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The relation between emotion-awareness and aggression: Two cultural adolescent groups compared

Margret Rosier-Otakie

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Faculty of Social Science– University of Leiden

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Student number: 1209485

Supervisor: Dr. B. Li

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EMOTION AWARENESS, AGGRESSION AND CULTURAL ORIENTATION

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Abstract

Introduction: Emotion awareness, which is a prerequisite of emotion regulation, refers to cognitive processes and abilities that help recognize and understand one's own emotions and the emotions of others. Although the importance of emotion awareness in regulating emotions has been shown in different studies regarding internalizing problems, few studies have examined the relation between emotion awareness and aggression. Furthermore, previous research suggest that cultural orientation could influence emotion awareness and aggression. Therefore, this study aimed to examine the relationship between emotion awareness and aggression, and to explore whether the relation is influenced by cultural orientation.

Method: The Emotion Awareness Questionnaire (EAQ-30), The Self-Report Instrument for Reactive and Proactive Aggression (IRPA) and the individualism-collectivism statement-questionnaire were filled out by 1399 Malaysian and 322 Dutch second year students from secondary schools (age range 12-14) in both Malaysia and the Netherlands.

Results: In both populations aggression was negatively related with four aspects of emotion awareness, namely, differentiating emotions, verbal sharing of emotions, not hiding emotions and attending to others' emotions. Further testing with regression analysis showed that aggression was predicted by differentiating emotions and verbal sharing of emotions. Also we found no moderating effect of cultural orientation on the relation between emotion awareness and aggression.

Discussion and conclusion: The present study shows that individual ability, especially differentiating emotions and verbal sharing of emotions are related to a decrease in aggression. These findings suggest that intervention programs targeting adolescent aggression can focus more on improving adolescents' differentiating and communicating emotions verbally, which may help adolescents to regulate their negative emotions adaptively and hence to reduce aggression. Further research on the influence of cultural orientation on the relation between emotion awareness and aggression needs yet to be done.

Key words: emotion awareness; aggression; cultural orientation; adolescents

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1. Introduction

Aggression in children and adolescents occurs across cultures (Bergmüller, 2013). Even though in some special occasions aggressive behavior can benefit one's survival, in general it has been viewed as a maladaptive behavior, associated with negative outcomes such as delinquency, depression and anxiety (Robertson, Daffern & Bucks, 2012; Röhl, Koglin & Petermann, 2012; Vitaro, Brendgen & Tremblay, 2002). In attempts to understand the underlying factors of aggression, many studies have highlighted the role of poor emotion regulation in expressing aggressive behavior (Calvete & Orue, 2012; Donahue, Goranson, McClure & van Male, 2014; Robertson et al., 2012; Röhl et al., 2012). In order to regulate emotions adaptively, it is necessary to recognize and understand own and others' emotions. This internal emotional insight, which literature refers to as emotion awareness, is a prerequisites of an adaptive emotion regulation (Boden & Thompson, 2015; Rieffe, Oosterveld, Miers, Meerum-Terwogt & Ly, 2008). Although the importance of emotion awareness in regulating emotions has been shown in different studies concerning internalizing problems (Boden & Thompson, 2015; Rieffe et al., 2008; Rieffe & Rooij, 2012), there is a gap in the literature concerning the relation between emotion awareness and externalizing problems, such as aggression. Therefore, the main aim of this study was to fill in this gap by examining the relation between emotion awareness and aggression. Additionally, previous studies showed that cultural orientation may influence both emotion awareness (Ford & Mauss, 2015; Markus & Kitayama, 1991; Mesquita & Walker, 2003) and aggression (Hofstede, Hofstede & Minkov, 2010). Therefore, in this study we also measured the cultural values held by adolescents and examined how the cultural values could influence the relation between emotion awareness and aggression. As most studies have been done in the western society, to increase the external validity, we included adolescents from a western country, i.e., the Netherlands, and from an eastern country, i.e., Malaysia.

1.1 Aggression

Aggression refers to intended actions or behaviors which aim to hurt or harm others (Dodge, 1991; Dodge, Coie & Lynam, 2006). Researchers distinguish between two kinds of aggression:

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reactive and proactive aggression (Dodge, 1991; Kaat et al., 2015). Reactive aggression refers to defensive behavior as a reaction to real or perceived provocation or threat (Dodge, 1991; Hubbard, McAuliffe, Morrow, & Romano, 2010). Reactive aggression seems to be emotionally driven and is associated with feelings of anger, hostile attribution biases and poor emotion regulation (Crick & Dodge, 1996; Hubbard et al., 2010; Ostrov, Murray-Close, Godleski, & Hart, 2013). Proactive aggression, on the other hand, is more calculated or planned and has been labeled as instrumental and emotionless (Crick & Dodge, 1996; Scarpa, Haden, & Tanka, 2010). Individuals who engage in proactive aggression seem not to be driven by emotional arousal. It has been suggested that proactive aggression is not related to emotional competence (Crick & Dodge, 1996; Hubbard et al., 2010; Scarpa et al., 2010). Therefore, in this study we focused only on reactive aggression.

1.2 Emotion awareness

Emotion awareness refers to a set of cognitive processes and abilities, that together represent the capacity to attend to, recognize and understand the emotions of oneself and of others (Rieffe et al., 2008; Zuddas, 2012). Researchers consider emotion awareness as a necessary underlying skill, which can be learned, in order to regulate emotions adaptively (Boden & Thompson, 2015; Robertson et al., 2012). According to Rieffe and Camodeca (2016) emotion awareness involves six aspects that can be divided in three categories: attentional, communication and attitudinal. The attentional aspect of emotion awareness involves the ability to maintain external focus during the emotion evoking situation. It includes (1) the ability to differentiate between one's own discrete emotions and to locate the antecedent that elicited the emotion (differentiating emotions); and (2) a reduced attention to the bodily symptoms that can be part of the emotion experience (bodily arousal). The communication aspect of emotion awareness involves the willingness and ability to communicate emotions, either (1) verbally (verbal sharing of emotions) or (2) nonverbally (not hiding emotions). The attitudinal aspect of emotion awareness includes the willingness and ability to face (1) one's own emotions (analyses of emotions) and (2) the emotions of others (attending to others' emotions).

1.3 Emotion awareness and aggression

Over the course of development, children are expected to learn how to regulate actions or behaviors that are triggered by negative emotions, such as aggression by anger. During this socialization process from infancy to adulthood, children depend less and less on external help for emotion regulation (e.g. being soothed by parents), but there is an increase of the internal insight to, and coherence in their own emotional state, including a better recognition and understanding of their own emotions and the emotions of others (Zimmerman & Iwanski, 2014; Zuddas, 2012). Lack of such an emotional insight or awareness may lead to emotional distress. In order to manage this emotional distress, the individual may use aggression as a (maladaptive) coping strategy (Cohn, Jakupcak, Seibert, Hildebrandt & Zeichner, 2010). Only when an individual is emotionally aware, s/he can find the correct coping strategy to deal with the emotion, and hence to suppress aggressive behaviors. To date, not many studies have explicitly examined the relation between emotion awareness and aggression, but the literature has suggested a link between them (Donahue et al., 2014; Mitrofan & Ciulovică, 2012; Robertson et al., 2012; Robertson, Daffern, & Bucks, 2015).

The ability to differentiate emotions is important in suppressing aggression, because different emotions, such as anger and shame, can trigger aggression differently. For example, shame may lead to (reactive) aggression (which has been described as a defensive form of aggression), especially when the individual's self-esteem seems to be threatened by others, and the individual is trying to protect it by using aggression as a defensive, but maladaptive coping strategy (Mills, 2005; Stuewig, Tangney, Heigel, Harty & McCloskey, 2010). Anger can also lead to aggression but due to a different reason. An individual can become angry when s/he feels that the goal s/he wants to achieve is obstructed or a boundary has been crossed (Hubbard et al., 2010; Mitrofan & Ciulovică, 2012; Pond et al., 2011). Being able to accurately detect which emotion one is experiencing can help that person to locate the trigger and identify the provoking situation. This in turn can help the person to find the correct strategy to cope with the emotion-provoking situation, and thus prevent aggressive behavior (Feldman-Barret, Gross, Christensen & Benvenuto, 2011; Pond et al., 2011).

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It should be noted that although paying attention to one's own emotional experience can have a positive effect on preventing aggression, too much attention to one's own bodily arousal is not adaptive. Rieffe and colleagues found that, when children were emotionally aroused, those who focused more on their (own) bodily reactions also showed more internalizing symptoms (Rieffe et al., 2012; Rieffe & Rooij, 2012). If an individual focuses too much on internal bodily symptoms, this can limit the person's external attention to the emotion evoking situation. Such external oriented attention or focus however, provides the individual with useful information about the situation, which leads to a better emotion recognition and to a better emotional control, which in turn can reduce aggression (Feldman-Barret et al., 2011). Similarly, Robertson and colleagues found that an increase of internally oriented focus and decrease of external focus is related to difficulties in tolerating uncomfortable emotions, which could lead to the use of aggression as a maladaptive coping strategy (Robertson et al., 2012; 2015).

Internally oriented focus seems also to be negatively related to one of the communication aspects of emotion awareness, namely verbal sharing of emotion. Rieffe and Rooij (2012), mentioned that the inability to talk about one's own emotions indicates an internally oriented focus, which may limit the individual to deal adaptively with the situation. So far, no clear evidence has been found regarding the directive relation between verbal sharing of emotions and aggression, but some studies suggest a non-directive relation between verbal sharing of emotion and a lower level of aggression. White and Turner (2014) indicated that not talking about (negative) emotions, such as anger, may increase the negative emotional state of the individual through rumination (the individual is repeatedly focused on the negative thought and on its possible causes and consequences, as opposed to its solutions), leading to a significant higher level of aggression. Besides, Katz, Hessler and Annett (2007) mentioned that children and adolescents who could talk about their emotions and describe how they feel in a conversation or in an interview, were seen as more popular by their peers and were less likely to engage in aggressive behavior.

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However, regarding the relation between not hiding emotion (the other communication aspect of emotion awareness) and aggression, Sullivan, Helms, Kliewer & Goodman (2010) suggested that non-verbal expression of emotions may contribute to adaptive emotion regulation and thus to less aggressive behavior, probably because emotion expression is crucial for interpersonal communication and social inclusion. The authors argued that expression of emotion (instead of hiding emotions) may facilitate social understanding because it offers a way to communicate social information, which may elicit support from others. In other words, when an individual is hiding his/her emotions (and does not share them with others), it may limit the extent to which individuals can make use of external support for coping with negative emotions (English & John, 2013; Sullivan et al., 2010).

Concerning the attitudinal aspects of emotion awareness, the ability to attend to others' emotions can help prevent aggressive behaviors. First, attending to others' emotions requires an attitudinal shift from one's own emotional state and internal attributes, to the emotional state of others (Rieffe et al., 2008). Eisenberg (2000) indicated that individuals who can attend to the emotions of others and imagine how the others feel, are less likely to engage in aggressive behavior. Previous studies show that attending to others' emotions, may increase positive feelings such as sympathy, empathy and reciprocity, which are related to a lower level of aggression (Markus & Kitayama, 1991; Mesquita & Walker, 2003). Besides, when an individual is not able to attend to others' emotions and is focused only on his own negative emotional state, the individual may attribute behavior or emotion (expression) of others to negative intentions (Coyne, 2004; Hubbard et al., 2010), which may be wrongly interpreted and could lead to aggression (Crick & Dodge, 1996; Hubbard et al., 2010; Ostrov et al., 2013).

As for the aspect analyses of one's own emotions, Rieffe and colleagues (2008), indicated that the attitude of the individual towards one's own emotions may determine how willing the individual is to interpret the emotion experience, and how s/he is able to deal with the emotion. In other words, the way the individual values emotions as a positive or negative part of the self, or the

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way the individual regards emotion as a private or interpersonal process, may determine if the individual is willing and able to access and utilize the adaptive information inherent in the emotion (Robertson et al., 2015). Such internal emotion-information provides guidance for one to find adaptive coping strategies that may modulate the intensity and duration of the negative emotional state, leading to a lower level of aggression (Cohn et al., 2010; Robertson et al., 2015).

1.4 Cultural orientation

According to Hofstede (2001) cultural orientation is divided into two dimensions: individualism versus collectivism. In individualistic cultures, people are independent of one another and the linkage between members of the society are relatively weak. The needs and desires of the person as an individual are emphasized. In collectivistic cultures, people are dependent on one another, therefore the linkages between the members of society are strong. The needs, goals and desires of the individual are subordinate to those of the group (Bergmüller, 2013; Ford & Mauss, 2015; Hofstede et al., 2010). Hofstede (2001) saw the concept of individualism versus collectivism as two categories, and characterized countries as either individualistic or collectivistic. Consequently, most studies that examined cultural differences, distinguished cultural orientation by countries. Yet, other studies criticized this distinction by countries, arguing that individuals in the same country can hold different cultural orientations and that countries are not strictly individualistic or collectivistic oriented (Bergmüller, 2013; Oyserman, Coon, & Kemmelmeier, 2002). Therefore, in this present study we examined the cultural orientation not by countries, but on an individual level. That means that instead of assuming that Dutch adolescents are individualistic oriented and Malaysian adolescents collectivistic oriented, we examined the cultural orientations in adolescents in both the Dutch and Malaysian groups.

1.5 The influence of cultural orientation on emotion awareness and aggression

Cultural orientation may influence both emotion awareness and aggression (Ford & Mauss, 2015, Hofstede et al., 2010). Earlier studies found a positive relation between collectivism and attending to others' emotions. Compared to individualistic oriented people, collectivistic oriented

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people focus more on how others feel, probably because they have 'the other' and not their own internal attributes as the primary referent (Markus & Kitayama, 1991; Mesquita & Walker, 2003). Consequently, collectivistic oriented people express more 'other-focused' emotions, such as sympathy and empathy (which is the ability to sense other peoples emotions), because it seems to facilitate reciprocity of well-intended actions and harmony (Markus & Kitayama, 1991). In respect to aggression, previous research found that collectivism is related to a lower level of aggression because collectivistic oriented people view themselves as part of the group or in terms of 'relation to others', rather than as a unique, independent individual. They emphasize attention to others and harmonious interpersonal relationships, which is related to less aggression (Markus & Kitayama, 1991; Mesquita & Walker, 2003). Therefore, we assumed that collectivism may strengthen the relation between the aspect attending to others' emotions and aggression.

Regarding individualism, previous research found that individualistic oriented people seem to place greater emphasis, than collectivistic oriented people, on emotional self-expression and emotion communication, i.e., talking about their emotions (verbal sharing of emotions) or showing others how they feel (not hiding emotions) (Kim & Sherman, 2007; Rimé, 2007; 2009). Similarly, previous studies showed that collectivistic oriented people are reticent in expressing their emotions and are less likely to communicate their negative emotions overtly, compared to individualistic oriented people (Ford & Mauss, 2015; Lo, 2014). In respect to aggression, as mentioned before, verbal and nonverbal emotion expression seem to play a role in reducing aggressive behavior, because it facilitates social understanding and it may elicit support from others. Moreover, in a recent study Celik, Storme and Myszkowski (2016) found a positive relation between expressing negative emotions (talking about emotions and showing the others how you feel as opposed to suppressing them) and psychosocial well-being, because it helps people achieve their personal social goals, which may be associated to less aggressive behavior. Therefore, we assumed that individualism may strengthen the relation between the communication aspects of emotion awareness (verbal sharing of emotions and not hiding emotions) and aggression.

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1.6 Present study

The main aim of this study was: 1. to examine the relation between emotion awareness and aggression in adolescents from the Netherlands and Malaysia, and 2. to explore whether cultural orientation influenced the relation between emotion awareness and aggression. Based on the previous findings we expected that a higher level of emotion awareness, namely, an increased ability of emotion differentiation, verbal sharing of emotions, not hiding emotions, attending to others' emotions and analyses of emotions, and a decreased attention to bodily arousal were related to a lower level of aggression, in both Dutch and Malaysian adolescents. Besides, we assumed that collectivism moderated the relation between attending to others' emotions and aggression. We expected that when adolescents were highly collectivistic oriented, the negative relation between attending to others' emotions and aggression would be strengthened. Moreover, we assumed that individualism would moderate the relation between the communication aspects of emotion awareness and aggression. We expected that when adolescents were highly individualistic oriented, the negative relation between verbal sharing of emotions and aggression, and between not hiding emotions and aggression would be strengthened. Finally, gender was taken into account in this study. In respect to aggression, males express more aggression than females (Calvete & Orue, 2012; Cohn et al., 2010; Li & Fung, 2015). Regarding emotion awareness, previous literature showed that males were less emotionally aware than females, which is reflected in having more difficulties in differentiating emotions, acknowledging one's own emotions and acknowledging emotions of others (Donahue et al., 2014). Based on these findings we expected that in comparison to boys, girls would have a higher level of emotion awareness and a lower level of aggression.

2. Method

2.1 Participants and procedure

The initial sample comprised 1752 young adolescents, second-year students from secondary schools both in the Netherlands and in Malaysia. The Dutch sample consists of 325 participants and the Malaysian sample consists of 1427 participants. The data of 31 participants were excluded

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because of three or more missing values. The final sample used for data analysis consists of 1721 participants. The demographic profiles of the Dutch and Malaysian participants are displayed in table 1.

Table 1.

Demographic profile of participants

| | Dutch participants | | Malaysian participants | |
|---------------|--------------------|------------------------|------------------------|------------------------|
| | <i>n</i> (%) | <i>M</i> (<i>SD</i>) | <i>n</i> (%) | <i>M</i> (<i>SD</i>) |
| Total | 322 | | 1399 | |
| Age | | 13.65 (.43) | | 13.30 (.69) |
| <u>Gender</u> | | | | |
| Male | 161 (50.00%) | | 605 (43.50%) | |
| Female | 161 (50.00%) | | 794 (56.50%) | |

Note: *n*=number of participants per data set; *M*=Mean; *SD*=Standard deviation.

The Ethics Committees of the University of Leiden in The Netherlands and the Malaysian Economic Planning Unit, the Malaysian Ministry of Education and the Education Department in each participating state in Malaysia, granted permission for this study. In the Netherlands, schools all over the country were approached through phone calls and emails. Schools that agreed to participate in this study received an informed consent from the research team and forwarded these to the parents and the participating adolescents. After the parents and the adolescents had signed their informed consent, the participating adolescents were asked to fill out questionnaires in the classroom. The questionnaires were filled out in a time frame of approximately 50 minutes. The same procedure took place in Malaysia at an earlier time conducted by Malaysian researchers.

2.2 Materials

2.2.1 Aggression. The Self-Report Instrument for Reactive and Proactive Aggression (IRPA) (Rieffe, et al., 2016), consists of 36 items which cover six types of aggressive behavior, based on a two-factor structure describing reactive aggression and proactive aggression. The reactive aggression scale involves 18 items with the following three reasons for aggression: “I was mad”; “I

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was bullied”; “I was name-called”. The proactive aggression scale involves 18 items with the following three reasons for aggression: “I wanted to be mean”; “I took pleasure in it”; “I want to be the boss” (Rieffe et al., 2016). Participants report how often they performed an aggressive behavior in the last four weeks on a five-point scale: 1 = *(almost) never*, 2 = *seldom*, 3 = *sometimes*, 4 = *often*, 5 = *(almost) always*. A higher score indicates a greater level of aggression. Pouw, Rieffe, Oosterveld, Huskens and Stockmann (2013) and Rieffe et al. (2016) found good psychometric properties of the IRPA. The psychometric properties of the IRPA in this current study were good (see table 2). In this study, we used only the scales of reactive aggression.

2.2.2 Emotion Awareness. The Emotion Awareness Questionnaire (EAQ-30) (Rieffe et al., 2008) contains 30 statements about how children and adolescents feel, and how they think about their feelings. The EAQ-30 has six scales which describe various aspects of emotion awareness. (a) Differentiating Emotions (e.g. “It is difficult to know whether I feel sad or angry or something else”, reversed-scored); (b) Bodily Awareness of Emotions (e.g. “When I feel upset I also feel it in my body”, reversed-scored); (c) Verbal Sharing of Emotions (e.g. “I find it hard to talk to anyone about how I feel”, reversed-scored); (d) Not Hiding Emotions (e.g. “When I am upset, I try not to show it”, reversed-scored); (e) Attending to Others’ Emotions (e.g. “It is important to know how my friends are feeling”); (f) Analysis of Emotions (“When I am angry or upset, I try to understand why”). Participants were asked to rate each item how it pertains to them on a three-point scale (1 = *not true*, 2 = *sometimes true*, 3 = *often true*). Twenty items are negatively formulated and therefore reversely-scored. In all aspects a higher score indicates a higher level of the ability. Rieffe et al. (2008) found satisfactory psychometric properties of the EAQ-30 for the Dutch population. The EAQ has also been validated in other countries (e.g., Lahaye, Luminet, van Broeck, Bodart, & Mikolajczak, 2010), but the current study was the first to use EAQ in a Malaysian population. However, three aspects i.e., bodily awareness, verbal sharing of emotion and attending to others’ emotions, showed low psychometric properties for the Malaysian group (see Table 2). Therefore, the three scales were excluded from the following analyses.

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2.2.3 Cultural orientation. The individualism-collectivism statement-questionnaire was developed for this research especially, based on several validated questionnaires for adults (Cross, Bacon, & Morris, 2000; Oyserman, 1993; Singelis, 1994). The questionnaire contains twenty statements describing the individualistic or collectivistic orientation of the adolescent concerning his/her relation to others. Ten items are individualistic oriented (e.g. "I believe that it is better to follow my own ideas than to take suggestions from my friends"). The other ten items are collectivistic oriented (e.g. "I feel happy when my friends and family are happy"). Participants were asked to rate each item how it pertains to them on a five-point scale (1 = *strongly disagree* to 5 = *strongly agree*). A higher score indicates a higher level of the cultural orientation presented by the statement. The psychometric properties of the individualism–collectivism statement questionnaire in this current study were good (see table 2).

2.3 Statistical data analysis

The data were analyzed with IBM SPSS statistics version 22. First, independent t-tests were carried out to compare the Dutch and Malaysian group on all variables. Independent t-tests were also carried out to compare gender difference on all variables separately for Dutch and Malaysian adolescents. Second, the relations between aggression, emotion awareness scales and cultural orientation were established by means of Pearson correlations for the Dutch and the Malaysian group. The strengths and differences between the correlation coefficients for the Dutch and Malaysian groups were examined by using Fisher r-to-z transformations. Third, for the Dutch group hierarchical regression analysis was carried out, with aggression as the dependent variable. Gender (coded as dummy variable 0, 1) was entered in step 1. All aspects of emotion awareness and both cultural orientations were centered and entered in step 2, to examine which aspects of emotion awareness and cultural orientation may predict aggression. In step 3, the interactions between a. attending to others' emotions and collectivism, b. verbal sharing of emotion and individualism and c. not hiding emotion and individualism were entered, to examine whether collectivism would strengthen the relation between the aspect attending to others' emotions and aggression, and

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whether individualism would strengthen the relation between the communication aspects of emotion awareness and aggression. Forth, also for the Malaysian group a hierarchical regression analysis was carried out, with aggression as the dependent variable. Gender (coded as dummy variable 0, 1) was entered in step 1. three aspects of emotion awareness (differentiating emotions, not hiding emotions and analyses of emotions) and both cultural orientations were centered and entered in step 2, to examine which of those aspects of emotion awareness and cultural orientation may predict aggression. In step 3, the interactions between not hiding emotions and individualism were entered, to examine whether individualism would strengthen the relation between not hiding emotions and aggression.

3. Results

Table 2.

Psychometric properties and mean scores of the Emotion Awareness, aggression and cultural orientation in Dutch and Malaysian adolescents.

| | No. of Items | Score Range | Dutch Participants N=322 | | Malaysian Participants N=1399 | |
|---------------------------|--------------|-------------|-----------------------------|------------------|----------------------------------|------------------|
| | | | <i>Cronbach's α</i> | <i>Mean (SD)</i> | <i>Cronbach's α</i> | <i>Mean (SD)</i> |
| IRPA | 36 | | | | | |
| Reactive aggression* | 18 | 1-5 | .90 | .92 | 1.63 (.59) | 1.77 (.69) |
| EAQ-30 scales | 30 | | | | | |
| Differentiating emotions* | 7 | 1-3 | .73 | .70 | 2.34 (.42) | 1.91 (.39) |
| Bodily awareness | 5 | 1-3 | .69 | .42 | 1.88 (.50) | 1.88 (.39) |
| Not hiding emotions* | 5 | 1-3 | .71 | .64 | 2.00 (.47) | 1.84 (.42) |
| Verbal sharing | 3 | 1-3 | .63 | .31 | 2.06 (.52) | 1.85 (.42) |
| Attending others emotions | 5 | 1-3 | .71 | .51 | 2.40 (.45) | 2.21 (.38) |
| Analyses of emotion* | 5 | 1-3 | .78 | .60 | 2.07 (.51) | 2.27 (.39) |
| Ind.- coll. Statements | 32 | | | | | |
| Individualism* | 16 | 1-5 | .73 | .73 | 3.55 (.51) | 3.39 (.58) |
| Collectivism | 16 | 1-5 | .84 | .75 | 3.75 (.50) | 3.76 (.67) |

Note. N =Number; SD = Standard deviation EAQ-30 = Emotion Awareness questionnaire (30 items), IRPA = Self -Report Instrument for Reactive and Proactive Aggression; Ind.- coll. Statements = The individualism-collectivism statement-questionnaire.

* $p < .01$

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Table 2. shows that Malaysian adolescents reported more aggression than Dutch adolescents, $t(1750) = 3.470, p \leq .001$. Regarding emotion awareness, Dutch adolescents scored higher than Malaysian adolescents on the scales differentiating emotions: $t(1718) = -17.213, p \leq .001$ and not hiding emotions: $t(1718) = -5.861, p \leq .001$. Malaysian adolescents scored higher than Dutch adolescents only on the scale analyses of emotions $t(1718) = 7.592, p \leq .001$. Gender differences in the Dutch and Malaysian groups are presented in Table 3.

Table 3.
Gender differences of Dutch and Malaysian adolescents on emotion awareness, aggression and cultural orientation.

| Dutch adolescents | Boys | | Girls | |
|---------------------------------|----------|------------------|----------|------------------|
| | <i>N</i> | <i>Mean (SD)</i> | <i>N</i> | <i>Mean (SD)</i> |
| Differentiating emotions** | 154 | 2.42 (.39) | 155 | 2.25 (.42) |
| Bodily awareness** | 154 | 2.00 (.48) | 155 | 1.76 (.47) |
| Verbal sharing of emotions | 154 | 2.09 (.45) | 155 | 2.06 (.53) |
| Not hiding emotions | 154 | 1.97 (.47) | 155 | 2.03 (.45) |
| Attending to others' emotions** | 154 | 2.20 (.43) | 155 | 2.60 (.37) |
| Analyses of emotions | 154 | 2.01 (.53) | 155 | 2.12 (.46) |
| Aggression | 151 | 1.77 (.60) | 161 | 1.50 (.55) |
| Individualism | 156 | 3.54 (.57) | 159 | 3.54 (.45) |
| Collectivism | 156 | 3.60 (.59) | 159 | 3.88 (.46) |
| Malaysian adolescents | | | | |
| Differentiating emotions** | 600 | 1.98 (.37) | 788 | 1.86 (.40) |
| Not hiding emotions** | 601 | 1.89 (.44) | 788 | 1.80 (.41) |
| Analyses of emotions** | 601 | 2.20 (.41) | 788 | 2.32 (.37) |
| Aggression** | 605 | 1.94 (.75) | 794 | 1.64 (.60) |
| Individualism** | 601 | 3.21 (.61) | 791 | 3.52 (.53) |
| Collectivism** | 601 | 3.60 (.72) | 791 | 3.88 (.42) |

Note. *SD* = Standard deviation; *N* = Number

** $p < .001$

3.1 Emotion awareness and aggression.

Table 4. shows the Pearson correlations between aggression, emotion awareness and cultural orientation. Fisher transformations showed significant differences in strength between the correlation coefficients of the Dutch and the Malaysian group on aggression, emotion awareness and cultural orientation.

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In both groups, there was no relation between aggression and analyses of emotion. In the Dutch group, bodily awareness was also not related to aggression.

Table 4.

Correlations between Emotion Awareness scales, aggression and cultural orientation.

| | aggression | Individualism | Collectivism |
|-------------------------------|--|---------------|--------------|
| | Dutch Group (N = 322) / Malaysian group (1499) | | |
| Differentiating emotions | .15** | .07/-.27** | -.11/-.24** |
| Bodily arousal | .03 | .00 | -.20** |
| Verbal sharing of emotions | -.18** | .18** | .09 |
| Not hiding emotions | -.09** | .03/-.23** | .01/-.25** |
| Attending to others' emotions | -.16** | .27** | .57** |
| Analyses of emotions | -.02 | .25**/.38** | .31**/.42** |

Note: Using Fisher transformation the correlation coefficient in italics denote significant group differences Dutch group / Malaysian group; the correlations of the three scales bodily awareness, verbal sharing of emotions and attending to others' emotions with other variables were not calculated for the Malaysian data due to low psychometric properties of the three scales.

* $p < .05$

Tables 5 and 6. show the hierarchical regression analysis of gender and the emotion awareness aspects as predictors for aggression in the Dutch group (table 5, *models 1 and 2*) and the Malaysian group (table 6, *models 1 and 2*). In both, the Dutch and the Malaysian group, gender was a significant predictor of aggression, which mean that boys are significantly more at risk to engage in aggressive behavior. Furthermore, although four aspects of emotion awareness were negatively correlated to aggression, only differentiating emotions (in the Dutch and the Malaysian group), and verbal sharing of emotions (in the Dutch group) predicted a lower level of aggression.

3.2 Cultural orientation, emotion awareness and aggression

Individualism and collectivism were highly correlated in both, the Dutch and the Malaysian group. However, collectivism was negatively correlated to aggression only in the Malaysian group. Collectivism predicted also a lower level of aggression in the Malaysian group. Regarding the relation

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between emotion awareness and cultural orientation, in the Dutch group both attitudinal aspects of emotions awareness (attending to others' emotions and analyses of emotions) were positively correlated to both individualism and collectivism. Additionally, verbal sharing of emotions was positively correlated only to individualism and was negatively correlated only to collectivism. Interestingly, in the Malaysian group the three included aspects of emotion awareness were correlated to both individualism and collectivism. Analyses of emotions was positively correlated, and differentiating emotions and not hiding emotions were negatively correlated to both individualism and collectivism. Further testing with regression analysis showed in both, Dutch and Malaysian groups that although, in both analyses (table 5 and 6, *model 3*) the *p* value of all three regression models were significant, no moderation effects of cultural orientation were found.

Table 5.

Hierarchical regression analyses for emotion awareness and interaction with collectivism and individualism on aggression in Dutch participants

| Predictors | <i>R</i> ² | B | <i>P</i> |
|--|-----------------------|------|----------|
| <i>Model 1</i> | .05 | | .000 |
| Gender | | -.21 | .000 |
| <i>Model 2</i> | .13 | | .000 |
| Differentiating emotions | | -.25 | .000 |
| Bodily awareness | | -.08 | .239 |
| Verbal sharing of emotions | | -.15 | .023 |
| Not hiding emotions | | .02 | .737 |
| Attending to others' emotions | | -.08 | .270 |
| Analyses of emotions | | -.02 | .726 |
| Individualism | | .12 | .061 |
| Collectivism | | -.05 | .523 |
| <i>Model 3</i> | .14 | | .000 |
| Collectivism x Attending others | | -.03 | .556 |
| Individualism x Verbal sharing of emotions | | .10 | .121 |
| Individualism x Not hiding emotions | | -.31 | .291 |

Note: P value in italic denote the significance of the model.

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Table 6.

Hierarchical regression analyses for emotion awareness and interaction with collectivism and individualism on aggression in Malaysian participants

| Predictors | <i>R</i> ² | B | <i>P</i> |
|-------------------------------------|-----------------------|------|-------------|
| <i>Model 1</i> | .05 | | <i>.000</i> |
| Gender | | -.22 | .000 |
| <i>Model 2</i> | .08 | | <i>.000</i> |
| Differentiating emotions | | -.15 | .000 |
| Not hiding emotions | | -.03 | .416 |
| Analyses of emotions | | .01 | .854 |
| Individualism | | .05 | .155 |
| Collectivism | | -.12 | .002 |
| <i>Model 3</i> | .08 | | <i>.000</i> |
| Individualism x Not hiding emotions | | .10 | .386 |

Note: P value in italic denote the significance of the model.

4. Discussion

The aim of this study was to examine the relation between emotion awareness and aggression in adolescents from the Netherlands and Malaysia, and to explore whether the relation is influenced by cultural orientation held by the adolescents. The outcomes showed that in both, the Dutch and the Malaysian group, aspects of emotion awareness were negatively related to aggression, suggesting that an increased level of those aspects of emotion awareness is related to a decreased level of aggression in adolescents. In respect to gender, consistent with previous findings, boys show higher levels of aggression than girls (Calvete & Orue, 2012; Cohn et al., 2010; Li & Fung, 2015). No clear gender differences in emotion awareness were found.

4.1 Emotion awareness and aggression

As we expected, aspects of emotion awareness were negatively related to aggression in both Dutch and Malaysian adolescents. However, not all aspects of emotion awareness were related to aggression in adolescents. Besides, regression analysis showed that differentiating emotions

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contribute negatively to the prediction of aggression in both Dutch and Malaysian adolescents. This finding emphasizes the importance of the ability of adolescents to pay attention to the antecedent that elicited the emotion (Rieffe et al., 2008; 2012) and the importance of recognizing or detecting which emotion the individual is feeling, since different emotions may elicit aggression in different ways (Mitrofan & Ciuluvică, 2012; Stuewig et al., 2010). In the Dutch group also verbal sharing of emotions was a predictor of decrease in aggression. As Rieffe and colleagues (2008; 2012; 2016) already indicated, both aspects, differentiating emotions and verbal sharing of emotions, require an external oriented focus as opposed to a self-oriented focus. This finding emphasizes the importance of one's external focus during the emotion experience in regulating emotion adaptively. To our best knowledge, this study is the first one to confirm the unique contribution of the aspect verbal sharing of emotion to less aggression, which provides supporting evidence for the previous findings that talking about negative emotions or showing others how you feel, may contribute to the social well-being of the individual and reduce externalizing and internalizing problems (Celik et al., 2016; Katz et al., 2007; Rieffe & Rooij, 2012; White & Turner, 2014). This finding suggests a new direction for future research concerning emotion communication and aggression.

In contrast to our expectation, analyses of emotions was not related to aggression. Although, previous studies in adults showed the importance of analyzing emotions for adaptive emotion regulation (Cohn et al., 2010), analyses of emotions require cognitive analytical processes (such as evaluation and reflection), which may not be yet fully developed or understood by young adolescents (Imbir, 2016). Interestingly, also attending to other emotions, which is the other indicator of the attitude towards emotions did not contributed to decrease in aggression. These findings may suggest that the attitudes of the adolescents toward their own emotions or to the emotion of others, do not influence the level of aggression, but that abilities such as differentiating emotions and verbal sharing of emotions do reduce aggressive behavior. Besides, in respect to the communications aspect of emotion awareness, only verbal sharing of emotions predicted less aggression, which may suggest that not hiding emotions is not as helpful as verbal sharing of emotions. Probably, talking about ones

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feelings help the person to analyze the situation, but just showing an angry face to other people does not help the person to reflect upon the event and to deal with it adaptively.

Bodily awareness was also unrelated to aggression suggesting that less attention to bodily symptoms does not play a role in reducing aggression. Rieffe and Rooij (2012) indicate that bodily awareness was consistently found to be strongly related to various internalizing problems in children and adolescents. Future research should check if a greater attention to bodily symptoms is more related to internalizing problems, rather than to externalizing problems.

4.2 Cultural orientation, emotion awareness and aggression

In the Dutch group cultural orientation was not related to aggression. In the Malaysian group, individualism was also not related to aggression, but collectivism contributed negatively to decrease in aggression, which is in line with previous studies (Hofstede et al., 2010). In contrast to our expectation, in both, Dutch and Malaysian adolescents, cultural orientation did not strengthen any relation between aspects of emotion awareness and aggression. It is important to note that the individualism-collectivism statement questionnaire is especially developed for this research, which does not allow us to compare our findings with findings of other studies. Further research is needed to validate the individualism-collectivism statement questionnaire in different countries and to shed more light on the influence of cultural orientation on the relation between emotion awareness and aggression at an individual level.

4.3 Limitation

The findings of this study have several limitations. First, as mentioned before, some scales of the emotion awareness questionnaire (EAQ -30) were excluded of analyses due to low psychometrical properties in the Malaysian group. Since the EAQ-30 is designed in the Netherlands and is validated in studies with European children and adolescents (Rieffe et al., 2008; Lahaye et al., 2010), it may be possible that the questions in the EAQ-30 fit the perceptions and interpretations of the Dutch adolescents better than the Malaysian adolescents, leading to a higher internal consistency in the Dutch group. Appropriately, Li and Fung (2008) indicated that questions of a

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Western designed questionnaire can be differently understood and interpreted in other countries, leading to a lower internal consistency of the scales and different correlation between aspects. The exclusion of three scales of the EAQ-30 limited us from using the whole data and comparing the Dutch and Malaysian groups. Second, the individualism-collectivism statement questionnaire is not yet validated, thus we need to be very cautious when interpreting the results. Third, it took approximately 50 minutes to fill out the questionnaires, which may be quite long for children and adolescents. When questionnaires take a long time, participants tend to respond acquiescently (“Acquiescent Responding”) or to give extreme ratings on scales (“Extreme Responding”) without considering the meaning of the question (Paulhus & Vazire, 2007). Shorter questionnaires should give more reliable results and may be less stressful for young participants.

5. Conclusion and implications

This present study show that an increased emotion awareness is related to a decrease in aggression. Especially the abilities differentiating emotions and talking about own emotions, contribute significantly to less aggressive behavior. This finding emphasizes the importance of external oriented focus (as opposed to internal oriented focus) during the emotion experience, in reducing aggression. However, not the attitude of the adolescent toward his/her emotions or the emotions of others, but skills that can be learned, such as talking about emotions and detecting emotions are important in reducing aggressive behavior. This finding provides a first step in developing aggression interventions (programs) that focus on improving adolescents’ emotional awareness by teaching them how to differentiate and how to communicate emotions verbally. Thus far not much evidence was found concerning the relation between the communication aspects of emotion awareness and aggression. Further research on the relation is needed in order to fill in the gap in literature concerning this particular issue. Future research on the effects of cultural orientation on the relation between emotion awareness and aggression, may contribute to the development of interventions, that focus on the improvement of emotion awareness in a cultural sensitive way.

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