Aggregation and emotions: cultural and individual differences

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Citation

Dahamat Azam, M. N. B. (2019, December 18). *Aggression and emotions: cultural and individual differences*. Retrieved from https://hdl.handle.net/1887/81581

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Title: Aggression and emotions: cultural and individual differences
Issue Date: 2019-12-18

CHAPTER 4

REACTIVE VERSUS PROACTIVE AGGRESSION AND MORAL EMOTIONS: THE MODERATING ROLE OF CULTURAL VALUES

Dahamat Azam, N., Novin, S., Li, B., Oosterveld, P., Madon, Z., Schoerke, J., & Rieffe, C. (submitted). Reactive versus proactive aggression and moral emotions: The moderating role of cultural values.

ABSTRACT

Adolescent aggressors are known to exhibit poor emotional functioning, yet the relevant studies have featured only Western samples. Could cultural background and values moderate different forms of adolescent aggression? The present study investigated relations between coping strategies, moral emotions, and reactive versus proactive aggression in Dutch and Malaysian adolescents, respectively. Besides, we explored the moderating role of cultural values in these relations. A total of 535 young adolescents aged 12 to 14 years old completed self-report questionnaires that measured reactive and proactive aggression, coping strategies of approach and avoidance, moral emotions of shame and guilt, and cultural values of individualism and collectivism. Results confirm the moderating role of country-of-origin on the relation between shame and aggression: shame was positively related to more reactive and proactive aggression in Dutch adolescents, whereas shame was negatively related to proactive aggression in Malaysian adolescents. Across countries, guilt and collectivism were related to less proactive aggression. Adolescents who endorsed individualism were more likely to exhibit proactive aggression when experiencing high levels of shame, regardless of whether they used approach or avoidant coping. Our findings show that cultural background and values should be taken into consideration when attempting to understand the motives for aggression and its emotional correlates in adolescents.

Aggression refers to any intentional behaviour by an aggressor that can seriously hurt or harm a victim, physically and/or psychologically (Anderson & Bushman, 2002), and thus all societies, by definition, want to avoid or diminish. Aggression is prevalent especially during adolescence, with potential negative consequences for all parties involved, which can persist well into adulthood. Therefore, many studies are aimed at understanding the underlying factors that contribute to aggressive behaviours. Two important factors are coping (i.e., regulating negative emotions) and moral emotions (i.e., shame and guilt). These aspects of emotional functioning have been discussed extensively in research on aggression (e.g., Gardner, Archer, & Jackson, 2012; Roos, Hodges, & Salmivalli, 2014; Stuewig, Tangney, Heigel, Harty, & McCloskey, 2010). However, the majority of research targeted Western populations of adolescents. The scarcity of studies on this topic in non-Western adolescents is a gap that needs to be bridged. Moreover, the role of culture itself warrants consideration: every culture has its own values, and these values influence how people think, feel and act (Nisbett, Peng, Choi, & Norenzayan, 2001; Singelis & Brown, 1995). Therefore, the purpose of the present study was to compare the extent to which certain aspects of emotional functioning (i.e., coping and moral emotions) were related to aggression in adolescents from predominantly Western and East Asian cultures (Dutch and Malaysian), while taking into account adolescents' endorsement of cultural values.

Different motives for aggression and their correlates

Research interest in the distinction between different motives for aggression, as in reactive versus proactive aggression, has increased in recent years. Reactive aggression refers to a hostile-impulsive-affective type of aggression. It is related to negative and stressful peer experiences, such as peer rejection and victimization, which are followed by the occurrence of depression in later stages of life (Card & Little, 2006; Polman, De Castro, Thomaes, & Van Aken, 2009; Salmivalli & Helteenvuori, 2007). In contrast, proactive aggression refers to a goal-directed, instrumental-cold-blooded type of aggression (Card & Little, 2006; Crick & Dodge, 1996). It is purposeful and intentional in nature (Dodge & Coie, 1987; Heilbron & Prinstein, 2008), and related to antisocial behaviours such as delinquency and criminality (Card & Little, 2006; Fite, Raine, Stouthamer-Loeber, Loeber, & Pardini, 2010). Adolescents who show proactive aggression are primarily interested in self-gain, and expect rewards (e.g., wanting "to be the boss").

Previous research has shown that the two types of aggression have different emotional and behavioural correlates. First, when dealing with negative emotional arousals, reactively aggressive adolescents tend to use different coping strategies from proactively aggressive adolescents. Approach coping is a form of emotion regulation, whereby an individual approaches the situation and attempts to resolve conflicts through problem solving or seeking social support (Wright, Banerjee, Hoek, Rieffe, & Novin, 2010). Adolescents with higher levels of reactive aggression seem more sensitive to perceived provocation (i.e., to offensive and hurtful action and speech by peers),

and are more likely to use approach coping to confront individuals who provoke them (Csibi & Csibi, 2011; Lobbestael, Cousijn, Brugman, & Wiers, 2016). Avoidant coping, in contrast, is a coping strategy that features withdrawing from conflict situations, including walking away from the conflict and seeking distraction, which might help to calm the situation (Kochenderfer-Ladd & Skinner, 2002; Wright, Banerjee, Hoek, Rieffe, & Novin, 2010). Prior studies show that adolescents who scored higher on reactive aggression were less likely to use avoidant coping strategies (Gardner et al., 2012; Lobbestael, Cousijn, Brugman, & Wiers, 2016). Again, this suggests that these adolescents might prefer confrontation instead.

In contrast, prior research suggests that adolescents with higher levels of proactive aggression tend to use avoidant coping instead of approach coping. Although proactive-aggressive adolescents hurt others to achieve their aims, they themselves prefer to avoid threatening situations (Lobbestael et al., 2016). Children and adolescents high in proactive aggression often ignore, distract their attention, or walk away from conflicts (Champion, 2009). Achieving their aim appears to be their priority, thereby avoiding their own and others' emotions.

In addition to coping strategies, the two types of aggression also relate differently to moral emotions. Previous studies have shown that higher levels of shame contribute to more reactive aggression (Broekhof et al., submitted; Broekhof, Bos, & Rieffe, submitted; Stuewig, Tangney, Heigel, Harty, & McCloskey, 2010). Shame is an unpleasant emotion that arises when individuals fail to meet internalized social standards such as morality (Tracy & Robins, 2004). Adolescents who feel more ashamed over time often seem to respond with more reactive aggression, possibly due to the higher levels of fury or anger that shame can evoke (Lewis, 1971; Thomaes, Stegge, Olthof, Bushman, & Nezlek, 2011).

On the other hand, guilt plays an important role in preventing proactive aggression (Fite, Rubens, Preddy, Raine, & Pardini, 2014; Hubbard, McAuliffe, Morrow, & Romano, 2010; Polman et al., 2009). Guilt is an unpleasant emotion that arises when individuals feel responsible for the damage or injury incurred on others. Individuals who feel guilty usually want to correct the wrong and display empathic behaviours (Haidt, 2003; Olthof, 2012; Olthof, Schouten, Kuiper, Stegge, & Jennekens-Schinkel, 2000). Prior studies have found that adolescents with higher levels of proactive aggression usually show little or no remorse when hurting others, which makes it possible to harm someone without feeling bad about it (Roşan & Costea-Bărluţiu, 2013). This explains why lower levels of guilt are related to more proactive aggression over time (Broekhof et al., submitted; Frick, Cornell, Barry, Bodin, & Dane, 2003).

Notably, patterns between emotional functioning and different motives for aggression in adolescents described thus far are all based on studies involving Western samples. Yet some cross-cultural studies do show how cultural values could influence different motives for aggression, and how these might be related to emotional coping strategies and moral emotions.

Coping strategies across cultures

Although limited in number, a few studies have shown cross-national differences in coping strategies in conflict situations (Lam & Zane, 2004; McCarty et al., 1999; Oláh, 1995). Compared to East Asian samples, approach coping was rated as more desirable in Western samples (Chun, Moos, & Cronkite, 2007; Oláh, 1995), whereas avoidant coping was rated as more desirable in East Asian samples (Bjorck, Cuthbertson, Thurman, & Lee, 2001; Okazaki, 1997).

It has been suggested that these cross-national differences are due to differences in salient cultural values. Individualistic values, which are often salient in Western cultures and endorsed by Western individuals, highlight the needs, concerns, and welfare of the individual (Hui & Triandis, 1986; Triandis, 2001). Collectivistic values, in contrast, are often salient in Eastern cultures and endorsed by East Asian individuals. These values highlight the needs, concerns and welfare of the social group (Hui & Triandis, 1986; Triandis, 2001). Depending on which cultural values are endorsed, individuals are likely to vary in how they cope in a social conflict situation.

In a cultural context where individualistic values are emphasized, approaching the other in a conflict situation may be an adaptive way to ensure that the individual's needs are met (Chun et al., 2007). However, in a cultural context where collectivistic values are emphasized, avoidant strategies may be more adaptive as a way to maintain social cohesion and harmony within the social group (Forbes, Collinsworth, Zhao, Kohlman, & Leclaire, 2011; Trubisky, Ting-Toomey, & Lin, 1991), whereas an approach strategy such as direct confrontation can be viewed as inappropriate and rude (Chen, Hou, & Wu, 2016; Tardif & Wan, 2001), which may intensify the conflict. It should be noted that, even in a cultural context that endorses individualistic values, approach coping strategies could be related to more reactive aggression, because individuals with high levels of reactive aggression can become more easily emotionally overwhelmed in a peer conflict situation and further escalate the conflict, whether they endorse individualistic or collectivistic cultural views. Yet, to our knowledge, there have been no cross-cultural studies examining how coping strategies are related to aggression by comparing Western samples to East Asian samples.

Moral emotions across cultures

Moral emotions such as shame and guilt are regarded differently in East Asian and Western societies. In Western societies, shame is commonly perceived as a negative and unwanted emotion that can diminish self-esteem, and is followed by further negative consequences such as avoidance, withdrawal, and inhibition of social interactions (Haidt, 2003; Keltner & Harker, 1998; Tangney, Stuewig, & Mashek, 2007). However, in East Asian societies, shame is commonly seen as an effective mechanism for self regulation and for complying with group norms (Bedford & Hwang, 2003; Cole, Tamang, & Shrestha, 2006; Fung, 1999). Committing a wrongdoing (e.g., inflicting violence) may cause great shame not only to the individual but also to the community that he or she belongs to. This makes both the individuals and the community loose

face, an affront to be avoided at all costs (Bedford & Hwang, 2003; Li, Wang, & Fischer, 2004; Midlarsky, Venkataramani-Kothari, & Plante, 2006; Yoshioka & Choi, 2005). Therefore, shame could function as a protective mechanism against moral transgression among East Asian adolescents in a way that it does not for Western adolescents. In their study of 12 to 14-years-old adolescents from Malaysia, Azam, Novin, Oosterveld, and Rieffe (2019) found that shame was indeed related to less aggressive behavior, and to less proactive aggression in particular.

In Western societies, striving for one's individual achievements, freedom and autonomy is held in high regard (Oyserman, Coon, & Kemmelmeier, 2002; Triandis, Bontempo, Villareal, Asai, & Lucca, 1988). In such a cultural context, guilt works well as an effective mechanism for social control (Realo, Koido, Ceulemans, & Allik, 2002; Triandis et al., 1988), because by expressing guilt the individual shows responsibility for his or her own negative actions, and willingness to make reparations. A few studies have also stressed the importance of guilt in non-Western cultures. Furukawa, Tangney and Higashibara (2012) examined moral emotions and aggressive-related behaviours in school-aged children from different cultural backgrounds, and found that higher levels of guilt were related to less aggression in Korean children. Azam et al. (2019) showed that higher levels of guilt were related to less proactive aggression in Malaysian adolescents. These findings suggest a potential protective role for guilt in both Western and Eastern culture.

Present study

This study aimed to examine relations between aggression (i.e., reactive, proactive), coping strategies (i.e., approach, avoidance), and moral emotions (i.e., shame, guilt) in adolescents in a cross cultural context. Instead of assuming cultural orientations based on individuals' country of origin, we investigated the potential influences of cultures at both the country level and the individual level. This is because broad, macro-level view may oversimplify individual identities and differences within cultures (Strohmeier, Yanagida, & Toda, 2016; Vu, Finkenauer, Huizinga, Novin, & Krabbendam, 2017), and that individualism and collectivism are not mutually exclusive and can coexist within a person (Coon & Kemmelmeier, 2001; Oyserman et al., 2002). Therefore, we compared adolescents based on their country of origin, where the Netherlands represented an individualistic culture and Malaysia represented a collectivistic culture. Besides, we measured endorsement of individualistic and collectivistic values within individuals. We expected the relationships between reactive/proactive aggression and emotional functioning to be moderated on varying degrees by country-of-origin and by individual endorsement of cultural values.

Based on the literature, we had the following expectations. Regarding reactive aggression, we expected reactive aggression to be positively correlated with approach coping in all adolescents, regardless of their country of origin or their endorsed cultural values. While we expected reactive aggression to be negatively correlated with avoidant coping, we predicted that the correlation would be stronger in Malaysian

adolescents or individuals who endorsed collectivistic values. We expected reactive aggression to be more positively correlated with shame among Dutch adolescents or individuals who endorsed individualistic values.

Regarding proactive aggression: we expected proactive aggression to be positively correlated with avoidant coping. Further, we predicted that the correlation would be stronger in Dutch adolescents or individuals who endorsed individualistic values. In addition, we expected proactive aggression to be negatively correlated with guilt in adolescents from both countries, regardless of their cultural values. Last, we expected proactive aggression to be negatively correlated with shame only in Malaysian adolescents or individuals who endorsed collectivistic values.

METHOD

Participants and Procedure

Participants were comprised of 535 children and adolescents in total, between 12 and 14 years of age, from four secondary schools in the Netherlands (n = 251; 53.4% girls; M_{age} = 13.90, *SD* = 0.57) and three secondary schools in Malaysia (n = 284; 52.5% girls; M_{age} = 13.09, *SD* = 0.58), respectively. The study was conducted during regular school hours.

Prior to data collection, the requisite approval was obtained from all relevant administrative bodies and individuals. In the Netherlands, permission to conduct this study was granted by the Psychological Ethics Committee of Leiden University. Similarly, permission was granted by the Government authorities in Malaysia, namely the Economic Planning Unit (EPU) under the Prime Minister's Department, and the Ministry of Education Malaysia. Active informed consent was also obtained from parents or caregivers (in the Netherlands only) or from the school principals or their assistants, and from all participants (in both countries), before data were collected .

Measures

Self-report Instrument for Reactive and Proactive Aggression (IRPA; Rieffe et al., 2016) consists of 36 items, equally divided between reactive and proactive aggression, respectively. Six types of aggressive behaviour were assessed (i.e., kicking, pushing, hitting, name-calling, arguing, and saying bad things or lying about someone else). Participants were asked how frequently (1 = never to 5 = very often), in the past four weeks, they behaved this way (e.g., "Over the last four weeks, I pushed someone because…") for three reactive reasons (e.g., "I was mad; I was bullied; I struck back") and three proactive reasons (e.g., "I wanted to be mean; I took pleasure in it; I wanted to be the boss"). This questionnaire was validated in a Malaysian sample prior to this study (Azam et al., 2019), showing good psychometric properties in terms of factor structure and internal consistencies.

The Brief Shame and Guilt Questionnaire for Children (Novin & Rieffe, 2015) measures proneness to shame and guilt. It is comprised of 12 vignettes that depict

scenarios appropriate for children that have been designed to provoke imagined shame or guilt. A shame vignette can be illustrated as follows: "You are standing in front of the class. You have to give a talk. Everybody is looking at you. You forget what you wanted to say." A guilt vignette can be illustrated as follows: "There is just one biscuit left in the biscuit tin. You quickly put it in your mouth. Now your friend does not have a biscuit." Following presentation of each vignette, participants were asked to rate their feelings of shame or guilt from 1= *not at all* to 5 = *very much*. However, two items of the questionnaire (each representing shame and guilt, respectively) were omitted due to human administrative error.

Coping Scale (Wright, et al., 2010) is a 29-item self-report measure that sheds light on coping strategies adopted by children and adolescents. Three different coping strategies were measured using this scale, as follows: (a) approach (e.g., "I ask someone in my family for advice", "I find a way to solve the problem"), (b) maladaptive (e.g., "I get angry and throw or hit something", "I keep feeling afraid it will happen again"), and (c) avoidance (e.g., "I keep busy so I don't worry about the problem", "I think the problem is not such a big issue"). Participants rated these items from 1 = *almost never* to 5 = *always*. For the purpose of this study, only the 11 approach items and 10 avoidant items were used for analysis.

The Individualism-Collectivism Questionnaire for Adolescents (Novin, Dahamat Azam, Broekhof, Li, Koch & Rieffe, submitted) consisted of 11 items that assessed the extent to which adolescents agreed with individualistic or collectivistic values on a 5-point scale ranging from 1 = *Strongly disagree* to 5 = *Strongly agree*. An example of an individualistic item is, "I can make my own decisions. I do not need friends and family for that." An example of a collectivistic item is, "Friends and family are an important part of who I am."

Table 1 presents the psychometric properties of each measure for the total combined sample, and separately for the two groups. The Cronbach's alpha values between .68 to .94 suggest that all internal consistencies were adequate and within acceptable levels.

Translation of the Questionnaire

Most of the questionnaires used in this study were originally formulated in Dutch; however there were also English versions available. The English versions were first translated into Malay (i.e., the national language of Malaysia) by the first author, after which they were translated back into English by an independent bilingual translator who adopted a back-translation method. Both the original and back-translated English versions were compared and checked for language consistency and coherency. Any inconsistencies were discussed and subsequently resolved. Prior to data collection, a pilot test of the Malay questionnaire was conducted in Malaysia, in which 168 secondary school students participated. Following feedback received from these participants, some minor amendments were made to the Malay versions.

Table 1. Psychometric properties of the questionnaires for reactive and proactive aggression, moral emotions, coping strategies and cultural values

	n items	*range*	Cronbach's α			*M (SD)*			*T*
			Total	Dutch	Malay-sian	Total	Dutch	Malay-sian	
Reactive Aggression	18	1 – 5	.93	.89	.92	1.76 (.72)	1.45 (0.51)	2.02 (0.77)	-10.39**
Proactive Aggression	18	1 – 5	.94	.81	.93	1.44 (.69)	1.09 (0.19)	1.75 (0.81)	-13.33**
Shame	5	1 – 5	.76	.69	.81	3.15 (0.97)	2.86 (0.78)	3.41 (1.12)	-6.98**
Guilt	5	1 – 5	.78	.75	.83	2.98 (1.00)	2.91 (0.84)	3.05 (1.12)	-1.66
Coping									
Approach	11	1 – 5	.85	.89	.82	2.96 (.79)	3.06 (0.83)	2.87 (.74)	2.70*
Avoidant	10	1 – 5	.80	.79	.81	2.64 (.74)	2.70 (0.71)	2.58 (0.75)	1.96
Individualism	5	1 – 5	.76	.68	.73	3.03 (0.87)	3.43 (0.64)	2.66 (0.85)	11.83**
Collectivism	6	1 – 5	.86	.75	.88	3.73 (0.87)	4.00 (0.55)	3.51 (1.03)	6.82**

*$p < .001$; *$p < .01$

Statistical Analysis

To examine cultural values as a moderating role in any relationship between social emotions, coping strategies, and reactive or proactive aggression, two separate hierarchical regression analyses were performed. In each analysis, control variables (i.e., gender: -1 = boy, 1 = girl; and centered participants' age) and the centered scores for shame- and guilt-proneness, approach coping, and avoidant coping, were entered into the first model (model 1). Then, the centered scores of individualism and collectivism were entered into the second model (model 2). In the third model (model 3), we added all two-way interactions for shame, guilt, approach coping, avoidant coping with country-of-origin, individualism, and collectivism. The main effect of country-of-origin (-1 = Netherland, 1 = Malaysia) was not analyzed because both Malaysian and Dutch data were centered around the mean within country, to control for across-country differences in the analysis.

Missing Data Analysis

A missing value analysis was conducted prior to data analysis to determine the pattern and proportion of our missing data. Results showed that approximately less than 1% of incomplete cases and values were left unfilled. Furthermore, the non-significant value of the Little's MCAR test ($\chi^2 = 15.33$, DF = 13, $p = .287$) indicated that the missing data

were missing completely at random. Considering the small values of the missing data, and that the Little's MCAR test was not significant, complete case analysis (*list-wise deletion*) was employed for all further analyses.

RESULTS

Table 2 presents the results of the regression analyses on reactive and proactive aggression, respectively. Additionally, a zero-order correlation matrix is presented in Supplementary Table 1 although not specifically discussed in this study.

Table 2. Regression analysis showing age, gender, shame-proneness, guilt-proneness, approach coping, avoidant coping, and cultural values as predictors of reactive and proactive aggression

Predictor	Reactive Aggression (n = 534)				Proactive Aggression (n = 533)			
	B	SE B	P	R^2 /ΔR^2	B	SE B	p	R^2 /ΔR^2
Model 1				.08/ .08**				.10/ .10**
Age	.11	.05	.021		.12	.04	.006	
Gender	-.15	.03	.000		-.10	.03	.000	
Shame	.08	.04	.027		-.04	.03	.285	
Guilt	-.09	.04	.007		-.10	.03	.002	
Approach	.03	.04	.502		-.05	.04	.207	
Avoid	.08	.04	.042		.10	.04	.004	
Model 2				.09/ .01				.16/ .06**
IND	.08	.04	.030		.10	.03	.002	
COLL	-.03	.04	.446		-.19	.03	.000	
Model 3				.15/ .06*				.23/ .07**
Shame x CNTY	-.08	.04	.027		-.08	.03	.017	
Guilt x CNTY	.01	.04	.737		.00	.03	.895	
APP x CNTY	.10	.04	.024		.02	.04	.519	
AVO x CNTY	.08	.04	.054		.09	.04	.022	
Shame x IND	.02	.05	.675		-.11	.04	.007	
Guilt x IND	.04	.04	.314		.08	.04	.038	
APP x IND	-.01	.05	.786		.09	.04	.037	
AVO x IND	.12	.05	.013		.09	.04	.023	
Shame x COLL	.01	.04	.755		.01	.04	.777	
Guilt x COLL	-.06	.04	.144		.01	.04	.816	
APP x COLL	.03	.05	.544		-.04	.04	.365	
AVO x COLL	-.03	.05	.565		.01	.04	.823	

$^*p < .01$, $^{**}p < .001$
Note: B = unstandardized regression coefficients; *SE* = Standard Error; p = significant value; Δ *R2* = change in *R2* value; APP = approach coping; AVO = avoidant coping; IND = individualism; COLL = collectivism; CNTY = Country

Cultural values as a moderator between reactive aggression and emotion regulation

The analysis with reactive aggression as the dependent variable showed that older and male participants reported more reactive aggression behaviors (Model 1). Furthermore, higher levels of shame and avoidant coping, as well as lower levels of guilt, were related to more reactive aggression. In Model 2, higher levels of individualism were related to more reactive aggression.

In model 3, country of origin interacted with levels of shame and approach coping. As shown in Figure 1, higher levels of shame-proneness were related to more reactive aggression in Dutch participants (B = .17; $p < .001$), but no effect was found for Malaysian participants (B = .00; $p = .929$). Furthermore, in Figure 2, higher levels of approach coping were related to more reactive aggression in Malaysian participants (B = .20; $p = .042$), but no significant effect was found for their Dutch peers (B = -.18; $p = .072$).

Also in model 3, individualism interacted with levels of avoidant coping. As shown in Figure 3, higher levels of avoidant coping were related to more reactive aggression in participants with a high level of individualism (B = .13; $p = .021$), but no effect was found for participants who endorsed a low level of individualism (B = -.05; $p = .393$).

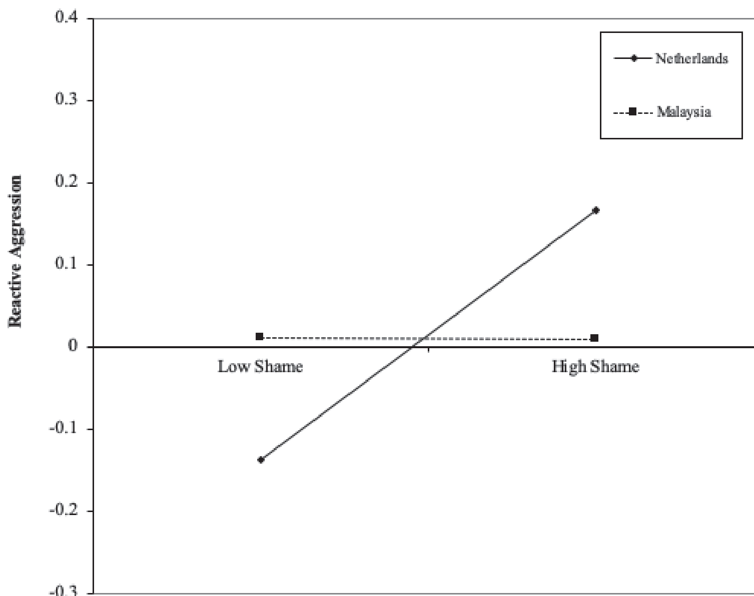

Figure 1. The moderating effect of country-of-origin on the relationship between shame and reactive aggression

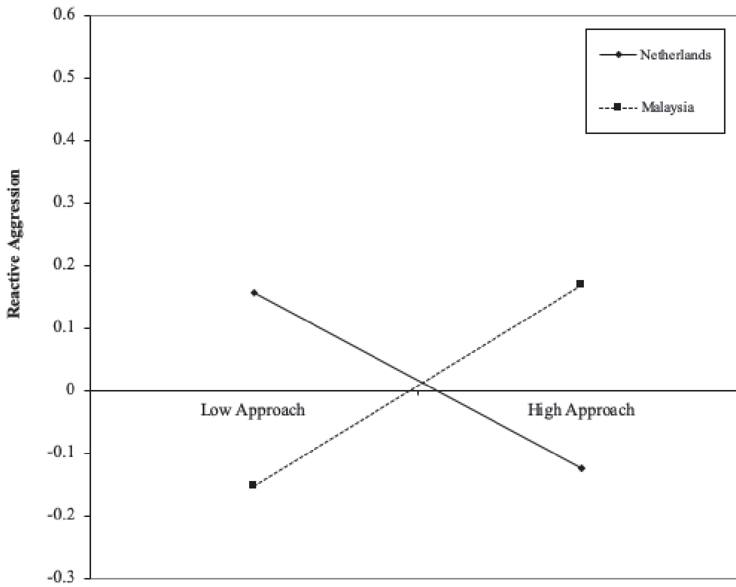

Figure 2. The moderating effect of country-of-origin on the relationship between approach and reactive aggression

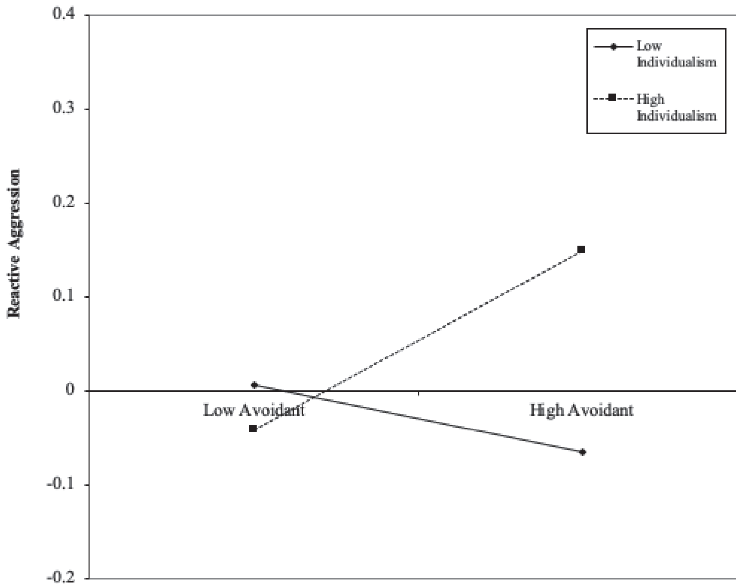

Figure 3. The moderating effect of individualism on the relationship between avoidant and reactive aggression

Cultural values as a moderator between proactive aggression and emotion regulation

The analysis with proactive aggression as the dependent variable showed older and male participants reported more proactive aggression behaviors in model 1. Furthermore, higher levels of avoidant coping and lower levels of guilt were related to more proactive aggression. In model 2, higher levels of individualism and lower levels of collectivism were related to more proactive aggression.

Country of origin interacted with levels of shame and avoidant coping in model 3. As presented in Figure 4, higher levels of shame-proneness were related to less proactive aggression in Malaysian participants (B = -.12; *p* = .031), but no effect was found for Dutch participants (B = .11; *p* = .060). Meanwhile, in Figure 5, higher levels of avoidant coping were related to more proactive aggression in Malaysian participants (B = .18; *p* <.001, but no significant effect was found for Dutch participants (B = .00; *p* = .893).

Also in model 3, endorsement of individualism interacted with levels of guilt- and shame-proneness, and approach and avoidant coping. As shown in Figure 6, higher levels of shame were related to less proactive aggression in participants with a high level of individualism (B = -.10; *p* = .045), but no effect was found for participants with a low level of individualism (B = .08; *p* = .087). Meanwhile, Figure 7 showed that higher levels of guilt were related to less proactive aggression in participants who rated their individualistic values as low (B = -.10. *p* = .014), but no effect was found for participants who rated their individualistic values as high (B = .02; *p* = .568).

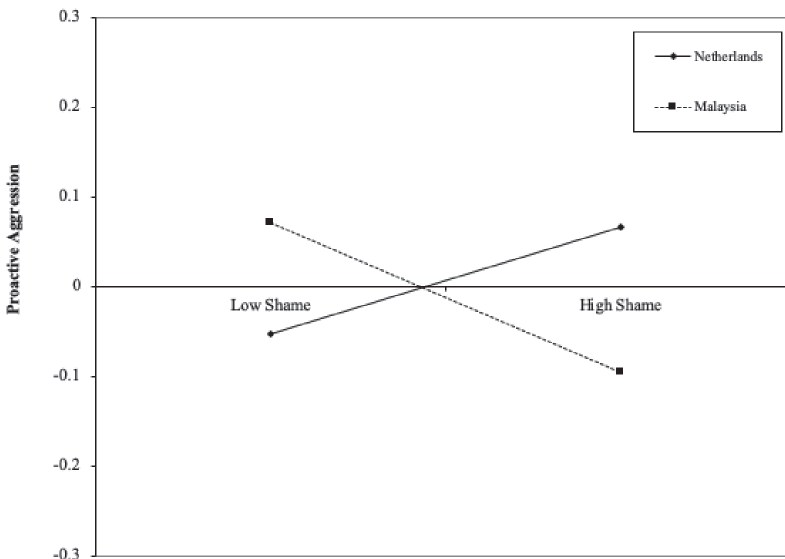

Figure 4. The moderating effect of country-of-origin on the relationship between shame and proactive aggression

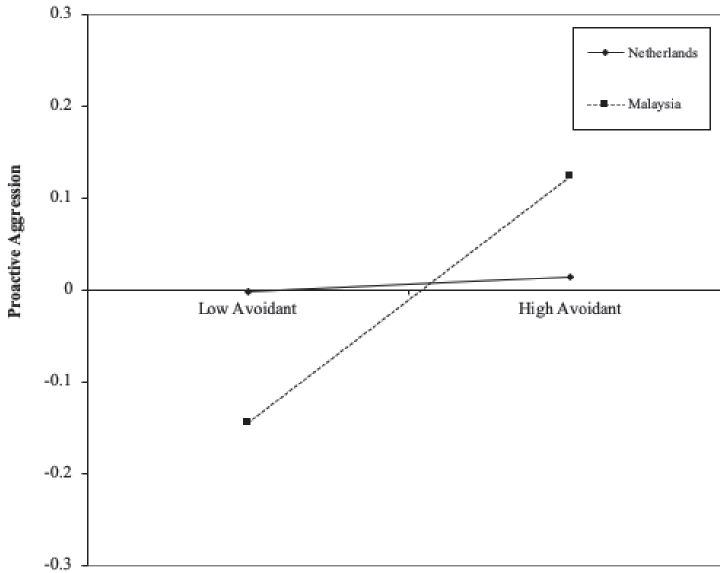

Figure 5. The moderating effect of country-of-origin on the relationship between avoidant and proactive aggression

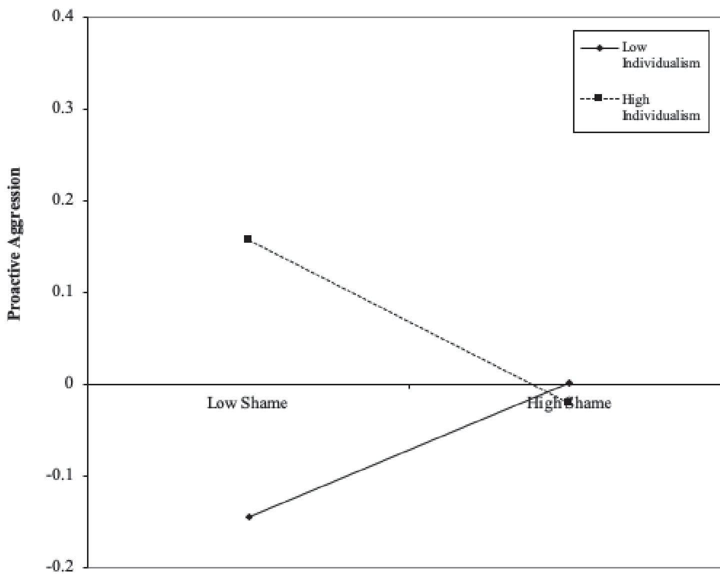

Figure 6. The moderating effect of individualism on the relationship between shame and proactive aggression

In Figure 8, higher levels of approach coping were related to more proactive aggression in participants who had higher levels of individualism (B = .12; p = .041), while no effect was found in participants who had lower levels of individualism

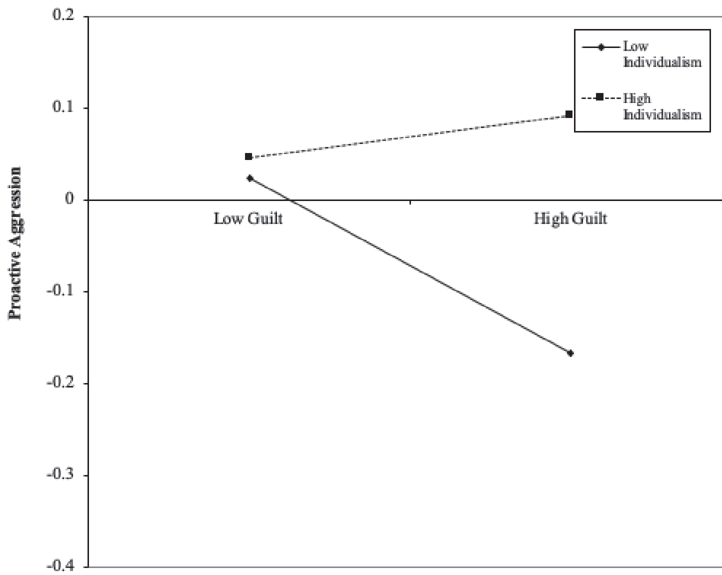

Figure 7. The moderating effect of individualism on the relationship between guilt and proactive aggression

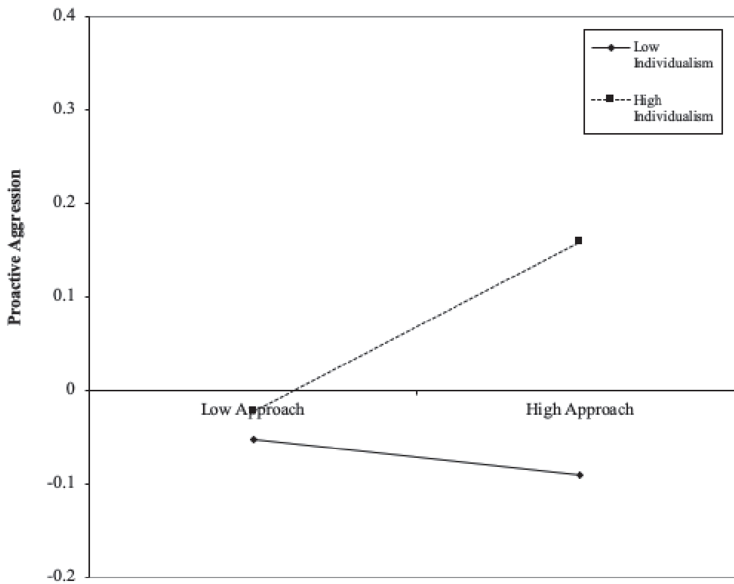

Figure 8. The moderating effect of individualism on the relationship between approach and proactive aggression

(B = -.03; *p* = .661). Meanwhile, Figure 9 shows that higher levels of avoidant coping were related to more proactive aggression in participants who endorsed higher levels of individualism (B = .16; *p* < .001), while no effect was found in participants who endorsed lower levels of individualism (B = .02; *p* = .652).

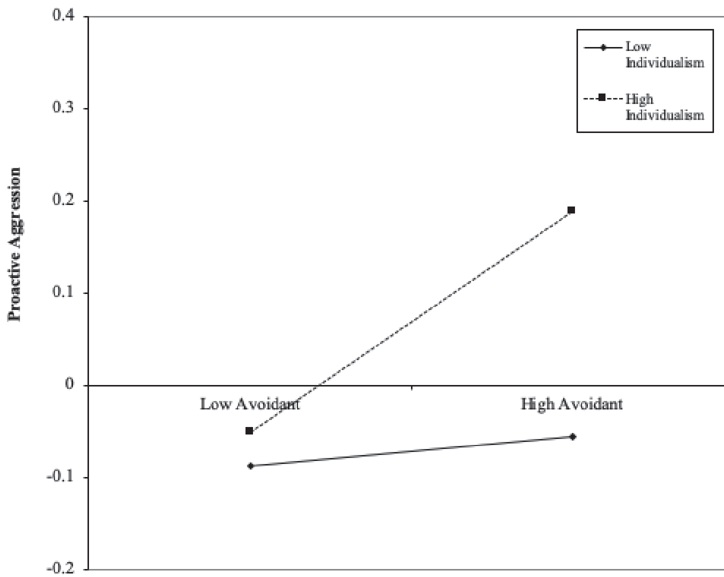

Figure 9. The moderating effect of individualism on the relationship between avoidant and proactive aggression

DISCUSSION AND CONCLUSION

Aggression is a manifestation of uncontrolled and heightened negative emotionality that is especially common during adolescence, a period characterized by "storm and stress" (Arnett, 2006). Aggressive encounters can cause behavioral and mental health problems in both aggressors and victims, and the negative impact is known to persist until adulthood (Rieffe et al., 2016). Research in aggressive behaviours in Western countries highlights the importance of emotion regulation and moral emotions for understanding the different motives of aggression in adolescents. These findings contribute to developing prevention and intervention programs aimed at reducing aggression in Western countries (Broekhof et al., submitted; Csibi & Csibi, 2011; Fite et al., 2014; Frick et al., 2003; Lobbestael et al., 2016). However, it is unclear to what extent these findings can be generalized to adolescents in East Asian countries, where different cultural values prevail. To address the gap, we tested the moderating effects of cultural values by examining the effect of country of origin (i.e., the Netherlands, Malaysia) and endorsement of cultural values (i.e., collectivistic, individualistic) on relations between aggression (i.e., reactive, proactive), coping strategies (i.e., approach, avoidance), and moral emotions (i.e., shame, guilt). Our findings are largely consistent with the findings of Western countries. However, we also have some new outcomes.

Regarding reactive aggression, in line with previous research, we found that reactive aggression was related to more approach coping, but the relation was found only in Malaysian adolescents. Reactive aggression was also related to more shame,

but this relation was found only in Dutch adolescents conform other studies (Broekhof et al., submitted). However, guilt was related to less reactive aggression, and this now applied to adolescents from both countries (Azam et al., 2019, submitted). Regarding proactive aggression, as we expected, proactive aggression was related to more avoidant coping, especially in adolescents who endorsed individualism. Proactive aggression was also related to less guilt, especially for adolescents with low endorsement of individualism. Furthermore, less proactive aggression was indeed related to higher level of shame in Malaysian adolescents.

A novel and intriguing finding in the present study was the moderating role of individualism in relations between proactive aggression and coping. In this study, adolescents were presented with different coping strategies as they related to a peer conflict situation. Coping generally functions as a means to find a balance between individual aims and social goals, especially during conflicts. However, this may constitute a problem for adolescents with higher levels of individualism. Their strong focus on their own needs and goals, accompanied by less focus on maintaining relationships or achieving social goals (e.g., harmony), may promote an imbalance that results in higher rates of proactive aggression. Therefore, whatever coping strategies these adolescents choose (whether approach or avoidant), their focus on individualism above all could increase the risk of proactive aggression. Due to the cross-sectional design of this study, causal inferences cannot be made. However, future studies could further investigate this issue.

In line with previous studies, shame was related to more reactive aggression in Dutch adolescents (Broekhof et al, submitted), whereas shame was related to less proactive aggression in Malay adolescents (Azam et al., 2019). These outcomes support the idea that shame is a culturally embedded construct. Despite being perceived as a negative experience in Western societies that undermines self-esteem and self-worth, shame is highly valued in many Eastern societies, as we previously mentioned. In Eastern societies, shame signals understanding that a wrongdoing could threaten important social ties (e.g., with in-group members such as family, friends, and neighbors), and threatening social ties would need to be avoided at all costs (Ho, Fu, & Ng, 2004). Therefore, shame is seen as an effective mechanism for self control within a social context that is highly valued and supercedes individual needs, thus promoting conformity and social harmony (Bedford & Hwang, 2003; Cole et al., 2006; Fung, 1999). This differential meaning of shame, depending on the social context, probably best explains why shame matters in eliciting defensive-type aggression in Western adolescents, while reducing instrumental aggression in East Asian adolescents.

In line with earlier studies (Azam et al., 2019; Broekhof et al., submitted), the outcomes of this study provide evidence for a protective role for guilt in both a Western country and an East Asian country, but especially for adolescents with low endorsement of individualism. While the protective role of guilt against proactive aggression in Western samples is well-known in the literature (Broekhof et al.,

submitted; Frick et al., 2003), the fact that this also applies to their Eastern peers is relatively new and noteworthy. In fact, admitting a mistake and asking for forgiveness, which are guilt-related behaviors, are also common in collectivistic cultures (Bedford & Hwang, 2003; Merolla, Zhang, & Sun, 2013). The fact that this appears to apply especially to adolescents with low endorsement of individualism suggests that the protective role of guilt is more effective when the adolescent is not focused on his or her own needs and achievements.

This study has several notable strengths: first, this study was among the first that sought to address whether cultural values moderate relationships concerning coping strategies, moral emotions, and reactive versus proactive aggression. Second, we observed country of origin and measured endorsement of cultural values (i.e., individualistic versus collectivistic) in relation to six other factors: coping strategies (i.e., approach, avoidant), moral emotions (i.e., guilt, shame) and aggression (i.e., reactive, proactive) . Thus, different levels of analysis for cultural values have now been conducted in relation to all of these variables, and reveal different effects on these relationships.

Yet, some limitations deserve consideration. First, as mentioned previously, our data, which is cross-sectional in nature, prevents us from establishing causal relations between emotion regulation, moral emotions, and aggression. While the dependent variables were reactive and proactive aggression, the direction of causality remains open for debate. For example, there is a possibility that proactive aggression may influence adolescents' preference for avoidant coping, as has been suggested in previous studies (e.g., Gardner et al., 2012). To address this limitation, we suggest that future research adopt a longitudinal or experimental design, to examine causal relations and directions between variables, cross-culturally.

Second, although the selection of one Eastern and one Western country provide some representation of collectivistic versus individualistic societies, respectively, the degree to which our findings can be generalized remains limited. As every country is unique, with its own values and norms, our findings may not be applicable to populations in other Eastern or Western countries. As such, we suggest that future investigators who may wish to replicate our methodology include samples from a greater number of Eastern and Western countries, for a more representative sample.

Third, our data do not include participants' demographic information. Including information on socioeconomic status (e.g., household income, parental employment, and level of education) may provide more in-depth information about whether aggression and the selection of coping strategies or proneness to certain moral emotions by adolescents are influenced by differences in socioeconomic status, within and among different countries.

Despite the limitations, our study highlights the importance of understanding relations between coping strategies, moral emotions, and reactive versus proactive aggression in the context of different cultures. Adolescent aggression occurs in both Western and East Asian countries. Despite a differential role of shame (i.e., protective

against aggression in East Asian countries, while contributing to more aggression in Western countries), we found many similarities that apply to both countries, such as the protective role of guilt against aggression, and the finding that coping strategies in a peer conflict situation – whether approach or avoidant - were related to more aggression. Importantly, these outcomes mainly applied to adolescents with high endorsement of individualism. Individualism did not play a role in all relations, but when it did, it was always related to more, and never less, aggression. Yet, the protective role of collectivism was most evident in relation to less proactive aggression. Taking these values into account can provide important additional information, when trying to understand the causes of adolescent aggression.

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