

## **Parenting Factors and Emotion Regulation among Asian Adolescents: A Systematic Review**

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### **Abstract**

Parenting is a culturally specific task which is believed to influence the development of adolescents' emotion regulation. The present study aims to explore the parenting factors that are associated with emotion regulation among Asian adolescents. Employing the PRISMA guideline, this study conducted systematic research from Scopus, Web of Science and PubMed databases, covering articles that report on parenting factors associated with emotion regulation among Asian adolescents. Using the AXIS tool to appraise the quality of the articles, a total of 29 articles were selected. The thematic synthesis found that there are three major themes of parenting factors that influence Asian adolescents' emotion regulation, which are observational learning, parenting practices, and the emotional climate of the family. Specifically, parents' reaction, attachment, and parent-adolescent relationship were associated with both emotion regulation as well as emotion dysregulation. Positive parenting was observed to be associated with emotion regulation only, but negative parenting was related to emotion dysregulation. Studies found that attachment and parent-adolescent relationship were unrelated to expressive suppression. Future studies need to examine the effects of observational learning, parental control, and parenting styles on adolescent's emotion regulation due to limited and inconsistent findings. This study will enlighten researchers on parenting factors that directly and indirectly shape the ways Asian adolescents regulate their emotions.

**Keywords:** Parenting, Emotion Regulation, Adolescent, Cultures, Systematic Review

**Introduction**

Emotion regulation refers to the ability of an individual to modulate and express both positive and negative emotions in adaptive ways (Gross, 1998; Thompson, 1994). The purpose of regulating emotion is to enhance, reduce, or maintain the emotions based on personal needs or motivation (Aldao, 2013). This process also helps individuals to express their emotions in a social manner (Eisenberg et al., 2010). The common strategies used to regulate emotions are cognitive reappraisal and emotion suppression (Gross, 1998), and other strategies were later introduced such as self-blame, acceptance, and rumination (Garnefski et al., 2001). Numerous studies found that regulating emotions effectively are associated with positive well-being (Kobylińska & Kusev, 2019) and low risk of mental health problems (Sloan et al., 2017; Aldao et al., , 2010). However, experiencing emotion dysregulation such as using maladaptive strategies will interfere with social, cognitive, interpersonal functioning, and daily goal-directed behaviors (Badayai et al., 2019). Cole et al. (2017) suggested that there are four components of dysregulated emotion which are (1) persistent emotion with ineffective regulatory attempts; (2) emotions that impair appropriate behavior; (3) expressed emotions inappropriate to social context; or (4) rapid or slow change of emotions.

Adolescence is known as a vulnerable stage which encompasses various physical, cognitive, and emotional changes (Casey et al., 2010). Physical change includes the increased size of amygdala which is associated with making impulsive decisions and carrying out high-risk activities (Rosenfield et al., 2009). Meanwhile, social changes involve academic pressures (Pascoe et al., 2020), increasing importance of peer relationships (Sawyer et al., 2012), and reduced dependence on family support (Zaimah et al., 2021). At the same time, they are likely to experience intense and fluctuating positive and negative emotions (McLaughlin et al., 2015). Given their increased independence and new environmental demands, they require a particular need to cope and regulate themselves. Unable to cope with such challenges, adolescents have difficulties regulating their emotions (Darmadi & Badayai, 2021), experiencing internalizing symptoms (Durbeej et al., 2019) and risk of delinquent behaviors (Murad et al., 2020).

To ensure that emotions can be regulated adaptively, adolescents need to have internal and external resources of emotion regulation (Morris et al., 2017). Internal resources refer to cognitive abilities and capacities such as the ability to use reappraisal strategy to manage emotions. Meanwhile, the external resources refer to external support such as that from parents and peers that can assist them in managing their emotions. It is believed that adolescents have limited cognitive capacities (Caballero & Tseng, 2016), therefore they may require parents to guide them in regulating their emotions (Morris et al., 2017).

According to the Tripartite Model, parents shape adolescents' development of emotion regulation in three ways (Morris et al., 2007). First, adolescents learn to regulate their emotions by observing their parents. The observational learning might occur through modeling, social referencing, and social contagion (Eisenberg & Morris, 2002). Since the stage of infancy when they rely most on their parents, adolescents unconsciously learn and mimic their parents' behaviors (Bandura, 1973). The learning occurs when adolescents have less information on how to respond to a new and unfamiliar situation (Morris et al., 2007). Adolescents look for emotional and behavioral cues from their parents as guidance to identify which emotions are acceptable and expected for them to express. Therefore, parents' own emotional profiles indirectly teach adolescents how to regulate their emotions (Morris et al., 2007).

Second, adolescents learn to regulate their emotions through specific parenting practices. Utilizing the Heuristic Model of emotion socialization (Eisenberg et al., 1998), the parenting practices involve parents directly teaching adolescents about emotions and emotion regulation. For example, parents help adolescents to recognize their emotions and to solve their emotion-elicited problems (Morris et al., 2017). These positive parenting practices have a significant impact on adolescents' emotions, where parents directly coach them to regulate emotion by using specific skills and strategies. Further, this model suggests that parents who react positively towards adolescents' emotional state, such as encouraging emotional expression and embracing their emotions, will also shape adolescents' emotion regulation. In contrast, parents who ignore and minimize adolescents' emotions will cause adolescents to feel insecure about their emotions and be unable to regulate their emotions successfully (Morris et al., 2017).

Third, the development of adolescents' emotion regulation is affected by the emotional climate of the family. Emotional climate reflects the quality of parent-child relationship, the parenting style, and family expressiveness. For example, adolescents feel emotionally safe at home when their parents respond appropriately to their emotions by being warm, nurturing, and accepting of their needs and feelings. In addition, parents who consistently respond to adolescents' emotions will eventually provide a schema for adolescents to regulate their emotions independently (Bowlby, 1969) as well as to cope with life challenges (Morris et al., 2017). However, adolescents that grow in hostile, overly controlled and unpredictable environments may react negatively (Chong et al., 2014), lack self-control or be emotionally blunted (Morris et al., 2007).

The model also highlights the importance of parents' beliefs and expectations regarding emotion regulation. Parents' beliefs and expectations are culturally specific and they may have different socialization goals in bringing up their children (Eisenberg et al., 1998). For example, parents in collectivist cultures value harmonious relationships with others (Matsumoto et al. 2008) and cultivate ingrained family values (Chao & Tseng, 2002). Children are expected to respect others and exert self-control (Chao & Tseng, 2002). These values eventually dictate the way parents react, respond, and behave towards their adolescents' behaviors and emotions. Eventually, parents shape adolescents' emotion regulation based on what is considered to be socially desirable. As Lim (2016) suggested, emotional suppression is a common emotion regulation strategy used among collectivistic societies.

Furthermore, these two models also suggests that the adolescents' characteristics, such as the gender, affects parents' response towards them. Gender indirectly influences parents' expectations and behaviors towards their children's emotions (McKinney & Renk, 2008; Morris et al., 2007; Eisenberg et al., 1998). Parents would expect boys to display certain types and intensity of emotion which are different from girls (Morris et al., 2007). Parents may also teach boys specific strategies of emotion regulation that are distinct from girls (Morris et al., 2007). Studies also suggest that both boys and girls expect different reactions from their parents (Dou et al., 2020) in helping them regulate their emotions. Thus, parenting behaviors may differ according to their children's gender and this may impact emotion regulation in boys and girls in different ways.

### **The Present Study**

The Tripartite Model has provided us a framework to understand the contribution of parenting behaviors on adolescents' emotion regulation. It is debatable, however, parents of

Asian countries which practice collectivistic values may have different parenting attitudes from parents of Western countries which in turn influence different development of adolescents' emotion regulation. Eisenberg et al. (1998) argued that despite the positive modes of parental socialization behavior and the desirable consequences of the socialization of emotion, it is still difficult to arrive at a reasonable conclusion due to the different goals of emotional socialization across cultures. Therefore, the aim of this study is to conduct a systematic literature review on previous studies to identify parenting factors that are associated with emotion regulation among Asian adolescents. Findings from this study may be useful to understand the nature of emotion regulation specifically among Asian adolescents. Two research questions were developed for this systematic review: (1) What are the parenting factors related to emotion regulation among Asian adolescents? and (2) Does the gender of adolescents moderate the relationship between parenting factors and development of emotion regulation among Asian adolescents?

## Methods

### Materials

The Preferred Reported Items for Systematic Reviews and Meta Analyses (PRISMA; Page et al., 2021) was used as a guideline to conduct a systematic search, data extraction, and analysis (see Figure 1). As an appraisal for article eligibility, the author used the Appraisal tool for Cross-Sectional Studies (AXIS) as a guideline (Downes et al., 2016). The study reviews the chosen articles qualitatively to identify the parenting factors and the moderation effect of adolescents' gender.

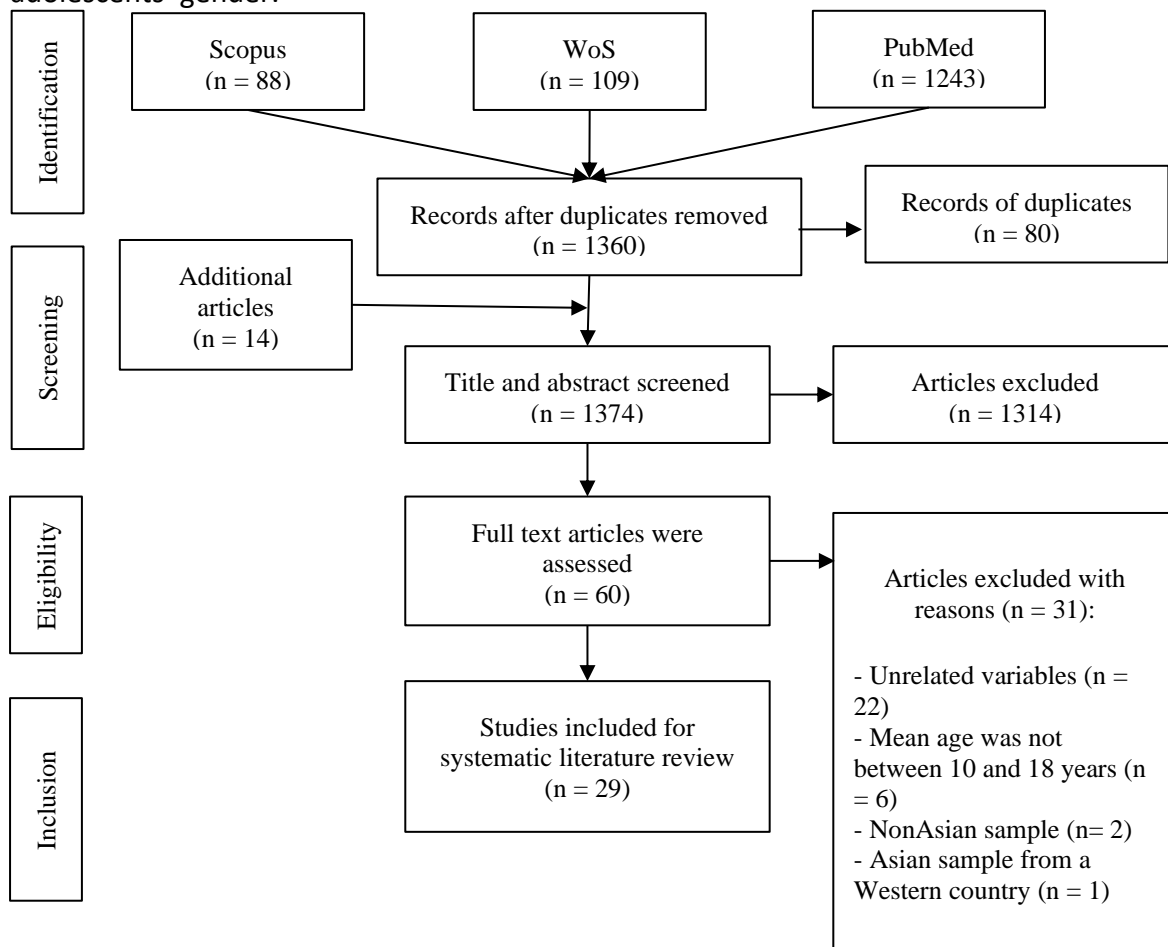


Fig 1 PRISMA Flow Diagram

### Search strategy

The first stage of the selection process involved identification. Four terms were generated based on the research questions, namely parent, adolescent, emotion regulation, and Asian. The author identified similar terms from the thesaurus and keywords from previous studies to create multiple and diverse terms. Articles related to the terms were retrieved from Scopus, Web of Science (WOS), and PubMed databases in April 2022. The search strings on each database are listed out in Table 1. The results of our searches returned with 1440 articles in total, such that 88 articles were from Scopus, 109 articles were from WOS, and 1243 articles were from PubMed.

Table 1

Search strings used in retrieving articles from Scopus, WOS and PubMed

Scopus	TITLE-ABS-KEY ( ( "emotion regulation*" OR "emotion dysregulation*" OR "emotion* adjustment" ) AND ( "youngster*" OR "youth" OR "teenager*" OR "adolescen*" OR "teen*" ) AND ( "parent\$" OR "parent\$ attitude*" OR "parent adolescent relation\$" OR "parent\$ socialization" OR "father" OR "mother" OR "paternal" OR "maternal" ) AND ( "Asian" OR "Collectivist" OR "Culture" OR "Chin\$" OR "Japan\$" OR "Indonesia*" OR "Pakistan\$" OR "Bangladesh*" OR "Philippin\$" OR "Vietnam\$" OR "Turk\$" OR "Iran\$" OR "Thai\$" OR "Myanmar" OR "Burmese" OR "South Korea" OR "Korean*" OR "Iraq*" OR "Afghan\$" OR "Saudi Arabia" OR "Saudi*" OR "Uzbekistan*" OR "Malaysia*" OR "Yemen*" OR "Nepal\$" OR "North Korea" OR "Syria*" OR "Cambodia" OR "Khmer" OR "Jordan*" OR "Azerbaijan*" OR "Tajikistan*" OR "Israel\$" OR "Lao\$" OR "Leban\$" OR "Kyrgyzstan\$" OR "Turkmenistan\$" OR "Singapore\$" OR "Oman" OR "Palestin\$" OR "Kuwait*" OR "Georgia*" OR "Mongolia*" OR "Armenia*" OR "Qatar*" OR "Bahrain*" OR "Timor-Leste" OR "Timorese" OR "Cypr\$" OR "Bhutan\$" OR "Maldive*" OR "Brune\$" OR "Taiwan\$" OR "Hong Kong" OR "Maca\$" ) )
WOS	TS=( ( "emotion regulation*" OR "emotion dysregulation*" OR "emotion* adjustment" ) AND ( "youngster*" OR "youth" OR "teenager*" OR "adolescen*" OR "teen*" ) AND ( "parent\$" OR "parent\$ attitude*" OR "parent adolescent relation\$" OR "parent\$ socialization" OR "father" OR "mother" OR "paternal" OR "maternal" ) AND ( "Asian" OR "Collectivist" OR "Culture" OR "Chin\$" OR "Japan\$" OR "Indonesia*" OR "Pakistan\$" OR "Bangladesh*" OR "Philippin\$" OR "Vietnam\$" OR "Turk\$" OR "Iran\$" OR "Thai\$" OR "Myanmar" OR "Burmese" OR "South Korea" OR "Korean*" OR "Iraq*" OR "Afghan\$" OR "Saudi Arabia" OR "Saudi*" OR "Uzbekistan*" OR "Malaysia*" OR "Yemen*" OR "Nepal\$" OR "North Korea" OR "Syria*" OR "Cambodia" OR "Khmer" OR "Jordan*" OR "Azerbaijan*" OR "Tajikistan*" OR "Israel\$" OR "Lao\$" OR "Leban\$" OR "Kyrgyzstan\$" OR "Turkmenistan\$" OR "Singapore\$" OR "Oman" OR "Palestin\$" OR "Kuwait*" OR "Georgia*" OR "Mongolia*" OR "Armenia*" OR "Qatar*" OR "Bahrain*" OR "Timor-Leste" OR "Timorese" OR "Cypr\$" OR "Bhutan\$" OR "Maldive*" OR "Brune\$" OR "Taiwan\$" OR "Hong Kong" OR "Maca\$" ) )
PubMed	((emotion regulation OR emotion dysregulation) AND (youngster OR youth OR teenager OR adolescent OR teen)) AND (parent OR parent attitude OR parent adolescent relationship OR parental socialization OR father OR mother OR paternal

OR maternal)) AND (Asian OR Collectivist OR Culture OR China OR Chinese OR Japan OR Japanese OR Indonesia OR Indonesian OR Pakistan OR Bangladesh OR Philippines OR Vietnam OR Turkey OR Iran OR Thailand OR Thai OR Myanmar OR Burmese OR Korea OR Korean OR Iraq OR Afghanistan OR Saudi OR Uzbekistan\* OR Malaysia OR Yemen OR Nepal OR Syria OR Syrian OR Cambodia OR Khmer OR Jordan OR Azerbaijan OR Tajikistan OR Israel OR Laos OR Lebanon OR Kyrgyzstan OR Turkmenistan OR Singapore OR Oman OR Palestin OR Kuwait OR Georgia OR Mongolia OR Armenia OR Qatar OR Bahrain OR Timor-Leste OR Timorese OR Cyprus OR Bhutan OR Maldives OR Brunei OR Taiwan OR Hong Kong OR Macao))

### Screening

All the articles from the identification stage were screened to remove duplicate articles. As a result, 80 articles were removed. The remaining 1360 articles were then screened based on certain inclusion and exclusion criteria. This was done by examining the titles and abstracts to ensure that they will meet the criteria and fulfill the objective of this study. The inclusion criteria were: (1) journal articles; (2) articles that focus on parenting and parental factors and their relation to emotion regulation in adolescents; (3) published in English; (4) studies that recruited Asian samples from Asian countries; and (5) studies that recruited adolescents with mean age of between 10 to 18 years old. The authors did not put a restriction on the publication year due to a smaller number of articles retrieved during the identification stage. The summary of inclusion and exclusion criteria are as set out in Table 2. Fourteen articles were added after searching through the references list of included articles. Based on the criteria stated, a total of 1314 articles were excluded.

Table 2  
Inclusion and Exclusion Criteria

Criterion	Inclusion Criteria	Exclusion Criteria
Literature Type	Journal Article	Systematic review, meta-analytic review, grey literature, chapter in book, book, conference proceedings
Language	English	Non-English
Study Focus	Parenting factors and emotion regulation in adolescents	Not focused on parenting factors and emotion regulation in adolescents
Sample	Asian	Non-Asian or Asian that reside in Western country
Participants	Mean age between 10 – 18 years old	Less than 10 years old or more than 18 years old

### Eligibility

The author reviewed the methodology and results to ensure that the remaining 60 articles met the stated inclusion criteria. As a result, 31 articles were excluded as the mean age of the participants were not between 10 to 18 years, the variables were unrelated to parental and emotion regulation, the sample was a non-Asian sample or a sample of Asians who do not reside in Asian countries. In addition, the quality of each article was appraised using 20 items of AXIS tool. Based on each item, each study was evaluated and left blank ( ) if



it satisfactorily met a criterion, a cross sign (X) if it did not meet the criterion, and a 'NR' if it was not reported. The articles were defined as "good", "fair", or "poor" according to the number of "( )" and "NR" in the evaluation from above 75%, 74%-25%, and below 24% respectively (refer to Table 3). The "poor" articles will be removed at this stage. Based on the quality analysis, all the articles were rated as "good" except two articles were rated as "fair", therefore, none of the articles were excluded due to a "poor" quality. The detailed quality appraisal for each study is presented in the Supplementary material Table S1.

### **Data Extraction & Analysis**

The remaining 30 articles underwent data extraction and analysis phase. In the first phase, the following data were extracted from each article: nationality/country, sample description, study design, parenting assessment, and emotion regulation assessment. A similar extraction process was done on studies that contained mixed samples where the authors only extracted Asian sample related data. Besides that, the main results that answer our research question and the potential gender of adolescents as the moderator were also extracted. In the second phase, thematic analysis of the main results was carried out by thematically grouping them according to the Asian region, and applying the Tripartite model as well as the Heuristic model. To ensure that the main results were appropriately assigned to each theme and subtheme (i.e., main factors and subfactors of parenting), the author read the definition of measured factors and ensured that the author understood the function of measurement tools used in the articles.

## **Results**

### **General Findings**

The chosen articles were published between 2009 to 2022. There was one article published in each of the years 2009 and 2022; two articles were published in each of the years 2012 and 2016; three articles were published in 2017; four articles were published in each of the years 2013 and 2020; five articles were published in each of the years 2019 and 2021; seven articles were published in 2018 and none were published in 2010, 2011, 2014, and 2015. The studies had been conducted in 11 different countries, most of them were from China (37%) followed by India and Korea (each 11%), Iran and Turkey (each 8%), Hong Kong (5%), and others (14%). In general, there were articles from East Asia, South Asia, West Asia, and Southeast Asia (has a result for moderator only) and none of the articles were from Central Asia. The respondents for parental measurement were varied which includes the parent representative (father or mother), both parents, mothers only, students, and an experimenter. Meanwhile, the respondents for emotion regulation measurements were all adolescents except for one study where the respondents were the mothers (refer to Table 3).

### **Main Findings**

Table 4 provides a summary of themes and subthemes (i.e., parental and parenting factors) and studies that explored adolescents' gender as a potential moderator. In general, there are three main themes that have been studied in relation to emotion regulation among Asian adolescents. The themes are (1) observational learning; (2) parenting practices; and (3) emotional climate. Each of these themes were further refined into nine subthemes which are parents' emotion regulation and parents' emotion, teaching, parents' reaction, attachment, parents' warmth, parents' control, parenting style, and parent-adolescent relationship (see Table 4).

### East Asia Countries

First, in relation to observation of emotional regulation, a longitudinal study by Cheung et al., (2020) showed that father's and mother's emotion dysregulation predicted concurrent adolescent's emotion dysregulation. However, their study found that mothers', but not fathers', emotion dysregulation predicted later emotion dysregulation in their adolescents. Huang et al. (2018) also found that parents' positive affect was associated with better emotion regulation in Chinese adolescents.

In terms of parents' reactions, Wang et al. (2019) found that Chinese adolescents with a supportive (high levels of responsiveness and expressive encouragement) father were more likely to use reappraisal strategy compared to adolescents with a balanced father (i.e., moderate levels of responsiveness, punitive, and minimization). Furthermore, Wang et al. (2019) also found that adolescents with a supportive father have the highest ability to use emotion regulation strategies compared to those with a harsh father. Similarly, parents who were responsive towards their adolescents' school activities are also associated with the use of

**Table 3**

Summary of the articles included in the final review

Authors (year)	Nationality /Country	N	Age M (SD)	Gender of Adolescents F%	Sample	Study Design	Analyses	Parenting Measure				Emotion Regulation Measures		Quality Rating
								Parental Factors	Parent	Parental Measures	Informant	ER measures	Informant	
Roth et al. (2009)	Israeli/Israel	S1 : 169 S2 : 156	14.7 (n/a), 14.6 (n/a)	S1: 58.0 S2: 54.0	School, middle- to lower-class	Cross-sectional	Causal	Conditional regard	Both	Adapted PCR	Adolescent	Adapted DSR	Adolescent	Good
Saritzaz & Gencoz (2012)	Turkish/Turkey	365	15.19 (0.49)	49.6	School	Cross-sectional	Correlational	Emotion Regulation	Mother	DERS	Mother	DERS	Adolescent, Mother	Good
Raval et al. (2013)	Indian/India	250	11.59 (0.47)	46.7	School, middle-class	Cross-sectional	Causal	Socialization & Behavioral Response	Mother	CCNES	Mother	CSAMS	Adolescent	Good
Yu et al. (2013)	Korean/South Korea	525	15.33 (0.47)	30.0	School, middle- to lower-class	Cross-sectional	Causal	Acceptance, Rejection	General	PARQ	Adolescent	DERS	Adolescent	Good



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								Parental Factors	Parent	Parental Measures	Informant	ER measures	Informant	
Jabeen & Riaz (2013)	Pakistan	194	14.0 (3.25)	51.0	Student, middle-class	Cross-sectional	Correlational	Authority	Both	PAQ	Adolescent	EATQ-R	Adolescent	Good
Saritz et al. (2013)	Turkish/Turkey	365	15.16 (0.49)	43.0	School	Cross-sectional	Correlational	Emotion Regulation, Warmth, Rejection	Mother	DERS, s-EMBU	Mother, Adolescent	DERS	Adolescent	Good
Halvaiepour et al. (2016)	Iranian/Iran	547	n/a	n/a	School	Cross-sectional	Causal	Criticism	General	PCM	Adolescent	Kruglanski's ESR	Adolescent	Good
Wang & Qi (2017)	Chinese/China	828	13.58 (n/a)	42.0	Local sample, SES n/a	Cross-sectional		Harsh	Both	Sims et al. (2017)'s harsh parenting	Both	Differentiation of Self-Inventor y	Adolescent	Good
Raval, et al. (2017)	Indian/India	450	n/a	45.5	School, middle-class	Cross-sectional	Causal	Authority & Behavioral Response	Mother	CCNE S, PAQ	Mothers	YSR	Adolescent	Good
Raval et al. (2017)	Indian/India	238	15.06 (1.2)	100.0	local sample, lower - to higher-class	Longitudinal (5-months)	Causal	Response to Positive Affect	General	RAHAS	Parents	RPAC	Adolescent	Good
Wang & Wang (2018)	Chinese/China	838	13.55 (0.95)	41.0	Students, lower - to higher-class	Cross-sectional	Causal	Harsh	Both	Sims et al. (2017)'s harsh parenting	Both	Differentiation of Self-Inventor y	Adolescent	Good
Wang et al. (2018)	Chinese/China	998	15.15 (1.57)	53.0	School	Cross-sectional	Correlational	Parent-Adolescent Relationship	General	PARQ	Adolescent	ERA	Adolescent	Good

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								Parental Factors	Parent	Parental Measures	Informant	ER measures	Informant	
Chen et al. (2018)	Chinese/China	1955	14.85 (2.68)	50.0	School	Cross-sectional	Correlational	Attachment	Both	IPPA	Adolescent	ERQ-CA	Adolescent	Good
Huang et al (2018)	Chinese/China	486	11.99 (1.51)	51.8	Rural to urban migrant	Cross-sectional	Correlational	Positive Affect	General	PAS	Parents	ERQ	Adolescent	Good
Norastabadi & Halvaiepour (2018)	Irani/Iran	350	16.8 (n/a)	0.0	School	Cross-sectional	Causal	Criticism	General	PCM	Adolescent	ERQ	Adolescent	Fair
Ha & Jue (2018)	Korean/South Korea	316	15.31 (0.90)	79.7	School	Cross-sectional	Causal	Psychological Control	General	DAPC	Adolescent	CSMS CAMS	Adolescent	Good
Hapunda et al. (2018)	Indian/India	180	16.63 (0.53)	36.7	Local	Cross-sectional	Correlational	Attachment	Both	ECR-RS	Adolescent	ERQ	Adolescent	Good
Wang et al. (2019)	Chinese/China	743	14.85 (1.60)	75.0	School	Cross-sectional	Causal-comparative	Reaction	Father	CCNES	Adolescent	ERQ & DERS	Adolescent	Good
Liu (2019)	Chinese/China	404	13.77 (1.08)	53.0	Rural left-behind	Cross-sectional	Causal	Parenting Style	Both	EMBU	Adolescent	CERQ-C	Adolescent	Good
Liu et al (2019)	Chinese/China	832	10.25 (0.81)	49.3	Rural left-behind	Cross-sectional	Causal	Supportive Behavior	General	PNSBQ	Adolescent	ERQ	Adolescent	Good
Yaghoubipour et al. (2019)	Irani/Iran	105	14.13 (2.98)	n/a	Detention Centre	Cross-sectional	Correlational	Attachment	General	IPPA	Juvenile	DERS	Juvenile	Fair

Authors (year)	Nationality /Country	N	Age M (SD)	Gender of Adolescents F%	Sample	Study Design	Analyses	Parenting Measure				Emotion Regulation Measures		Quality Rating
								Parental Factors	Parent	Parental Measures	Informant	ER measures	Informant	
Lo et al. (2020)	Chinese/Hong Kong	125	12.21 (1.39)	39.0	School, middle-class	Longitudinal (1 year)	Causal	Parenting Demandingness	General	Yap et al. (2008)	Experimenter	CRSQ	Adolescent	Good
Yeo et al. (2019)	Singaporean/Singapore & Chinese/China	291, 310	13.86 (.63), 12.74 (.67)	Singaporean, 57.0 Chinese, 54.0	School sample, middle- to lower-class	Cross-sectional	CFA (Causal)	Reaction	General	CCNES	Adolescent	ERQ-CA	Adolescent	Good
Cheung et al. (2020)	Chinese/Hong Kong	T1 : 389 T2 : 343	13.64 (1.15)	52.0	Local sample, lower- to higher-class	Longitudinal (1 year)	CFA (Causal)	Emotion Regulation	Both	DERS	Adolescent	DERS	Adolescent	Good
Gao et al. (2021)	Chinese/China	T1 : 865 T2 : 818	11.82 (1.28)	50.8	School sample, lower- to higher-class	Longitudinal (1 year)	Causal	Love withdrawal, Guilt induction, Shaming	Mother	CRPBI	Mothers	SRS	Adolescent	Good
Shi & Wang (2021)	Chinese/China	213	12.18 (0.60)	48.3	School	Longitudinal (1.5 years)	Causal	Reactions	Both	CCNES	Adolescent	CSCY	Adolescent	Good
Lee & Shin (2021)	Korean/South Korea	609	n/a	29.0	School	Cross-sectional	Causal	Care, Overprotection	Both	PBI	Adolescent	STAXI	Adolescent	Good
Günaydin et al. (2021)	Turkish/Turkey	5916	n/a	49.1	School, Stratified sample	Cross-sectional	Causal-comparative	Parenting Style	General	IPSS	Adolescent	DERS	Adolescent	Good

Authors (year)	Nationality /Country	N	Age M (SD)	Gender of Adolescents F%	Sample	Study Design	Analyses	Parenting Measure				Emotion Regulation Measures		Quality Rating
								Parental Factors	Parent	Parental Measures	Informant	ER measures	Informant	
Wang et al. (2022)	Chinese/China	726	13.48 (n/a)	46.2	School	Cross-sectional	Correlational	Harsh	Both	Sims et al. (2017)'s harsh parenting	Adolescent	Differentiation of Self-Inventor y	Adolescent	Good

Abbreviations. M = Male; F = Female; S1 = Study 1; S2 = Study 2; T1 = Time 1; T2 = Time 2; PCR = Parent Conditional Regard; PCS = Parental Control Scale; FCS = Family Conflict Scale; CCNES = Children’s Negative Emotion Scale; PARQ = Parental Acceptance-Rejection Questionnaire; PAQ = Parental Authority Questionnaire; s-EMBU = My Memories of Upbringing (short form); PCM = Perceived Criticism Inventory; RAHAS = Response to Adolescent Happy Affect Scale; PAC = Parent-Adolescent Communication; IPPA = Parents and Peers Attachment; PAS = Positive Affect Scale; DAPC = Domain-Specific Assessment Of Psychological Control; CRPBI = Children’s Report of Parental Behavioral Inventory; ECR-RS = Experiences in Close Relationship Questionnaire; EMBU = Eegna Minnen av Barndoms Uppfostran; PNSBQ = Parents’ Need Supportive Behavior Questionnaire; DPICS = PBI = Parental Bonding Instrument; DSR = Dysregulation and Suppressive Regulation; STAXI-2 = State-Trait Anger Expression Inventory; DERS = Difficulties of Emotion Regulation Scale; CSAMS = Children’s Sadness and Anger Management Scales; EATQ-R: Early Adolescent Temperament Questionnaire; ESR = Emotional Self-Regulation Scale; YSR = Sadness & Anger Management Scales; RPAC = Responses to Positive Affect Questionnaire; ERQ-CA = Emotion Regulation Questionnaire for Children and Adolescence; ERA = Emotion Regulation Ability; ERQ = Emotion Regulation Questionnaire; CSMS = Children’s Sadness Management Scale; CAMS = Children’s Anger Management Scale; ECR – RS = Experiences in Close Relationship Questionnaire; CERQ-C = Emotion Regulation Questionnaire – Chinese Version; CRSQ : Children’s Response-Styles Questionnaire; SRS = Self-Regulation Scale; CSCY = Chinese Version of the Coping Scale for Children and Youth; STAXI = State-Trait Anger Expression Inventory

cognitive reappraisal and expressive suppression among Chinese adolescents (Liu et al., 2019). When examining parents' negative reactions, adolescents with disengaged and harsh fathers scored similarly or lower than those with balanced fathers in the use of reappraisal strategy. Meanwhile, adolescents with balanced fathers and disengaged fathers scored similarly on overall emotion regulation strategy. Wang et al. (2019) also found that none of the supportive, balanced, disengaged, and harsh fathers related to expressive suppression among the adolescents. Lastly, Shi and Wang (2021) found that supportive reactions (emotion coaching and positive reaction) from both father and mother towards an adolescent's negative emotions predicted lesser use of avoidance coping later among Chinese adolescents.

In relation to the parents' warmth, Chen et al. (2018) found that adolescents with high scores on attachment scales for both parents were associated with higher use of cognitive reappraisal and lesser use of expressive suppression strategies. In contrast to Lee and Shin (2021), they found that parental bonding had no direct relationship with anger suppression among Chinese adolescents. When Yu et al. (2013) studied maternal rejection, they found that parents' negative behaviors were associated with greater difficulties in emotion regulation among Korean adolescents. A longitudinal study by Gao et al. (2021) suggested that withdrawal of maternal love nonetheless, was not the predictor of later emotion regulation development in Chinese adolescents. In relation to harsh parenting, Wang and Qi (2017) found there to be a direct impact of harsh parenting on Chinese adolescents' emotional dysregulation. Similarly, two studies by Wang and Wang (2018) and Wang et al. (2022) found that both harsh fathering and mothering were positively associated with Chinese adolescents' emotional dysregulation.

In terms of parental control, Ha and Jue (2018) studied parents that control their adolescents emotionally by varying their love and acceptance of adolescents' emotion inhibition and regulation. The study found that this parenting factor has a positive association with sadness and anger inhibition, and a negative association with emotion regulation coping skills among Chinese adolescents. An observational study by Lo et al. (2020) suggested that parents who made declarations that contain an order when interacting with their adolescents significantly predicted later rumination among adolescents. Meanwhile, parents who gave suggestions in the form of a question or request that did not require compliance when interacting with their adolescents did not predict later rumination. Another study by Gao et al. (2021) found that parents who placed guilt and humiliation on Chinese adolescents in response to their emotions did not predict later emotion regulation, cognitive regulation, and self-regulation.

Lastly, in terms of a parent-adolescent relationship, Wang et al. (2018) found that the quality of relationship between parents and adolescents positively predicted Chinese adolescents' emotional control, recovery, and strategy use. Moreover, Park and Kim (2012) found that the quality of Korean adolescents' communication with their fathers was negatively related to anger suppression, but not anger expression and control. Nonetheless, mother communication did not relate with anger suppression, anger expression, and anger control. Park and Kim (2012) also found that the intensity of parent-adolescent conflict is positively related to adolescents expressing their anger, but not anger suppression nor anger control.

### **South Asian Countries**

In terms of parents teaching adolescents regarding emotions, Raval et al. (2017) found that mothers' reports on emotion-focused and problem-focused responses did not predict

the emotional expression and emotion regulation skills among Indian adolescents. Another study by Raval et al. (2017) found that parents who help adolescents to capitalize on their positive emotions predicted Indian females' rumination, the repetitive thoughts that trigger feelings of positive emotions. Meanwhile, Raval et al. (2013) found that mothers who provide explanations of emotional experiences to adolescents in response to their sadness and anger were positively related to Indian adolescents' report of emotion regulation. Raval and her colleagues (2013) also found that mothers who are solution-oriented in response to their adolescents' emotions were negatively related to emotion dysregulation, but not to emotion regulation.

In relation to parents' reaction, Raval et al. (2013) found that non-supportive parents (i.e., those who punish, minimize, scold and do not talk to their children) were related to high levels of anger and sadness dysregulation among Indian adolescents. Moreover, mothers who punish and minimize their adolescents' emotions were positively related to difficulty in expressing, and coping with, anger and sadness among Indian adolescents (Raval et al., 2017). In a sample of Iranian adolescents, Halvaiepour et al. (2016) found that parents' perceived criticisms had a direct positive effect on adolescents' emotion regulation, such as critically evaluating oneself and initiating a goal-directed movement. Meanwhile, Norastabadi and Halvaiepour (2018) found a negative direct effect between parents' perceived criticism and emotion regulation (i.e., cognitive reappraisal and expression suppression) among Iranian adolescents.

Next, in regards to parent-child attachment, Hapunda et al. (2019) found both father-adolescent and mother-adolescent anxious relationships were associated with increased use of cognitive reappraisal, but not expressive suppression among Indian adolescents. In addition, no relationship was found between avoidance in both parents, cognitive reappraisal, and expressive suppression. A study by Yaghoubipoor et al. (2019) discovered that Iranian juveniles reported a reduction in the difficulties of emotion regulation (e.g., acceptance of emotional awareness and limited access to emotion regulation strategies) when there is an increased sense of trust and a decreased sense of alienation from their parents.

For parenting style, mothers' reports on authoritarian parenting were positively related to sadness and anger regulation among Indian adolescents, but insignificantly related to sadness and anger dysregulation (Raval et al., 2017). However, Jabeen et al. (2013) studied both paternal and maternal authoritarian parenting and found that none of them predicted any emotion regulation scales such as attention shifting and focusing, inhibitory control, and deactivation control among Pakistani adolescents. Jabeen and his colleagues also studied authoritative and permissive parenting and found that both paternal and maternal parenting style predicted positive and negative adolescent's emotion regulation respectively. A study by Günaydin et al. (2021) which compared scores in emotion regulation difficulties across parenting styles found that Turkish adolescents with authoritarian parents scored higher than those with neglectful parents. No significant difference was found when comparing authoritarian parenting with authoritative and permissive parenting.

### **West Asia Countries**

For observation of emotional regulation, Saritas and Gencoz (2012) found a positive correlation between mother-report of mother's emotion regulation difficulties and adolescent-report and mother-report of adolescents' emotion regulation difficulties. However, Saritas et al. (2013) found that mother-report of mother's emotional regulation difficulties had no direct effect on adolescent-report of adolescents' emotion regulation



difficulties. Meanwhile, in terms of parent's reaction, Roth et al. (2009) found a direct positive effect between attentive mother and suppressive regulation of anger among Israeli adolescents. No direct effect was found for both attentive father and mother on suppressive regulation of fear in the Israeli adolescents (Roth et al., 2009).

In relation to parent's warmth, Saritaz et al. (2013) found that maternal warmth was not significantly related to Turkish adolescents' emotion regulation difficulties. When Saritaz and his colleagues (2013) examined maternal rejection, however, they found that maternal rejection was significantly related to adolescents' emotion regulation difficulties. For parenting autonomy support, Roth et al. (2009) found a direct effect positive effect between father's autonomy support and awareness of anger states among Israeli adolescents, not for mother's autonomy support. In contrast, Roth and his colleague (2009) found a direct effect positive effect between mother's autonomy support and awareness of fear among Israeli adolescents, not for father's autonomy support.

### **Moderation Effect of Gender**

In terms of observational learning, Cheung et al. (2020) found that the gender of adolescents did not moderate the relationship between both paternal and maternal parent's emotional dysregulation and Chinese adolescent's emotional dysregulation. However, Saritaz et al. (2013) found there to be a direct effect of mother's emotion regulation difficulties in girls' emotion regulation difficulties, but not in boys.

In terms of parent's coaching, Yeo et al. (2019) found that parents who assisted their adolescents at managing their emotions are related to Singaporean boys' cognitive reappraisal, but not girls. In relation to parent's reaction, Yeo et al. (2019) also found that parent's positive reactions (i.e., expressive encouragement, emotion-focused, and problem-focused) were associated with the use of cognitive reappraisal in Singaporean boys, not girls. Similarly, in a sample of Chinese adolescents in China, parent's expressive encouragement was found to be related to boys only, not girls (Yeo et al., 2019). When Yeo and his colleagues (2019) examined parent's negative reactions, there was a positive association between punitive and distress reactions with Singaporean girls' suppression. No association was found between parent's negative reaction and girls' suppression in China (Yeo et al., 2019).

In terms of parenting warmth, the gender of adolescents did not moderate the relation between both paternal and maternal positive and negative conditional regard among Israeli adolescents' emotion dysregulation (Roth et al., 2009). Yu et al. (2013) also found that the gender of adolescents did not moderate the relation between parent's negative parenting behavior and adolescents' emotion dysregulation. Wang et al. (2022) also found that maternal harsh parenting has a similar effect on boys' and girls' emotion dysregulation. In contrast, Wang and Wang (2018) found harsh fathering to be positively associated with girls' emotional dysregulation but not significantly for boys. Wang et al. (2022) also found paternal harsh parenting to be more closely related to girls' than boys' emotions dysregulation. In relation to control, the gender of adolescents did not moderate the relationship between maternal psychological control and adolescents' emotion regulation (Gao et al., 2021). Similarly, Roth et al. (2009) found that the relations both father and mother autonomy support to the adolescent's anger and fear awareness were not moderated by gender.

Table 4

Themes (Main factors) and subthemes (subfactors) found in the article

Main factors	Observation		Parenting Practices		Emotional Climate					Adolescent's Gender
	ER	E	T	R	A	W	C	PS	PA	
Roth et al. (2009)				/			/			/
Park & Kim (2012)								/	/	
Saritz & Gencoz (2012)	/									
Raval et al. (2013)			/	/						
Yu et al. (2013)						/				/
Jabeen et al. (2013)								/		
Saritz et al. (2013)	/					/				/
Halvaiepour et al. (2016)				/						
Wang & Qi (2017)								/		
Raval et al. (2017)			/	/				/		
Raval et al. (2017)				/						
Wang & Wang (2018)						/				/
Wang et al. (2018)									/	
Chen et al. (2018)						/				
Huang et al. (2018)		/								
Norastabadi & Halvaiepour (2018)				/						
Ha & Jue (2018)							/			
Hapunda et al. (2018)					/					

Main factors	Observation		Parenting Practices		Emotional Climate					Adolescent's Gender
	ER	E	T	R	A	W	C	PS	PA	
Wang et al. (2019)				/						
Liu (2019)						/				
Liu et al. (2019)						/				
Yaghoubipoor et al. (2019)					/					
Lo et al. (2020)							/			
Yeo et al. (2019)				/						/
Cheung et al. (2020)	/		/							/
Gao et al. (2021)						/	/			/
Shi & Wang (2021)			/	/						/
Lee & Shin (2021)						/				
Günaydin et al. (2021)								/		
Wang et al. (2022)						/				/

Abbreviations. ER = Parent's Emotion Regulation; E = Parent's Emotion; T = Teaching; R = Reaction; A = Attachment; W = Warmth; C = Control; PS = Parenting Style; PA = Parent-Adolescent Relationship.

## Discussion

The Tripartite Model of Emotion Regulation proposes that parents influence their children's development in three ways, namely through observational learning, parenting practices, and emotional climate of the family. In addition, the Heuristic Model suggests that emotional socialization is varied across cultures, thus influencing the way parents behave towards their children. Given the proposed models, this review aimed to explore parenting factors that contribute to the development of emotion regulation among Asian adolescents and also to study the moderation effect of adolescent's gender. Overall, our review synthesis indicates that observational learning, parenting practices, and the emotional climate of the family had been studied in various Asian countries. Most of the studies discovered that parenting practices do influence the development of emotion regulation among Asian adolescents. A similar pattern can be seen across different Asian regions. Nevertheless, we observed mixed findings for observational learning and emotional climate of the family even though the studies were conducted within the same region (or country) and using the same measurement tools. Moreover, studies which are related to moderation effect of adolescents'

gender are still limited in number, but we found that the effect was significant in the case of harsh parenting.

### **Parenting Factors**

First, this review demonstrates that parent's reaction, general attachment style, and parent-adolescent relationship are related to both emotion regulation and emotion dysregulation. Only one study of father's reaction was found to be unrelated to expressive suppression. Parents with this type of parenting are naturally displaying repeated behaviors and interactions with their adolescents. Adolescents eventually learn about the expectations of their parents towards their own emotions (Morris et al., 2017) and they have been learning ways to appropriately regulate their emotional expression. Therefore, these types of parenting build a foundation of related-emotion skills in adolescents. We also found that all of the studies on specific attachment style and parent-adolescent relationship were unrelated to expressive suppression, except one study which found that general attachment was related to expressive suppression. Asian adolescents may adopt other emotion regulation strategies (e.g., cognitive reappraisal or avoidance) to accomplish the goal of dealing with their emotions based on their internal working model of attachment.

Interestingly, we also found that positive-related parenting is related to emotion regulation and negative-related parenting is related to emotion dysregulation. For example, warm, supportive, and expressive parents are related to emotion regulation, not to emotion dysregulation. Meanwhile, hostile, non-supportive, rejecting parents are found to be related to emotional dysregulation, but not to emotion regulation. This can be explained by the fact that parent's positive related parenting would be able to guide adolescents in times of difficulties and help them to feel emotionally safe. Through such guidance, adolescents learn specific skills to effectively regulate their emotions (Eisenberg et al., 1998), and thus these parenting behaviors are more related to emotion regulation which specifically examine the construct of emotion regulation strategy. This is contrary to negative parenting which would invalidate adolescent's emotion and cause adolescents to be unaware of their emotional experience, unable to express emotion and feel uncertainty (Morris et al., 2017). Thus, negative related parenting is more related to emotion dysregulation.

Moreover, parenting style, observational learning, and control revealed inconsistent findings from a total number of three studies for each. Two studies that examined parenting style showed that authoritarian parenting was related to emotion regulation, but another study did not show any association. We also could not draw an appropriate interpretation for authoritative and permissive parenting due to there being only one correlation study and one study which compared scores of emotion dysregulation between parenting styles. Similar to the observational learning of emotion regulation, we are unable to observe a consistent pattern across studies even when we made comparisons across countries and when the same measurement tool was used. For control, all of the studies were conducted in the East Asian region and centered around parent's psychological control, except one study conducted in West Asian region that focused on autonomy support. Despite this, inconsistent results were still obtained. Furthermore, we only found two studies that examined emotion coaching and the findings were mixed. For instance, one study showed that mothers who provide explanations of emotional experience were related to emotion regulation, but the other study found that mothers who help to solve emotion-elicited problems were unrelated to both emotion regulation and dysregulation.

**Moderation Effect of Gender**

Contrary to Eisenberg et al. (1998) and Morris et al. (2007), studies of the emotional climate of the family such as parenting styles in this review were equally important to the emotion regulation of Asian boys and girls. The emotional climate of a family comprises overall warmth, emotional responsiveness and consistent caregiving (Morris et al., 2017) which is essential for creating a secure base (Bowlby, 1969). Thus, regardless of gender, the secure base may serve as an important psychological need and a strong foundation to build good emotion regulation skills. Therefore, the family with a positive emotional climate will provide adolescents with experiences necessary for better emotion regulation, whereas families with a negative emotional climate tend to have the worst emotion regulation skills.

Nonetheless, we observed that harsh parenting affects girls' emotion dysregulation more than boys, except for one study which did not find there to be a gender effect. Consistent with Eisenberg et al. (1998) and Morris et al. (2007), these negative parenting factors are more salient to girls' emotion regulation compared to boys. This can be explained by the fact that girls favor close relationships with others and have the need to form intimate relationships socially (David-Barrett et al., 2015). As Dou et al. (2020) also pointed out, girls expect certain reactions from their parents that would enable them to form a close relationship with their parents. However, this kind of relationship could not be formed in a harsh environment, which in turn girls are unable to learn adaptive emotion regulation skills. Therefore, girls are more likely to experience difficulties in emotion regulation.

Furthermore, we discovered that parents' assistance in regulating emotions is more helpful to boys in regulating their emotions than to girls. One possible reason for this is that parents may be more likely to guide adolescents with gender-specific skills that are associated with their own gender. For example, parents tend to offer help to boys in solving their emotion-related problems, while actively listening to girls to help them regulate their emotions. However, caution of interpretation should be noted until further research. In addition to that, there were two studies that examined the moderation effect of gender in observational learning; one study did not find any moderation effect of gender while the other showed a direct effect of observational learning on girls' emotion regulation difficulties.

**Limitation and Future Direction**

The present review has several limitations that should be acknowledged. First, the current review explored parenting factors that influence emotion regulation and the moderation effect of adolescent's gender. Other possible moderators (e.g., parent's mental health) or mediators (e.g., adolescent's self-efficacy) should be investigated to understand the reason these two variables are related. Second, we discovered that most of the studies did not report sample size justification and did not address non-responders when assessing the quality of articles. Lastly, only five studies used a longitudinal research design which examines different parenting factors. More longitudinal studies are required to detect any changes in parents' contribution to adolescents' development of emotion regulation.

For the future studies, the topics of related observational learning, parents' emotion coaching, and parents' control (i.e., psychological control and behavioral control) in Asian countries are still under-researched. It is worthy to study parents' control and its relation to adolescents' emotion regulation due to the Asian parents' control behaviors which are usually perceived as desirable, given that Asian-style parental care is different to Western-style parental care in Western countries (Choi et al., 2014). Although our review does not examine the effect of parents' gender, we found there to be a limited number of studies which

examined the role of fathers in Asian adolescent's emotion regulation, which is an important area to study (Morris et al., 2017).

Furthermore, more studies are needed in West Asia (e.g., United Arab, Israeli, and Iraq) and in the Southeast Asia region (e.g., Malaysia, Indonesia, and Taiwan) to ensure the consistency of the role of parenting factors in adolescents' emotion regulation. Last not but not least, there is a scarcity of research that has specifically explored gender-related emotion regulation skills in Asian boys and girls, as well as how parents impart and teach those skills. It is imperative that future studies endeavor to fill this research gap.

## **Conclusion**

In conclusion, the current review has analyzed the articles thematically to identify parenting factors that are possibly linked to emotion regulation in Asian adolescents. The current systematic review found there to be three main themes of parenting factors, which are observational learning, parenting practices, and emotional climate of the family. Although different measurement scales were used across the studies to measure emotion regulation, we found a similar pattern of parenting factors that influence adolescents' emotion regulation across the Asian regions.

These findings provided insights into how parenting factors, particularly in Asian cultures can affect emotion regulation. These findings expanded the Tripartite Model and Heuristic Model highlighting that the impact of parenting on emotion regulation can be culture-specific. In particular, the findings suggested that aspects of parenting such as parental warmth, attachment and parenting style can play a significant role in influencing how adolescents regulate their emotions, which may not be emphasize to the same degree in the original models. Furthermore, the findings also emphasize that the effect of parenting on emotion regulation can vary between genders in Asian cultures. This gender moderation aspect is an important addition to the models, as it suggests that gender plays a role in how parenting factors influence emotion regulation. In contrast, the original model does not explicitly consider the role of gender in emotion regulation. Overall, these current findings expand the model by emphasizing the role of cultural and gender-specific parenting influences on emotion regulation. This highlights the need for a more nuanced understanding of how emotion regulation operates in different cultural contexts and among diverse populations.

Notwithstanding the limitations, the results of this study will direct practitioners' attention to the parenting factors that indirectly contribute to the development of various emotion regulation strategies among adolescents. This will help practitioners who work with parents and adolescents from Asia to design interventions that specifically promote appropriate parenting behaviors such as parental warmth and attachment which can improve adolescents' emotional health and psychological well-being.

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## **Declarations**

**Conflict of interest:** The authors report no conflict of interest.



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