

COMPREHENSIVE REVIEW

# Overprotective parenting experiences and early maladaptive schemas in adolescence and adulthood: A systematic review and meta-analysis

Niki Yuen Fen Bruysters  | Pamela D. Pilkington

School of Behavioural and Health Sciences,  
Australian Catholic University, Sydney,  
Australia

**Correspondence**

Niki Yuen Fen Bruysters, School of  
Behavioural and Health Sciences, Australian  
Catholic University, Sydney, Australia.  
Email: [nikiyuenfen.bruysters@myacu.edu.au](mailto:nikiyuenfen.bruysters@myacu.edu.au)

**Abstract**

Young's schema model identifies overprotection as a type of childhood experience associated with early maladaptive schemas. This review evaluated the evidence base examining overprotective parenting as a predictor of schema endorsement in adolescence and adulthood. A systematic review and meta-analysis were conducted in accordance with the PRISMA guidelines, and registered on PROSPERO (CRD42021258990). PsycINFO, CINAHL and PubMed databases were searched on 5 June 2021 for eligible studies reporting original data on unadjusted association(s) between overprotective parenting and schema endorsement in samples with a mean age of 12 years or older. Studies were excluded if they were not in English or peer reviewed or participants were exposed to an intervention. Meta-analyses using Meta-Essentials software examined the relationship between maternal and paternal overprotective parenting with Young's 18 schemas. An adapted version of the Appraisal tool for Cross-Sectional Studies (AXIS) was used to assess methodological quality. A total of 16 articles were included. Based on 36 meta-analyses (Pooled  $N = 1,496$  to  $3,218$ ), several schemas demonstrated positive small correlations with maternal overprotective parenting (range:  $r = 0.15$ , 95% CI =  $0.10$ ,  $0.19$  [Entitlement] to  $r = 0.29$ , 95% CI =  $0.13$ ,  $0.43$  [Enmeshment]) and paternal overprotective parenting (range:  $r = 0.15$ , 95% CI =  $0.10$ ,  $0.20$  [Abandonment] to  $r = 0.24$ , 95% CI =  $0.10$ ,  $.36$  [Enmeshment]). Considerable heterogeneity was detected, but subgroup analyses were not significant. Overall, recollections of overprotective parenting experiences were primarily associated with schemas relating to disconnection and rejection, and impaired autonomy and performance. However, the literature has thus far relied on retrospective measures of parenting, and longitudinal research is needed to establish causality.

**KEYWORDS**

early maladaptive schemas, meta-analyses, overprotective parenting, systematic review

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## 1 | INTRODUCTION

Beck's (1991) Cognitive Theory broadly identified schemas, cognitive frameworks for the interpretation and organization of new information, as risk factors for psychopathology in adulthood. The Young et al. (2006) Schema Model elaborates on Beck's theory to identify early maladaptive schemas (herein referred to as schemas), defined as pervasive dysfunctional themes comprised of cognitions, memories, emotions and bodily sensations, regarding oneself and one's relationships with others (Young et al., 2006). Young identified 18 schemas grouped into four domains that categorize schemas based on the unmet emotional needs theorized to lead to their development (Bach et al., 2018). Schemas negatively influence how one interprets and responds to interpersonal experiences and are thus associated with the development and maintenance of mental illness (Barazandeh et al., 2016; Bishop et al., 2021; Maher et al., 2022; Young et al., 2006). Schema therapy seeks to treat chronic and pervasive mental disorders by modifying schemas and has been found to be effective in treating personality, affective and eating disorders (Masley et al., 2012; Peeters et al., 2021; Pugh, 2015; Taylor et al., 2017). Given the central role schemas play in the aetiology and maintenance of psychopathology (Bishop et al., 2021; Pugh, 2015; Taylor et al., 2017), it is important to identify the early experiences associated with schema formation. The current review examined the relationship between childhood experiences of overprotective parenting and schemas in adolescence and adulthood.

A core tenet of schema theory is that schemas originate in early parenting experiences. Repeated experiences of unmet core emotional needs, in interaction with the individual's temperament, culture and environment, are theorized to lead to the formation of schemas (Lockwood & Perris, 2012; Young et al., 2006). Young identified five core emotional needs: (1) secure attachment, (2) freedom to express emotions and needs, (3) realistic limits and self-control, (4) autonomy, competence, and identity and (5) spontaneity and play. Based on the unmet core emotional needs, Young et al. (2006) identified 18 schemas organized into four domains (Bach et al., 2018) summarized below (see appendix A of Bach et al., 2018, for full list of schemas and definitions).

The first domain, disconnection and rejection, encompasses schemas relating to the unmet need for secure attachment. For example, a child may develop an emotional deprivation schema (the expectation that one's emotional needs will not be met by others) if a parent is consistently distant and cold. Schemas in the second domain, impaired autonomy and performance, relate to inadequate internal limits regarding perceived ability to function independently, such as the enmeshment and undeveloped self-schema (excessive emotional involvement and closeness with one or more significant others at the expense of full individuation or normal social development). Schemas in this domain may develop if a child is not given freedom to develop their own autonomy and confidence. The third domain, excessive responsibility and standards, includes schemas that relate to internalized rules and expectations about one's performance. An example is the self-sacrifice schema (an excessive focus on voluntarily meeting the needs of others at the expense of one's own gratification), which

### Key practitioner message

- These meta-analytic findings support Young's Schema Model, which links childhood experiences of unmet needs with early maladaptive schema development in adolescence and adulthood.
- Recollections of maternal overprotective parenting showed small positive correlations with the following schemas: enmeshment, emotional deprivation, mistrust abuse, dependence incompetence, social isolation and alienation, abandonment and instability, failure to achieve, insufficient self-control and entitlement.
- Recollections of paternal overprotective parenting demonstrated small positive correlations with enmeshment, vulnerability to harm, mistrust and abuse, dependence incompetence, subjugation, approval seeking and abandonment schemas.
- Understanding that overprotective parenting is associated with schemas relating to the unmet need for secure attachment, healthy individuation and competence can inform both case conceptualization and treatment, as well as parenting and prevention efforts.

is theorized to develop because of limited spontaneity and play, due to obligations to others. The final domain is impaired limits, which encompasses schemas relating to a lack of realistic limits and self-control. For instance, the entitlement and grandiosity schema (the feeling that one is superior to other people, entitled to special rights and privileges or not bound by the rules of reciprocity that guide normal social interactions) may develop in children who are given too much freedom without limits or consequences.

Young identified four specific types of childhood adversity theorized to lead to schema formation (Young et al., 2006): (1) toxic frustration of needs (e.g., lack of love), (2) trauma and victimization (e.g., physical abuse), (3) overprotection and overindulgence and (4) selective internalization or identification (e.g., adopting and identifying with how a parent feels or behaves). These forms of maltreatment include physical abuse, emotional abuse and emotional neglect. A recent meta-analysis by Pilkington et al. (2020) examined the relationships between schema endorsement in adulthood and adverse childhood experiences relating to (1) toxic frustration of needs and (2) trauma and victimization. Schemas showed small to large correlations with emotional neglect, small to moderate correlations with emotional abuse and small correlations with physical neglect, physical abuse and sexual abuse. However, the Pilkington et al. (2020) meta-analysis did not examine the remaining two types of childhood adversity identified by Young. A scoping review of 14 studies on the effects of adverse early experiences in the context of Young's schema model by Lim and Barlas (2019) indicated that recollections of low care, high rejection, high overprotection and/or control and maladaptive parenting styles are implicated in depression in adulthood. The authors

highlighted the importance of considering the spectrum of parenting behaviours, including overprotectiveness, when investigating predictors of adult mental health outcomes in the context of Young's schema model (Lim & Barlas, 2019). Both Pilkington et al. (2020) and Lim and Barlas (2019) called for greater attention to the parental origins of the development of EMSs. Therefore, the current review sought to examine the third type of childhood adversity that looks at parental control, i.e., overprotection and overindulgence. The scope was limited to overprotective parenting, as to date no studies have examined overindulgent parenting as a predictor of schemas.

Yap et al. (2014, p. 11) defined overprotective parenting as parenting that interferes with 'children's age-normative autonomy and emotional independence and encouragement of excessive dependence on the parent'. Although overprotectiveness tends to involve the positive intention of maintaining one's child safety, the excessive focus on avoiding harm limits the child's opportunities for the development of healthy independence and psychosocial skills (Ungar, 2009). Overprotectiveness can reinforce avoidance and restrict opportunities for individuals to socialize and individuate, leading to increased vulnerability for psychological disorders, particularly anxiety (Betts et al., 2009; Gerull & Rapee, 2002; Schiffrin et al., 2019). Overprotection and overindulgence have also been identified to correlate with poor mental health in adulthood (Ungar, 2009). Meta-analyses have linked overprotective parenting with internalizing problems, depression and anxiety in childhood (Yap & Jorm, 2015) and adolescence (Yap et al., 2014), as well as psychopathology and attachment insecurity in adulthood (Kim et al., 2021).

Schemas in the Impaired Autonomy and Performance domain are theorized to be the most strongly associated with overprotective parenting, given that this domain encompasses schemas relating to the frustration of needs for independence, individuation and competence (Haugh et al., 2017). In particular, overprotective parenting is likely to contribute to schema development related to dependence on others, such as the vulnerability to harm schema (an exaggerated fear that imminent catastrophe will strike at any time, and that one will be unable to prevent it). This is consistent with research suggesting that children raised with overprotective caregivers may develop an external locus of control that can result in a perception of a 'dangerous world' and an inability to assess risk adequately (Lynch et al., 2002). Despite the theorized links between overprotective parenting and schema development, the status of the empirical support for this aetiological pathway has yet to be evaluated.

Existing literature has highlighted positive correlations between schemas and psychopathology. Maladaptive schemas are found to be related to anxiety disorders, eating disorders and personality disorders (Carter et al., 2013; Nadort et al., 2009; Pugh, 2015). Current research supports the relationship between depression and schemas. For instance, Bishop et al. (2021) concludes that individuals with social isolation or defectiveness and shame schemas reported higher levels of depression. Considering schemas are related to psychopathology and poor functioning, this justifies research into parenting styles and schemas in order to better comprehend aetiology and prevent potential psychopathology.

## 2 | THE CURRENT STUDY

The purpose of the present study was to meta-analyse the evidence on recollections of parental overprotective parenting in childhood and schemas in adolescence and adulthood, and review the current literature in the area. Both adolescent and adult samples were included as there is growing research suggesting that schemas are present by adolescence and are important predictors of psychopathology in this age group (Nicol et al., 2020). Previous reviews (Pilkington et al., 2020) have focused on the link between parenting behaviours such as recalled experiences of abuse and neglect and schemas but did not examine overprotective parenting. The current review differentiated between maternal and paternal overprotective parenting as previous research has shown gender differences in parenting (Brussoni & Olsen, 2013; Kwon et al., 2012). For example, the gender congruence theory stipulates that parents have a larger influence on same-gender children (Ruble et al., 2006). Improved understanding of the relationships between maternal and paternal overprotective parenting and schemas can inform case conceptualisation, guide therapeutic interventions and inform parenting and prevention programmes (Calvete et al., 2015; Louis et al., 2018).

## 3 | METHOD

A systematic review and meta-analysis of overprotective parenting in childhood and schema endorsement in adolescence and adulthood was completed in compliance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement (see Figure 1; see Appendix S1; Page et al., 2021). A protocol was registered on the PROSPERO register for systematic reviews (<https://www.crd.york.ac.uk/prospero/>, registration number: CRD42021258990).

### 3.1 | Information sources and search strategy

The Medline, PsycINFO and CINAHL electronic databases were searched on 5 June 2021 using the search string: (parent\* OR mother\* OR father\* OR paternal OR maternal) AND (schema\*). The search terms were limited to appear in the abstract and titles. The included articles from the initial screening were subsequently screened based on full text using Rayyan software (Ouzzani et al., 2016). The reference lists of included studies were hand searched and forward searches were completed using Web of Science on 31 July 2021.

### 3.2 | Eligibility criteria

#### 3.2.1 | Inclusion criteria

Included studies were required to fulfil the following criteria: (a) assessed experiences of overprotective parenting during childhood;

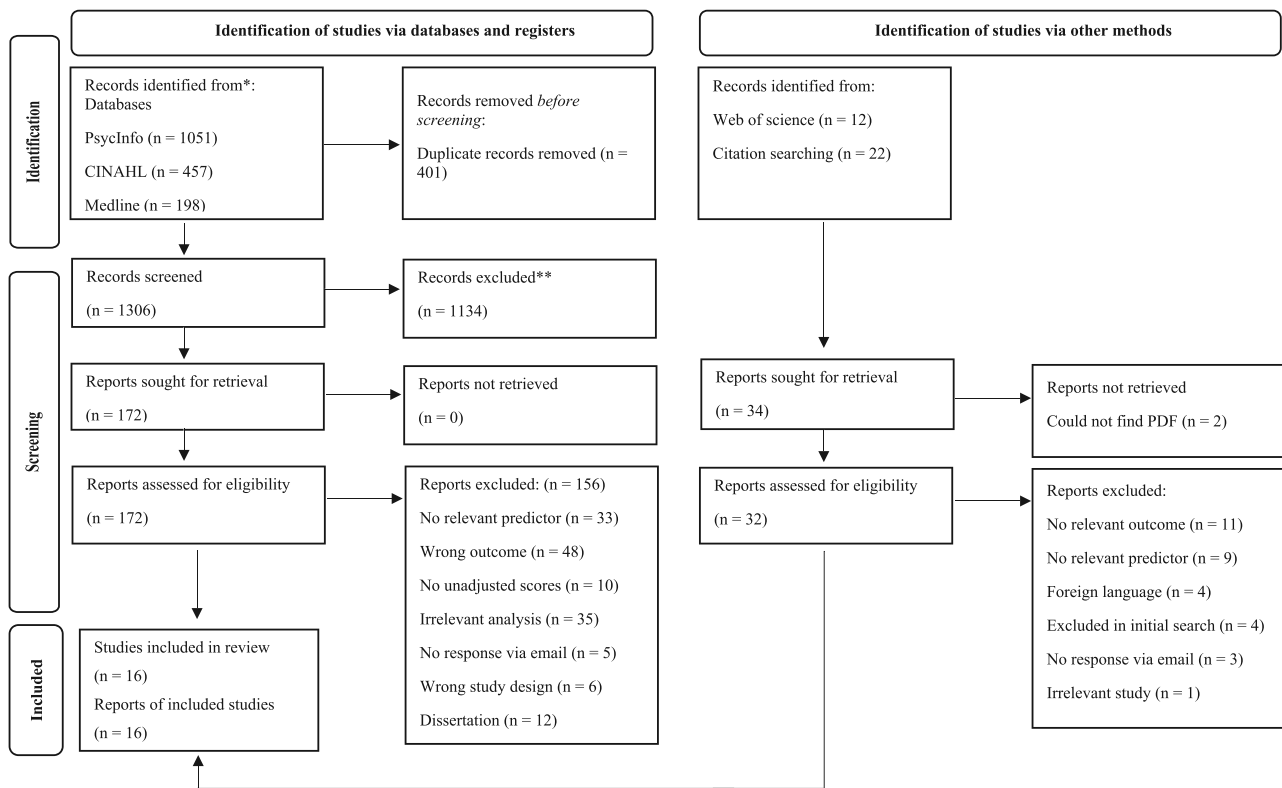


FIGURE 1 PRISMA 2020 flow diagram (Page et al., 2021)

TABLE 1 Measures and example items for overprotective parenting

Measure	Subscale	Example item
EMBU (Muris et al., 2003)	Overprotection	'Does your mother/father interfere in everything you do?'
PBI (Parker et al., 1979)	Control/overprotection	'Did not want me to grow up' 'Tried to control everything I did'
YPI (Young & Brown, 2005)	Controlling	'Controlled my life so that I had little freedom of choice'.
YPI (Young & Brown, 2005)	Overprotective	'Did too many things for me instead of letting me do things on my own'
YPI (Young & Brown, 2005)	Overprotection & Overindulgence factor	'Worried excessively that I would get hurt'. 'Treated me as if I was fragile'.
YPI (Young & Brown, 2005)	Dependence	'Made me feel I could not rely on my decisions or judgment'. 'Did too many things for me instead of letting me do things on my own'.

Abbreviations: EMBU, Egena Minnen Beträffande Uppfostran (My Memories of Upbringing); PBI, Parental Bonding Instrument; YPI, Young's Parenting Inventory.

(b) mean age of the sample was 12 years or older; (c) assessed one or more schemas using a version of the Young Schema Questionnaire (Young & Brown, 2005); (d) reported sufficient unadjusted data for the relationship between overprotective parenting and schemas; (e) published in a peer-reviewed journal and (f) employed a retrospective, longitudinal or cross-sectional study design. Measures were included if the scale or subscale measure corresponded with Yap et al. (2014) definition of overprotectiveness. See Table 1 for the measures used to assess overprotective parenting, with example items. One subscale, 'YPI Overprotection and Overindulgence', included items

relating to over-indulgent parenting but was included as most items related to over-protectiveness. The included measures investigated retrospective experiences individuals had with overprotective parenting during their childhood.

### 3.2.2 | Exclusion criteria

Studies were excluded if (a) original data were not reported; (b) the article was not in English; (c) the article was a case study or review

paper and (d) schemas or overprotective parenting was assessed following exposure to an intervention (e.g., parenting programmes or schema therapy).

### 3.3 | Data extraction and management

The initial screening was completed based on the title and abstract of articles identified by the search strategy using an online screening tool called Rayyan that was created by Ouzzani et al. (2016). Subsequently, the full text of those included articles was screened in compliance with eligibility criteria by the primary author. Data were extracted from included studies and stored in an Excel spreadsheet. Included full text data were independently extracted by both authors, and discrepancies were resolved through discussion. Basic descriptive information including sample size, gender composition (% female) and age group was extracted. Information on the study design, the overprotective parenting and schema measures, and the correlations between overprotective parenting and schemas were also extracted. The characteristics of all included studies were summarized in Table 3. A total of five authors were emailed regarding missing data. No responses were received prior to submission, and these articles were excluded from the review. None of the included studies shared data or samples; therefore, management of data interdependency was not necessary.

### 3.4 | Quality assessment

The quality of the studies was assessed using an adapted version of AXIS criteria (see Table 2; Downes et al., 2016). The AXIS was selected as it was developed by a Delphi panel, therefore increasing its reliability. Particular strengths include the tools transferability across disciplines due to its novel critical appraisals and its multimodal evidence approach that was used to develop the tool (Downes et al., 2016).

The tool was adapted for the current review. Specifically, question 9 was split into two items to ensure both the independent and dependent variable were evaluated. Further, items that lacked relevance to this review, such as sample size descriptions (e.g., Q4: 'Was the target/reference population clearly defined?') and

methodological descriptions (e.g., Q11: 'Were the methods sufficiently described to enable them to be repeated?'), were excluded. Additionally, items relating to the discussion (e.g., Q17: 'Were the authors discussions and conclusions justified by the results?' and Q18: 'Were the limitations of the study discussed?') were excluded as they lacked relevance. Quality assessment was completed for each included study with yes, no or unclear responses to the below questions (see Appendix S2).

### 3.5 | Synthesis methods: Planned meta-analysis

Separate meta-analyses were completed to examine the relationship between overprotective parenting during childhood and each of the 18 schemas in adulthood using the *Meta-Essentials* software (Suurmond et al., 2017). As heterogeneity was anticipated, a random-effects model was used for all analyses. The correlation coefficient, Pearson's  $r$ , was used as the summary effect size metric as it was the most reported statistic across the included articles. The online Practical Meta-Analysis Effect Size Calculator (Wilson, 2001; <https://www.campbellcollaboration.org/escalc/html/EffectSizeCalculator-R3.php>) was used to convert effect sizes other than correlation coefficients (<7% of the data), such as mean and standard deviation, into  $r$ . Effect sizes were not Fischer  $z$  transformed before they were averaged. Effect sizes were interpreted as small, medium or large using Cohen (1992) categories (0.1 is small, 0.3 medium and 0.5 large). Considering the volume of meta-analyses, only results of pooled effect sizes with confidence intervals with a lower bound of 0.10 or larger were considered to show an effect.

As considerable heterogeneity was expected, a random-effects model was used for all analyses. Heterogeneity was assessed using the  $I^2$  statistic to account for data dependency and unreliability. An  $I^2$  value of 0% indicates no observed heterogeneity, and higher values indicate greater heterogeneity. In accordance with Higgins et al. (2019), an  $I^2$  score greater than 75% was considered substantial. Subgroup analyses were conducted for results that had sufficient available studies (i.e.,  $\geq 10$  studies; Higgins et al., 2019). The subgroup analyses examined English-speaking countries versus non-English speaking countries as moderators.

For sensitivity analyses, outliers were determined if the 95% confidence interval for the primary study effect size did not overlap with the 95% confidence interval for the pooled effect size (Viechtbauer & Cheung, 2010). An outlier was identified between paternal overprotective parenting and the entitlement schema. A leave-out analysis (Viechtbauer & Cheung, 2010) was completed to calculate the pooled effect with the outlier omitted to identify influences to the results.

For certainty assessment, each meta-analysis was evaluated on confidence that the true effect size was similar to the estimated effect. Ratings for certainty were based on imprecision and inconsistency criteria taken from the Grading of Recommendations Assessment, Development and Evaluation (GRADE) guidelines. Regarding

**TABLE 2** Adapted version of Appraisal tool for Cross-Sectional Studies (AXIS)

Axis Q3	Is the sample size justified?
Axis Q6	Selection process likely to select participants that were representative?
Axis Q9a	Risk factor variables measured correctly?
Axis Q9b	Outcome variables measured correctly?
Axis Q13	Response rate raises concerns about non-response bias?
Axis Q14	Was information about non-responders described?

TABLE 3 Study characteristics of included studies

Author and year	Country	Sample type	Sample description	Overprotection measure	Schema measure	N	Age, years M (SD)	% female
Bach et al. (2018)	Denmark	Clinical and non-clinical combined	Psychiatric outpatients with personality disorder traits and individuals from the general community and college students	YPI-overprotection	YSQ-S3	850	28.93 (8.73)	80%
Bouvard et al. (2018)	France	Non-clinical	University student volunteers	EMBU-overprotection	YSQ-S3	432	20.63 (1.94)	78%
Carr and Francis (2010)	Australia	Non-clinical	University student volunteers	PBI-overprotection	YSQ-SF	178	27.18 (10.58)	66%
Estevez et al. (2016)	Spain	Non-clinical	Volunteers from Spain with history of childhood abuse and maltreatment	YPI-dependence	YSQ-SF	122	34.68 (8.92)	89%
Gibson and Francis (2019)	Australia	Non-clinical	Mother and daughter dyads	PBI-overprotection	YSQ-SF	57	26.28 (9.33)	100%
Hassija et al. (2018)	USA	Non-clinical	University student volunteers	PBI-overprotection	YSQ-SF	305	24.3 (7.6)	100%
Jalali et al. (2011)	Iran	Clinical	Opioid-dependent patients randomly selected from two rehabilitation centres	YPI-dependence	YSQ-S3	56	29.74 (NR)	0%
Jones et al. (2006)	UK	Clinical	Members of the Eating Disorder Association (EDA) with current diagnoses of eating disorders	EMBU-overprotection	YSQ-SF	66	32.52 (9.69)	100%
Keith et al. (2009)	Scotland	Clinical	Females with a current eating disorder diagnosis in recruited through a specialist outpatient eating disorder service and a national charity, the BEAT	PBI-overprotection	YSQ-SF	52	33 (10.6)	100%
Leung et al. (2000)	UK	Non-clinical (control group)	Women without eating disorders or other diagnoses	PBI-overprotection	YSQ-L3	23	26.1 (7.80)	100%
Leung et al. (2000)	UK	Clinical (bulimic group)	Women referred for psychological treatment at eating disorder clinic	PBI-overprotection	YSQ-L3	27	25.6 (5.13)	100%
Lewin et al. (2015)	USA	Non-clinical	University student volunteers	PBI-overprotection	YSQ-SF	222	22.13 (6.21)	51%

(Continues)

TABLE 3 (Continued)

Author and year	Country	Sample type	Sample description	Overprotection measure	Schema measure	N	Age, years M (SD)	% female
Louis et al. (2018)	USA	Non-clinical	Volunteers from non-governmental organisations, mainly university students	YPI-overprotection	YSQ-L3	214	43.41 (22.60)	NR
Messman-Moore and Coates (2007)	USA	Non-clinical	University student volunteers	PBI-overprotection	YSQ-SF	382	19.3 (3.4)	100%
Monirpoor et al. (2012)	Iran	Non-clinical	University student volunteers	PBI-overprotection	YSQ-SF	345	NR	63%
Sheffield et al. (2005)	UK	Non-clinical	University student volunteers	YPI-overprotection	YSQ-SF	160	24.5 (7.9)	84%
Turner et al. (2005)	UK	Clinical	Secondary school students	PBI-overprotection	YSQ-SF	23	17.6 (0.42)	100%
Turner et al. (2005)	UK	Non-clinical	Secondary school students	PBI-overprotection	YSQ-SF	23	17.7 (0.43)	100%

Abbreviations: EMBU, Egna Minnen Beträffande Uppfostran (My Memories of Upbringing); M, Mean; NR, not reported; PBI, Parental Bonding Instrument; SD, Standard Deviation; YPI, Young's Parenting Inventory; YSQ-L3, Young Schema Questionnaire-Long Version 3; YSQ-SF, Young Schema Questionnaire-Short Form; YSQ-S3, Young Schema Questionnaire-Short Version 3.

imprecision, results were downgraded if lower bounds of confidence intervals for pooled estimates were below 0.10 (Guyatt, Oxman, Kunz, Brozek, et al., 2011). In terms of inconsistency, results were deemed inconsistent if  $I^2$  was greater than 60% (Guyatt, Oxman, Kunz, Woodcock, et al., 2011; Higgins et al., 2019). Estimates were rated on whether they met criteria for imprecision or inconsistency or both (low = imprecision and inconsistency, medium = either imprecision or inconsistency and high = no imprecision or inconsistency).

## 4 | RESULTS

### 4.1 | Characteristics of included studies

A total of 16 studies were included in the meta-analyses. The included study characteristics are summarized in Table 3. Studies were published between the years 2000 to 2018. All studies utilized a retrospective measure to examine overprotective parenting ( $k = 16$ ). The pooled sample size was 6,518 participants (pooled  $N$  for each meta-analysis ranged from 1,496 to 3,218), and study sample sizes ranged from 23 to 850 participants ( $Mdn N = 141$ ). The mean age of the samples ranged from 17.6 ( $SD = 0.42$ ) to 43.4 years ( $SD = 22.6$ ). Of the 16 studies, 9 recruited female participants only, 1 study recruited males only and 7 studies recruited both genders (although most participants were still female). One study did not report the gender composition of the sample. Most participants were recruited from nonclinical samples, such as undergraduate university students ( $k = 8$ ), secondary school students ( $k = 2$ ) and mother-daughter dyads ( $k = 1$ ). There were five clinical samples included (eating disorders;  $k = 3$ , substance use dependence disorders;  $k = 1$ , personality disorders;  $k = 1$ ). Of the 16 studies, 4 were conducted in the USA, 4 in the UK, 2 in Australia, 2 in Iran and the remainder in Denmark ( $k = 1$ ), France ( $k = 1$ ), Scotland ( $k = 1$ ) and Spain ( $k = 1$ ). Most studies used either the PBI (Parker et al., 1979;  $k = 8$ ) or YPI (Young, 1994;  $k = 6$ ) to measure overprotection, while two studies used the EMBU-SF (Muris et al., 2003). All studies used a version of the YSQ to measure early maladaptive schemas.

### 4.2 | Quality assessment

Most studies had a representative group of participants; however, only three studies justified their sample sizes using power analyses. A few studies provided non-response information ( $k = 5$ ), but only two studies touched on the potential biases that non-responses may have. Ascertainment of overprotective parenting during childhood was assessed by all studies using validated measuring tools. All studies also used a validated version of the YSQ to assess schemas. Valid parenting measures were used by all studies (PBI, YPI and EMBU-SF). See Appendix S2 for quality assessment ratings based on AXIS (Downes et al., 2016).

**TABLE 4** Meta-analyses examining maternal and paternal overprotective parenting and early maladaptive schemas

Domain	Schema	Maternal overprotective parenting						Paternal overprotective parenting									
		<i>r</i>	95%CI	(%)	<i>k</i>	<i>N</i>	Imprecision	Inconsistency	Certainty	<i>r</i>	95% CI	<i>f</i> <sup>2</sup>	<i>k</i>	<i>N</i>	Imprecision	Inconsistency	Certainty
Disconnection and rejection																	
	Emotional deprivation	0.23	0.11, 0.34	82%	11	2,663	-1	-1	Medium	0.19	0.08, 0.29	79%	10	2,940	-1	-1	Low
	Social isolation and alienation	0.20	0.12, 0.27	50%	10	2,359	-1	-1	High	0.18	0.09, 0.26	62%	10	2,689	-1	-1	Low
	Emotional inhibition	0.16	0.06, 0.26	60%	8	2,102	-1	-1	Low	0.13	0.05, 0.21	63%	7	2,409	-1	-1	Low
	Defectiveness and shame	0.16	0.09, 0.22	41%	11	2,663	-1	-1	Medium	0.15	0.09, 0.21	47%	9	2,913	-1	-1	High
	Mistrust and abuse	0.22	0.14, 0.29	60%	12	2,968	-1	-1	Medium	0.19	0.13, 0.25	58%	10	3,218	-1	-1	High
Impaired autonomy and performance																	
	Dependence and incompetence	0.22	0.15, 0.29	37%	10	2,215	-1	-1	High	0.17	0.14, 0.21	0%	8	2,465	-1	-1	High
	Failure to achieve	0.18	0.11, 0.25	35%	10	2,281	-1	-1	High	0.12	0.04, 0.20	60%	8	2,531	-1	-1	Medium
	Subjugation	0.11	0.05, 0.18	33%	9	2,286	-1	-1	Medium	0.16	0.13, 0.20	0%	6	2,147	-1	-1	High
	Abandonment and instability	0.19	0.14, 0.23	17%	10	2,789	-1	-1	High	0.15	0.10, 0.20	34%	9	3,096	-1	-1	Medium
	Enmeshment	0.29	0.13, 0.43	79%	6	1,702	-1	-1	Medium	0.24	0.10, 0.36	76%	5	2,009	-1	-1	Medium
	Vulnerability to harm	0.18	0.09, 0.27	56%	10	2,281	-1	-1	Medium	0.19	0.13, 0.25	28%	9	2,597	-1	-1	High
Excessive responsibility and standards																	
	Self-sacrifice	0.16	0.06, 0.26	60%	8	2,102	-1	-1	Low	0.09	0.02, 0.16	41%	7	2,536	-1	-1	Medium
	Unrelenting standards	0.09	0.02, 0.16	27%	7	1,924	-1	-1	Medium	0.09	0.03, 0.15	12%	6	2,231	-1	-1	Medium

(Continues)



TABLE 4 (Continued)

Domain	Schema	Maternal overprotective parenting						Paternal overprotective parenting										
		$r$	95%CI	(%)	$k$	$N$	$I^2$	Imprecision	Inconsistency	Certainty	$r$	95%CI	$I^2$	$k$	$N$	Imprecision	Inconsistency	Certainty
Impaired limits	Entitlement	<b>0.15</b>	<b>0.10,</b> <b>0.19</b>	<b>0%</b>	<b>8</b>	<b>2,185</b>			High	0.12	0.07, 0.16	2%	7	2,492	-1			Medium
	Insufficient self-control	<b>0.18</b>	<b>0.11,</b> <b>0.25</b>	<b>46%</b>	<b>8</b>	<b>2,229</b>			High	0.14	0.06, 0.22	60%	7	2,536	-1	-1		Low
Unclassified	Negativity pessimism	0.17	0.08, 0.27	15%	4	1,553		-1	Medium	0.16	0.03, 0.29	28%	3	1,504	-1			Medium
	Punitiveness	0.11	0.01, 0.22	0%	3	1,496		-1	Medium	0.10	-0.13, 0.31	77%	3	1,504	-1	-1		Low
	Approval seeking	0.16	-0.04, 0.34	64%	3	1,496		-1	Low	<b>0.16</b>	<b>0.10,</b> <b>0.22</b>	<b>0%</b>	<b>3</b>	<b>1,504</b>				High

Note: Bold indicates that the lower bound of the confidence interval of the pooled effect size is 0.10 or greater.

### 4.3 | Overprotective parenting associated with early maladaptive schemas

A total of 36 meta-analyses were conducted to examine maternal and paternal overprotective parenting as risk factors for each of the 18 early maladaptive schemas (see Appendix S4 for primary study findings). Table 4 presents the pooled effect size  $r$  with 95% confidence intervals,  $I^2$ , number of primary studies ( $k$ ), pooled sample size for each meta-analysis and certainty assessment results. Significant pooled effect sizes with confidence intervals with a lower bound of 0.10 or larger are presented in bold in Table 4 and summarized below.

Maternal overprotective parenting showed small positive correlations with emotional deprivation, abandonment, mistrust abuse, social isolation, failure to achieve, dependence incompetence, enmeshment, insufficient self-control and entitlement schemas. The significant pooled effect sizes ranged from  $r = 0.15$  to  $r = 0.29$ . For maternal overprotective parenting, the emotional deprivation schema ( $I^2 = 82%$ ) and the enmeshment schema ( $I^2 = 79%$ ) showed substantial heterogeneity with  $I^2$  values above 75% (Higgins et al., 2019). Paternal overprotective parenting demonstrated small to medium positive correlations with abandonment, mistrust abuse, dependence incompetence, vulnerability to harm, enmeshment, subjugation and approval seeking schemas. The significant pooled effect sizes ranged from  $r = 0.15$  to  $r = 0.24$ . For paternal overprotective parenting, the emotional deprivation schema ( $I^2 = 79%$ ), the enmeshment schema ( $I^2 = 76%$ ), and the punitiveness schema ( $I^2 = 76%$ ) showed substantial heterogeneity with  $I^2$  values above 75% (Higgins et al., 2019).

### 4.4 | Sensitivity analyses

Sensitivity analyses examined the influence of correlations reported by primary studies that appeared to be outliers. An outlier was identified in the meta-analysis between paternal overprotection and the entitlement schema. A leave-out-analysis (Viechtbauer & Cheung, 2010) calculated the pooled effect with the outlier omitted and indicated that the outlier influenced the results (see Appendix S3). With the outlier included, the pooled effect was  $r = 0.09$  (95 CI = -0.05, 0.23). Without, the pooled effect  $r = 0.12$  (95 CI = 0.07, 0.16). Although the outlier being removed did not greatly change the pooled correlation, the confidence intervals became narrower, and the heterogeneity went from 70.3% to 1.5%. Therefore, the meta-analysis results for Table 4 excluded the outlier from calculations but are retained in Appendix S3 to allow for comparison.

## 5 | DISCUSSION

The foundation of schema theory is that experiences of unmet core emotional needs in childhood lead to early maladaptive schema development in adulthood (Young et al., 2006). This systematic review and

meta-analysis aimed to evaluate the empirical literature investigating retrospective experiences of overprotective parenting with schema endorsement in adolescence and adulthood. Although overprotective parenting may reflect well-intentioned efforts to keep a child safe, encouraging dependence on the parent frustrates a child's core emotional need for autonomy and independence and is thus associated with schema endorsement (Lockwood & Perris, 2012). Based on our conservative criteria for statistical significance (lower confidence limit  $> 0.1$ ), both recollections of maternal and paternal over-protective parenting were associated with the mistrust abuse, dependence incompetence, abandonment and enmeshment schemas. Recalled maternal over-protective parenting was also associated with emotional deprivation, social isolation and alienation, failure to achieve, entitlement and insufficient self-control. In contrast, recalled paternal overprotection was associated with the subjugation, vulnerability to harm and approval seeking schemas. All significant correlations were small in magnitude, ranging from  $r = 0.15$  to  $0.29$ . Although correlational, these results provide broad support for the Young et al. (2006) schema model. In conjunction with the meta-analyses completed by Pilkington et al. (2020), which indicated that emotional neglect and traumatization predict schema development, the results support the proposition that childhood adversity underpins schema formation.

As anticipated, overprotective parenting was associated with schema development within the impaired autonomy and performance domain. This suggests that overprotective parenting is primarily associated with schemas relating to the frustration of needs for autonomy and independence in childhood. In particular, overprotective parenting and the enmeshment schema represented the largest pooled effect sizes in the current review (maternal:  $r = 0.29$ , 95% CI = 0.13, 0.43; paternal:  $r = 0.24$ , 95% CI = 0.10, 0.36). It was unsurprising that the enmeshment schema had the strongest correlations given that overprotective parenting thwarts the need to freely explore and thus hinders a child's opportunity to develop a sense of self and agency (Yap et al., 2014). Consequently, this limits a child's opportunity to make their own decisions, assess risk and listen to internal cues as they learn to defer to another person to guide them. The enmeshment schema may be an important target for limited reparenting in schema therapy with clients presenting with a history of overprotective parenting (Kellogg & Young, 2006). Conversely, processing childhood experiences of being overprotected may also lead to schema healing.

Notably, overprotective parenting was also associated with schemas within the disconnection rejection domain. Specifically, maternal overprotective parenting demonstrated small, pooled correlations with emotional deprivation ( $r = 0.23$ , 95% CI = 0.11, 0.34), mistrust abuse ( $r = 0.22$ , 95% CI = 0.14, 0.29) and social isolation ( $r = 0.20$ , 95% CI = 0.12, 0.27), while paternal overprotective parenting demonstrated a small correlation with the mistrust abuse schema ( $r = 0.19$ , 95% CI = 0.13, 0.25). Interestingly, the emotional deprivation and social isolation schemas were also associated with toxic frustration of needs, and trauma and victimization (Pilkington et al., 2020). This suggests that schemas can develop from a various experiences of unmet core needs (Young et al., 2003). These results also highlight that overprotective parenting has potential implications for schemas

surrounding expectations for safety, nurturance, expression of feelings and social belonging, being consistently unmet. The mistrust abuse schema was the only schema within this domain to demonstrate correlations with both maternal and paternal overprotective parenting. This suggests that overprotective parenting may be associated with an expectation that people are manipulative. This may reflect that overprotective parenting contributes to a perception that the world and others are dangerous. Results also align with Spokas and Heimberg (2009) who found that children with overprotective caregivers were more likely to be apprehensive of social contexts and report a more external locus of control.

Overprotective parenting was unrelated to schemas in the excessive responsibility and standards domain (maternal overprotective parenting range:  $r = 0.09$ , 95% CI = 0.02, 0.16 to  $r = 0.16$ , 95% CI = 0.06, 0.26; paternal overprotective parenting range:  $r = 0.09$ , 95% CI = 0.02, 0.16; to  $r = 0.09$ , 95% CI = 0.03, 0.15). The minimal relationship identified with this domain might be explained by the enmeshment and the undeveloped-self schema association, whereby the individual is consistently looking outwards to authority or parental figures to guide their own behaviour instead of inwards (Ungar, 2009). Alternatively, depending on an individual's culture, roles of the family may be more strongly emphasized over individual or social expectations. For instance, parents as an authority figure may be perceived as more important in collectivist cultures compared to individualistic cultures (Kemmelmeyer et al., 2003). However, it is important to acknowledge the considerable heterogeneity of results and that a possible relationship between overprotective parenting and the excessive responsibility and standards domain was not identified due to a lack of available data. These potential explanations warrant further research.

Schemas within the impaired limits domain showed differences in their relationships with maternal and paternal overprotective parenting. Maternal overprotective parenting demonstrated small correlations with entitlement ( $r = 0.15$ , 95% CI = 0.10, 0.19) and insufficient self-control ( $r = 0.18$ , 95% CI = 0.11, 0.25). In contrast, paternal overprotective parenting was correlated with approval-seeking ( $r = 0.16$ , 95% CI = 0.10, 0.22) and was unrelated to entitlement ( $r = 0.12$ , 95% CI = 0.07, 0.16) and insufficient self-control ( $r = 0.14$ , 95% CI = 0.06, 0.22). A reason for these differences could be related to stereotypical roles of mothers as more nurturing and validating, versus fathers as more authoritarian and absent (Gerull & Rapee, 2002). A study conducted by Peyper et al. (2015) found that daughters with absent fathers developed an increased desire to seek approval and attention from their fathers in order to feel worthy. However, it is important to consider that only three studies were included in the meta-analysis investigating approval seeking due to limited data. Future research is needed to clarify the nature of the relationship between overprotective parenting and schemas in the impaired limits domain, and the potential role of gender differences.

Maternal overprotective parenting represented larger magnitudes of correlations with more schemas compared to paternal overprotective parenting. These findings align with previous studies proposing differences between maternal and paternal overprotective parenting (Brussoni & Olsen, 2013). Results also support arguments made by

Kwon et al. (2012), whereby fathers are reportedly less involved in a child's upbringing compared to mothers in terms of time spent with the child. A potential explanation of these results could be related to differences found between fathers and mothers regarding spontaneity and play (Majdandžić et al., 2016). Particularly, fathers are more likely to tease their children, play rough and encourage risk taking behaviours compared to mothers who adopt a more protective and nurturing perspective (Gerull & Rapee, 2002; Majdandžić et al., 2016). Moreover, studies included in this review did not investigate non-heteronormative family constellations, such as single parent homes or having two mothers per home. The differences between maternal and paternal forms of overprotective parenting, as well as investigating non-heteronormative family structures, warrant further research in association with schema formation.

Another limitation to this review is the lack of clarity regarding how the overprotective measure was assessed across the included studies. It is unclear whether each individual reported previous childhood experiences of overprotective parenting with one or both parents. Having one or two overprotective parents may be another avenue for research, clarifying whether two overprotective parents would increase schema development or whether one parent could be a potential protective factor that buffers against the development of schemas. Future research should investigate the differences between presence of two overprotective parents versus one.

## 5.1 | Strengths and limitations

This review was completed in accordance with the PRISMA statement (Page et al., 2021), which follows a structured methodical approach for screening and data extraction. Additionally, the primary data enabled us to separately examine maternal and paternal parenting as predictors of schemas. Future research should seek to differentiate the sources of overprotective parenting to account for potential variances. However, the findings of this review need to be interpreted in the context of several limitations. For instance, full text articles were screened by a single author, leaving room for human error and bias. Furthermore, relevant studies were potentially omitted from the screening process as articles in languages other than English were excluded. However, this decision was justified based on evidence that translating articles into English for the purpose of reviews is time consuming and prone to error (Balk et al., 2013).

Most meta-analyses portrayed moderate to substantial heterogeneity, indicating large variations between results. Louis et al. (2018) argue that the severity of schemas and the degree of thwarted core needs greatly depend on a child's temperament, their cultural background, environment and the relationship a child has with their parent. Although subgroup analyses identified nil significant moderation effects for language, potential moderators such as age, gender, type of parenting measure or YSQ version were unable to be completed due to insufficient data. Given that Young et al. (2003) argues that a child's temperament and other biopsychosocial factors are likely to impact schema formulation, further research is needed into potential

mediators of the relationship between overprotective parenting and schemas in adolescence and adulthood. For example, future studies could investigate the implications of overprotective parenting between clinical and non-clinical sample types or assess possible discrepancies between the utilization of parenting measures and YSQ versions. Generally, future research should consider examining potential moderators between experiences of overprotective parenting and schemas.

Although this review investigated overprotective parenting, it has neglected to examine the fourth adverse childhood experience categorized by Young et al. (2006), selective internalization or identification. Growing research has found implications between both positive and negative parenting practices, highlighting a need to continue building the empirical support that investigates parenting and schemas (Lockwood & Perris, 2012; Louis et al., 2018). Furthermore, the current review was unable to examine overindulgent parenting due to the limited empirical evidence available. Future research should also investigate overindulgence and its implications on schemas once more primary studies have been completed. Finally, another area of focus should examine the impact of multiple experiences of adversity and their cumulative effect on schemas (Pilkington et al., 2020). This research could provide a more comprehensive test of the Young et al. (2006) schema model by building upon the understanding of moderating roles between schemas, childhood adversity and parenting.

All included studies assessed overprotective parenting using retrospective measures. This required participants to recall previous memories of their upbringing. Memory biases may have influenced recall of overprotective experiences. For example, there is a likelihood participants may have over-reported and recalled events that did not happen. Conversely, participants may also have underreported experiences of overprotectiveness because of shame or embarrassment. It is possible that the observed small correlations may be due to shared method variance, given that all included studies in the meta-analysis assessed schemas and overprotective parenting via self-report inventories. This highlights a need for more longitudinal studies to establish temporal causality. Benefits of utilizing a longitudinal design would limit recall biases dependent on mood and current circumstances (Roemmele & Messman-Moore, 2011). Moreover, longitudinal designs may also examine potential differences between overprotective parenting at different developmental stages of life (Pilkington et al., 2020). The employment of more longitudinal designs would aid in bettering the understanding of the influence childhood experiences have at different life points. Despite this, a review of studies examining adult memories of early parenting suggests that such recall is adequately reliable and consistent; thus, findings from this review are still informative of the relationship between overprotective parenting and schemas (Brewin et al., 1993).

Another potential limitation is that the correlations in our meta-analyses were not adjusted for the unreliability of the variables. Zhang (2021) recommended that meta-analyses with continuous variables should correct for coefficient alpha to obtain an accurate mean effect size estimate, corrected for measurement error. However, *Meta-*

*Essentials* does not provide this functionality, adjusting effect sizes upwards can lead to unjustifiably large mean effect sizes, and not all included studies reported on the reliability of their measures Lipsey and Wilson (2001). Therefore, we decided to present the unadjusted effect sizes based on the observed associations, rather than adjusted effect sizes that represent hypothetical ideal values.

The findings of this review lead to implications for parenting programmes and highlight areas for future research. This review highlights the importance for early intervention parenting programmes to inform parents of the implications their parenting has on their children. The Louis et al. (2021) Good Enough Parenting Program is an example of a parenting program targeted to prevent the development of psychopathology by intervening with initial parenting experiences. Results from this review can help inform parenting programmes surrounding the implications of overprotective parenting specifically. Similarly, these findings may also implicate individual treatment by informing practitioners of aspects to identify during assessment of clients with reported childhood experiences of overprotection. Furthermore, these results can help guide clinicians conducting imagery rescripting and chair work with their clients. These findings emphasize the importance to address experiences of being over-protected by parents to better target schemas relating to the disconnection and rejection, or impaired autonomy and performance domains in imagery rescripting and chair work. Moreover, having a more targeted treatment of less acute experiences in comparison to overt abuse and neglect can weaken schemas and provide relief for an individual.

Future research should seek to improve generalisability of the current evidence base. A large proportion of the participant samples for this review were female and were recruited from a university student sample in western countries. Future studies should seek to recruit gender-balanced samples as the style and influence of parenting differs between genders (Brussoni & Olsen, 2013; Ruble et al., 2006). Moreover, cultural interpretations of what overprotective parenting is may lead to inconsistencies within the data of this review. For instance, a collectivist culture may interpret overprotective parenting as the norm and not report it as an adverse experience, whereas individualistic cultures may find the experiences more influential. Given that previous literature has identified potential gender and cultural differences regarding the influences of parenting, ongoing research should aim to examine the implications of overprotective parenting on broader sampling pools (Brussoni & Olsen, 2013; Kwon et al., 2012).

## 6 | CONCLUSION

In conclusion, this review synthesizes the current evidence on early childhood experiences of overprotective parenting and schemas in adolescents and adulthood. Overall, the literature broadly supports Young et al.'s (2006) proposition that experiences of overprotective parenting are associated with schemas with small magnitude of effects, although longitudinal studies are needed to establish causality. Both maternal and paternal overprotective parenting was most

strongly associated with schemas in the impaired autonomy and performance domain with small correlational data, particularly with the enmeshment schema. The findings provide empirical support for the Young et al. (2006) schema model but also highlighted clear small correlational associations between overprotective parenting and schemas in the disconnection and rejection domain, particularly with mistrust and abuse, and emotional deprivation schemas. Findings also suggested that there are differences in how maternal and paternal overprotective parenting relate to schema endorsement, and this warrants further exploration. The increased awareness of implications of overprotective parenting can inform parenting programmes, schema therapy and prevention efforts.

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## CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

## AUTHOR CONTRIBUTIONS

Pam Pilkington had the idea for the article. Niki Bruysters performed the literature search and meta-analyses. All authors contributed to the design of the review (e.g., inclusion and exclusion criteria). Data extraction (i.e., double extraction) was completed by Pam Pilkington. The first draft of the manuscript was written by Niki Bruysters, and Pam Pilkington commented on drafts. Both authors read and approved the final manuscript.

## DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analysed in this study.

## ORCID

Niki Yuen Fen Bruysters  <https://orcid.org/0000-0002-2800-7154>

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## SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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