a statement can only be formulated that PSOD less than 2 years ago is a risk factor. O'Hara et al. (2019) also show that PSOD that is less than 2 years ago is a risk factor. When the results of Bachar et al. (2008), Perales et al. (2017), and O'Hara et al. (2019) are joined it seems evident that a shorter time since PSOD serves as a risk factor for developing a mental health issue. This result needs to be relativized as in Perales et al. (2017) anxiety disorder, major depressive disorder, ADHD, and conduct disorder show that scores rise from 5 to 10 years to more than years ago since PSOD which reverses the trend that a short time since PSOD serves as a risk factor for developing a mental health issue. However, this might not be strongly influenced by PSOD but by other factors such as puberty. The study participants in Perales et al. (2017) are 12 to 17 years old. When the PSOD is more than 10 years ago it can be argued that those study participants are likely in puberty. Puberty itself is a risk factor for developing a mental health issue (Halsted et al., 2019, p. 2; Mendle et al., 2020, p. 1; Oldehinkel et al., 2011, p. 73) and can therefore influence scores. That is why this master

dissertation narrows down the results to a short time since PSOD is a risk factor for developing a mental health issue. A short time in this instance means 5 years ago or less. However, in reality, a short time since PSOD alone does not explain why it raises the risk of developing a mental health issue. Because most children are not told about the PSOD beforehand while younger children have a higher risk of not being told, they feel left out in the process (Bagshaw, 2007; Birnbaum & Saini, 2012, p. 275; Butler et al., 2002, p. 91f.). However, when „separation occurred some time ago, allowing time for adjustment, […] their transition to adulthood provides the opportunity to look back on their childhood experience in a different light" (Kay-Flowers, 2019, p. 12). So the initial feeling of being left out can be remedied by having time to talk to parents, grandparents, friends, and professionals (Kay-Flowers, 2019, p. 65) to find explanations, develop an understanding, and find meaningfulness (Kay-Flowers, 2019, p. 45). Moreover, pupils can experience loyalty conflicts where parents express anger or show aggressive behaviors (Johnston, 1994, p. 165ff.) which is more likely to occur right after the separation or divorce (O'Hara et al., 2019, p. 2). All in all, these reasons might explain why a short amount of time since PSOD is a risk factor while in contrast to this, Perales et al. (2017) show that more than 10 years since PSOD the markers for developing a mental health issue go up again. Moreover, this result for group 2 needs to be viewed amidst the backdrop of Penttinen et al. (2020) not providing any data on reliability or test results and Perales et al. (2017) not offering insight into the reliability and the scale of the test. This makes it hard to judge the reliability of the results and hard to interpret the magnitude of those findings. However, data from other research indicates that the pattern identified in group 2 is applicable as there are more teacher-rated internalizing problems when the divorce is more recent (Robbers et al., 2011, p. 311). Interestingly, an association could not be established between time since PSOD and internalizing problems when parents are asked (Ibid.). This might be because parents are preoccupied with their conflicts and do not see the issues that children face (Fortin et al., 2012, p. 326). There is evidence to suggest that most children do not suffer long-term negative outcomes after PSOD (Lansford, 2009, p. 149). However, some disagreement comes in the form of a qualitative study which states that some mother's parenting collapses under the pressure of the PSOD accompanied by psychiatric problems and the loss of stable family structure which leads to a lack of care for their children who are in desperate need of care themselves in this situation (Wallerstein et al., 2013, p. 167f.). A meta-analysis agrees with this notion as there is a difference in

child mental health outcomes between negative and positive parenting behaviors (van Dijk et al., 2020, p. 1). Because the group 2 pattern states that a time of 2 years ago or less is a risk factor, this pattern only proves to be partially reliable. It does not consider that parents have different parenting styles after PSOD, and this specific time frame does not prove to be maintainable. However, the notion that there is an increased risk that parents show negative parenting behavior that leads to a worsening in children's mental health is still true in most cases. Therefore, the pattern in group 2 is changed from PSOD of less than 2 years ago is a risk factor to a long time since PSOD is a protective factor and a short time since PSOD is a risk factor. This is part of the synthesis refinement process which uses further theoretical insight to adapt and strengthen findings (Pound & Campbell, 2015, p. 57). This newly formulated and adapted pattern is used to discuss possible preventive measures in school in chapter 6. That is why this adapted pattern can be used to discuss preventative measures that can be taken in school in chapter 6.

Group 3 which can be viewed in table 12 joins the data of three primary studies to find the pattern that a high quality of own resources serves as a protective factor and vice versa. Sentse et al. (2011) use the concepts of internalizing problems defined as having symptoms of anxiety and depression as well as externalizing problems defined as showing behavior of rule-breaking and delinquency. Both internalizing and externalizing problems are measured with the CBCL (Achenbach & Edelbrock, 1991) and YSR (Achenbach, 1991). These measures are correlated with measures from the scale fearfulness and the scale effortful control from EATQ-R (Putnam et al., 2001) in which a lower correlation is preferable. Participants are 11.09 years (SD=0.55) old at T1 to 16.27 years (SD=0.73) old at T3. Fearfulness at T1 serves as a predictor for T3 internalizing problems. Pupils low on fearfulness show a non-significant correlation of B=-0.10 ($p<.32$) with internalizing problems. Children and teenagers high in fearfulness have a correlation of B=0.24 ($p<.05$) with internalizing problems. This signals that high fearfulness serves as a risk factor for developing a mental health issue. Effortful control at T1 on the other hand serves as a predictor for T3 externalizing problems. Low effortful control is correlated with externalizing problems (B=0.42; $p<.01$) whereas high effortful control is not significantly correlated with externalizing problems (B=0.09; $p=.44$). That is why low effortful control is a medium risk factor for developing a mental health issue (Cohen, 1992, p. 157). The alpha score for the scale fearfulness from EATQ-R is .63 and therefore below

the acceptable value of .70 while it is a good .86 for the scale effortful control (Bortz & Döring, 2007, p. 707f.). Therefore, especially the pattern found in EATQ-R scores must be investigated by contrasting the results with other research data. Sentse et al. (2011) declare no source of funding and it is therefore not possible to judge a conflict of interest. Like Bachar et al. (2008) they report an age range with a 95% CI. This borderline case is acceptable as the standard deviation does not exceed half of the difference between the highest age range and 18 years of age (Siddaway et al., 2019, p. 766). Weaver et al. (2015) measure externalizing problems defined as rule-breaking and aggressive behavior by using the CBCL and TRF. Both scales are not stated, and lower scores are preferable. Scores for the test in this study are displayed in a table and are therefore approximations. The scores for externalizing problems in children with lower IQ according to the mother's report are displayed in brackets: Grade 2 (48.125), 3 (47.375), 4 (46.875), 5 (46.625), 6 (46.375), 7 (46.375), 8 (46.625), 9 (46.875). Children with a higher IQ show the following results: Grade 2 (47.875), 3 (47.5), 4 (46.75), 5 (46.375), 6 (46.25), 7 (46.25), 8 (46.375), 9 (46.5). It becomes evident that children with a higher IQ show higher externalizing problems in grades 2 and 3. In contrast to this, children with a higher IQ have lower externalizing problems from grades 4 to 9. Scores for externalizing problems in children with lower IQ according to the teacher report are: Grade 2 (56.375), 3 (56.625), 4 (56.5), 5 (56.125), 6 (55.625). Children with higher IQ score: Grade 2 (56.125), 3 (56.25), 4 (56.125), 5 (55.875), 6 (55.375). This means that in the teacher report children with a lower IQ from grades 2 to 6 score higher and therefore have higher externalizing problems. Even though the scale is unknown it can be stated that the differences in scores are minute because the biggest difference is 0.75 points when all scores exceed 46 points. All in all, it can be noted that having a higher IQ is protective although the mother's report shows that this is not the case for grades 2 and 3. Individual IQ scores range from 71 to 145 (Weaver & Schofield, 2015, p. 8) but there is no statement for what is a high or low IQ which makes it difficult to judge the magnitude. Because the score differences are tiny, it seems justifiable to state that the higher the IQ is, the more protective it is against developing externalizing problems and the lower the IQ is, the more risk is involved in developing externalizing problems. It must be noted that this factor is small in its magnitude and is applicable from grade 4 or age 9 onwards. Externalizing problems reported with CBCL as well as reported with TRF have an acceptable and almost good reliability with α=.79 (Bortz & Döring, 2007, p. 707f.). Weaver et al. (2015) are funded by several

authorities of the U.S.A. and are therefore considered to have no conflict of interest. Sorek (2019) investigates how PSOD influences the QoL of children which is defined as own and parent evaluation of children's wellbeing. Well-being is defined as positive life aspects in this context. They use the construct of active coping which is defined as "actions initiated by the children to cope with the difficulty they feel as a result of interparental conflict" (Sorek, 2019, p. 2). This construct is correlated with OLS, HLTW (Rees et al., 2013), PWI-SC (Cummins et al., 2003), SLSS (Huebner, 1991), child's perception of conflict intensity, and child's feeling of being caught between parents (Grych et al., 1992). Cronbach's Alpha is missing for OLS, HLTW, Child's perception of conflict intensity, and active coping with conflict. It is .64 for Child's feelings of being caught between parents and is therefore a poor value (Bortz & Döring, 2007, p. 707f.). Active coping correlates with the given measures as follows:

OLS: B=0.89; SD=0.21; p<.001, HLTW: B=0.86; SD=0.25; p<.001, PWI-SC: B=0.47; SD=0.15; p=.002, SLSS: B=0.27; SD=0.08; p<.001, children's perceived conflict intensity and active coping with conflict and OLS: B=0.75; SD=0.21; p<.001 as well as children's feelings of being caught between parents x active coping with conflict and OLS: B=0.82; SD=0.19; p<.001.

The following scores are approximations because the authors only provided tables. Children's active coping serves as a moderating variable between their perceived conflict intensity and OLS and the scores for children high in active coping are 8.9 for perceived low conflict and 9.1 for perceived high conflict. Moreover, scores for children low in active coping are 8.3 for perceived low conflict and 6.9 for perceived high conflict. Fittingly, children's active coping also serves as a moderating variable between their perception of being caught between parents and SLSS. In this instance children with high active coping score 8.5 points for being low caught in between parents and 9.7 points for being high caught in between parents. Children with low active coping skills on the other hand score 8.2 points when they are lowly caught in between parents and 6.8 points when they are high caught in between parents. This shows that high active coping serves as a moderating variable between their perceived conflict and OLS as the scores for perceived low conflict (8.9) and perceived high conflict (9.1) do not show strong differences whereas for children that have low active coping skills they do show strong differences between perceived low conflict (8.3) and perceived high conflict (6.9). This signals that Overall Life Satisfaction is more stable for children with high active coping skills which

is especially helpful when the conflict between parents is perceived to be high. This trend repeats when children's active coping as a moderating variable between children's perception of being caught between parents and SLSS is compared. Here the pattern also emerges that high active coping serves as a protective factor against being low (8.5) and being high caught in between parents (9.7). Vice versa, low active coping serves as a risk factor for being low (8.2) and being high caught in between parents (6.8). In both instances, high active coping shows more potential to improve measures indicative of mental health when children feel that the conflict between parents is high or when they feel caught in between parents. In other words, the effect is stronger when the situation for the children is critical and there is a weaker protective effect of active coping when the situation is more relaxed. To summarize, the correlation coefficients between active coping with conflict and other measures range from 0.27 to 0.89. For this master dissertation the correlation coefficients are interpreted as small when they are ≥ 0.2, medium when they are ≥ 0.5, and large when they are ≥ 0.8 (Cohen, 1992, p. 157). Therefore, there are positive weak, medium, and strong associations between active coping with conflict and other measures which signals that stronger active coping skills lead to better measures and therefore better mental health outcomes. The effect of this is weak for Student Life Satisfaction Scale, medium for the Personal Well-Being Index School Children, and strong for the combined measures of children's perceived conflict intensity x active coping with conflict and Overall Life Satisfaction as well as children's feelings of being caught between parents x active coping with conflict and Overall Life Satisfaction. For the moderating variables, it becomes clear that the effect is stronger when the situation for the children is critical and there is a weaker protective effect of active coping when the situation with the parents is more relaxed. The fact that the chart scores are imprecise because they are extracted from a chart only marginally threatens the explanatory power of the scores because there is always a clear trend identifiable. However, the fact that Alpha scores are missing for OLS, HLTW, child's perception of conflict intensity, and active coping with conflict and is only .64 for child's feelings of being caught between parents is highly problematic (Bortz & Döring, 2007, p. 707f.). The validity of these measures influences the explanatory power of the results and is further impaired by the missing scale for the moderating scores. This needs to be considered when the validity of the emerging pattern is judged. Sorek (2019) declares to have no conflict of interest. However, the source of funding is not stated, and therefore a judgment on the conflict of

interest is not possible. Overall, there is one emerging trend in group 3 across all three studies. High quality of own resources serves as a protective factor against, and low quality of own resources serves as a risk factor for developing mental health issues. This is applicable from grade 4 or age 9 onwards to grade 9 or age 15 because Weaver et al. (2015) could not find this pattern consistently in grades 2 and 3. For judging the validity of this pattern, it needs to be considered that Cronbach's Alpha is missing for several scales or tests or is below the acceptable range. Moreover, the scales for multiple tests are unknown and some test scores are approximations because they are taken from a chart. This makes the judgment of differences in scores harder although it seems that scores are high enough in every instance to state that imprecisions and the missing scale do not add a lot of uncertainty to interpret the results. Imprecisions in scores in conjunction with poor validity scores negatively influences the explanatory power for externalizing problems in Weaver et al. (2015). This makes an informed judgement on the validity and magnitude of those findings hard. That is why primary research is consulted to fill the uncertainty.

The pattern found in group 3 finds support in research about resilience. Resilience in this instance refers an "a pattern of functioning indicative of positive adaptation in the context of significant risk or adversity" which makes it effective against developing mental health issues (Ong et al., 2009, p. 1777). Not only do own resources help to work through issues that arise after PSOD. Also, children with parents that communicate well are beneficial for the development of their children because the children in turn have more resources to cope with the difficulties of PSOD (Flowerdew & Neale, 2003, p. 155). The pattern found in group 3 is that a high quality of own resources serves as a protective factor against, and a low quality of own resources serves as a risk factor for developing mental health issues. This is applicable from grade 4 or age 9 onwards to grade 9 or age 15. Self-compassion is a protective factor for peoples mental health which is defined as "tendency of being kind and understanding to oneself when confronted with personal failings and difficulties" (Muris, 2016, p. 1461). Moreover, children score lower on tests diagnosing depression, suicidal ideation and anxiety when they receive training for emotional intelligence defined as "perceive, use, understand, and manage emotions in oneself and others" (Mayer et al., 2000, p. 396; Persich et al., 2021, p. 1018). Furthermore, active coping with the conflict of parents can be regarded as beneficial as it an adaptive behavior that aims to solve problems which is a crucial factor to buffer stress for good mental health after

PSOD (Du Plooy & Van Rensburg, 2015, p. 492; Vorster, 2011, p. 94; Weiten et al., 2014, p. 99ff.). As the primary research backs up this group 3 pattern that a high quality of own resources is beneficial for the mental health, it is deemed to be applicable and can therefore be used to discuss corresponding preventive measures in school in chapter 6.

Group 4 patterns are established from the dataset of the three primary studies Weaver et al. (2015), Sorek (2019) and Sorek (2020). It must be noted they use the same data set with a different focus. It therefore does not harm the triangulation process because they do not present identical data. Table 12 shows that the pattern that emerges from this is that a high quality and availability of family and extended family resources serves as a protective factor and vice versa. Weaver et al. (2015) measure internalizing problems defined as being anxious, depressed, withdrawn and having somatic complaints as well as externalizing problems defined as rule-breaking and aggressive behavior using the teacher reported TRF and the mother reported CBCL (Achenbach & Edelbrock, 1991). In both tests lower scores are preferable. Data on the validity of the mediated models is not available in every instance in this study. Likewise, the scale is for both tests is not stated. Both harm the explanatory power (Bortz & Döring, 2007, p. 707f.) which needs to be considered and therefore contrasted with supplementary findings from other primary research findings. The study presents effect sizes of mediated models of parental divorce through indirect pathways. The effect of PSOD on internalizing problems in TRF is mediated by family income (B=0.02). Internalizing problems in CBCL are mediated by more sensitive mothers as they score the following points in their respective grade: grade 2 (46.125), 3 (45.25), 4 (44.75), 5 (44.25), 6 (43.875), 7 (43.75), 8 (43.75), 9 (43.875)
Children of less sensitive mothers however score: grade 2 (46.625), 3 (45.125), 4 (45.875), 5 (44.875), 6 (44.625), 7 (44.75), 8 (44.625), 9 (44.75)
Externalizing problem scores reported by CBCL for children with more sensitive mothers are: Grade 2 (45.875), 3 (44.375), 4 (43.625), 5 (43.125), 6 (42.625), 7 (42.375), 8 (42.25), 9 (42.5)
Externalizing problem scores for children with less sensitive mothers are: grade 2 (45.875), 3 (45.0), 4 (44.5), 5 (44.0), 6 (43.75), 7 (43.625), 8 (43.5), 8 (43.5), 9 (43.5)
Effect sizes for repercussions of PSOD are mediated by maternal depression. The Cronbach's Alpha is not stated for this example and therefore hurts the explanatory power (Cohen, 1992, p. 157). The effect size mediated by maternal depression is a minute 0.02

for teacher reported internalizing problems, a large 0.93 for mother reported internalizing problems, and a medium 0.73 for mother reported externalizing problems. Effect sizes for repercussions of PSOD are also mediated by a stimulating post-divorce home environment which is not further defined in this study. The effect size mediated by home environment is a minute 0.09 for internalizing problems in the teacher report and a minute 0.10 for externalizing problems in the teacher report as well as a large effect size 1.46 for externalizing problems in the mother report. This shows that family income is negatively correlated with children's mental health outcomes. This applies to internalizing problems when teachers are to report them using the TRF. However, this effect is minute as it does not even reach the threshold for being small (Cohen, 1992, p. 157). The fact that there is no Cronbach's Alpha reported adds to the fact that this effect should be seen as negligible (Bortz & Döring, 2007, p. 707f.) when there is no strong data of complementary studies suggesting otherwise. Internalizing problems in CBCL are mediated by more sensitive mothers from grade 2 and grade 4 to 9. In grade 3 children with more sensitive mothers score higher than children with less sensitive mothers. However, the scale is unknown and the biggest difference in scores between children with more and less sensitive mothers is 0.875. Because all scores go above 43 points it seems plausible to suggest that this a difference of .875 points or less is minute. Moreover, the scores are approximations because the data is taken from a chart. Tiny differences of 0.125 such as in grade 3 are highly affected by measuring errors so that the pattern could be less consistent in a repeated measurement in other studies. Therefore, it is assumed that there is a minute effect that more sensitive mothers are a protective factor against developing internalizing problems from grade 4 to 9. Externalizing problem scores for children with less as well as more sensitive mothers are identical for grade 2 and from grade 3 on the divide grows up to 1 point in grade 9. This makes clear that children with more sensitive mothers benefit from this from grade 3 to 9. A missing Cronbach's Alpha score for the mediation of PSOD through family income does not pose a problem as the effect size (B=0.02) is too tiny to realistically suggest any links between family income and children's mental health outcome. Moreover, the missing Cronbach's Alpha score for the mediation of PSOD through maternal depression also does not pose a problem for the minute correlation of 0.02. However, the missing Alpha scores present an issue for interpreting the validity of the mother reported internalizing (0.93) and externalizing problems (0.73) as they show higher effect sizes. For this reason, other research data needs to be consulted to judge if

this can be applied in practice. Effect sizes of PSOD mediated by home environment show a good validity of α=.84. Acceptable scores of α=.79 can be registered for more and for less sensitive mothers in mother reported externalizing and internalizing problems. This leads to the conclusion that these test scores can be deemed to be realistic unless other research data suggests otherwise. Sorek (2019) investigate the concept of QoL defined as own and parent evaluation of children's wellbeing. Children's wellbeing is defined as positive life aspects in this context. For the group 4 pattern three correlations from this study are important to highlight. The correlation between child's perception of conflict intensity (Grych et al., 1992) and OLS (Rees et al., 2013) is a medium B=-0.61. The correlation between child's perception of conflict intensity and SLSS (Huebner, 1991) is a small B=-0.37. Gap in mother's perception of conflict intensity at questionnaire completion & during marriage (Lumer, 1998) correlates with SLSS by a minute B=-0.15. This signals that the children's perception of conflict intensity negatively influences the overall life satisfaction and student life satisfaction. The gap in mother's perception of conflict intensity at questionnaire completion and during marriage describes how mother's feel the conflict has increased from marriage to the time of divorce at questionnaire completion. This negatively correlates with student life satisfaction and is therefore also a risk factor. Some validity scores are provided such as α=0.87 for SLSS and α=0.80 for Intensity of parental conflict mothers' perception. However, validity scores for OLS, HLTW and Child's perception of conflict intensity are missing. The fact that some Alpha scores are, and some are not reported makes the findings validity hard to judge and it is therefore advisable to check with current research findings. Sorek (2020) also investigate the concept of QoL defined as own and parent evaluation of children's wellbeing (positive life aspects). As this study uses the same data base, it does in part offer the same results as Sorek (2019). These results are not discussed again because the participants, tests and procedures are identical and would therefore not add to the findings. However, Sorek (2020) offer additional data which is discussed. The correlation between mothers' perceived gap in conflict intensity (Lumer, 1998) and OLS (Rees et al., 2013) is a medium -0.58 (SD=0.20). Overall social support (Attar-Schwartz et al., 2009; Soliz, 2008) is correlated with OLS (a large 0.82; SD=0.18), with HLTW (Rees et al., 2013) (a large 1.01; SD=0.21), with PWI-SC (Cummins et al., 2003) (a medium 0.59; SD=0.12) and with SLSS (Huebner, 1991) (a small 0.24; SD=0.07). Moreover, closeness to grandparents (Soliz, 2008) is correlated with OLS (a medium 0.72; SD=0.18) as well as with PWI-SC

(a small 0.37; SD=0.13) and SLSS (a minute 0.19; SD=0.08). Open discourse with grandparents (Soliz, 2008) is a moderator between gap in mothers' perception of conflict intensity (Lumer, 1998) and OLS. The reason for this is that a limited discourse leads to 9.5 points for a decreased conflict and 7.1 points for an increased conflict (a large -1.23, no SD stated). In contrast to this, an open discourse leads to 8.4 points for a decreased conflict and 8.5 points for an increased conflict (a minute 0.08; p<.785). This correlation is not significant, therefore it can be stated that "open discourse on divorce between the children and their grandparents protected their QoL from the negative consequences of the parental conflict's intensity" (Sorek, 2020, p. 7). The scale is not stated in this instance which makes it hard to judge the magnitude. However, the accompanying correlations that are given remedy this in part because this score includes the magnitude. Moreover, there is no Cronbach's Alpha scores for OLS, Overall social support and active coping, and a below acceptable score of .64 for children's feelings of being caught between parents (Bortz & Döring, 2007, p. 707f.). The Personal Well-Being Index – School Children as well as closeness to grandparents reach a good α=0.89, the Student Life Satisfaction Scale offers a good validity of α=0.87, open discourse with grandparents achieves a very good α=0.90, and mother's perception of intensity of conflict is a good α=0.80 (Bortz & Döring, 2007, p. 707f.). Therefore, the validity of some results is partially undermined by a missing scale or by a missing or a low Cronbach's Alpha score. This needs to be remedied by enquiring about congruent or divergent research data. Sorek (2020) also declare that there is no conflict of interest. However, there is again no source of funding reported. Therefore, there is no judgement possible on the conflict of interest. This makes it justified to investigate how realistic the pattern identified in group 4 by enquiring other research findings. Good communication with parents is generally considered to be beneficial for pupils so that they can better deal with their feelings and anxieties (Bagshaw, 2007, p. 461f.). However, many pupils are not told about the PSOD beforehand (Birnbaum & Saini, 2012, p. 275). In fact, pupils need to speak about the PSOD more than once and speaking to other people such as teachers, friends, professionals or grandparents seems to be beneficial (Kay-Flowers, 2019, p. 65; Maes et al., 2012, p. 272; Spremo, 2020, p. S358). The reason for this is that there is a loyalty conflict which can lead children to pick a side instead of communicating about issues with parents (Johnston, 1994, p. 194ff.; Kay-Flowers, 2019, p. 156). To use multiple sources of support rather than to rely on one source is also helpful (Kay-Flowers, 2019, pp. 226-239). Sorek (2020)

as well as Sorek (2019) show that parental conflict and a rise in conflict intensity leads to a lower quality of life in affected children. This pattern partly reflects among girls in Flanders who show a positive correlation between parental conflict intensity and alcohol use (Vanassche et al., 2014, p. 128). Regarding girls' quality of life, it can be said that parental conflict resolution strategies have a huge positive influence (Khorami Ghaziyani & Abolghasemi, 2020, p. 1) which is in line with findings from Sorek (2019) and Sorek (2020). Further support for this mechanism can be found in the fact that a high level of accommodation of PSOD stems from a lack of parental conflict but is also positively influenced by children being told about the PSOD as well as good communication between child and parents (Kay-Flowers, 2019, p. 45ff.; Zoccola, 2021, p. 1040). Weaver et al. (2015) find that a higher level of maternal depression leads to more internalizing and externalizing problems. This finding is supported by the finding that a high level of maternal depression is linked to higher levels of depression in children (Wesselhoft, 2016, p. 20). However, there could not be any literature retrieved to support or reject the notion that maternal depression leads to more internalizing and externalizing problems in children during PSOD. For family income there seems to be a tiny connection between adjustment and family income (Lansford, 2009, p. 149) especially when a parent does not provide child support after PSOD (Francia & Millear, 2015, p. 561) which fits with findings from Weaver et al. (2015) who also only find a minute link between those two. There is a minute link between a more sensitive mother and less internalizing and externalizing problems in children after PSOD according to Weaver et al. (2015) which is supported by corresponding literature (Lansford, 2009, p. 149). Moreover, a good home environment as stated by Weaver et al. (2015) is also minutely linked to less internalizing and externalizing problems. This finding is supported by Block et al. (1988, p. 12) who can also find minute correlations between those two and further stress that effects should be measured before and after PSOD to find tangible differences (Block et al., 1988, p. 212). Moreover, a meta-analysis identifies inter-parental conflict as a risk factor for internalizing problems in children after PSOD (Yap & Jorm, 2015, p. 424) which corresponds with findings of Sorek (2019) and Sorek (2020). The primary research consulted to examine the group 4 pattern largely agrees with the finding. However, consulting professionals and teachers does also seem to be a relieve even though some teachers are hesitant because they do not know how to do that (Kay-Flowers, 2020, p. 18). Professionals in this context are defined as staff members that have professional training in talking to pupils

about mental health issues which is based on the scientific consensus in this field. Peers are not included in this pattern as they are not professionally trained and they can even distance themselves when they do not understand what pupils are experiencing after PSOD (Ferow, 2019, p. 1). Therefore, the group 4 pattern is changed from a high quality and availability of family and extended family resources as a protective factor and vice versa to a high quality and availability of family, extended family, and professional resources as a protective factor and vice versa.

The pattern identified in group 5 is that mental health problems in children due to PSOD decrease with higher age and increase with younger age. This pattern is synthesized of the three studies Oldehinkel et al. (2008), Weaver et al. (2015), and O'Hara et al. (2019). Oldehinkel et al. (2008) investigate depressive symptoms defined as "depressed mood, anhedonia, loss of energy, feelings of worthlessness and guilt, suicidal ideation, sleep problems, and eating problems" (Oldehinkel et al., 2008, p. 287). This mental health issue is investigated with the help of the child reported affective problem scale of the YSR (Achenbach, 1991) and the parent reported affective problem scale of the CBCL (Achenbach & Edelbrock, 1991). Scales go from 0 to 26 in both tests and lower scores are preferrable. Boys score the following points in the self-report at the age of 10 (4.2), 11 (3.9), 12 (3.6), 13 (3.3), 14 (2.9), and 15 (2.6). In the parent report they score the following points at the age of 10 (3.25), 11 (2.9), 12 (2.6), 13 (2.3), 14 (1.9), and 15 (1.6). The validity of the child reported YSR ranges from $\alpha = .72$ to .77 and is therefore acceptable while the parent reported CBCL ranges from a slightly below acceptable $\alpha = .68$ to an acceptable .73 (Bortz & Döring, 2007, p. 707f.). Judging the validity of the pattern is also impeded by the fact that the scores in CBCL and YSR are approximations because the chart in this study does not present precise values. On top of that, the scores for girls in the child reported YSR show exactly the opposite effect. The girls score 3.8 points at age 10 score and 5.3 at the age of 15 which clearly indicates that problems get worse over time for them. One might think that this is a distinction related to gender. However, in the parent reported CBCL girls score the following points at age 10 (2.80), 11 (2.75), 12 (2.70), 13 (2.65), 14 (2.60), and 15 (2.55). These inconclusive findings in combination with imprecise chart scores and acceptable or below acceptable validity scores indicates that there is a need to consult other research findings to be able to formulate a sound statement. Weaver et al. (2015) measure internalizing problems defined as being anxious,

depressed, withdrawn and having somatic complaints and externalizing problems defined as rule-breaking and aggressive behavior. For this endeavor, they use the teacher reported TRF and the mother reported CBCL in both of which lower scores are preferable (Achenbach & Edelbrock, 1991). Children with a more sensitive mother score the following points in internalizing problems for grade 2 (46.125), 3 (45.25), 4 (44.75), 5 (44.25), 6 (43.875), 7 (43.75), 8 (43.75), and in grade 9 (43.875) in the mother reported CBCL. Children with a less sensitive mother score the following points for the same measure for grade 2 (46.625), 3 (45.125), 4 (45.875), 5 (44.875), 6 (44.625), 7 (44.75), 8 (44.625), and in grade 9 (44.75) which is also measured with the CBCL. Mother reported externalizing problems in the CBCL for children with a more sensitive mother score the following points in grade 2 (45.875), 3 (44.375), 4 (43.625), 5 (43.125), 6 (42.625), 7 (42.375), 8 (42.25), and in grade 9 (42.5). Children with less sensitive mothers score the following points in grade 2 (45.875), 3 (45.0), 4 (44.5), 5 (44.0), 6 (43.75), 7 (43.625), 8 (43.5), 8 (43.5), and 9 (43.5) for the same measure. Children with a lower IQ score the following points in externalizing problems in the mother reported CBCL in grade 2 (48.125), 3 (47.375), 4 (46.875), 5 (46.625), 6 (46.375), 7 (46.375), 8 (46.625), and 9 (46.875). Children with a higher IQ score the following points in grade 2 (47.875), 3 (47.5), 4 (46.75), 5 (46.375), 6 (46.25), 7 (46.25), 8 (46.375), and 9 (46.5) for the same measure. Fittingly, teacher reported externalizing problems measured with the TRF show the following scores for children with a lower IQ in grade 2 (56.375), 3 (56.625), 4 (56.5), 5 (56.125), and 6 (55.625) whereas children with a higher IQ score the following points in grade 2 (56.125), 3 (56.25), 4 (56.125), 5 (55.875), and 6 (55.375). All scores are approximations because the chart does not present exact figures. This presents a problem for interpreting the results because the difference in scores is tiny overall and small discrepancies can lead to different interpretations. The validity of all measures is good because they are all at α=.79 (Bortz & Döring, 2007, p. 707f.). Therefore, one can see the pattern that a more sensitive mother and a child with a higher IQ is associated with less externalizing or internalizing problems. However, the magnitude of this finding is hard to interpret due to unreported scales. It seems plausible that this finding is tiny in magnitude because the difference in scores does not exceed a 1-point difference. Externalizing problems in more and less sensitive mothers for mother reported externalizing problems in grade 2 are identical and grade 3 results for internalizing problems for more and less sensitive mothers as well as grade 3 results for mother reported externalizing problems in

children with a higher and lower IQ therefore do not support the pattern found in the rest of the data set. All these factors need to be considered to judge the validity and the magnitude of these findings. Therefore, other research findings are investigated to judge the explanatory power. O'Hara et al. (2019) investigate mental health problems defined as internalizing and externalizing problems and measure this construct with the mother reported CBCL (Achenbach & Edelbrock, 1991). They identify different trajectories and put them into groups. For this purpose, the Low Decreasing group that is comprised of pupils that start with low internalizing as well as low externalizing problems which decrease from T1 to T5 and the High Decreasing group which consists of pupils that start with high scores in internalizing and externalizing problems that also decrease from T1 to T5. In the Low Decreasing group internalizing problems at T1 are 56.20 points (SD=9.05) and 51.11 points (SD=9.58) at T5. In the same group externalizing problems at T1 are 54.40 points (SD=8.15) and 49.82 points (SD=9.96) at T5. The High Decreasing group scores 59.31 points (SD=9.99) at T1 and 53.81 points (SD=8.42) at T5 for internalizing problems. Externalizing problems in this group at T1 are 55.76 points (SD=9.13) 50.66 points (SD=9.55) at T5. The pattern that can be identified in this data set is that mental health problems after PSOD decrease with higher age and increase with lower age. However, it unclear whether this is also influenced by the time since divorce. A child with a higher age is more likely to have a longer time since PSOD. This study does not differentiate the time since divorce. Therefore, it is unknown whether the synthesized pattern in this study is influenced by the time since divorce. It is also problematic that the scale is not stated which makes it hard to judge the magnitude of the differences in scores. Validity scores are an acceptable α=.74 for T1 and a good α=.88 for T5 (Bortz & Döring, 2007, p. 707f.). Because the missing scale and the unpredictable interaction with the time since divorce weakens the explanatory power of the pattern, it is contrasted with other research data.

The fact that group 5 identifies age as a factor for adjustment to PSOD might be because parents talk differently to younger children than older ones. Children want to know what is happening independently of their age when a PSOD is looming (Kay-Flowers, 2019, p. 45; Maes et al., 2012, p. 272). The reason for this is that they do not want to feel left out and left alone with their feelings of anxiety, confusion and distress about the future especially when the parents are in a high-conflict situation (Bagshaw, 2007, p. 462f.;

Dunn & Deater-Deckard, 2001, p. v; Johnston, 1994, p. 165ff.). However, most children are not told beforehand about the PSOD which creates a discrepancy between need and reality and their right to be heard and listened to (Birnbaum & Saini, 2012, p. 275; Dunn & Deater-Deckard, 2001, p. v; United Nations, 2017, p. 5). In fact, the younger the child, the more likely it is that parents do not tell their child about the reasons for the PSOD (Butler et al., 2002, pp. 89-92; Kay-Flowers, 2019, p. 46). This opens the possibility that the parents' behavior towards their children depending on age influences how much children know and can process which in turn influences their adjustment. There could not be identified any data that could confirm or deny this presumed mechanism. There is more evidence to suggest that children adapt to PSOD depending on their age (Lansford, 2009, p. 149) as resilience is learned and developed over time. The group 5 pattern proposes that pupils show more mental health problems with lower age and vice versa. Because the primary research consulted to investigate this proposition finds agreement in this claim, this pattern is used to discuss preventative measures that can be taken in school in chapter 6.

Five group patterns are discussed in this chapter. However, there are more findings than are presented in these five groups. The reason for this is that only findings that become apparent in more than one study are combined. It is the synthesis process as a "a lens through which evidence is viewed" (Murad et al., 2016, p. 126) that sets systematic reviews apart from other research designs regarding the validity of its statements. As the WHO demands to prevent mental health issues with strategies that are informed by strong evidence, the findings that appear in one study only are not discussed (World Health Organization, 2013, p. 5). The following chapter 6 discusses how these five group patterns can be used in a school setting, how a school environment needs to be developed prevent mental health issues after PSOD in pupils.

6 Discussion of Findings

The five group patterns identified and adapted in chapter 5 are used in this chapter to discuss measures that the school administration and professionals can implement to prevent mental health issues in pupils after PSOD. Group patterns and corresponding

measures are discussed individually apart from the patterns that derive from group 2 and 5 as they are similar in nature.

The pattern identified in group 1 is that being a girl is a risk factor and being a boy is protective factor in pupils aged ~13 to ~15 years old after PSOD. Boys and girls are in fact affected differently by parental conflict (Reynolds & Houlston, 2014, p. 52f.). That means that girls tend to see PSOD as a threat to family relationships and boys see it as a threat to themselves (Grych et al., 2003, pp. 1188-1191). This might be the reason why girls tend to show more signs of internalizing problems and boys more signs of externalizing problems after PSOD (Spremo, 2020, p. S358). Because internalizing problems are more acceptable than externalizing problems, girls get more support in school (Ibid.). These firmly hold beliefs are constructs that are hidden from us (Hassan, 2006, p. 6). However, it the task of reflective teachers to be open to new pathways of thinking to fulfil the role bestowed on them (Hassan, 2006, p. 8). This means that teachers and the school management need to consider this bias to be able to support pupils independently of the social norm that externalizing behavior is thought to be inappropriate (Spremo, 2020, p. S358). Later PSOD can be predicted for girls at the age of 3 because parent reported externalizing problems are higher (Robbers et al., 2011, p. 311). That is why girls' mental health issues should be prevented by working together with Kindergartens in the area. There, externalizing problems of girls at the age of 3 should be tested by professionals trained in diagnostics by using appropriate diagnostic tools that are based on the current scientific consensus in this field to identify the potential need to help them. Being a girl is considered a risk factor at the age of ~13 to ~15 years in this group pattern. However, it is neither ethical nor productive to suggest that girls should change their gender to enjoy the protective factor of being a boy in this age group. Therefore, this pattern only helps to potentially identify girls that are at risk at an early stage. How to help them prevent mental health issues is analyzed in the following discussions for the group 3 and 4 patterns.

Group 2 identifies that a PSOD less than 2 years ago is risk factor. However, after consulting with other research findings it is decided to change this pattern. That is why a long time since PSOD is considered protective and vice versa. Group 5 proposes that a higher age is considered a protective factor and a lower age is considered a risk factor. Group 2

and 5 patterns can have the similar unwanted and inappropriate effect that schools misinterpret these results to argue for staying inactive and therefore undertaking a wait-to-fail approach (Reynolds & Shaywitz, 2009, p. 1). These patterns should not be used to argue to wait out this problem as this would not prevent mental health issues and this would not help any individual. Instead, it should be reflected why a long time since PSOD and a higher age are protective factors. As children are dependent on their parents, the PSOD is not their responsibility and not in their control (Spremo, 2020, p. S353). However, children tend to blame themselves to secure the attachment to at least one parent as a survival mechanism (Fraley & Shaver, 2016, p. 41; Grollman & Grollman, 1977, p. 36; Kay-Flowers, 2019, p. 258). Only when the conflict between parents subsides do children cope better because the survival situation abates (Brand et al., 2017, p. 175; Fraley & Shaver, 2016, p. 41; Grollman & Grollman, 1977, p. 36). That might be one of many reasons why children tend to do better when the time since PSOD is longer ago. One reason why a lower age of pupils is a risk factor is possibly because they are equipped with lower levels of resilience which are developed over time and can buffer effects of PSOD (Lansford, 2009, p. 149). Therefore, schools need to address group 2 and 5 findings. Primary schools in Lower Saxony go from grade 1 to 4 in which most pupils are between the ages of 6 to 10 years old. Primary school pupils are therefore especially vulnerable to the factor of a lower age and they need to develop strategies so that those pupils do not have to carry too much responsibility (Brand et al., 2017, p. 176). What teachers and parents can do to remedy this and the fact that a shorter time since PSOD is a risk factor is discussed in group 4 findings which cover resources that teachers, SEN teachers, professionals and grandparents can provide. What pupils can do to help themselves is discussed in group 3 findings which deals with resources that pupils have and can develop.

Group 3 states that a high quality of own resources serves as a protective factor and vice versa. Even though, the PSOD is out of control for the children, the ways in which they react is different (Spremo, 2020, p. S353) and there is children that can find healthy ways of dealing with this family split up (Vanassche et al., 2010, p. 1). When parents are caught up in their own conflicts it is difficult for the child to deal with change (Spremo, 2020, p. S353). In this situation parents tend to focus on their own conflict; however, it is desirable to put the child's interest first (Ibid.). Otherwise, there is the risk that children are silenced

and this limits “their contribution to our understanding of their lives” (Brand et al., 2017, p. 176). In fact, most children are willing as well as capable to form opinions and speak about their worries to a social worker reliably (Birnbaum, 2017, p. 152). This signals the importance to teachers and SEN teachers that they should actively encourage to let children speak out about their problems in a safe environment where they are not judged and what they say stays non-disclosed until they approve otherwise. While listening to the child is certainly encouraged under the right conditions, it is not advantageous to let them carry too much responsibility especially when they are younger (Brand et al., 2017, p. 176). However, it is widely recognized that participation of children in decision-making processes reduces negative effects after PSOD (Birnbaum, 2017, p. 148; Cashmore, 2003, p. 174f.; Smart, 2002, p. 318; Smith et al., 2000, p. 34ff.). Therefore, it is a resource that children want and can talk, and this resource should be encouraged by schools and teachers. The way teachers and schools should facilitate this communication is analyzed in the group 4 discussion. The reason for this is that group 4 deals with professional resources which trained teachers are considered as in this paper. There is also strategies that pupils can facilitate to foster their own communication skills but this paper neglects these strategies as that would mean that they had to carry too much responsibility in most cases (Brand et al., 2017, p. 176). Moreover, the children should enhance their coping which is the “adequacy of problem-solving skills” (Vorster, 2011, p. 94). Coping can be used to buffer stressful life events such as PSOD (Du Plooy & Van Rensburg, 2015, p. 492) which makes this a great resource which should be fostered by schools. Another helpful resource that pupils should build is resilience. Resilience as “a pattern of functioning indicative of positive adaptation in the context of significant risk or adversity” (Ong et al., 2009, p. 1777). The way teachers can foster this is analyzed in the group 4 discussion.

Group 4 finds that a high quality and availability of family and extended family resources serves as a protective factor and vice versa. This pattern is extended to a high quality and availability of family, extended family and professional resources is a protective factor and vice versa. The reason teachers and schools are paramount is that they are in close contact with pupils, and it is their responsibility to create a safe school environment. Encouraging children to speak so that there is good communication between the child and each parent makes them adapt better to change (Kay-Flowers, 2019, p. 318). However, some teachers are aware that pupils want to talk about family situation but do not know

how to do that (Kay-Flowers, 2020, p. 18). SEN teachers have the task to focus on the social and emotional development of pupils according to §4 II s. 3 Niedersächsisches Schulgesetz and the emotional and social development includes the field of consultation (Carl von Ossietzky University Oldenburg, 2021a). This means that SEN teachers are responsible for either consulting with pupils and parents or, amidst the current shortage of SEN teachers (Kultusministerkonferenz [Conference of Education Ministers], 2022), make sure that teachers are provided with the needed skills to professionally consult. That is why SEN teachers should encourage teachers to utilize a communication model that prepares them for this important and challenging task. One such communication model is called client focused consultation and guidance which aims to repeat the pupils' expressions in own words to make sure that there is a common understanding, to verbalize emotions, and to uncover contradictions with the help of active listening, paraphrasing, and verbalizing emotional experiences (Weinberger, 2013, pp. 19-55). The ethical attitude of the consulting teacher must include that a relationship between teacher and pupil is established that is characterized by genuineness, acceptance, unconditional positive regard, and empathy for the pupil which is perceivable by the pupil (Rogers, 2007, pp. 241-244; Weinberger, 2013, pp. 56-67). This can be achieved in schools by normalizing attitudes and promoting mental health and to raise awareness about information about mental well-being that should be made available on websites and newsletters so that pupils have a lower threshold to talk about problems and build a relationship with the consulting teacher (Marshall et al., 2017, p. 9). In fact, young adults whose parents divorced in their childhood express the opinion that they would have expected a counseling service and that teachers spot differences in the behavior early to help (Kay-Flowers, 2019, p. 300). A change in friendships that signals towards more isolation might act as a precursor, therefore a whole school approach is necessary so that responsible and competent consulting teachers can act accordingly (Kay-Flowers, 2019, p. 303). Nonetheless, there are other communication models such as solution-oriented consultation and guidance which chooses to focus on the solution and to ignore the problem (Rietmann, 2009, pp. 13-19) as well as cooperative consultation which follows a 9 step process to solve a problem (Mutzeck, 2008, p. 58ff.). It is suggested to focus on the client focused consultation and guidance for counseling pupils when their parents are in conflict because pupils need unconditional acceptance during this time. Solution-oriented consultation and guidance and cooperative consultation are focused on solving a problem which is not appropriate

in this context as children tend to blame themselves even though their parents conflict is not in their control and not their responsibility (Brand et al., 2017, p. 176; Fraley & Shaver, 2016, p. 41; Grollman & Grollman, 1977, p. 36; Kay-Flowers, 2019, p. 258; Spremo, 2020, p. S353). However, when teachers talk to parents, these communication models can be utilized to effectively communicate how the parents can behave so that their children are less affected. Parents are still the decision-makers in this process, so to effectively use this line of communication teachers should "have detailed knowledge of the child and family circumstances" (Kay-Flowers, 2019, p. 303f.). This detailed knowledge should be used to activate family resources such as grandparents and other relatives that can be supportive for pupils (Sorek, 2020, p. 7). There could not be any research identified which compares the effectiveness of the these communication models. Therefore, schools should discuss the characteristics of all three communication models and how to implement the most appropriate ones depending on the circumstance into the school environment. Teachers also need to be aware why pupils do not seek help and therefore do not use talking as a resource. In a sample of 7- to 14-year-old pupils, reading test scores as well as reading comprehension are negatively affected 2 to 4 years before the PSOD while reading comprehension continues to decline after the first decrease (Arkes, 2015, p. 1). This fact can be used to detect early signs of conflict in conflict in the relationship of parents in some cases. However, this is not a tried and tested way of diagnosing issues in the relationship of pupils' parents. Therefore, teachers should be aware of common barriers that pupils have so that they can be paid attention to. The most important barriers that pupils voice are embarrassment and shyness (Yap et al., 2013, p. 255). Moreover, lower age is a prominent risk factor for not actively seeking help (Ibid.). It is the schools task to create a positive school environment that supports pupils whose parents are in conflict and to initiate commination with parents and the child (Kasehagen et al., 2018, p. 305). Raising awareness for these factors in school staff independently of qualifications and positions is a low-cost strategy to make sure that struggles in most pupils if not everyone are detected at an early stage before PSOD occurs so that pupils can leverage their ability to talk as a resource early in the process. The teachers that offer consultation need to be given time as well as the professional training to provide them with a framework that they can use to communicate more effectively. To make pupils want to talk as early as possible, they need to be aware how a healthy relationship works

so that they can detect if their parents lead an unhealthy relationship. Therefore, sex education in a school setting should involve how healthy relationships are characterized as well as "families and people who care for me" (Department for Education, 2019, p. 11; Kay-Flowers, 2019, p. 306). In Lower Saxony, sexual education is part of the curriculum as §2 I s. 3 3rd and 7th alternative Niedersächsisches Schulgesetz state that pupils must learn how to build relationships between humans after the principle of justice, solidarity, tolerance, and equality of genders as well as learn how to solve conflicts reasonably and to healthily endure conflicts. This shows that there is a legal basis that allows schools to teach children to learn skills that can be used to detect unhealthy relationships in parents at an early stage. However, according to §96 IV s. 1-7 Niedersächsisches Schulgesetz, schools need to coordinate with parents especially concerning sexual education as it would otherwise infringe on their constitutional and parental right of education according to Art. 6 II s. 1 Grundgesetz (Basic Law). This should also be done while utilizing an appropriate communication model. This represents a solid basis for building a high quality of own resources to be able to deal with PSOD. This process should start as early as possible to make mental health issues preventable and should involve the clarification of conceptions and misconceptions about parental conflict and PSOD for children in an age-appropriate way (Brand et al., 2017, p. 174f.). While resilience is a great resource for everyone to have, the authors suggest that teachers become aware and focus on identifying pupils that show signs of non-resiliency (Gardner & Stephens-Pisecco, 2019, p. 8). Regarding the topic of this paper, this demand can be adjusted so that teachers focus on pupils which show early and detectable signs of later PSOD. However, it is also possible to make programs for resiliency mandatory for all pupils which reduces the work required to detect potential future PSOD in individual pupils especially when it is considered that it is unclear how many false positives and false negatives this detection would produce. That is why this paper suggests offering a resiliency program for every single pupil instead. The authors give an overview of scientific literature that describes prevention programs that can be used in schools to build resilience for pupils (Gardner & Stephens-Pisecco, 2019, p. 6f.). They include multiple programs for every resilience category which are creating a safe environment, building relationships, affect regulation, perception of self, personal qualities, fortitude, cognitive skills, and adaptive coping strategies (Ibid.). As these programs are manyfold and highly specialized, this paper does not discuss them in detail. Instead, schools and teachers should use this collection to discuss

which of these programs fits with the current school environment and implement the most appropriate. Parents that are free from conflict are beneficial for the child (Brand et al., 2017, p. 175). However, where this is not the case, parents and teachers should provide time for spontaneous play (Ibid.). SEN teachers that are trained in mental health should play a vital role in advising parents and teachers to facilitate this play time so that pupils have a way of diverting attention away from the conflict (D'Onofrio & Emery, 2019, p. 100). In the process of working with parents, consulting teachers should start the communication with the notion that parents are concerned with the best interests for the development of their children (United Nations, 2017, p. 6). During this, teachers should make parents aware of their role and the role of grandparents and professionals such as therapists as a resource for the child. It is most desirable that the parenting is "characterized by mutual respect, collaboration, effective communication, and harmony" (Rejaan et al., 2021, p. 16). But not all parents manage to do that because of "negotiating and organizing new family boundaries, roles, and routines following divorce" (Rejaan et al., 2021, p. 16; Russell et al., 2016, p. 450). Most legal systems in western countries focus on cooperative parenting models which leads mental health professionals to aim at cooperative parenting strategies even though in high conflict situations this strategy maintains the level of conflict (Sullivan, 2008, p. 4). Consulting teachers need to realize this and adapt their communication strategy with parents and other teachers in a high conflict situation so that the conflict does not constantly flare up. Moreover, teachers and parents should provide a sense of achievements for children for example in in sports, clubs and school subjects (Brand et al., 2017, p. 175f.). The facilitation of this should be discussed with parents. Especially in a high conflict situation should parents be made aware that a children's secure attachment facilitated through effective communication and a secure base to them provides children with a resource that promotes resiliency which provides a valuable buffer (Ainsworth et al., 2015, p. 249; Du Plooy & Van Rensburg, 2015, p. 490; Faber & Wittenborn, 2010, p. 89; Fraley & Shaver, 2016, p. 41; Francia & Millear, 2015, p. 556). For this, teachers that consult parents need to be trained in the theory of attachment and bonding as a scientific basis for talking to parents about the implications how they can adapt their behavior and their availability to their children to foster their resources. Engaged parents are therefore beneficial as a resource for pupils. Schools that are successful at engaging parents give the following advice: promoting an open-door policy is a low barrier for parents to talk to teachers, having respect, listening to parents

concerns and suspending judgement because parents are the experts for their children, using different communication channels such as phone, email, text messages, website updates as well as face-to-face contact to make sure that parents will be reached despite busy schedules, and communicating positive developments to promote self-efficacy (Department for Education, 2017b, p. 2). This advice should be discussed in schools and implemented into the school environment. The challenges that come with this are that teachers need to be supported and trained which they need to be given time for so that their own mental health does not decline (Department for Education, 2017a, p. 4). This can be remedied by having a mental health leadership role who understands the importance of pupils' and teachers' mental health and has the authority to prioritize time for mental health training and implementation of school environment changes (Department for Education, 2017a, p. 5). Moreover, teachers need time to reflect on practices and they need to be supported by the school management and be well rested so that they are available to pupils in need (Ibid.).

Overall, five patterns of risk and protective factors that affect pupils' mental health after PSOD can be identified. The underlying data to support this shows minute to mild effects of these risk and protective factors on the mental health of pupils. This signals that the school environment must be shaped in a way that it can utilize all protective factors and avoid all risk factors identified throughout these five patterns for maximum effectiveness. This notion is emphasized by the fact that there is a mild publication bias in medicine and psychology according to a meta-meta-analysis (Van Aert et al., 2019, p. 1). Moreover, schools that aim to implement these findings need to be aware that this systematic review relies on data on risk and protective factors from quantitative studies in which risk must be considered as a statistical term. It uses probability calculations as its foundation which lead to the conclusion that a high level of significance makes it probable that the hypothesis holds true and vice versa (Bortz & Döring, 2007, p. 26). Therefore, this is not a deterministic view because there is always a remaining risk that a hypothesis results from coincidence (Ibid.). Moreover, an assessment of the robustness of the findings of this systematic review is conducted to give schools a more exhaustive picture for implementation into the school environment (Gough et al., 2017, pp. 254-256). For the five group patterns identified, this systematic review relies on data from diagnostic tests in which some studies offer slightly lower than acceptable validity scores or do not even declare a

validity score. In the latter case, it is not possible to determine how valid a score is. Moreover, the range of scales is not always declared which presents an issue when the magnitude of risk and protective factors is interpreted. On top of that, in Penttinen et al. (2020) there is hardly any data available to analyze and the data pool of Sorek (2019) and Sorek (2020) are identical which makes group 4 in which the data of Weaver et al. (2015), Sorek (2019), and Sorek (2020) is analyzed depend on only two pools of participants. However, as the absence of data from Sorek (2019) and Sorek (2020) would not change the outcome heavily, so at the moment it is not assumed that this fact skews the result (Gough et al., 2017, p. 255). Bachar et al. (2008), Chung et al. (2010), Sentse et al. (2011) as well as Penttinen et al. (2020) do not report a source of funding and Sorek (2019) and Sorek (2020) declare that there is no conflict of interest but do not declare a source of funding. This acknowledges missing information on the sources of funding and conflict of interests to be transparent for schools and researchers (Shea et al., 2007, p. 5). However, it is unclear whether this negatively affects the robustness of the findings. Because these five group patterns are based on data that is partly lacking in validity, all patterns are examined with the help of appropriate and fitting research articles to strengthen its robustness. This means that that schools can implement the findings into their school environment while being aware that researchers need to continue to be critical, to test these group patterns, adapt and advance this field of knowledge with systematic and strong research methods (World Health Organization, 2013, p. 5).

The research question in chapter 3 asks: “What does quantitative research tell us about which risk and protective factors are associated with parental divorce or separation of pupils that can be considered by teachers and particularly SEN teachers in school to prevent mental health issues in pupils who are 6 to <18 years old?” The answer is that quantitative research tells us that being a girl is a risk factor while being a boy is a protective factor at the age of ~13 to ~15 years. Moreover, a long time since PSOD is protective and a short time since PSOD is risk & vice versa. Also, a high quality of own resources serves as a protective factor and whereas a low quality of own resources serves as a risk factor. A high quality and availability of family, extended family and professional resources can be considered a protective factor while a low quality and availability serves as a risk factor. On top of that, a higher age is considered a protective factor and a lower age is considered a risk factor. How to implement these risk and protective factors is discussed

in this chapter by changing the school environment to offer different communication channels for parents and pupils for an early and low barrier help (Department for Education, 2017b, p. 2; Yap et al., 2013, p. 255), awareness training for all school staff so that changes in behavior and friendships that signal isolation are detected as early as possible and not only externalizing behavior of boys but also internalizing behavior of girls is detected (Hassan, 2006, p. 6ff.; Kay-Flowers, 2019, p. 303; Reynolds & Houlston, 2014, p. 52f.; Spremo, 2020, p. S358), professional communication training for consulting teachers depending on if they talk to parents or pupils (Mutzeck, 2008; Rietmann, 2009; Rogers, 2007; Weinberger, 2013), awareness training for so that consulting teachers perceive parents as a resource that have the best interests for their children as well as training in the theory of attachment and bonding so that consulting teachers can make parents of how they can positively influence the mental health of their children with their parenting behavior as well as spontaneous offers to play for diverting attention away from the conflict and provide pupils with a sense of achievement in school and sports for example (Ainsworth et al., 2015; Brand et al., 2017, p. 175f.; D'Onofrio & Emery, 2019, p. 100; Fraley & Shaver, 2016, p. 41; Grollman & Grollman, 1977, p. 36; Spremo, 2020, p. S353; United Nations, 2017, p. 6). This way, parents and other teachers should be encouraged to actively listen to the needs of the affected children without letting especially younger children carry too much responsibility (Birnbaum, 2017, p. 148; Brand et al., 2017, p. 176; Cashmore, 2003, p. 174f.; Kay-Flowers, 2019, p. 318; Smart, 2002, p. 318; Smith et al., 2000, p. 34ff.). Moreover, consulting teachers should be aware of the family composition and make parents ware that they can activate grandparents or other relatives as a resource for the children (Kay-Flowers, 2019, p. 303f.; Sorek, 2020, p. 7). Schools should provide sex education which deals with healthy relationships so that unhealthy patterns in their parents behavior are detected by children so that communication with a consulting teacher can be established as early as possible (Department for Education, 2019, p. 11; Kay-Flowers, 2019, p. 306). Moreover, this systematic review finds that coping and resilience training for all pupils is beneficial and especially needed for younger children to provide a protective buffer before PSOD or even before conflict in parents (Du Plooy & Van Rensburg, 2015, p. 492; Lansford, 2009, p. 149). Discussing the need for a change in school environment so that staff understand that inactivity represents a wait-to-fail approach is paramount (Reynolds & Shaywitz, 2009, p. 1). Once that is

achieved, there is a multitude of resilience programs to choose from which the most appropriate should be adopted into the school environment (Gardner & Stephens-Pisecco, 2019, p. 6f.).

This all means that the school environment needs to change so that consulting teachers are provided with the skills and time to help pupils in a demanding situation. The schools need to build awareness for low barrier multi-channeled information to be able to collaborate closely with parents as well as to utilize extended family resources and pupils' resources. As new research findings emerge that adapt or enhance the findings in this study, schools should constantly consider implementing changes in the school environment to grant pupils the right to special care and assistance as they teachers of the present and the future are a coach and a mentor who fosters a relationship (RedaktionsNetzwerk Deutschland [EditorialStaffNetwork Germany], 2021, 01:58 - 02:06; United Nations, 2017, p. 4). The following chapter reflects the methods that are used to conduct this systematic review to learn if and how individual methods are successful to answer the research question.

7 Critical Reflection of Methods

Chapter 4.2 utilizes four scientific databases to find appropriate studies. However, the systematic search in ERIC and FIS Bildung yields almost no results. To use PubMed as well as Web of Science Core Collection only would have saved valuable time resources and it would have not affected the included studies. Similarly, there could be no German articles retrieved. To include only English articles would have not changed the search results but would have saved valuable time. The first systematic search provided eight included studies. Therefore, the second search changes the earliest possible publishing year from 2010 to 2005 which yields ten results. This is not a huge improvement. However, a further decrease in the earliest publishing year would have risked finding outdated studies. That is why an expansion of the keywords such as ADHD, suicide, anxiety, depersonalization syndrome, alcohol and coping would have helped. Another way to approach the systematic search is to widen the focus of the search so that only randomized controlled trials are included to strengthen the quality of the data. However, chapter 4.2

discusses in detail why this approach opens the possibility that important findings are ignored which is still considered as not appropriate for this paper. Moreover, a tighter focus leads to studies that are more appropriate for the context of this paper which is appropriate when the field is well researched and a scoping research is run in Web of Science that confirms this (Soilemezi & Linceviciute, 2018, p. 4). Therefore, a narrow search is still viewed as being appropriate. The downside to this approach is that the quality of reporting in the included studies is improvable. During the planning stage of this paper, inappropriate reporting in primary studies should be avoided by only including peer-reviewed articles. A journal in which a paper with the title and the text 'Get my off Your Fucking Mailing List' can be published can only be called predatory (Martin & Martin, 2016, p. 301; Mazieres & Kohler, 2005). However, it is easy for the journal to claim that it is peer-reviewed on its own website (International Journal of Advanced Computer Technology, n.d.). This shows that a researcher who conducts a systematic review cannot solely rely on the fact that included papers are from journals that reiterate a peer-review process for quality control. Because the included articles in this review do not include such blatant acts of fraud, the lack of quality due to a lack of reporting are deemed to be acceptable even though they limit the informative value. The method of synthesis is a synthesizing theory as described in table 11 in chapter 4.4. This method proves to be expedient and there is no obvious benefit in using a different synthesis method in this context. The following chapter 8 gives suggestions for future research as the research findings in this review need to be adapted and enhanced in the future to provide schools with an effective toolbox to prevent mental health issues in pupils before PSOD.

8 Suggestions for Future Research and Practical Implications

To gather knowledge on what quantitative research can tell us about which risk and protective factors are associated with parental divorce or separation of pupils constitutes the groundwork for creating a guideline for schools that they can use so that teachers and SEN teachers prevent pupils from developing mental health issues before PSOD. This paper focuses on the groundwork. The guideline needs to be developed by future research so that schools have an easy to apply policy. This represents the ability to inform policy-makers, school officials, teachers, and SEN teachers of which risk and protective factors

they must consider when they develop or improve a school environment for pupils that might be affected by the repercussions of PSOD in the future. Researchers can evaluate these findings when schools implement the suggested changes to the school environment so that they can be adapted and enhanced over time. Moreover, it is worthwhile to investigate how therapeutic institutions can be implemented as part of the change in the school environment to foster pupils' mental health. This work also discusses what role teachers and SEN teachers should play in incorporating those risk and protective factors into the school environment. However, research needs to be conducted on how well these changes can be implemented and where caveats lie for example regarding budget or time constraints, limited availability of as well as mental overload for consulting teachers. Cultural differences in how pupils are affected and how this can be remedied should also be researched with strong research designs as the stigmatization of PSOD can have negative effects on pupils (Lansford, 2009, p. 149; World Health Organization, 2013, p. 5). This paper focuses on how mental health issues of pupils can be prevented before PSOD. This opens the possibility for other researchers to complement this finding by preventing a drop in learning outcomes as well (Visible Learning^{plus}, 2017, p. 1). In this context it would to use both this finding as well as the finding in this systematic review to investigate how this can be tied to a school environment in which a response to intervention model (RTI) is implemented. RTI allows for a change to an inclusive school environment as it is a proactive concept for early detection, prevention, and intervention of learning and behavior problems with constant audits in three support stages (Grosche & Huber, 2012, p. 312). This is a new paradigm and it represents a shift from a wait-to-fail approach to early detection, prevention, and intervention that aims to act as early as possible to leave no one behind (Grosche & Huber, 2012, p. 312; Reynolds & Shaywitz, 2009, p. 1). As mental health issues can lead to school absenteeism which also negatively influences the learning outcomes (DeSocio & Hootman, 2004, p. 189), research on how to implement prevention measures against mental health issues in the context of RTI independent of reasons such as PSOD should be investigated. This way, schools have a framework with which they can provide an environment in which all pupils enjoy the right to special care and assistance and the protection of their mental development (United Nations, 2015, p. 52; 2017, p. 9) as well as their learning performance in which teachers act as a coach and mentor (RedaktionsNetzwerk Deutschland [EditorialStaffNetwork Germany], 2021, 01:58 - 02:06).

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Appendix

Appendix 1: AMSTAR

1. Was an 'a priori' design provided? The research question and inclusion criteria should be established before the conduct of the review.	☒ Yes ☐ No ☐ Can't answer ☐ Not applicable
2. Was there duplicate study selection and data extraction? There should be at least two independent data extractors and a consensus procedure for disagreements should be in place.	☒ Yes ☐ No ☐ Can't answer ☐ Not applicable
3. Was a comprehensive literature search performed? At least two electronic sources should be searched. The report must include years and databases used (e.g. Central, EMBASE, and MEDLINE). Key words and/or MESH terms must be stated and where feasible the search strategy should be provided. All searches should be supplemented by consulting current contents, reviews, textbooks, specialized registers, or experts in the particular field of study, and by reviewing the references in the studies found.	☒ Yes ☐ No ☐ Can't answer ☐ Not applicable
4. Was the status of publication (i.e. grey literature) used as an inclusion criterion? The authors should state that they searched for reports regardless of their publication type. The authors should state whether or not they excluded any reports (from the systematic review), based on their publication status, language etc.	☐ Yes ☒ No ☐ Can't answer ☐ Not applicable
5. Was a list of studies (included and excluded) provided? A list of included and excluded studies should be provided.	☐ Yes ☒ No ☐ Can't answer ☐ Not applicable
6. Were the characteristics of the included studies provided? In an aggregated form such as a table, data from the original studies should be provided on the participants, interventions and outcomes. The ranges of characteristics in all the studies analyzed e.g. age, race, sex, relevant socioeconomic data, disease status, duration, severity, or other diseases should be reported.	☒ Yes ☐ No ☐ Can't answer ☐ Not applicable
7. Was the scientific quality of the included studies assessed and documented? 'A priori' methods of assessment should be provided (e.g., for effectiveness studies if the author(s) chose to include only randomized, double-blind, placebo controlled studies, or allocation concealment as inclusion criteria); for other types of studies alternative items will be relevant.	☐ Yes ☒ No ☐ Can't answer ☐ Not applicable
8. Was the scientific quality of the included studies used appropriately in formulating conclusions? The results of the methodological rigor and scientific quality should be considered in the analysis and the conclusions of the review, and explicitly stated in formulating recommendations.	☒ Yes ☐ No ☐ Can't answer ☐ Not applicable
9. Were the methods used to combine the findings of studies appropriate? For the pooled results, a test should be done to ensure the studies were combinable, to assess their homogeneity (i.e. Chi-squared test for homogeneity, I^2). If heterogeneity exists a random effects model should be used and/or the clinical appropriateness of combining should be taken into consideration (i.e. is it sensible to combine?).	☐ Yes ☐ No ☐ Can't answer ☒ Not applicable
10. Was the likelihood of publication bias assessed? An assessment of publication bias should include a combination of graphical aids (e.g., funnel plot, other available tests) and/or statistical tests (e.g., Egger regression test).	☐ Yes ☐ No ☐ Can't answer ☒ Not applicable
11. Was the conflict of interest stated? Potential sources of support should be clearly acknowledged in both the systematic review and the included studies.	☒ Yes ☐ No ☐ Can't answer ☐ Not applicable

(Shea et al., 2007, p. 5)

Appendix 2: PRISMA Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	p. 0
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	p. 3
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	pp. 4-7
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	pp. 10-12
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	pp. 21-23
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	pp. 16
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	pp. 16-20
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	pp. 13-24
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	pp. 22-24
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	pp. 28
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	pp. 28
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	pp. 22
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	--
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	--
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	--

Section and Topic	Item #	Checklist item	Location where item is reported
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	--
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	pp. 22-24
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	--
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	--
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	p. 102
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	--
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	p. 27
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	--
Study characteristics	17	Cite each included study and present its characteristics.	pp. 24-26
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	--
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	--
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	--
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	--
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	--
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	--
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	--
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	pp. 72-94
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	pp. 72-105

Section and Topic	Item #	Checklist item	Location where item is reported
	23b	Discuss any limitations of the evidence included in the review.	pp. 105-106
	23c	Discuss any limitations of the review processes used.	pp. 105-106
	23d	Discuss implications of the results for practice, policy, and future research.	pp. 106-107
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	--
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	--
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	--
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	p. 14
Competing interests	26	Declare any competing interests of review authors.	p. 14
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	Data extracted from included studies: pp. 29-70

(Page et al., 2021; PRISMA, 2021)

Affidavit

I hereby declare that I composed this work independently. Only sources and tools that are mentioned have been used. Moreover, I assure that I followed the universal principles of scientific work and publication stated in the guidelines of good scientific practice of the Carl von Ossietzky University of Oldenburg.

03.05.2022 Olaf Janßen