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Article

Emotion Regulation: An Exploration of Gender Differences among Adolescents in Malaysia

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Abstract: The intricate dynamics of gender roles significantly shape emotion regulation (ER) among adolescents, underscoring the importance of understanding these assigned roles in comprehending adolescents' emotional experiences. This study aimed to investigate and analyze in detail the central aspects of disparities between genders in the utilization of ER strategies. The formulation of the hypotheses aimed to predict significant distinctions between boys and girls, particularly in cognitive reappraisal (CR) and expressive suppression (ES) strategies. A cross-sectional design was employed and implemented in 27 public secondary schools across 12 states in Malaysia. A total of 1,718 adolescents, both boys and girls who did not have any current or prior clinical issues became participants in this study. Using the Malay version of the Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA), the study's findings contradicted the proposed hypotheses. The findings showed no gender disparities in CR and ES. These findings provide valuable insights for parents, caregivers, teachers, and adolescents, offering a nuanced understanding of ER during the critical stages of adolescence. The implications of ER across genders may guide the development of targeted interventions to address potential gender disparities and mitigate the risk of psychopathological issues.

Keywords: Adolescents; cognitive reappraisal; expressive suppression; emotion regulation; gender

Introduction

The adolescent phase, a critical juncture positioned between childhood and adulthood, encompasses profound changes in physical, cognitive, and emotional realms. This period of transformation has a crucial and vital role in molding the essence of oneself and providing them with the essential abilities to navigate the intricacies and obligations of the adult stage (Zimmermann & Iwanski, 2014; Azalia & Sulistyarini, 2019; de Veld et al., 2012; Chamizo-Nieto et al., 2020). Adolescents encounter increased frequency and intensity of negative emotions, leading to various challenges and the development of heightened emotional sensitivity (Zimmermann & Iwanski, 2014). Hence, the occurrence of adverse emotions and challenges in ER is a common concern among adolescents (Ahmed et al., 2015).

Although numerous adolescents have acquired proficient abilities in regulating their emotions at an early stage, Lee et al. (2014) found that one out of every five adolescents develop psychopathological tendencies related to difficulties in ER. For example, up until May 2021, the Malaysian Ministry of Health (MOH) through the National Recovery Plan (2021) discovered that a total of 85.5% out of 145,173 calls were received by governmental organizations, particularly amidst the COVID-19 crisis. These calls encompassed matters of mental health that necessitated empathic assistance and intervention, such as acute stress, anxiety, depression, abuse, and contemplation of self-inflicted harm. Abu Zahrin et al. (2020) found that if a person does not get any social, economic, emotional, and spiritual support, it will cause various negative implications such as giving up on life

and increased social problems. These situations occur due to individuals having difficulties controlling and releasing the emotions they experience. Gross (1998) stated that emotional function will reach an optimal level if the individual can manage and adapt their emotions to cope with the situation at hand.

Literature Review

ER pertains to how individuals manage their emotions, expression, and the way they behave when they experience emodiversity (Gross, 2015). Meanwhile, Thompson (1994) described ER as the cognitive endeavor of observing, appraising, and adapting emotional responses to attain personal objectives. The study carried out by Gross and John (2003) has established that the development of ER typically follows an upward trajectory during childhood and adolescence, as the ability to understand emotions emerge and cognitive ability is developed. Hence, to regulate emotion, many strategies have been identified. In organizing these strategies, the focus has been given to the point at which regulatory processes are applied to situations that evoke emotional responses. One of the notable models of ER proposed by Gross (1998) is an exemplary model that outlines the development of emotions through a sequential progression of steps. In this process, these steps involve a diverse range of strategies, beginning with situation selection, progressing to situation modification, followed by attention deployment, cognitive change, and culminating in response modulation. Every step holds a unique role in the comprehensive process of ER conjointly, these transformations actively contribute to enhancing an individual's ability to adeptly navigate and adapt to diverse emotional experiences. This process model also introduces a differentiation between antecedent-focused strategy and response-focused strategy in regulating emotion, emphasizing the temporal sequencing of these regulatory processes to the complete activation of the emotion. It elucidates the dynamic interplay between antecedent factors and subsequent responses in the overall regulation of emotions.

CR as an antecedent-focused strategy, is the most prominent strategy that entails altering individuals' cognitive perception of emotion-evoking situations to modify the subsequent emotional impact. In cases where the antecedent-focused strategy is not implemented correctly and the emotion has already been fully activated, individuals may still exert control over their ongoing emotional expression. Within this process, the response-focused strategy is predominantly exemplified by the employment of the ES strategies (Gross & John, 2003). Numerous research findings consistently support the association of CR with a range of positive outcomes. These encompass heightened positive emotional experiences, enhanced social adaptation, increased happiness, improved problem-solving skills, and a heightened sense of well-being (Ricarte Trives et al., 2016; McRae et al., 2012; Gross & John, 2003). On the flip side, ES has been consistently linked to negative emotional experiences, symptoms of depression, impaired social adjustment, and a decrease in overall happiness. Research consistently indicates that inhibiting the expression of emotions may have detrimental effects on psychological well-being (de France & Hollenstein, 2019; Eastabrook et al., 2014; Gross & John, 2003).

There is a mixed picture of ER transition during the stages of adolescence (Zimmermann & Iwanski, 2014). These contrasting findings might be explained by, among others, gender-specific preferences in ER that do not have solid evidence until middle childhood or adolescence (Chaplin & Aldao, 2013). Since the early 1990s, scholars have had arguments regarding the connection between gender and ER. This topic has remained a central theme in academic discussion, prompting ongoing exploration and analysis within the research community (Zhao et al., 2014). This scenario arises when there exists a robust gender stereotype predicated on the perceptions of disparities in emotional expression between genders (Timmers et al., 2003). For example, it is a common stereotype that girls tend to exhibit a greater display of prosocial emotions compared to boys (Fabes & Martin, 1991). Additionally, there exists a prevailing notion that females possess a greater propensity for emotional expression in comparison to males, irrespective of their chronological age, biological sex, or cultural background (Shields, 2003; Hess et al., 2000).

There are several theories associated with ER and gender differences. First and foremost are the biological theories. Disparities in ER among boys and girls may potentially arise from variances in genetics and age, including hormonal distinctions (Zahn-Waxler et al., 2008). However, based on social development theories, it is posited that children and adolescents experience assimilation of behaviours that consistently adhere to gender roles, while simultaneously engaging in the formation of cognitive frameworks. These two situations are intricately influenced by processes of observational learning and experiential encounters (Liben & Bigler, 2002). Bandura (1969) indicated that children are also taught gender roles through observing and imitating models within their immediate social circle, including their parents, caregivers, and siblings. Lastly, according to social

constructivist theories, context and environment play a crucial role in societal expectations, ultimately influencing the formation of human behaviour and gender expectations (Deaux & Major, 1987).

Several studies have revealed that gender disparities significantly impact ER among individuals during their adolescent stage (Zhang et al., 2020; Ratnasari & Suleiman, 2017; Zhou et al., 2020; Zimmermann & Iwanski, 2014; Flannery et al., 2018). However, diverse findings have been reported regarding the variations in ER strategies employed by boys and girls. Gullone et al. (2010) found that adolescents tend to endorse ES strategies more than their adult counterparts. Studies found that boys typically favor ES (Flynn et al., 2010; Martin-Albo et al., 2018; Gullone & Taffe, 2012; Teixera et al., 2015) whereas girls are inclined to employ CR strategies to regulate their emotions (Tamres et al., 2002). Simultaneously, research findings by Chaplin and Aldao (2013), Orgilés et al. (2018), and Zhao et al. (2014) have consistently shown that girls tend to employ more adaptive strategies, specifically utilizing CR, to manage and regulate their emotional responses. Girls also express a greater propensity to convey internalized emotions of a positive and negative nature (Sanchis-Sanchis et al., 2020; Chaplin & Aldao, 2013). Chaplin and Aldao (2013) also reported that girls may employ more adaptive strategies than boys. However, this does not necessarily safeguard them from the onset of emotional problems.

Girls often demonstrate a heightened tendency to feel, convey, and focus on their emotions (Fabes & Martin, 1991; Barrett & Bliss-Moreau, 2009). Conversely, boys are commonly seen as suppressing their emotions. Additionally, societal tendencies lead people to attribute girls's emotional expressions to stable and intrinsic qualities. Meanwhile, boys's emotional expressions are often attributed to situational factors (Barrett & Bliss-Moreau, 2009). These perceptions align and are consistent with specific gender role theories suggesting that girls typically adopt internally focused and passive reactions to their emotions, while boys may resort to suppression, which may involve turning to substances to evade emotional experiences.

Subsequently, Klosowska et al. (2020) and Neumann et al. (2010) present contrasting findings, suggesting that girls not only employ fewer effective ER strategies compared to boys but also experience greater challenges in regulating their emotions. These differences in ER strategies between genders underscore the complexity of ER processes during adolescence. To conclude, when it comes to the utilization of CR and ES, the empirical evidence exhibits considerable diversity (Nolen-Hoeksema & Aldao, 2011). This diversity might stem from gender roles or disparities in socialization based on gender (Saarni et al., 2006) and emphasizes the importance of recognizing the individual differences within gender groups in regulating emotion.

1. Current Study

Examining the impact of gender on ER reveals varying perspectives. While Aldao & Nolen-Hoeksema (2011) assert gender's role in influencing how emotions are regulated, studies by Fujita et al. (1991) and Flynn et al. (2010) present inconsistent findings. Notably, Tamres et al. (2002) found that girls tend to prefer strategies such as seeking emotional support, CR, or active coping in regulating emotion, while boys lean towards ES (Flynn et al., 2010; Cabello et al., 2013). Consequently, conducting a comprehensive analysis of how adolescents navigate and regulate their emotions based on gender becomes imperative. This approach is vital for acquiring a nuanced understanding of the developmental outcomes associated with gender-specific ER strategies.

Concurrently, several studies (Cheung & Park, 2010; Ramzan & Amjad, 2017) suggest a higher prevalence of ES in collectivistic cultures. Given that Malaysia is a country that embraces collectivism (Sumari et al., 2020), it becomes imperative to conduct research within this cultural context. Moreover, within the Malaysian context, as evidenced by research conducted by Abd Hadi et al. (2023), the use of ES is often seen as a method employed to maintain relationships, foster harmony, and display obedience. Subsequently, CR proves ineffective as an ER strategy for certain minority groups within collective cultures when facing emotional difficulties, while ES seems to carry fewer adverse effects (Wang et al., 2020; Su et al., 2015). However, more contradictory findings indicate that collectivistic societies may practice both CR and ES (Yeh et al., 2017; Yeo et al., 2020).

Numerous studies have been dedicated to examining the distinctions between gender and ER across diverse populations. This exploration has spanned the general population, including the study by Kaur (2022), Masumoto et al. (2016), and McRae et al. (2012), as well as specific groups such as teachers (Ratnasari & Suleeman, 2017), adolescents (Zhao et al., 2014; Sanchis-Sanchis et al., 2020), mother-child dyads (Kristiane, 2006), and undergraduate students (Gardener, 2013). In the Malaysian context, research investigating gender differences in ER has been relatively limited. Existing studies have predominantly concentrated on specific subsets, specifically male adults (Lee & Abdullah, 2018), and academicians (Haron et al., 2010). While acknowledging the specified

constraints in studies and addressing inconsistencies through an investigation into gender differences in ER among adolescents, a noticeable gap exists in attention toward understanding gender variations in ER among adolescents, especially in larger sample sizes (Zimmermann & Iwanski, 2014). This gap highlights the need for more extensive research to comprehensively explore the nuances of gender-specific ER patterns among adolescents in the Malaysian context.

Thus, the key goal of this study is to investigate the potential disparities in ER among adolescents in Malaysia within the age range of 13 to 14 years old. The focus of this investigation centers on two key dimensions of ER which are CR and ES. By delving into the nuanced ways in which adolescents engage with these ER strategies, the research aims to add to the current knowledge about the emotional experiences of this age group within the Malaysian context. In the formulation of this study, two hypotheses were crafted to guide our exploration. The first hypothesis posits that boys and girls demonstrate differences in the utilization of CR. The second hypothesis suggests that boys and girls exhibit notable differences in the employment of ES.

Methodology

1. Participants

This research study utilizes a cross-sectional design, allowing for the analysis of data from a population at a specific time (Wang & Cheng, 2020). To facilitate the research, questionnaires were employed to collect data from a selected group of adolescents who met the inclusion criteria. The factors considered as inclusion criteria encompassed adolescents who are currently enrolled in public and secondary schools in Malaysia. These adolescents must possess an acceptable level of proficiency in the Malay language and have obtained consent from their parents. In this study, 1,718 adolescents, with an age range of 13-14 years, were selected from 27 public secondary schools in Malaysia. Overall, the number of participants counts comprised 788 boys and 930 girls. The ages of 13-14 years have been chosen because at this age they closely experience a lot of transitions such as physical, cognitive, school, and socio-emotional changes (Santrock, 2019). Therefore, they will experience a lot of emotional difficulties and emotional instability (Soto et al., 2011). All 27 public secondary schools from different states in Malaysia were randomly chosen to participate in this study.

2. Instrument

To assess ER, this study employed the Malay version of the Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA) (Ali et al., 2022). The ERQ-CA comprised a set of 10 items, with six items assessing CR and four items measuring ES. This questionnaire utilizes a 5-point Likert scale and provides respondents with a continuum of choices, ranging from 1 (strongly disagree) to 5 (strongly agree). This instrument permits individuals to express varying degrees of agreement or disagreement with the statements presented. The higher the score, the more ER strategies have been used. The reliability coefficient for the Malay version of ERQ-CA with CR and ES is .72 and .58, respectively.

3. Procedure

After receiving approval from the Research Ethics Committee (REC) of the Universiti Kebangsaan Malaysia, the Ministry of Education Malaysia, and the corresponding State of Education Departments from each state, further approval was obtained from the school principals. Following this, the liaison teachers reached out to the students and provided them with the relevant information sheets and forms required for parental consent. Consent from both parents and students was a mandatory prerequisite, emphasizing the necessity of indicating agreement by signing the provided consent forms. Furthermore, all the students were duly notified regarding the study's objectives and ethical deliberations. Only those students who had acquired informed consent were considered eligible to partake in the study, ensuring a principled approach to the research process. The students, in turn, dedicated 20 to 30 minutes of their time to completing the questionnaire, contributing valuable insights to the comprehensive exploration of the study's objectives.

4. Analysis

The questionnaire consisted of two parts, namely demographic profiles, and ER. The frequency and percentage of the demographic profiles were used to identify the characteristics of the respondents. The mean score, standard

deviation, and independent t-test of adolescents' evaluations of their ER according to gender disparities were calculated using Statistical Package for the Social Sciences (SPSS) version 29.

The Findings

1. Adolescents' Demographic Profile

Table 1 presents the adolescents' demographic profile. The respondents consisted of 1,718 adolescents including 788 boys (45.9%) and 930 girls (54.1%). In terms of age range, 793 adolescents (46.2%) were 13 years old and 925 (53.8%) were 14 years old. Out of the total number of respondents, 122 (7.1%) were from Johor, whereas 220 (12.8%) were from Kedah. Additionally, 140 (8.1%) respondents represented Kelantan, followed by 71 (4.1%) from Melaka, 69 (4.0%) from Negeri Sembilan, 73 (4.2%) from Pahang, 71 (4.1%) from Perlis, 200 (11.6%) from Sabah, 295 (17.2%) from Sarawak, 321 (18.7%) from Selangor, 58 (3.4%) from Terengganu, and 78 (4.5%) from Wilayah Persekutuan Kuala Lumpur.

Characteristics Demographic Profile Gender Boys		N	% 45.9	
		788		
	Girls	930	54.1	
Age	13	793	46.2	
	14	925	53.8	
States	Johor	122	7.1	
	Kedah	220	12.8	
	Kelantan	140	8.1	
	Melaka	71	4.1	
	Negeri Sembilan	69	4.0	
	Pahang	73	4.2	
	Perlis	71	4.1	
	Sabah	200	11.6	
	Sarawak	295	17.2	
	Selangor	321	18.7	
	Terengganu	58	3.4	
	Wilayah Persekutuan Kuala Lumpur	78	4.5	

Table 1. Adolescents' demographic profile

2. Mean Score for Emotion Regulation Strategies

The average score of 22.298 for CR reflects a relatively high proficiency, considering the score range of 6 to 30. This mean score surpasses the mid-point of the score range, which is 15 for this dimension. In contrast, the mean score for ES is 13.729, slightly exceeding the midpoint of the score range of 4 to 20 for this dimension. The findings are presented in the table provided in Table 2 below:

Variable	Mean	SD
CR	22.298	3.367
FS	13 729	2 662

Table 2. Mean Score for Emotion Regulation Strategies

3. Finding of Mean Differences

Two main hypotheses were developed, namely (1) boys and girls demonstrate significant differences in the utilization of CR, and (2) boys and girls exhibit notable differences in the employment of ES. The findings are set out in Table 3 below:

Variable	Group	N	Mean	SD	t	p
CR	Boys	788	22.267	3.172	267	.714
	Girls	930	22.326	3.525	.367	
ES	Boys	788	13.692	2.581	500	600
	Girls	930	13.760	2.729	.522	.602

Table 3. Findings of the mean differences in cr and es based on boys and girls

 H_{A1} : Boys and girls demonstrate differences in the utilization of CR.

The finding specified that there was no difference in CR between boys and girls, as evidenced by the t-test statistic in Table 3 which is (t(1716) = .367) and the p-value exceeding .05. Specifically, boys and girls demonstrated mean scores of 22.267 and 22.326, respectively. Therefore, the dismissal of hypothesis 1 implies that there is no statistically significant difference in CR scores between boys and girls in the study.

 H_{A2} : Boys and girls exhibit notable differences in the employment of ES.

The finding disclosed that there was no difference in ES between boys and girls, as indicated by the t-test results in Table 3 which is (t (1716) = .522) and a p-value exceeding .05. Notably, boys and girls exhibited mean scores of 13.692 and 13.760, respectively. Consequently, the rejection of hypothesis 2 followed, indicating that there is no statistically significant difference in ES scores between boys and girls in the study.

Discussion

The goal of this study was to explore the differences between genders in ER strategies. Based on the findings, the first hypothesis was rejected as no difference was found in CR and gender among adolescents. The alignment of these findings with prior studies, such as those by Martin-Albo et al. (2018), Ali et al. (2022), Gullone & Taffe (2012), and Verzeletti et al. (2016), indicates a robust trend in the absence of gender-based differences in the utilization of CR by adolescents. According to Verzeletti et al. (2016), boys and girls appear equally enamoured of CR, indicating that it develops at an early age, without recognizable differences in terms of age and gender. However, the findings of this study demonstrate a lack of consistency with previous research studies by Zhao et al. (2014) and Keshky (2018) which reported differences in using CR based on gender. More specifically, both Zhao et al. (2014) and Keshky (2018) found that girls engage in CR more than boys during their adolescence, which may improve their ability to implement CR. Additionally, insights from a neuroscientific standpoint were provided by Che et al. (2015). Their findings indicate that while both boys and girls use cognitive strategies to regulate emotions, particularly to alleviate negative effects, girls exhibit a more pronounced medial prefrontal cortex response during CR compared to boys. As a result, it seems that the influence of CR is more pronounced in girls than in boys.

The findings also showed no significant difference among adolescents in ES based on gender. This finding is consistent with the research carried out by Pastor et al. (2019), Ali et al. (2022), and Verzeletti et al. (2016). The lack of disparities in ES influenced by gender differences reflects the lower importance of gender-specific emotion rules used by Malaysian adolescents. According to Ali et al. (2022), Malaysian adolescents tend to suppress their emotions similarly, which leads to different findings compared to how adolescents in other countries suppress their emotions, such as Arab adolescents (Keshky, 2018), Australian adolescents (Gullone & Taffe, 2012), and Portuguese adolescents (Teixeira et al., 2015). Moreover, all these studies (Keshky, 2018; Gullone & Taffe, 2012; Teixeira et al., 2015) have demonstrated differences between boys and girls in the suppression of their emotions. Studies by Balzarotti (2021), Zhao et al. (2014), Zimmermann and Iwanski (2014), and Martin-Albo et al. (2018) showed that there are gender differences in ES among adolescents. The findings showed that boys use more ES than girls. According to Brody (2000), this may be attributed to the process of socialization, where boys have been educated to repress their emotions compared to girls. According to Chen et al. (2018), through life-span development, individuals acquire consistent gender-role behaviours. For example, it is more common for girls to exhibit cheerfulness and sadness than it is for boys to demonstrate strength and anger. Flynn et al. (2010) also suggested in the traditional framework, boys have historically exhibited greater physical

strength and resilience, leading to a reduced tendency for emotional expression. Conversely, girls have traditionally been perceived as possessing more delicate and tender qualities, thereby enabling them to openly express their emotions with greater ease.

1. Limitation and Recommendation

Considering these intriguing findings, it's essential to acknowledge that the current study, like all research endeavors, has certain limitations. Firstly, this research is primarily only focused on two dimensions of ER, namely CR and ES. For future research, it is imperative to broaden the scope by considering a more comprehensive array of factors associated with ER, including but not limited to acceptance, seeking social support, rumination, and denial. The confined setting of this study within public secondary schools raises concerns regarding the applicability of the results to a broader context. To enhance the external validity of subsequent investigations, it is recommended to address these limitations by incorporating diverse samples and expanding the study's reach to encompass a broader spectrum of secondary school environments. By doing so, researchers can contribute to a more comprehensive understanding of ER across various contexts and demographics. Finally, the sample exclusively consisted of secondary school students aged 13-14 years old. Therefore, caution is warranted when extrapolating our findings to a broader age range within adolescence, specifically ages 10 to 11 and 15 to 19 years old. In future studies, it is advisable to endeavor to incorporate a more comprehensive and representative sample, which should span a broader age range within the adolescent phase.

2. Implication

Despite the absence of significant differences in ER strategies between boys and girls, effectively regulating emotions is a crucial factor for lowering the risk of future psychopathology. Thus, it is of utmost importance to include certain strategies that are aimed at enhancing the acquisition of adaptable emotional self-regulation abilities in both therapeutic and preventive interventions (Sanchis-Sanchis et al., 2020). Moreover, addressing ER is crucial to raise awareness among various parties, including parents, school administration, healthcare professionals, and law enforcers. This awareness may lead to the creation of successful prevention programs aimed at fostering well-being among adolescents. Furthermore, this study contributes valuable insights and novel information that extend beyond the academic realm. It provides practical guidance to parents, caretakers, educators, and adolescents regarding the effective management of emotions. Such knowledge empowers adolescents to skillfully navigate and handle their emotions, fostering emotional resilience and contributing to their overall well-being. This comprehensive approach not only benefits the individual but also has broader implications for the community, promoting a supportive environment conducive to emotional health and flourishing.

Conclusion

To conclude, it appears that there are no noticeable discrepancies between genders in terms of the implementation of ER strategies for both CR and ES among Malaysian adolescents. The findings contribute to our understanding of gender-specific patterns in ER, highlighting a level of consistency in the utilization of these strategies among both boys and girls. However, it is crucial to acknowledge the importance of continued research in this area to deepen our insights and inform targeted interventions for enhanced emotional well-being.

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Informed Consent Statement: The parents who permitted their children to take part in this study had provided their informed consent. All requisite approvals were obtained before the start of the study.

Conflicts of Interest: The authors declare that there is no presence of any conflict of interest.

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