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PERCEIVED PATERNAL AND MATERNAL ATTACHMENT AND SOCIAL EMOTIONAL ADJUSTMENTS AMONG EARLY ADOLESCENTS

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ABSTRACT

The ethological theory of attachment (Bowlby, 1988) suggests the impacts of parent-child bonding on child adjustments. This study aims to examine relations between parental attachment and early adolescents' social emotional adjustments and the moderation effects of sex on the associations. A sample of 1349 adolescents aged 12 to 15 years was drawn from a large national study on parenting and child's well-being (Baharudin, Tan, & Zulkefly, 2010). Data were collected using a self-administered questionnaire that incorporated two measures. Parental attachments were measured using the Inventory of Parent and Peer Attachment (Armsden, 1986), and the Strengths and Difficulties Questionnaire (Goodman, 1997) assessed social emotional adjustments of the adolescents. Causal relationships between variables analyzed using path analysis in structural equation modeling (SEM) depicted direct effects of parental attachment on adolescents' adjustments. The revised model was good fit to the data. Paternal attachment was significantly related to adolescents' difficulties, whereas maternal attachment was found to contribute to strengths of the adolescents. Using a multi-group analysis, the findings revealed that causal relationships in the revised model were moderated by sex. Attachment with fathers and mothers seemed to play a different role in children's social emotional adjustments. Findings advanced understanding of adolescent characteristics and circumstances of parenting that promote positive child adjustments across sex. Implication for family practitioners is the increase of the efficacy of

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interventions focusing on early adolescence. Future research should consider the unique roles of fathers and mothers in broader contexts and factors that may mediate these links.

Key Words: Paternal attachment, Maternal attachment, Social emotional adjustments, Strengths, difficulties, Path analysis

JEL Codes:

INTRODUCTION

It is broadly recognized that the transition to high school is a challenging turning point in the path of early adolescence. This developmental period includes most pubertal changes, and thus, a critical stage for the development of biological, cognitive, and socio-emotional behaviors (Santrock, 2008). At this stage, adolescents will have to cope with new learning environments, redefine interpersonal relationships, and regulate emotional changes. Adolescents gain their recognition ability in understanding their own strengths and weaknesses by using social comparisons as the main sources of information. Evidence continues to accumulate that parental factor could have a crucial influence for families and children, including increased risk of behavioral problems or generating prosocial values in family members.

In past decades, parent-child attachment to children's development and functioning has gained increasing appreciation. Attachment theory has long been recognized as the main platform that emphasized the significance of relationships with others (Ainsworth, 1989; Bowlby, 1973), especially in the field of family studies. Bowlby (1988) referred to attachment as an affectional bond between a child and a caregiver, typically the mother. He further accentuated the importance of the quality of parent and child relationship, which serves as the foundation for later working models, which is a person's mental representation about one's self worth and competence (Ainsworth, 1989). Adolescents during their early years do not simply move away from parental influence into a decision-making world all on their own. Parents serve as important attachment figures and social support systems in order to allow adolescents to explore a more complex world (Santrock, 2008). Continuation to seek for attachment needs in adolescence would eventually anticipate an individual's well-being even into young adulthood (Laible, 2007). Attachment theorists speculated that children of a secure attachment relationship tend to perceive themselves as valuable and recognize the caregiver as being responsive. This internal positive working model of self will serve the child with great capacity to cope with emotions effectively in different circumstances. Alternatively, a parent-child relationship marked by insecurity will foster an insecure working model in which the child perceives himself or herself negatively. Subsequently, these maladaptive views of self may attribute to unfavorable outcomes and put the child at risk for maladjustments.

Although adolescence is typically characterized by a decline in overt attachment where they seek physical proximity with parents (Bowlby, 1977), their psychological health during this stage,

however, is still grounded in the adolescents' internal working models of the parental relationships. Arbona and Power (2003) describes this working model as adolescents' confidence in the availability and commitment of their parents. Undoubtedly, parents' approaches in child rearing are associated with child's strengths, for example, prosocial behavior and its contribution to this development take effect over time (Hastings, McShane, Parker, & Ladha, 2007). In order to understand the factor of prosocial development, the importance of parent-child relationships, which serve as positive resources, was further emphasized in previous studies (Dekovic & Janssens, 1992; Lamborn, Mounts, Steinberg, & Dornbusch, 1991). Marcus and Kramer (2001) also found a positive significant prosocial orientation–secure attachment relationship between mother and child. Thus, researches support the notions that a securely attached child has better strengths, particularly, in prosocial behavior.

From a positive perspective, children's attachments to parents have been shown to predict child-positive outcomes; likewise, its impact on a wide range of behavioral and emotional difficulties is also worth noting. Poor quality of attachment has been associated with a higher level of emotional difficulties, psychosocial maladjustment, and problematic peer relationships. For instance, emotion related to depression and anxiety was often found to be related to insecure attachment with parents (Cotterell, 1992; Doyle, Brendgen, Markiewicz, & Kamkar, 2003; Duchesne, Ratelle, Poitras, & Drouin, 2009; Lucas-Thompson & Clarke-Stewart, 2007). Research has also suggested that heightened emotion in attention-deficit hyperactivity disorders (ADHD) children was more likely to develop a context of an insecure parental attachment (Clarke, Ungerer, & Chahoud, 2002). Morris, Silk, Steinberg, Myers, and Robinson's (2007) review of emotional regulations development revealed that early attachment predicted internalizing and externalizing adjustments. Similarly, good attachment with primary caregivers in the early age and children's later conduct problem were significantly correlated (Vando, Rhule-Louie, McMahon, & Spieker, 2008). Besides the influence of parental attachment on emotional and behavioral problems, maternal attachment has been found to decrease risk of peer relationship problems in grade 6 children (Lucas-Thompson & Clarke-Stewart, 2007). Thus, the above findings tend to indicate that maladjustments in social emotion were evidence of poor or insecure attachment with parents.

Mothers' role in the family has been largely recognized and being labeled as "first teachers" and "cultural bearers" whom imparts life knowledge and values to the child (Mazuru & Nyambi, 2012). The traditional roles of mothers as primary caregivers have led to a lack of consideration in investigating the role of fathers in the development of their children (Lewis & Lamb, 2003). However, despite the recognition on mothers as primary caregiving, father's influence on child adjustment has gained societal attention, especially when children approach middle childhood (Coleman, 2003). Some recent studies discovered that mothers and fathers may differ in the way of their parenting practices (McKinney & Renk, 2008; Simons & Conger, 2007). Consistent with these studies, Conrade and Ho's (2001) study revealed that children tend to perceive more authoritativeness in their mothers, whereas fathers were seen as being more authoritarian. In the

same study, they also found that perception of sons and daughters differs toward their fathers and mothers. Mothers were viewed as displaying more permissiveness than fathers who adopt a more authoritarian style. As from the view of daughters, authoritativeness seemed to be attached more to their mother than to their fathers. However, this view is not in line with the study of Kerns, Tomich, Aspelmeier, and Contreras (2000) on father–child attachment. The study revealed that the attachment styles of fathers and mothers are somewhat similar.

Despite the enduring effect of parent and child attachment on adolescents' social emotional adjustment, relatively few studies have examined the differential roles fathers and mothers have during early adolescent stage. In particular, research examining sex differences on child strengths and difficulties is virtually rare. On the other hand, extensive research has been conducted on mothers and children, thus undermining the potential role of fathers, particularly during middle childhood. Moreover, scarce research has examined the unique contribution of fathers and mothers toward their sons and daughters (Laible, & Carlo, 2004) Thus, the need to examine these distinct relationships grounded on sex differences in family studies is evident.

Furthermore, earlier research generally utilized regression analysis in order to determine the effect of parental attachment on child development. Unlike previous studies, the present study employed path analysis from the structural equation modeling family. Path analysis permits hypotheses testing using multivariate linear causal models and provides breakdown of the covariance between variables and a parsimonious diagram of causal links with coefficients that indicate association among study variables (Gochman, 1988). Path analysis is also superior to ordinary regression analysis because it allows various types of relations among variables to be tested simultaneously and, at the same time, examination and comparison of similarities and differences between groups of studies can be done rigorously (Olobatuyi, 2006). As the current study was also conducted to investigate the role of sex in the links of parental attachments and child adjustments, path analysis has its strength to determine sex invariant within these complex relations concurrently.

OBJECTIVES AND HYPOTHESES

The purpose of the study was to examine the relationship between parental attachment of both sex and child social emotional adjustments during the critical period of early adolescence. Of particular interest is the impact of paternal and maternal attachment through the eyes of adolescents on their behavioral strengths and difficulties. The second purpose of the study was to evaluate sex-invariant of the causal model. Cross validation determined whether sex moderated the causal relationship between parental attachment and child social emotional adjustments.

Grounded on attachment theory, secure attachment to parents in adolescence can facilitate the adolescent's social competence and well-being. Research by Lieberman, Doyle, and Markiewicz (1999) noted that secure attachment to both father and mother was positively related to adolescents'

peer and friendship relations. Similarly, a recent study revealed (Allen, McFarland, Porter, McFarland, McElhaney and Marsh, 2007) that secure attachment in early adolescence is associated with successful autonomy and good peer relations. Additionally, authoritative paternal and maternal parenting, which are characterized by increased responsiveness, were found to be positively related to prosocial behavior in children (Hastings, McShane, Parker, & Ladha, 2007). Thus, in this study, it is hypothesized that paternal and maternal attachments are positively related to early adolescents' strengths.

Behavioral problems or difficulties measured in this study are in accordance with the evidence on the link between parenting attachment and maladaptive behaviors that has been documented in a vast majority of studies. For example, both emotional and behavioral problems were found to be negatively correlated with good quality of parent-child attachment (Ooi, Ang, Fung, Wong, & Cai, 2006) and adaptive parenting, which was characterized by low parental acceptance (Finkenauer, Engels, & Baumeister, 2005). Early adolescents were reported to have interpersonal relationship problems when they have poor attachment with their parents (Doyle, Brendgen, Markiewicz, & Kamkar, 2003). In the current study, it is hypothesized that paternal and maternal attachment are negatively related to early adolescents' difficulties. Based on the hypotheses of the study, the conceptual model for this study is as presented in Figure 1.

METHODS

Sample

A sample of 1349 Form 1 and Form 2 secondary students aged 12 to 15 years was drawn from a large national study on parenting and child's well-being (Baharudin et al., 2010). The sample was recruited through 49 government secondary schools in five regions in Malaysia: Selangor, Kelantan, Malacca, Penang, and Sabah. Using probability proportional to size sampling, the probability of respondents being sampled in this study was proportional to its population size. This self-weighting technique ensures that every sampling unit has the equal chance to be included in the study and it has its strength in reducing standard error and bias. At the outset of the study, the sample consisted of 2953 adolescents, but in this study, analyses were based on 1349 of them who were in the early adolescence stage.

The average age of the respondents was 13.47 years (SD = 0.53). Slightly more than half (55%) were females. Most (63%) of the respondents were Malays; the rest were Chinese (6.8%), Indians (12.8%), and aborigines (17.4%). All of the respondents were from intact families with moderate family size (mean = 4.38 siblings, SD = 2.104). They have parents who are still in their productive years [mean age for fathers = 46.4 years (SD = 6.54); 42.13 years (SD = 5.84) for mothers]. Both the mothers and fathers of the respondents were moderately educated (mean years of education for fathers = 12.05; mothers = 11.54). On average, the respondents' families earn an annual income of RM2283 [USD715.67 (1 USD = 3.19 Malaysian ringgit)].

Procedures

Data for the present study were collected in group using a self-administered questionnaire at the respondents' schools. Permission to conduct the study at the chosen schools was obtained from the Ministry of Education Malaysia, State Education Departments, and principals of each school. Additionally, the study was approved by the Universiti Putra Malaysia, Faculty of Medicine and Health Sciences' Ethics Committee for the study's procedures and participation of human subjects. All respondents gave consent to take part in the present study. Trained enumerators briefed respondents before completing the paper-and-pen questionnaires. Respondents were given ample time to answer all questions on their socio-demographic backgrounds, relationship with parents, and social emotional adjustments.

Measures

Parental attachment. Respondents were required to answer the Inventory of Parent and Peer Attachment (IPPA) (Armsden, 1986). The IPPA scale contains 25 items for paternal, maternal, and peer attachment, respectively. However, the peer attachment score was excluded from the analyses for the present study. The items were rated on a 5-point Likert scale ranging from 1 (almost never or never true) to 5 (almost always or always true). Although the scale was made up of three subscales (trust, communication, and alienation), Greenberg (2009) recommended that researchers use a summative score for this revised version of IPPA. Therefore, the possible range for the IPPA was 25 to 125, with higher scores indicating more positive perception of adolescents toward their relationships with their parents. A sample item is, "My father (/mother) respects my feelings." For the current sample, Cronbach alphas reported were high for both parents (paternal attachment = 0.85; maternal attachment = 0.85).

Social emotional adjustments. Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997) was used to assess social emotional adjustments of the early adolescents in this study. The scale was developed in the need for a brief and trustworthy psychopathology screening. With its applicability to children of broad age range (11 to 17 years), respondents completed all 25 items of the scale which rated on a 3-point Likert scale ranging from 0 (not true) to 2 (certainly true). The five distinct dimensions covered in SDQ, which are conduct problems, hyperactivity, emotional symptoms, peer problems, and prosocial behavior, well depict adolescents' adjustments socially and emotionally. For the analyses of the current study, a sum score of prosocial behavior subscale that consists of five items was used to represent respondents' strengths level. The remaining 20 items of the four subscales were summed up to measure respondents' difficulty level. For the current sample, reliability of the scale was at alpha 0.65 for strengths and 0.71 for difficulties.

Data Analysis

Path analysis using SEM was applied to examine and explain the causal relationships among the variables studied, namely, parental attachment and social emotional adjustments. Additionally, interaction modeling or sampling was used to compare the structural similarities of proposed

models across different samples or subgroups of samples (Schumacker & Marcoulides, 1998). Specifically, the working model was tested across sex to determine the moderation effect. The hypothesized model was first tested for a model fit. Prior to testing the fitness of the model, statistical assumptions were assessed using several indicators, which were Mahalanobis D^2 ($p < 0.001$), skewness value of |3.0| and kurtosis value of |10.0| (Kline, 2005). To evaluate model fit, a number of indices were reported, including the normed Chi-square (χ^2/df), Root Mean Squared Error Approximation Index (RMSEA), Comparative Fit Index (CFI), and Tucker-Lewis Coefficient (TLI). It is generally recognized that to support model fit, a consensus among the following is needed: normed $\chi^2 \leq 5$, RMSEA$\leq$.05, CFI$\geq$.90, and TLI$\geq$.90 (Blunch, 2008).

RESULTS AND DISCUSSIONS

Descriptive Statistics

As a preliminary analysis, Pearson correlations were computed to observe the overall patterns of relationships among variables. Means, standard deviations, and bivariate correlations for the variables studied are shown in Table 1. The results showed that the respondents tend to have a fairly good relationship with their parents. Additionally, the adolescents in the study did not seem to demonstrate severe deleterious behavior. Positive attachment with either father or mother seemed to promote adolescents' strength level, whereas negative attachment increases difficulty level. The presence of multicollinearity between paternal and maternal attachments was checked by calculating the variance of factor (VIF). The value of VIF was 3.694, indicating that there was a low possibility of multicollinearity (Fox, 1991).

The research model was specified by considering two exogenous variables (paternal and maternal attachment) and two dimensions of social emotional adjustments (strengths and difficulties) as endogenous variables. The hypothetical causal relationships model was built based on the literature discussed earlier. In addition, based on the preliminary analyses, paternal and maternal attachments were assumed to be correlated. However, strength and difficulties did not show a significant correlation, thus these two variables were presumed to be unanalyzed association. The path diagram representing the research model is presented in Figure 2.

Adequacy of the Hypothesized Model

In order to examine whether the effects of parental attachment on child strengths and difficulties are significant, path analysis was conducted. As shown in Figure 3, model fit was adequate, χ^2(df) = 1.293(1), p >.001; RMSEA = .015, CFI = 1.0, TLI = .99. It is worth noting that CFI = 1.0 is not an indication of a perfect fit, rather it shows that $CMIN_{deflt}$ is lesser than DF_{deflt} (Blunch, 2008). Albeit the model showed satisfied fit indices, two path coefficients were found to be insignificant: (1) paternal attachment to adolescent's strength level, and (2) maternal attachment to adolescent's difficulty level. Contrary to the hypotheses, paternal attachment failed to contribute to the strength

level of the adolescents and maternal attachment did not reduce the difficulty level of the adolescents. The proposed model was thus revised and the two insignificant paths were omitted.

Adequacy of the Revised Model

The revised model as shown in Figure 4 was fit to the sample data in order to establish the proposed model. The resulting model fit the data well: χ^2(df) = 7.471(3), p >.001; RMSEA = .033, CFI = .998, TLI = .996. Squared multiple correlation coefficients from the revised model indicated that only 12% of the variance in difficulties and 5% of the variance in strengths were accounted for. Akin to the zero order correlations, both exogenous variables yielded low to moderate significant associations in the revised model.

Parameter estimates for FPA to DIF was -0.34 and for MPA to STR was 0.24. Both path coefficients were in the hypothesized direction and significant at the .001 levels, which indicates practical importance. The findings revealed small to moderate effects of paternal and maternal attachment on the adolescents' strengths and difficulties. These tend to suggest that positive attachment with fathers may help to reduce difficult behavioral problem, whereas positive attachment with mothers promote strengths in early adolescents.

Sex Invariant of the Revised Model

The second purpose of the study was to examine the causal model across sex. In order to test sex-invariant, the unconstrained structural path was first tested to obtain a baseline Chi-square value. Next, the structural paths of paternal attachment to difficulty and maternal attachment to strength were constrained across sex. This would produce another Chi-square value, which was then tested against the baseline value to determine statistically significant differences. Table 2 shows the multi-group modeling results across male and female adolescents.

The invariance test across the male and female sample resulted in a statistically significant change in Chi-square value: χ^2(df = 2) = 15.475, p < .005. In other words, the path coefficients varied across the two groups in which the value of the constrained model was much worse that the unconstrained model. The findings indicated that sex moderated the causal relationship of parental attachment and adolescents' strengths and difficulties, particularly paternal attachment to difficulties and maternal attachment to strengths.

CONCLUSION

The present study investigated the influence of parental attachment on early adolescents' social emotional adjustments and to examine the potential moderating role of sex. Results indicated that parental attachments were related to adolescents' strengths and difficulties. However, path analysis revealed that fathers and mothers played different roles on their adolescents' adjustments. Fathers seemed to have a significant influence on their adolescents' difficulty level. On the contrary,

mothers appeared to enhance the adolescents' strengths. In other words, adolescents with insecure relationships to their fathers tend to display more difficult adjustments such as emotion, peer, and conduct problems. On the other hand, good maternal attachment would promote prosocial behavior in early adolescents. Surprisingly, the path analysis showed that attachment to father did not promote strength, and attachment to mother did not decrease difficulty level of the adolescents.

Attachment theorists have contended that a secure parental attachment is crucial for the construction of a healthy internal working model and for the promotion of many positive aspects in later years. It is worth noting that 'continuity of caregiving' is the critical determinant of later development (Berk, 2007). Thus, investigating and understanding the role of parental attachment during the early stage of adolescence is vital. The findings from the present study are somewhat concordant with earlier works on the impact of poor attachment with fathers on adolescents' maladjustments (Doyle et al., 2003; Duchesne, Ratelle, Poitras, & Drouin, 2009). In contrast to these earlier studies, the findings from the present study do not lend support to the notion that maternal attachment also contributed to child maladjustments. Williams and Kelly (2005), who examined the father's influence on behavioral problems in adolescence, revealed similar associations that fathers' involvement and attachment appeared to be the only significant predictor of externalizing problem and total behavioral problems.

With regard to children's strengths, which were measured based on prosocial aspect, only maternal attachment, and not paternal attachment, was found to be the significant predictor. The finding supports the possibility that there exist differences in parenting behavior between mothers and fathers as raised by the role theory (Hosley & Montemayor, 1997). The differential treatments by mothers and fathers could affect the way adolescents adjust. The tenets of this theory posited that mothers who are conventionally viewed as the primary caregiver practice warmer parenting for their children. Fathers with the masculine characteristics, on the other hand, often play the role as the disciplinarian figure. These sex role differences may, in turn, prompt children to perceive their parents using different standpoints, and thus, affecting how they adjust themselves to positive or negative developmental aspects.

Additional analysis revealed that sex moderated the relationship between parental attachment and the strengths and difficulties of the adolescents. Although research on sex-difference parenting and its outcomes are relatively rare in the past decades, few studies provided insight on how adolescents differ in their perceptions toward their mothers and fathers. As discussed earlier, Conrade and Ho (2001) found that male adolescents viewed their mothers as more permissive than their authoritarian fathers, whereas female adolescents perceived their mothers as being more authoritative than their fathers. The current findings support these discrepancies in perception on parenting and are consistent with previous research (McKinney & Renk, 2008). Due to the incongruity in parenting perceived by the adolescents, the impact that fathers and mothers have on

the development of the adolescents' strengths and difficulties could be varied. As the roles of parents continue to change over time, this area of study deserves further examination.

The present study should be seen in light of its limitations. First, there might be a possibility that data obtained from the adolescents' self-report on the scales can be attributed to shared variance method. Multi-informant or a method other than self-report would strengthen the construct validity of the bias measure. Second, this study focused only on the total difficulties score rather than on different subdimensions of the SDQ scale. Therefore, it cannot determine how parental attachment influences specific aspects of maladjustments. Third, the present study utilized the summative scores of each variable, which could undermine the relevant factors predicting the endogenous variables. Utilizing path analysis in determining causal relationship, no doubt, has gained its strengths in terms of parsimoniousness, but it limits researchers' ability to explore factors that contribute to the study variables. Lastly, the present study focused only on early adolescents, therefore findings from the study cannot be generalized to adolescents from other stages as well as clinical samples.

Understanding the importance of the dynamic interactions between parental attachment of both sex and adolescents' social emotional adjustments is beneficial in designing an effective intervention programs. This research refines understanding of the unique roles of fathers and mothers in their adolescents' lives and how attachments with these significant figures influence the development of strengths and difficulties. Additionally, sex of the child does play a role in these relationships. Furthermore, findings from this study lend support to Bowlby's theory of attachment, which postulates that a secure attachment fosters positive working models in adolescents. However, variations in parental attachment could develop due to the cultural differences and the changing roles of today's fathers and mothers. Future researchers may be keen to examine how these variations shape adolescents' behavioral adjustments. Despite its limitations, the present study provides further evidence on the importance of parental attachment in shaping positive social emotional adjustments in early adolescents.

Table-1. Correlations between Paternal Attachment (FPA), Maternal Attachment (MPA), and Child Social Emotional Adjustments [Strengths (STR) and Difficulties (DIF)]

Variable	1	2	3	4
1. FPA				
2. MPA	0.85***			
3. STR	0.19***	0.23***		
4. DIF	-0.35***	-0.33***	-0.05	
M	91.52	94.49	6.29	12.97
SD	14.01	13.86	1.93	5.01

Note: ***p <.001

Table-2. Multi-group Modeling across Sex

Model	χ^2	df	critical value	χ^2 change
Unconstrained	8.294	6	10.60	15.475*
Constrained	23.769	8		

*Note: *p* <.05

Figure-1. Conceptual model of the study

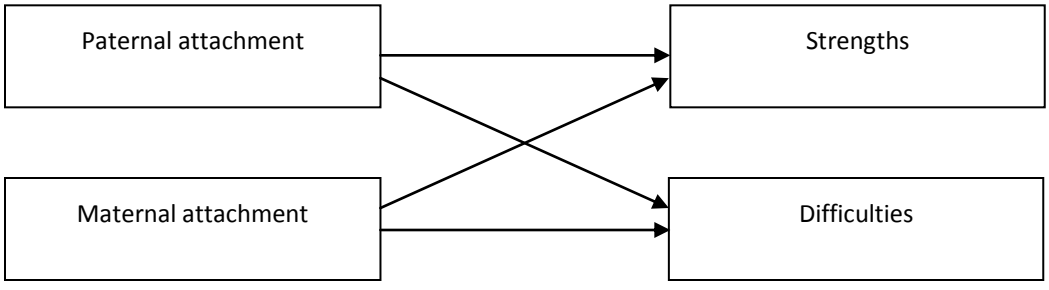


Figure-2. Path diagram of the study

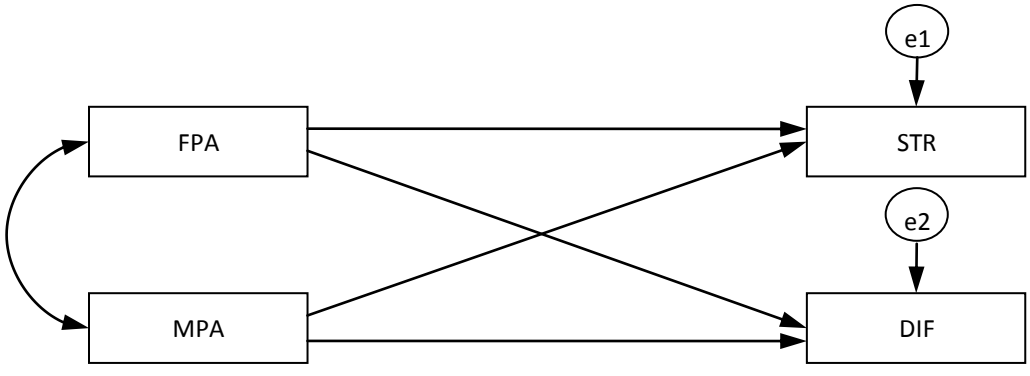
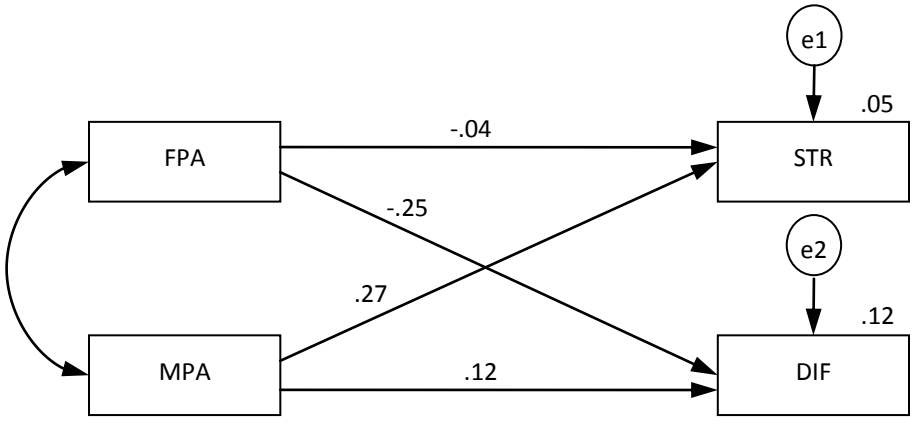
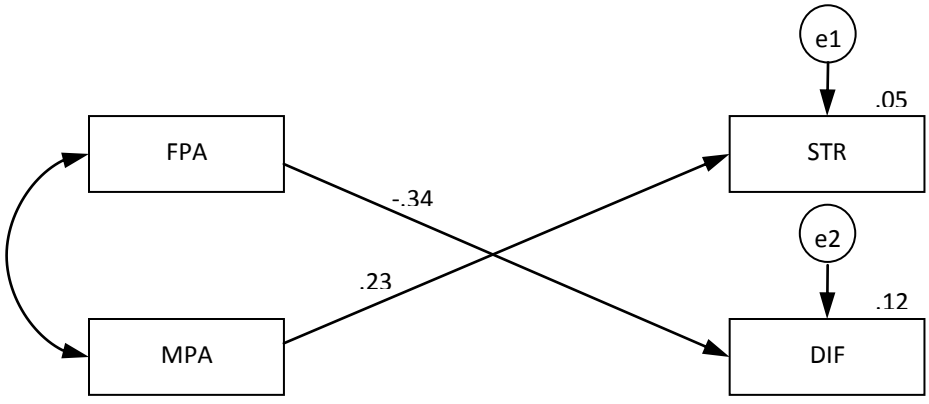


Figure-3. Hypothesized model



Note. Fit indices: $\chi 2(df) = 1.293(1)$, $p > .001$; RMSEA = .015, CFI = 1.000, TLI = .999

Figure-4. Hypothesized model



Note. Fit indices: χ^2(df) = 7.471(3), p >.001; RMSEA = .033, CFI = .998, TLI = .996

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