Mediating Role of Coping and Stress Responses in Relation to Corporal Punishment and Peer Aggression

Junelle R. Guerra[1], Arsenio Sze Alianan, Jr.[2]
[1]Samar State University, Catbalogan City, *Philippines*
[2]Ateneo de Manila University, *Philippines*
*junelle.guerra@ssu.edu.ph

Abstract

Coping and stress response is one of the important constructs in understanding human behavior especially those children who have experienced physical infliction and peer violence. To elucidate on the mediating role coping and stress responses play in the relationship between the reported experience of corporal punishment (CP) and peer aggression (PA), snowball sampling was used to recruit a total of 260 students in Grades 7 and 8, from three public high schools with designated Guidance Counselors in the province of Samar, Philippines. The respondents are at the adolescence phase with an age range from 11 to 16 years old. Results showed that adolescents respond to parent's use of CP through three coping and stress responses, namely, disengagement, involuntary engagement, and involuntary disengagement, however, only the use of involuntary engagement partially mediated the relationship between CP and peer aggression. This suggests that CP may promote patterns of responding that aid in the reactivation and maintenance of related distress and negative affect by ruminating on the stressful situation and possibly experiencing difficulties with enacting coping strategies related to the regulation of emotions, thoughts, and behaviors. Adolescents may then perpetrate peer aggression as a displaced reaction to the stress and pent up emotions associated with being physically punished.

Keywords: *coping, stress responses, corporal punishment, peer aggression*

I. INTRODUCTION

The stress and coping model has been extensively studied over the recent decade as it used as interventions for the improvement of people's coping capabilities amidst life challenges (Colodro, Godoy-Izquierdo, & Lush, 2010). Studies that used the Stress-Coping Framework to examine the impact of corporal punishment (CP) on peer aggression (PA) among adolescents are scarce. This in part because CP is hardly viewed as a stressor instead, it is considered as a normative and quite a necessary form of disciplinary tactic practiced to control misbehavior (Turner & Finkelhor, 1996). Literature has also consistently shown the pervasive and detrimental effects of CP on the physical and psychological well-being of children and adolescents across developmental periods (Gershoff, 2002; Holden, 2002; MacKenzie, Nicklas, Brooks-Gunn, & Waldfogel, 2015; Wang & Kenny, 2014; Simons & Wurtele, 2010).

Corporal punishment is one of the predictors of an extensive range of negative development possessions (Smith, 2006). Some of its outcomes include increased aggressiveness, depression, low self-esteem, phobias and anxiety, personality disorders, alcohol and drug abuses, violence, suicidality, and the like (Khademi, Bjorkqvist, Soderberg, & Osterman, 2018). In the same manner, these effects are also pervasive to peer aggression.

Introduction to peer aggression may be a predominant stressor with numerous antagonistic results. Learning how to manage effectively with such stressors may be a formative task to adapt what life later dictates. Disappointment to manage viably with peer aggression is a reflection of compromised feelings and various shapes of alteration and challenges, counting depressive indications. Unfortunately, there is a minimal knowledge on the most effective coping forms for children against depressive symptoms of peer aggression (Sugimura, Rudolph, & Agoston, 2013).

It is deemed necessary to look into how coping, an important construct in the relation between stressful circumstances and adaptational outcomes (Colodro, Godoy-Izquierdo, & Godoy, 2010), could be applied in the process of understanding the potential relationship between CP and PA. The present investigation thereby aims to contribute to the existing pool of theoretically driven literature by proposing the use of the Transactional Model of

Stress and Coping (Lazarus & Folkman, 1984) to understand the mechanisms that may link CP and PA.

This study aimed to elucidate on the mediating role coping and stress responses play in the relationship between the reported experience of corporal punishment (CP) and peer aggression (PA) among Filipino public school students. It addressed how corporal punishment predicts peer aggression, and primary control engagement, secondary control engagement, disengagement, involuntary engagement, and involuntary disengagement stress responses partial mediates the relationship between corporal punishment and peer aggression.

II. METHODOLOGY

Research Design

This study used correlational predictive design since it aimed to identify predictive relationship between corporal punishment and peer aggression, and identified related variables such as primary control engagement, secondary control engagement, disengagement, involuntary engagement, and involuntary disengagement stress responses.

Respondents

Snowball sampling was used to recruit a total of 260 students in 7^{th} – 8^{th} grade, from three public high schools with designated Guidance Counselors in the province of Samar. Age range from 11 to 16 years old (*M* = 13.75*)*, 33.1% were males, 66.9% were females.

For this study, participants without experiences of corporal punishment were removed, specifically those whose total or sum scores were less than or equal to seven (≤ 7), as this signifies that for the past year, they have never experienced any of the seven items on the Corporal Punishment scale. The new total is 232 students, 33.6% are males, and 63.8% are females.

Instrumentation and Data Gathering

All measures underwent translation and back-translation from English to Waray by bilingual academics. The original (English) items from all instruments were retained, with the Waray translations directly below each item. There is a total of 104 items across all measures.

Corporal punishment scale. A researcher-made scale on corporal punishment was used in the study. This is an adaptation of the Alabama Parenting Questionnaire – child form (Frick, 1991 as cited in Marsee & Frick, 2007).

The scale is consistent with Larzelere and Kuhn's (2005) definition of CP identified as customary physical punishment which emphasizes the frequency and manner in which parents typically use physical punishment without emphasis on severity. It includes forms of CP that may be categorized as severe by Western standards, but is typical or ordinarily used by parents in the Philippines. The items were constructed based on information from local literature. This includes spanking, hitting, or slapping with a bare hand, hitting or slapping on the hand, arm, or leg, shaking, or hitting with an object, hitting or slapping the child on the face, head, or ears (Lansford et al., 2010), pinching (Sanapo & Nakamura, 2011), and ear twisting (Beazley, 2006).

Participants were asked to assess the frequency with which their parents have physically punished them for their misbehavior within the past year. Each item is scored on a 5-point scale (*0 = Never to 5 = Always*). Items include "your parents spank you with their hand when you have done something wrong", "your parents slap you when you are misbehaving", and "your parents hit you with a belt, switch, or other object when you have done something wrong". The scale has a total of seven items. Internal consistency as used in the present sample is $\alpha = 0.62$.

Responses to Stress Questionnaire. The Responses to Stress Questionnaire (RSQ) is a 57-item measure designed to assess both voluntary and involuntary responses to family stress among adolescents (Conner-Smith, Compas, Wadsworth, Thomsen & Saltzman, 2000). It captures the ways that individuals cope with and react to specific sources of stress, and does not assume a general/dispositional coping. The participants rate how often it is that they use each coping method or experience each type of involuntary stress response on a 4-point scale (*1 = Not at all, 2 = A little, 3 = Some, and 4 = A lot*).

The measure contains three types of coping and two types of involuntary stress responses, and has 19 primary subscales. The measure yields five factors: (a) Primary Control Engagement Coping (problem solving, emotional regulation, and emotional expression scales); (b) Secondary Control Engagement Coping (distraction, positive thinking, cognitive restructuring, and acceptance scales); (c) Disengagement Coping (avoidance, denial, and wishful thinking scales); (d) Involuntary

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Engagment (emotional arousal, physiological arousal, impulsive action, intrusive thought, and rumination); and (e) Involuntary Disengagement (emotional numbing, involuntary avoidance, cognitive interference, and inaction). Reported internal consistency reliabilities (Cronbach's alphas) for the five factors on the self report version– family conflict in a sample of 12-18 years old were: α = 0.84 for Primary Control; 0.84 for Secondary Control; 0.88 for Disengagement; 0.92 for Involuntary Engagement; and 0.88 for Involuntary Disengagement (Conner-Smith, Compas, Wadsworth, Thomsen & Saltzman, 2000).

Items were reworded to fit the parameters of this study. Instead of family stress, participants were asked to rate the coping strategies they use in dealing with being physically punished. Internal consistencies of the scale as used in current sample are: α = 0.77 for Primary Control; 0.77 for Secondary Control; 0.65 for Disengagement; 0.85 for Involuntary Engagement; and 0.80 for Involuntary Disengagement.

Peer Conflict Scale. The Peer Conflict Scale (Marsee & Frick, 2007) is a 40-item self-report measure designed to assess aggression, using the same number of items, rating formats, and level of severity across the different types of aggression. It includes 20 items assessing for reactive aggression (10 reactive overt items: "When someone hurts me, I end up getting into a fight", and 10 reactive relational items: "If others make me mad, I tell their secrets"), and 20 items assessing proactive aggression (10 proactive overt items: "I start fights to get what I want", and 10 proactive relational items: "I gossip about others to become popular"). Items are rated on a 4-point scale (*0 = not at all true, 1 = somewhat true, 2 = very true, and 3 = definitely true*). Scores are calculated by summing the items to create the four subscales.

The factor structure of the scale has been supported in a large sample of adolescents (*N* = 855; age range = 12-19; Marsee et al., 2011). CFA showed that a heirarchical four-factor model best fit the data. Internal consistencies of the four aggression scales were: α = 0.82 for proactive overt; 0.80 for proactive relational; 0.89 for reactive over, 0.77 for reactive relational. Previous studies support the distinction between the reactive and proactive scales in that they show unique associations with emotional dysregulation and callous-unemotional traits (Marsee & Frick, 2007), narcissism and delinquency (Barry, Grafeman, Adler, & Pickard, 2007), and laboratory measures of aggression (Muñoz, Frick, Kimonis, & Aucoin, 2008) in adolescent samples.

In this sample, coefficient alphas were: α = 0.85 for proactive overt; 0.81 for proactive relational; 0.85 for reactive overt; and 0.83 for reactive relational. Overall internal consistency of the 40-item scale, which was used in this study, is 0.95.

Data Processing and Analysis

All recruitment and data gathering procedures were approved by the university ethics board. Then, permission to recruit and conduct the study was sought from the School's Division Superintendent before the data collection. Participants were recruited by approaching them in their classrooms with the supervision of their subject teachers. Parental written consent and participant assent forms were obtained 1-3 days before the scheduled day of data collection. The study was introduced and explained in detail during the recruitment and data gathering period. All questions regarding the study were entertained. Only those with signed consent and assent forms were allowed to participate.

Data collected were processed into tables and graphs. To determine the differences between groups of participants (based on current position and length of service) as to their financial management practices, ANOVA with post hoc analysis was used. To determine association between teachers' demographic profile and their financial management practices, Pearson's r was used. An online calculator by Ace Subido was used to calculate value of money between two timelines.

For the data analysis, since mediation seeks to identify and explain the mechanism or process in the relationship between the independent variable and dependent variable through the inclusion of a third intervening variable known as the mediator (Baron & Kenny, 1986; Jose, 2013). For this reason, multiple mediation analysis is used as the study aims to determine how the five coping and stress responses affect the relationship between corporal punishment and peer aggression.

The program Process Macro for SPSS developed by Hayes and Preacher version 2.16 was used to conduct the mediation analysis. The study benefits from using this program as it able to execute analysis on multiple mediators and automatically performs boostraping procedures or estimations. Bootstrapping is a nonparametric method of testing the indirect or mediating effect by resampling subsets from a given dataset, performs relevant statistical tests and summarizes the results of the numerous resamples. Conclusions generated from the

distribution of the resampled data are believed to be more robust than typical or standard statistical tests, especially with small datasets and/or non-normal distributions (Jose, 2013; Preacher & Hayes, 2004).

III. RESULTS AND DISCUSSIONS

The means and standard deviations for corporal punishment, peer aggression, and the five dimensions of coping and stress responses are shown in Table 1.

Overall, the scores on each item for reported corporal punishment experiences ranged from "almost never (2)" to "often (4)" (M = 13.27, SD = 3.29). This suggests that the adolescents in this study have experienced at least one type of CP within the past year. In terms of peer aggression, scores range from "somewhat true (1)" to "definitely true (3)" (M = 22.88, SD = 18.06), which also signify that the participants have perpetrated at least one type of aggressive behavior toward their peer. It should be noted that the distribution of scores for CP and PA are positively skewed and kurtotic which suggests that most of the participants experienced lower levels of CP, and/or barely perpetrated aggressive behaviors toward their peers.

The mean scores for the five stress and coping responses are as follows: primary control engagement (M = 24.29, SD = 5.19); secondary control engagement (M = 31.63, SD = 6.26); disengagement coping (M = 22.09, SD = 4.43); involuntary engagement (M = 34.74, SD = 7.79); and involuntary disengagement (M = 26.87, SD = 6.04).

Additional analysis was conducted to check for potential differences in scores in terms of age and gender. No significant age differences were found between younger adolescents (11-13 years old) and older adolescents (14-16 years old). Similar results were also found for gender, except for Secondary Control Engagement coping. It seems then that more females (M = 32.60) use Secondary Control Engagement coping to deal with CP than males (M = 32.60).

Correlations among the variables investigated in this study are shown in Table 2. As anticipated, CP correlated positively with PA (r = 0.41, p < .05), along with disengagement coping (r = 0.18, p < .05), and both involuntary engagement (r = 0.31, p < .05), and involuntary engagement (r = 0.39, p > .05) and involuntary disengagement (r = 0.38, p > .05) stress responses significantly correlated with peer aggression.

Table 1. Descriptive Statistics of Related Variables

Variables	Mean	SD	Range
1. Corporal Punishment	13.27	3.29	8.00 – 29.00
2. Disengagement	22.09	4.43	6.00 – 36.00
3. Involuntary Engagement	34.74	7.79	17.00 – 53.00
4. Involuntary Disengagement	26.87	6.04	13.00 – 43.00
5. Primary Control	24.49	5.19	4.00 – 36.00
6. Secondary Control	31.63	6.26	15.00 – 46.00
7. Peer Aggression	22.88	18.06	1.00 – 103.00

Note. N = 232

Table 2. Bivariate Correlations Among Related Variables

	Corporal Punishment	Dis-engagement	Involuntary Engagement	Involuntary Dis-engagement	Primary Engagement	Secondary Engagement	Peer Aggression
Corporal Punishment	-	0.18**	0.31**	0.29**	0.08	0.08	0.41**
Disengagement		-	0.59**	0.56**	0.56**	0.67**	0.16**
Involuntary Engagement			-	0.80**	0.52**	0.56**	0.39**
Involuntary Disengagement				-	0.33**	0.43**	0.38**
Primary Engagement					-	0.68**	0.05
Secondary Engagement						-	0.04
Peer Aggression							-

Note. N = 232, *p < .05, **p < .01.

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Mediation Analyses

Prior to analyses, requirements for multiple regressions were first considered. The variables are all of interval level of measurement. None of the variables are highly correlated except for the two involuntary stress responses– involuntary engagement and involuntary disengagement ($r = 0.80$, $p < .05$). This is expected since theoretically; they measure the same construct which is involuntary stress response. Results of the CFA of the original RSQ scale also showed high correlation between the two factors, thus a two-factor model was contrasted with a one-factor model. Although the one-factor model showed an adequate fit, the two-factor model was retained as it accordingly preserves the theoretical distinction between engagement and disengagement responses, and more closely parallels the conceptualization of involuntary responses, and the multi-dimensional theory of stress and coping in general (Compas et al., 2001; Connor-Smith et al., 2000). The present study therefore chose not to combine the two involuntary stress responses and instead chose to retain the five-factor model as hypothesized.

To further test for possible multicollonearity of the variables, collinearity diagnostics was performed using multiple regression analysis in SPSS. Results showed that all variance inflation factor (VIF) scores were less than 10, while tolerance statistic values were greater than 0.20. This suggests absence of multicollinearity in all of the variables used in this study (Field, 2009).

The Process macro developed by Preacher and Hayes (2004) was used to test the hypothesized models. Figure 1 illustrates this relationship.

Consistent with the first hypothesis, results showed that the total effect (C) of corporal punishment on peer aggression is significant, $B = 2.25$, $t(230) = 6.84$, $p < .05$. Thus, adolescents who experienced CP within the past year were also likely to perpetrate aggressive behavior toward their peers.

Contrary to the second hypothesis wherein it was expected that CP will be significantly related to all five coping and stress responses, results showed that the adolescents in this sample activated only three coping and stress response dimensions, namely: (a) disengagement, $B = 0.24$, $t(230) = 2.80$, $p < .05$; (b) involuntary engagement, $B = 0.74$, $t(230) = 4.97$, $p < .05$; and (c) involuntary disengagement, $B = 0.53$, $t(230) = 4.27$, $p < .05$.

Further, results of the study also failed to support the relation between all five hypothesized mediators and PA. As found, only two were significant predictors of PA: secondary control engagement coping was negatively related to peer aggression, $B = -0.53$, $t(225) = -2.05$, $p < .05$, while involuntary engagement coping was positively related to PA, $B = 0.77$, $t(225) = 3.03$, $p < .05$.

Meanwhile, the direct effect (C') of CP on PA accounting for the five mediators was still significant, but the effect was reduced, $B = 1.60$, $t(225) = 4.85$, $p < .05$. Thus, to confirm for partial mediation, the bootstrapping method with bias-corrected confidence estimates (95% confidence interval of the indirect effects was obtained with 5,000 bootstrap resamples) was generated. Results showed that among the five hypothesized mediators, only Involuntary Engagement stress response had a significant indirect effect in the relationship between CP and peer aggression, $B = 0.57$, CI = 0.20 to 1.06. The resulting confidence intervals did not include or cross zero, which indicates significant mediation. As previously mentioned, the total effect (C) of CP to peer aggression remained significant but was lessened when involuntary engagement was added, (direct effect, C') $B = 1.60$, $t(225) = 4.85$, $p < .05$. Results therefore suggest partial mediation, $F(6,225) = 15.03$, $p < .05$, $R^2 = 0.29$.

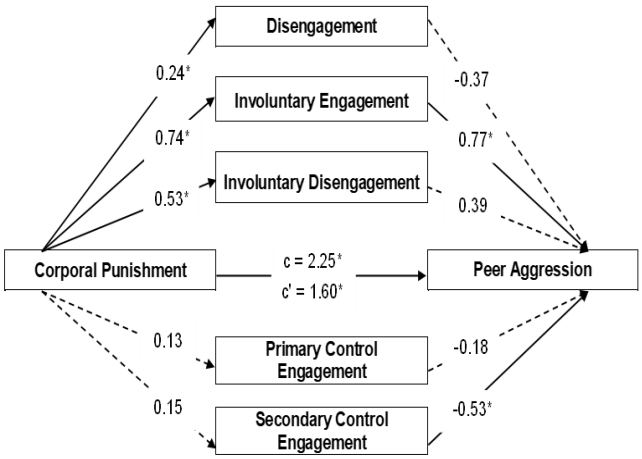

Figure 1. Significant Paths for corporal punishment, involuntary engagement stress response, and peer aggression. Unstandardized coefficients, $p < .05$.

To account for the compounding of what is considered as more severe forms of CP, such as shaking, hitting with an implement, or twisting of the ear, a separate analysis was done to control and limit CP to only spanking. Figure 2 illustrates this relationship. Results indicated that the total effect (C) of CP on PA was also significant, $B = 5.25$, $t(230) = 3.70$, $p < .05$. This signifies that regardless of the form of CP, whether it is considered as mild or severe, adolescents in this sample are still likely to perpetrate PA.

Further, CP limited to spanking significantly predicted the use of only two dimensions of coping and stress response, involuntary engagement, $B = 2.24$, $t(230) = 3.67$, $p < .05$, and involuntary disengagement, $B = 2.28$, $t(230) = 4.27$, $p < .05$, stress responses. Among the five hypothesized mediators, only two were significant predictors of PA: secondary control engagement coping was negatively related to peer aggression, $B = -0.61$, $t(225) = -2.29$, $p < .05$, while involuntary engagement coping was positively related to peer aggression, $B = 0.98$, $t(225) = 3.77$, $p < .05$.

Meanwhile, the direct effect (C') of CP on PA accounting for the five mediators was still significant, but the effect was reduced, $B = 2.68$, $t(225) = 1.95$, $p < .05$. Thus, to confirm for mediation, the bootstrapping method with bias-corrected confidence estimates (95% confidence interval of the indirect effects was obtained with 5,000 bootstrap resamples) was generated. Results showed that among the five hypothesized mediators, only Involuntary Engagement stress response had a significant indirect effect in the relationship between CP and PA, $B = 2.19$, CI = 0.93 to 4.13. The resulting confidence intervals did not include or cross zero, which indicates significant mediation. As previously mentioned, the total effect (C) CP to PA remained significant but was reduced when involuntary engagement was added, (direct effect, C') $B = 2.68$, $t(225) = 1.95$, $p < .05$. Results therefore suggest partial mediation, $F(6,225) = 10.85$, $p < .05$, $R^2 = 0.22$.

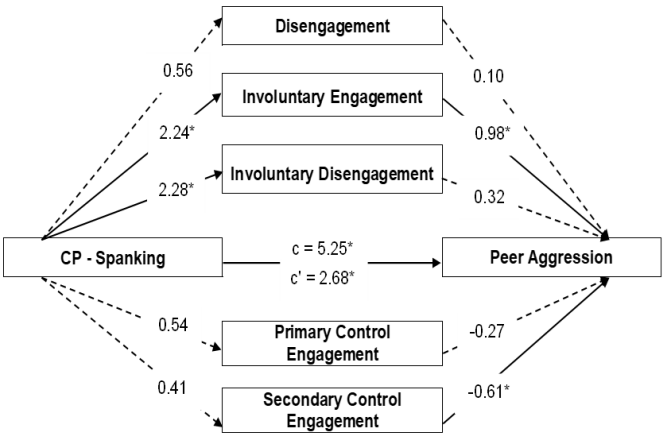

Figure 2. Significant Paths for corporal punishment limited to spanking, involuntary engagement stress response, and peer aggression. Unstandardized coefficients, $p < .05$.

Overall, results supported the study's hypothesis on the mediating role coping and stress responses play in the relation between corporal punishment and peer aggression. However, this is limited to the use of involuntary engagement stress response. This signifies that although there is a direct relation between CP and PA, an alternative path or model may also help enrich our understanding of this relationship as it accounts for 29% of the variance.

Essentially, the experience of CP in this sample is considered as a significant stressor which activates three types of coping and stress responses, namely disengagement coping, and involuntary engagement and involuntary disengagement stress responses. However, adolescents that rely on the use of involuntary engagement stress response in turn, does seem to perpetrate aggressive behaviors towards their peers, such as deliberate actions directed at achieving a goal by hurting or making fun of others, or retaliating through aggressive and emotional attacks in response to being hurt (Fuentes et al., 2016; Marsee & Frick, 2007; Pederson & Fite, 2014).

Results support the first hypothesis of the study establishing a relationship between corporal punishment and peer aggression. Specifically, adolescents with reported experiences of CP within the past year seem to enact aggressive behaviors as means of getting what they want or as response to a perceived attack or threat. Consistent with extant literature, this investigation contributes to the growing body of research indicating that the direction of the effects across CP studies seem largely uniform – a constant association with negative outcomes such as aggression, delinquency, antisocial behavior, and even criminal behavior into adulthood (Aucoin et al., 2006; Holden, 2002; Ma et al., 2012; Taillieu & Brownridge, 2013).

Isolating spanking from other forms of CP commonly used in the Philippines was an important consideration in this study. As pointed out in the meta-analytic studies by Gershoff (2002) and Larzelere and Kuhn (2005), uncertainty about the effects of CP on children and adolescents have persisted primarily because it was often confounded with harmful and abusive behaviors. Results however, remain fairly consistent even after controlling for more severe forms of CP such as hitting with an implement, shaking, or ear twisting. A positive association with PA was still found even after limiting CP to spanking with a hand.

These results seem to echo Wang and Kenny's (2014) contention that CP experienced during this developmental period is atypical or less normative than in childhood. Therefore, adolescents may be expecting that parents use alternative disciplinary techniques such as reasoning rather than CP to address their misbehavior. It is therefore likely that they would interpret CP as hostile, unjust, or degrading, which may lead to feelings of anger and rejection, or even aggression.

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Further, consistent with the social learning and coercion theories, physically punished adolescents are likely to perpetrate PA due to parent-child transactions. Specifically, individuals may have learned that spanking, slapping, or even pinching may be acceptable ways to interact and exert control, gain what they want, or as a conflict resolution tactic over their peers (Gómez-Ortiz et al., 2016; Karriker-Jaffe et al., 2013; MacKenzie et al., 2015; Simons & Wurtele, 2010; Smith et al., 2014; Smokowski et al., 2016).

The Mediating Role of Coping and Stress Response

Results of the mediational analysis support the study's second hypothesis in which coping and stress responses partially intervene in the relation between CP and PA. This relation however, is limited to involuntary engagement. This signifies that when an adolescent gets physically punished, he/she in response may instinctively or automatically experience and engage in some but not limited to the following behaviors: emotional arousal, rumination, difficulty in controlling actions, and engage in sensation-seeking or risk-taking behaviors. These reactions in turn, were associated with the adolescent's tendency to perpetrate aggressive actions toward his/her peers.

Studies conducted by Kliewer and Lapore (2015), as well Nassif and Wells (2013) suggested that individuals unable to cognitively process stress-related thoughts and emotions may experience sustained, persistent, and escalating levels of intrusive thoughts especially if they also tend to engage in rumination. Consistent with these findings, the results found in this study seem to suggest that perhaps being physically punished may promote patterns of responding and coping efforts that aid in the reactivation and maintenance of related distress and negative affect through rumination and potentially experiencing stress-related intrusive thoughts. The partially mediating effect found for involuntary engagement seem to signify that physically punished adolescents through the aforementioned strategies may engage or perpetrate peer aggression.

The comprehensive review on the relation of social-cognitive processes to the risk for aggression in adolescence conducted by Bartolo et al. (2010) may explain these results. As found, anger rumination was identified to influence the developmental pathways of violence and aggression. It was asserted that individuals may find it difficult to focus on thoughts that may be more adaptive as they become engrossed in their angry feelings. This in turn may make them more likely than others to retaliate aggressively after being provoked or even direct their aggression toward innocent targets. Similar results were also found by Smith et al. (2016) whereby intense and sustained negative affect associated with engaging in rumination was a significant predictor of displaced aggression.

Hence, based on these studies, it may be plausible that adolescents who experienced CP in this study may have become engrossed into making sense of the punishment they received, and in turn, possibly sustained and amplified the intensity of the negative affect they felt at the time. Thus, it seems likely that PA was a result of pent up emotions probably displaced or redirected to peers that provoke them or to innocent targets perceived as hostile or aversive.

Culture and Filipino traditions may also help elaborate on these results. In a study conducted by Esteban (2006), Filipinos faced with verbal abuse generally coped by tolerating and quietly enduring it. They tend to suppress their feelings and attempt to please the abusive parent, but had unexpressed anger and covert hostility. As suggested, these behaviors may be rooted on Filipino traditions where children are encouraged to be dependent, obedient, submissive, or are prohibited from talking back or rebelling against their elders. Extending this to the present study, it may be difficult for adolescents to express their feelings about the parent's use of CP as they might be bound by traditional Filipino patterns of responding. Hence, as previously mentioned these potentially pent up negative emotions could be taken out impulsively and redirected to innocent peers through aggressive behaviors.

Contrary to previous investigations, the present study failed to support the hypothesis on the mediating role of the other four dimensions of coping and stress responses. These results may be related to individual differences in terms of reactivity and self-regulation. Some may experience higher levels of arousal to threatening situations than others, or vary in terms of their capacity to sustain attention or suppress unwanted thoughts and emotions (Compas et al., 2001).

While disengagement and involuntary disengagement coping and stress responses were significantly related to CP, these strategies were not significant predictors of PA. Perhaps, since avoidance and suppression of thoughts and feelings are strategies meant to orient oneself away from the stressor (Compas et al., 2001), adolescents may be able to divert their attention to other things, or keep themselves from stress-related thoughts and emotions. Since there is no evidence to suggest a relationship with PA, these strategies may be related to other

constructs such as depression and anxiety, or possibly to better adjustment and well-being.

Results also showed that primary control engagement coping was not associated with neither CP nor PA. This seems to support earlier studies asserting that children and adolescents hardly use coping strategies intended to find solutions and directly alter stressors appraised as uncontrollable (Compas, 2001 et al.; Elzy et al., 2013; Yang et al., 2010; McLeod, 2009). Further, Herts et al. (2012) asserted that exposure to stressful experiences can limit the range of coping resources, emotional understanding, and emotional control. The non-significant results seem to suggest that perhaps in dealing with the stress related to CP, involuntary responses may be more accessible to adolescents since these are automatic and instinctive reactions to stress than coping resources specifically geared toward the regulation and expression of thoughts and emotions.

It is also worth noting that although it was not a significant mediator between CP and peer aggression, secondary control engagement coping was negatively related to peer aggression. This suggests that individuals who use distraction, positive thinking, and acceptance are less likely to perpetrate PA. Perhaps future research may want to look into other potential stressors or predictors that influence the use of secondary control engagement coping in this population, as well as investigate on its relationship in potentially lowering PA. Secondary control engagement coping may be a significant protective factor against other stressors and peer aggression.

IV. CONCLUSION

The present investigation reports the distinct intervening role involuntary engagement stress response play in the relationship between corporal punishment and peer aggression. Specifically, that CP as a stressor, seem to promote patterns of responding and coping efforts that potentially aid in the reactivation and maintenance of related distress and negative emotions. These strategies include rumination, experiencing negative affect and stress-related intrusive thoughts, and engaging in potentially risky behaviors based on an impulse.

Overall, results provide an alternative explanation to understanding how CP relates to PA within the stress-coping theory. It extends previous empirical knowledge by showing that adolescents perpetrate aggression as a reaction to the stress of being physically punished. On the contrary, it is not conclusive that the use of CP is particularly detrimental to adolescents. There is only evidence to suggest an association between CP and peer aggression based on adolescent self-reports. It may therefore be beneficial to look into parent reports in terms of the parameters with which CP is implemented– whether Instrumental or Impulsive.

Moreover, most of the indicators for involuntary coping were also associated to internalizing behaviors. Other co-occurring variables such as parent-child interactions, parent's emotional state, or the child's temperament may also be explored.

Future studies may also want to use either path analysis or structural equation modeling to be able to account for the appropriateness or goodness of fit of the hypothesized model, as well as to look into the relationship of specific sub-dimensions of model to yield richer results.

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