

The Mediating Role of Cognitive Emotion Regulation Strategies in the Development of Social Behavior among Adolescents

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ABSTRACT

This study aimed to investigate the mediating role of cognitive emotion regulation strategies in predicting emotional intelligence, spiritual intelligence, and parent-peer attachment towards social behavior among adolescents. A quantitative approach was utilized to gather the information through survey forms. A comparative causal-effect study design was applied and five instruments were used for data collection. In addition, a structural equation modeling was conducted to test the effect of the mediator variables of cognitive emotion regulation strategies on 538 secondary school students selected from five zones identified as north, south, west, east and East Malaysia. The results showed cognitive emotion regulation strategies fully mediated the effects of emotional intelligence and closeness on social behavior. The results also reported that the cognitive emotional regulation strategies were significant as partial mediators of the relationship between the spiritual intelligence and social behavior. As a result, this study proposes a mediation model

to support the combination of psychological theories from the emotional, spiritual and cognitive regulation aspects. In summary, the findings of this study recognized the factors that contribute to the social behavior among adolescents, which is crucial to policy makers in developing a prevention and intervention program.

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INTRODUCTION

Social behavior is an umbrella term that refers to a wide range of interrelated behaviors in the process of communicating. It includes physical and emotional behaviors which are influenced by ethics, attitudes, genetics and culture, among others. According to the report by World Health Organization (WHO, 2002), more than 1.6 million people around the world die as a result of violent behavior each year. In fact, violent behavior is one of the major causes of death among people aged between 15 to 44. Most forms of violent behavior, including activities that threaten health and well-being, are more common during adolescence (Steinberg et al., 2008). The number of crimes involving juveniles had increased by 30.8% from year 2009 to 2013 and keeps increasing yearly. These figures may indicate that adolescents are becoming more aggressive. Among the crimes committed include possession of weapons, breaking traffic rules, truancy, being involved in criminal activities related to the property of others, gambling, substance abuse, and trespassing.

In Malaysia, the prevalence of negative social behaviors among adolescents have increased, such as snatch theft 76%, physical assault 27%, physical fight 28%, and other violent-related behavior 16% (Lee et al., 2007). Previous studies indicated aggressive adolescents showed clear psychosocial maladjustment, low academic performance, absenteeism from school, involvement in delinquent acts, substance abuse, and various

mental health problems such as depression (Ostrov & Godleski, 2009; Piquero et al., 2007). Aggressive adults tend to show psychiatric problems and criminal conduct in addition to experiencing unstable marital relations and unemployment (Coccaro et al., 2009) and often suffer from depression, anxiety, low self-esteem, and stress, which are associated with physiological ailments, including headaches or sleeping irregularities (Malarvili & Saroja, 2018; OMoore & Kirkham, 2001).

The substantial effects of negative social behavior on psychosocial adaptation and mental health effects reiterate the significance of specifying factors that increase or inhibit aggressive conduct. Knowing such factors is essential not only for perceiving the mechanisms of negative social behavior but more accurately, for devising constructive plans for preventing violence and managing behavior. Several studies had aimed to identify variables that potentially influenced negative social behaviors, such as behavioral inhibition and control, empathy, and anger management (Barnett & Mann, 2013; Denson, 2013). Among processes believed to affect social behavior, emotional intelligence has appeared as a possibly pertinent variable (Brackett et al., 2004; Ragini & Badri, 2018). Studies have supported a robust relationship of spiritual intelligence and parents-peer attachment with social behavior (Choy & Zainal, 2019; Wigglesworth, 2006).

Emotional Intelligence (EI), Spiritual Intelligence (SI) and Parent-Peer Attachment (PPA)

Generally, elements such as emotional, spiritual, parent-peer relationships are profoundly related with individual social behavior especially during adolescent development. Accumulating evidence suggests EI is an individual mental ability that can be measured reliably (Brackett & Mayer, 2003; Śmieja et al., 2014). A number of initial studies have proposed lower EI is associated with engagement in self-destructive behaviors (Brackett & Mayer, 2003; Trinidad & Johnson, 2002); while higher EI is linked to positive consequences (Rivers et al., 2007). EI pertains to the capacity to apply reasoning concerning emotions and the potential of emotions to improve reasoning. Further, EI is believed to refer to the ability to perceive and thoroughly express emotion, use emotion to control thought, understand emotions, and manage emotions for emotional enhancement (Mayer et al., 2008).

Spiritual intelligence refers to the application of spiritual information according to the circumstances while handling routine problems and achievement of goals (Arbabisarjou, 2016; Emmons, 2000). Moreover, King (2008) also considered SI as a set of mental abilities related to non-materialistic and elevated dimensions of life, for example personal understanding, profound existential thinking, and extension of meaning. According to King (2008), SI consists of critical existential thinking, engendering of personal meaning,

transcendental awareness, and expansion of conscious states. Howell (2004) indicated SI involved seven steps: awareness, meaning, evaluation, centeredness, vision, projection, and mission.

Generally, attachment is referred to as an affective bond between a child and his/her caregivers, and it is affected by the ways in which caregivers react to the child and the extent to which they are available to respond to his/her needs (Bowlby, 2008). According to Bowlby's (1969) attachment theory, children start to develop a safe attachment relationship if they are assured of the caregivers' availability and responsiveness. This increases their confidence in themselves and in others. The lack of responsiveness and supportive reactions gives rise to instability in the caregiver-child relationships and hence, results in an insecure bond (Boris & Zeanah, 2005). Stephiana and Wisana (2019) reported the role of parents in child cognitive development.

Many studies have documented the relationship between peer acceptance and social behavior consequences. Commonly, popular students are regarded as being more prosocial and sociable, less aggressive and less detached (Asher & McDonald, 2009; Card & Little, 2006). Similarly, students' friendships and peer groups are ascribed to as social-behavioral traumas. Compared to children without friends, those with friends are more sociable, cooperative, and self-confident; children involved in bilateral friendships are also inclined to be more independent, altruistic, prosocial, and less aggressive compared to those

who are deprived of such friendships (Wentzel & Ramani, 2016). Concerning peer acceptance, these outcomes seemed to be valid and applicable to students in all age groups (Cillessen et al., 2005; Wentzel et al., 2004). Peer crowds often vary in terms of social behavior reputation (Brown et al., 1989).

Cognitive Emotion Regulation Strategies (CERS)

Emotion regulation refers to the processing, intensifying, weakening, altering or maintaining of emotions in a goal-directed manner (Gross & Thompson, 2007; Ochsner et al., 2012), which leads to more stable emotions (Gross & Jazaieri, 2014; Ochsner & Gross, 2005). Previous research on self-regulation emotion had been conducted mainly in Western countries. A growing number of studies had focused on the self-emotion regulation and behavior (Gross & Thompson, 2007; Ochsner & Gross, 2005), especially on the increased prevalence of violence among adolescents (Swahn & Donovan, 2004). Adolescents who are unable to control their emotions often display negative behavior and difficulties with emotional functioning (Bao et al., 2015). They are likely to express anger and aggressive behavior and consequently they may experience psychological impairments and develop mental disorder. Specifically, this process has been referred to as dysfunctional emotion regulation (Ahmed et al., 2015).

Dysfunctional emotional regulation affects the academic success through decreased social functioning and impaired

psychological and physical wellbeing of adolescents (McLaughlin et al., 2011). Furthermore, emotion regulation strategies emphasize the cognitive reappraisal involved in changing thoughts and beliefs (Aldao et al., 2010). A great number of studies have shown a growing interest in the mechanisms underlying the relation between attachment and depressive disorders in adolescents (Choy & Zainal, 2019; Gaylord-Harden et al., 2009; Ruijten et al., 2011). Emotion regulation is often described as involving skills, behaviors, and strategies that may initiate, control, modulate, inhibit, or enhance emotional experiences and expressions needed to adapt to a specific situation (Calkins, 2010). Emotion regulation is a goal-oriented process that focuses the form, intensity, expression, or duration of an emotion (Thompson, 1994; Vohs & Baumeister, 2016). This potential to self-control emotions is a fundamental attainment that develops during childhood and school years (Calkins, 2010; Eisenberg & Fabes, 2006). Adolescents can refer to a robust repertoire of emotion regulation strategies, like self-distracting, reconsidering in emotional situations (Bandon et al., 2010). Cognitive strategies, like cognitive reappraisal or reflection, which are initially displayed in late childhood, are also considered as part of that repertoire (Garnefski et al., 2007). Furthermore, adolescents can seek help from their parents or peers who act as social regulators since they tend to protect the adolescents in confusing conditions or avert their attention following a personal loss.

Since experiences and interactions play a significant role in the enhancement

of children's emotion regulation skills, it seems natural to propose that parent-child communication is the main predictor of emotion regulation problems (Thompson, 2001). Attachment has been viewed as an important factor in dealing with emotional situations. Wolfradt et al. (2003) found that adolescents who perceived parental support applied active problem-focused coping strategies which were considered adaptive. In addition, higher parental attachment predicts increased use of reappraisal and decreased suppression of emotional experiences in the way in which core emotions regulate strategies in adulthood (Gresham & Gullone, 2012). Also based on the findings of another study, adolescents who experienced a safe attachment style seemed to be capable of regulating mature emotional states through implementation of functional regulation strategies (Sroufe et al., 2009).

In summary, based on the highlights and reviews of previous studies as above, it is clear that EI, SI and PPA contribute to CERS and thus affect adolescent social behavior. However, studies to identify the relationships between all the above indicators in a single mediation model has not been appropriately studied. Therefore, this study aimed to explore all of the above variables by proposing the mediation model to address the social behavior problem faced by adolescents. Studies using the cognitive emotion regulation strategy were mostly explored in western countries where customs, cultures and environments are very different from Malaysia. Therefore, this study is crucial to provide awareness

and the processes of cognitive that occur consciously or unconsciously during the period of adolescent development.

Problem Statement

Adolescent misbehavior is often exposed in the media. According to statistics, the involvement of adolescents in various types of misconduct is increasing every year. The involvement of juvenile offenders has led to more cases of life-threatening deaths. This issue provides a clear picture of the depleted morale and personality among today's youth. Despite the many discussions, studies and efforts undertaken by various parties, these behavioral problems continue to be a hot topic that challenges the community and country in finding solutions. Behavior has a bearing on individual and environmental factors (Bandura, 1986). Through previous theories and studies, the identified individual factors were emotional intelligence and spiritual intelligence; while the environmental factors were parents and peers perceived risks of behavior. However, before behavior is formed, a cognitive process occurs in which the emotional stimuli trigger a tendency to react (Gross, 1998; Ragini & Badri, 2018). This cognitive process triggers emotional regulation strategies which an individual will consciously use before he/she is exposed to the behavior. Therefore, knowledge of cognitive self-regulation strategies for emotion is important as it determines the well-being of an individual's lifestyle especially in adolescent behavior. To understand the implications of using

cognitive emotion regulation strategies, a study needs to be conducted to identify the factors of cognitive emotion regulation characteristics that may influence an individual to regulate his/her emotions and behavior when faced with a situation.

Generally, in order to understand the existence of adolescent social behavior, the relationships between variables need to be described in detail in order to implement the form of cognitive strategies of emotionally self-regulating adolescents in order to implement them effectively. To address these needs, this study sought to explore the relationship between emotional intelligence, spiritual intelligence, parent-peer attachment and adolescent social behavior through cognitive emotion regulation strategies as a mediator among adolescents. Given that such studies have not yet been carried out in this country, we expect that the findings and formulation of this research

model will contribute positively to the design and implementation of programs to address adolescent behavior problems today. The mediation model which will be presented later can be the basis for future studies in enhancing our understanding and knowledge of the variable factors that relate to social behavior among adolescents in Malaysia. It is hoped the findings of this study will help many parties in finding solutions to adolescent behavior problems.

PRESENT STUDY

This study aims to address the effect of emotional intelligence (EI), spiritual intelligence (SI), parent-peer attachment (PPA), and cognitive emotional regulation strategies (CERS) on adolescents' social behavior by proposing the mediation model, namely Model of Social Behaviour (MSB). Figure 1 shows the conceptual framework of the present study.

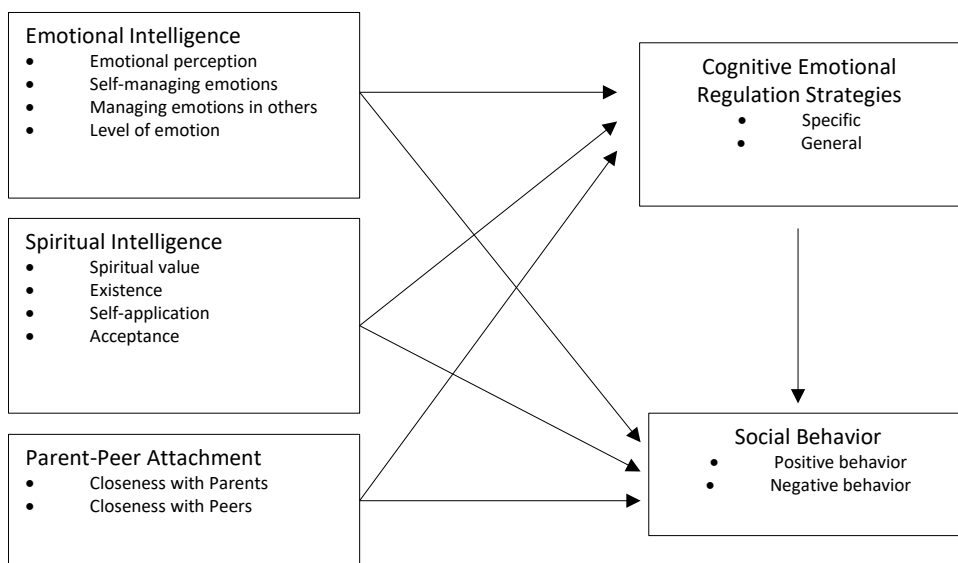


Figure 1. Conceptual framework

The main objectives of this study are: (1) to investigate the causal relationship of emotional intelligence, spiritual intelligence, parent-peer attachment, cognitive emotional regulation strategies and social behavior among adolescents; and (2) to examine the mediating effects of the CERS on the causal relationship between EI, SI, PPA, and adolescents' social behavior.

METHODOLOGY

Research Design and Sampling Procedures

This study adopted a correlational research design using structural equation modeling SEM to achieve the objectives of the study. The questionnaires were used to collect the data. A total of 538 participants were drawn from five identified zones in West Malaysia representing north, south, west, east and East Malaysia. The researcher employed cluster probability sampling to select one state in the respective zones to recruit adolescents from the national secondary schools. Upon receiving permission from the Ministry of Education to conduct this study, a letter was forwarded to the respective State Department of Education in each state to gain access to the selected schools.

Instruments

Cognitive Strategies of Emotional Self-Regulation (CSESR). This instrument was designed to assess reappraisal and suppression by John and Gross (2004). The instruments consisted of 36 items measuring cognitive strategies of self-blame, blaming

others, acceptance, refocus on planning, positive refocusing, rumination, and positive reappraisal from the perspective of catastrophizing. The responses were measured on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Social Behavior Checklist (SBC). This instrument measures SB-positive and SB-negative. This instrument was adapted from the procedures and guidelines by the Ministry of Education in collaboration with the Malaysian Police Force (PDRM) and the Malaysian Crime Prevention Foundation. Out of the 36 items, 12 items measure the positive and 24 items measure the negative social behavior.

Emotional Intelligence Survey

This instrument was developed based on the model by Salovey and Mayer (1990) and improved by Schutte et al. (1998). This instrument comprises 4 dimensions namely, emotional perception, self-managing emotions, managing emotion in others, and the level of emotion. The responses were rated on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Spiritual Intelligence Survey

This was assessed using the Spiritual Involvement and Beliefs Scale-Revised (SIBSR-R) (Hatch et al., 1998). The instrument was divided into 4 dimensions comprising basic spiritual values, existence, self-application, and acceptance. The items were scored on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Level of Closeness Survey

This was assessed using the Closeness with Parents and Closeness with Peers survey questionnaires which were divided into beliefs, communication, and separation/distant dimensions. All items in the mentioned instruments were scored on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Analytic Strategy

The analyses were conducted using SPSS and SEM-AMOS (Analysis of Moment Structures). SPSS was used for the descriptive analysis. Structural equation modelling (SEM-AMOS) was used for the path analysis. The path analysis was used to test the measurement model (inter-correlation), structural model, and mediation. First, the measurement model was developed based on the outcomes of the Pearson-correlation test. Second, the structural model was created to examine the effect of the exogenous variables (EI, SI, PPA, CERS) on endogenous variables (SB). Lastly, the test of mediation was used to determine the research objectives and research questions. The mediation model is proposed in the end of the study.

Preliminary Analysis

Preliminary analysis is an initial process conducted at the beginning of a study to ensure the data are valid and not normally distributed. In this study, for the measurement model, the preliminary analyses included the analysis of univariate normality, collinearity analysis, and confirmatory factor analysis (CFA).

The results of the preliminary analysis supported the univariate normality of the data (skewness and kurtosis values were in the range of -1.19 to 1.17 by Kline (2015). Also, the value of Tolerance (ranged between 0.28 to 0.61) and Variance Inflation Factor (VIF) (ranged between 1.64 to 3.52) met the cut off points, as recommended by Norusis (1995). The confirmatory factor analysis (CFA) was conducted before the SEM to ensure the construct indicators actually represented the constructs to be measured in the study (Byrne, 2016; Hair et al., 2010). To ensure the validity and reliability of the instrument, the present study focused on convergent validity and discriminant validity. Table 1 shows the inter-correlation among the constructs ranging from 0.31 to 0.87 ($p < 0.001$), supporting the discriminant validity (Hair et al., 2010).

Table 1

Inter-correlation among constructs in the study: measurement model

Correlation	1	2	3	4
Emotional Intelligence (EI)	1.0			
Spiritual Intelligence (SI)	.80***	1.0		
Parental-peer attachment (PPA)	.70***	.82***	1.0	

Table 1 (Continued)

Correlation	1	2	3	4
Cognitive Emotional Regulation Strategy (CERS)	.54***	.48***	.31***	1.0
Social Behaviour (SB)	.63***	.72***	.50***	.87***

Note: *** correlation is significant at $p < 0.001$

RESULTS

Model Fit

To determine the causal relationship between the constructs in the proposed model (Structural Model), the fit of the proposed model (Model of Social Behaviour) to the data had to be verified. The results of the present study indicated the model fit the data well. More than 4 fitness indices achieved the threshold values needed as suggest by Schumacker and Lomax (2016): RMSEA (< 0.08) = 0.04; AGFI (> 0.90) = 0.93; GFI (> 0.90) = 0.96; CFI (> 0.90) = 0.98; IFI (> 0.90) = 0.98; and relative Chi-square (< 5) = 2.25. Therefore, the Model of Social Behaviour (MSB) was accepted, and it could explain the causal relationship of the variables.

Causal Relationship of Emotional Intelligence (EI), Spiritual Intelligence (SI), Parent-peer Attachment (PPA) and Cognitive Emotional Regulation Strategies (CERS) with Social Behaviour (SB). Table 2 shows only two out of four causal relationships were significant, specifically, the path between CERS and SB ($\beta = 0.54$; $p < 0.01$) and the path between SI and SB ($\beta = 0.43$; $p < 0.001$). However, causal relationship between EI and PPA to SB was insignificant. The results indicated adolescents with cognitive emotional self-regulation strategies showed better SB. Additionally, PPA was not significantly related to adolescent SB. The strongest causal relationship was found for CERS, indicating for each one unit increase in CERS adolescent SB, it would be an increase by 0.54 units.

Table 2

Results of SEM on causal relationship on social behaviour

Construct	Estimate	S.E.	C.R.	p	β
Emotional Intelligence (EI)	-0.13	0.18	-0.70	0.481	-0.07
Spiritual Intelligence (SI)	2.02	0.67	2.99	0.003	0.43**
Parental-Peer Attachment (PPA)	-0.09	0.14	-0.68	0.496	-0.08
Cognitive Emotional Regulation Strategy (CERS)	0.24	0.03	6.74	0.000	0.54***

Note: *** significant at $p < 0.001$; **significant at $p < 0.01$

Causal Relationship between Emotional Intelligence (EI), Spiritual Intelligence (SI), Parent-peer Attachment (PPA) towards Cognitive Emotional Regulation Strategies (CERS) among Adolescents in the Model of Social Behaviour (MSB). Table 3 shows EI ($\beta = 0.45$; $p < 0.001$), SI ($\beta = 0.38$; $p < 0.01$), and PPA ($\beta = -0.31$; $p < 0.05$) were significant predictors of the adolescent CERS. EI and SI showed positive causal

relationship while PPA showed negative causal relationship with adolescent CERS. The results also showed EI had a stronger effect on adolescent CERS compared to SI and PPA. One unit increase in the EI would increase adolescent CERS by 0.45 units. Overall, the results indicated high EI and SI had positive effects on adolescents' CERS, although with low parental or peer attachment. A negative effect was found.

Table 3

Results of SEM on the causal effects of Cognitive Emotional Regulation Strategies (CERS)

Constructs	Estimate	S.E.	C.R.	p	B
Emotional Intelligence (EI)	1.92	0.36	5.21	0.000	0.45***
Spiritual Intelligence (SI)	3.97	1.38	2.87	0.004	0.38**
Parental-Peer Attachment (PPA)	-0.75	0.29	-2.56	0.010	-0.31*

Note: *** significant at $p < 0.001$; **significant at $p < 0.01$; *significant at $p < 0.05$

Mediating Effect

Generally, mediating effect occurs when a third variable affects the relationship between two other related variables (Hair et al., 2010). Mediation effect occurs only when there is a significant relation between each construct (Baron & Kenny, 1986). In this study, the results of the inter-correlations clearly revealed a significant correlation between all the constructs as shown in Table 1. Therefore, objective 4 aimed to identify the mediating effects of cognitive emotional regulation strategies on the causal relationship between (1) emotional intelligence and social behaviour, (2) spiritual intelligence and social behaviour, and (3) parental-peer attachment and social behaviour.

To identify the mediating effects in the Model of Social Behaviour (MSB), this study needed to establish the presence of mediation effect in the proposed model by proving that full mediation model is better than direct model. According to Kline (2015), Model Comparison involves the comparison of the value between direct model and indirect model. However, the researcher can adopt the additional decision criteria to determine the better fitting model, such as CMIN, PNFI, and AIC. The results of the Model Comparison and the Model Fit summary as reported in Table 4 and Table 5 supported the mediation effect in the model proposed by this study. The analysis showed the full mediation model is better than the direct model, and hence supporting the

proposed Mediation Model of Adolescent Social Behaviour. Therefore, objective 4 explained the mediating effect of each path on the MSB as well as the total direct and indirect effect for the overall model.

The Model Comparison established the presence of the mediation effect on the proposed model. The mediating effect for each causal relationship may be identified

as either full mediating effect or partial mediating effect. Full mediation effect happens when the direct effect between the causal variables and the outcome variables in the Full Mediation Model is insignificant. However, partial mediation effect occurs when a direct effect exists between the causal variable and outcome variable in the Full Mediation Model.

Table 4

Model Comparison

Model Comparison	CMIN	p	Decision Criteria (Mediation Model Better)
Indirect Model	24.32	0.000	sig- $\chi^2 < \alpha$ for Indirect Model
Direct Model	188.83	0.000	χ^2 smaller value

Table 5

Model fit summary

Model Fit Summary	Full Mediation Model	Indirect Model
CMIN (Smaller value is better model)	148.58	172.91
AIC (Smaller value is better model)	226.58	244.91

Table 6 shows CERS was a significant full mediator of the relationship between EI and SB ($p > 0.05$; Mediation Model) as well as the relationship between PPA and SB ($p > 0.05$; Mediation Model). On the other hand, CERS is a significant partial mediator of the relationship between the SI and SB ($p < 0.001$; mediation model). The strongest mediating effect emerged for EI (0.94) followed by SI (0.64) and attachment (0.26). The total effect of the model is 1.85.

Overall the model indicated EI, SI, PPA and CERS explain 56% of the variance in

adolescent SB (Figure 2). This means other factors account for the remaining 44% of the variance in adolescent SB. Additionally, Figure 2 shows EI, SI, and PPA explain 33% of the variance in CERS.

In conclusion, the findings of the study are in agreement with previous studies, especially those related to cognitive emotion regulation conducted by Gross (1998) and John and Gross (2004). This study has successfully explored the influence of several factors found to contribute to the individual's ability to regulate emotions. The

Table 6

Matrices of standardized direct effect, mediating effect, and total effect

Standardized Effect	Outcome variable	Causal Variables		
		EI	SI	P&P
Direct Model	SB	0.24*	0.76***	-0.32*
Mediation Model	SB	-0.07	0.43**	-0.08
Causal relationship: CERS to SB = .54***				
Total indirect effect		0.24	0.21	0.17
Total effect		0.94	0.64	0.26

Note: *** significant at p<0.001; **significant at p<0.01; *significant at p<0.05

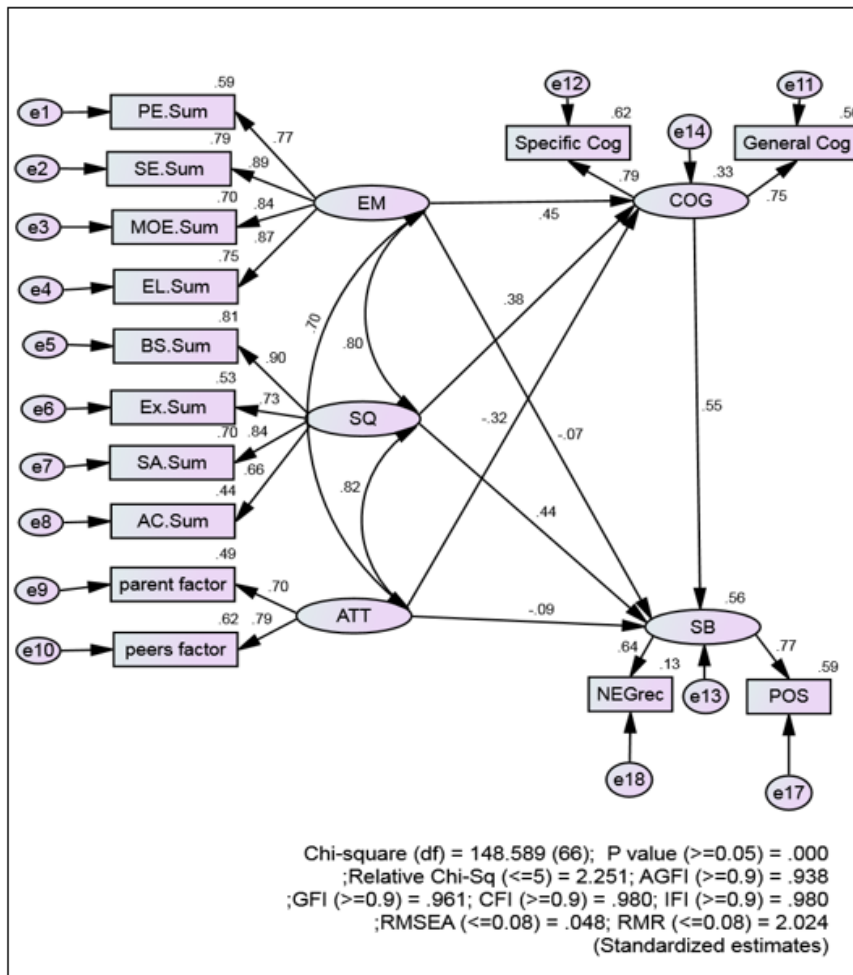


Figure 2. Model of Social Behaviour (MSB)

information, contributions and implications of the practice to be discussed are based on several findings on the relationship between EI, SI, PPA with adolescent CERS and SB.

EI is not the primary predictor of adolescent SB but is considered as a major contributor to adolescent SB. This suggests although previous studies had found EI affected SB, its effect is not as great as that of SI. SI is considered to be an important factor in the formation of EI. SI not only influences adolescent SB but it also appears to affect CERS. High levels of SI strongly influence adolescents' positive SB; whereas those with high level of SI comprised of adolescents who are less likely to have SB problems. SI is also found to affect several dimensions of CERS because according to a study, SI is seen to be able to control the state created by intellectual as well as emotional intelligence as its ability is a combination of the ability in the brain and the ability in the soul (Goleman, 1996). This shows the theory of SI and its influence is relevant to this study and needs attention from all parties to address adolescent behavior problems.

The finding also reported PPA was a dominant contributor to social behavior among adolescents. Both theory and previous studies had found PPA had the potential to influence adolescents' behavior and it is also consistent with the finding of this study. PPA, SI and EI play a very important role in adolescent behavior (Albeny et al., 2019). Parents play a very powerful role in shaping adolescent behavior and personality. It can also influence adolescent CERS because

low level of parental involvement is seen as a symptom of depression which can result in the adolescents' inability to regulate emotions (Kostiuk & Fouts, 2002) which then ultimately leads to behavioral problems (Albeny et al., 2019; Bennett, 2003). Additionally, PPA has also been found to influence adolescents' mood regulation (McCarthy et al., 2000). Emphasis should be given to all parental involvement for this is important for adolescent self-esteem.

Previous theories and studies on emotion regulation had reported its positive relationship with SB. The results of this study also confirmed the findings although the CERS dimensions used are different. The dimensions of reappraisal, refocusing on planning, and positive reappraisal contributed to positive social behavior while the dimensions of blaming (others) and thinking of catastrophizing contributed to negative social behavior. Previous studies did not specifically address the positive aspects of SB, so the references focused only on the negative aspects. Knowledge of these strategies can be a guide for specific strategies that can be applied to adolescents to help them control their emotions and thus avoiding being reckless in handling situations.

DISCUSSION

In this study, a mediation model of the relationship between EI, SI, PPA and adolescents' social behaviour was proposed to explore the mediating effects of CERS in the model. This study extends the current knowledge by considering the

elements contributing to adolescents' social behaviour. Specifically, we considered social supports contributed more to positive behaviour among adolescents. The findings supported the hypotheses that suggested EI and SI had the strongest relationship with CERS. Meanwhile, PPA showed negative correlation with CERS. The study also reported SI and CERS were significantly related on adolescents' social behaviour. This result indicated both variables contributed significantly to positive or negative adolescents' social behavior associated with emotional regulation (Gross & Thompson, 2007). Moreover, the inability to control problematic behavioral would lead to the struggle in regulating and releasing anger (Hessler & Katz, 2010). Thus, it is imperative for people to utilize diverse strategies to regulate their emotions. The other two factors on EI and PPA did not contribute to the fluctuation of the behaviour. The central aim of the current study was to investigate a mediational model in which CERS serves as a mediator in the relation between EI, SI, PPA, and SB among adolescents. First, the results supported the hypothesized relationship between SI and SB in adolescents. Higher level of SI indicated better SB in adolescents. Second, adolescent EI and PPA did not affect adolescent SB directly. Third, CERS were positively related to SB. Finally, the results partly supported the mediational role of CERS. CERS served as a full mediator in the relationship between EI, SI and PPA. Furthermore, CERS emerged as a partial

mediator in the association between SI and SB.

Meaningful relationship between the variables justified the investigation of a mediational model. In line with previous research, the current findings supported negative relations of PPA and SB (Kullik & Petermann, 2013). In adolescence, parents still function as important attachment figures and, in case of low attachment quality, they may exert their influence on psychological problems of their child. Furthermore, adolescents begin to develop attachment relationships with friends and romantic partners who fulfil comparable attachment functions. As indicated earlier, a few researchers had pointed out the core ability of SI, a general factor that penetrates into and guides other abilities (Fry, 2003; Ronel, 2008). A number of earlier studies had proposed lower EI was associated with being involved in self-destructive actions, including unacceptable conduct and cigarette smoking (Brackett & Mayer, 2003; Trinidad & Johnson, 2002), and higher EI was associated with positive sequences, like prosocial actions, parental love, and positive peer and family relationships (Rivers et al., 2007). This study supported this proposition. Based on the analysed data, the main results showed, (1) EI affects SB, (2) SI affects SB, (3) PPA affects SB, (4) and CERS affect SB of teenagers.

Due to the relationship between EI and social conduct variables, numerous researchers had proposed not being able to handle emotions is related to conflicting behaviours in social relations and

behavioural complexities (Lomas et al., 2012). A number of studies have examined likely relationships between EI and various forms of aggression, such as bullying (Elife et al., 2012; Lomas et al., 2012) or sexual aggressors in various situations (e.g., in school, with a partner during sex) (Siu, 2009). The studies in this field have indicated those high on EI are in touch with their own emotions and emotions of others, tend to handle themselves better and efficiently deal with others, and attend adequately to work requirements. The findings of this research confirmed these assertions. SI focuses on internal abilities of an individual, and it displays in different forms, like optimistic self-concepts, generous acts of donation, or elevated moral self and personal transcendence (Zohar, 2012). Hence, spiritual health of teenagers is crucial for their mental health. This study demonstrated the two-stage process through which SI may influence social actions. First, SI may influence social actions through its role as a comprehensive guide that affects SB and second, CERS mediates and increases the influence of SI to affect the SB of students.

Securely attached infants grow while expecting their emotional signals to be responded attentively and predictably. Therefore, they show their feelings readily and have the potential to regulate their emotions in a flexible manner respective to their environment (Goldberg, 2014). However, insecurely attached children grow while expecting their emotional signals to be responded rather selectively or unpredictably. Their emotional interactions

are impaired; thus, they tend to display maladaptive emotional regulation strategies, like minimisation or exaggeration. Earlier studies had investigated the relationship between emotional regulation and the quality of attachment in an adolescent sample (Choy & Zainal, 2019; Farley & Kim-Spoon, 2014). The data collected using an Inventory for Parent-Peer Attachment (IPPA) revealed higher level of trust and communication and lower level of alienation predicted more adaptive emotional regulation, whereas lower level of trust and communication and higher level of alienation predicted maladaptive emotional regulation (Taylor-Colls & Fearon, 2015). Overall, the findings demonstrated the relationship among EI, SI, PPA and adolescent SB. They also added to the body of knowledge by addressing the influence of emotional and spiritual support as well as PPA on SB among adolescents'. In conclusion, the study found the effect of CERS as a mediator of adolescents' SB and confirmed the data collected fit the proposal mediation model.

CONCLUSION

Implication

This study combined three main variables to see the effect of predictor factors on adolescent social behavior through cognitive emotion regulation strategies and finally proposing a mediation model. This combination produced new findings in addition supporting previous studies as well as the development of more integrated models to explain practically and theoretically the factors of adolescent social

behavior. The findings had successfully added another piece of scientific information and provided new information on aspects of adolescent behavior which emphasized emotion regulation dimensions as a means of controlling behavioral responses. Cognitive emotion regulation is seen as an effective intermediary agent for controlling adolescent social behavior. This study has provided useful information and findings to various parties, especially to adolescents, parents, schools, ministries, NGOs and the community in solving adolescent social behavior problems. The information also provided to both counselors and guidance teachers on how to assist students with social behavior problems.

Based on the theory of general strategy and cognitive strategy, emotion can actually be regulated to help in the process of determining social behavior. Cognitive emotion regulation strategy does not stand alone but is one of the agents of variation in shaping the individual social behavior especially among adolescents. Previous theories and studies had shown emotional intelligence, spiritual intelligence and parent-peer attachment can influence behavior but this study examines the influence of CERS as a mediator of adolescent social behavior by gathering all the above factors as new information as seen through these findings. The findings of this study clearly suggest factors such as EI, SI and PPA can help adolescents perform cognitive activities to regulate their emotions in relation to a more positive behavior. This means having EI, SI, PPA do not necessarily guarantee adolescents showing good behavior for the

cognitive process of emotional regulation occurs before a person acts. The theoretical gap between EI, SI, PPA and SB has been identified through this study where appropriate use of CERS plays an important role for adolescents in shaping adolescent social behavior.

Recommendation

This study has identified various variables contributing to the formation of positive social behavior as well as negative social behavior among adolescents. Therefore, a follow-up planning and actions need to be given specific attention by different stakeholders. Studies have shown spiritual intelligence is the most important direct contributory factors while emotional intelligence and parent-peer attachment are indirect contributing factors to cognitive emotion regulation strategy and adolescent social behavior. All of these variables need to be exposed to knowledge and skills through various programs. Therefore, the policy makers such as the Ministry of Education should take proactive steps in designing intervention programs and providing efficient services so adolescents can practise relevant knowledge and apply it in their daily lives. The ministry should review the policies, priorities and curriculum content in the relevant subjects so that this knowledge can be passed on to the adolescents before the advanced program is implemented. Aside from the practical application of the teaching and learning process, meaningful activities within the co-curriculum could also support and reinforce

this knowledge. The ministry needs to reflect on what programs are being implemented through studies, actions or views from experts that can lead to continuous changes in adolescent social behavior. For family, every married couple needs to be equipped with the knowledge and skills of parenting so when they face the problems, they will be able to add value to the relationship between parents and children. Good and meaningful relationships need to be established by parents so that children receive adequate care and love.

Suggestion

The model generated from this study can serve as a basis for further research related to the issue of cognitive emotion regulation strategy and adolescent social behavior. Future studies may use experimental methods through interventions to identify the effects and consequences of using cognitive emotion regulation strategy in expressing individual social behavior. Contributions of other variables such as teachers, community leaders, and the community may be able to influence adolescent social behavior. Among other methods that may enhance the findings includes using a qualitative approach through structured interviewing methods to develop deeper information into adolescent behavior experiences; longitudinal studies may also be able to provide input on the relationship between variables from childhood to early adolescence through observation, interview and document analysis.

This study is limited to intelligence and revenue factors. It is suggested future studies

may focus on demographic backgrounds such as gender, socioeconomic status, parental education status and geographical factors such as urban and rural areas as culture and environment may play an important role in social behavior problems among adolescents. Future studies may also consider personality factors and self-efficacy as well as self-esteem as psychosocial factors in adolescents' cognitive emotion regulation strategy and social behavior. The population of this study is also limited to adolescents in the secondary schools throughout Malaysia. It is recommended that adolescent samples be taken from behavioral rehabilitation centers or among juvenile detainees in prison. The sampling method can be performed either randomly or just as a sample. Those from rehabilitation centers have been identified to have committed a serious types of misconduct and not just a self-reports. In addition future studies can also look at aspects of individual internalizing problems such as depression, anxiety, stress and others in studying their current cognitive emotion regulation strategy used through their first-hand experiences of dealing with negative situations without ignoring positive aspects such as happiness, laughs among others.

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