

The Expression of Negative Emotions amongst Children: The Difference Between Boys and Girls

Hannah Giesler, Nadine Said Ehab, Nienke Wildeman, Sophie Folkers, Job Steen

Abstract

The present paper examined the ways in which boys and girls expressed negative emotions, and more specific how boys and girls differ in this expression. Based on discussed literature, it was expected that boys express their negative emotions more through bodily movements, whereas girls were expected to use more facial expressions. 50 short fragments from an annual returning event of the talkshow 'Jimmy Kimmel live', in which parents tell their children they ate their halloween candy, were collected and analyzed. The used coding scheme was based on the Dyadic Observed Communication Scale, and complemented with features shown in the fragments. After all features were divided into a bodily movements and a facial expressions category, several independent samples t-tests were executed. Results showed that boys use more bodily movements than girls, and girls show more facial expressions than boys. However, these results were not significant. Shortcomings and possible improvements are discussed.

Keywords: Emotions; expressing emotions; children; disappointment; nonverbal communication.

Introduction to the Subject Matter and Prior Theoretical Research

The field of non-verbal communication offers a vast spectrum of potential investigative topics. This report will focus on establishing a connection between gender differences in children and how these affect displays of emotions. More specifically this report will investigate how the display of negative emotions differs in children, based on their gender. Previous scholarly articles provided insights into the concept that children will be groomed by their surroundings (Visser, Kraemer & Swerts, 2015). Kids will often times adapt behaviour, displayed by parents, guardians, as well as their peers (Visser, Kraemer & Swerts, 2015). Prior research has indicated that while women will experience emotions more intensely than men, they will also be able to control them more effectively, leading to fewer aggressive and explosive body movements (Kashdan, Mishra, Breen & Froh, 2009). Due to the impressionability of children, it could be deduced that girls would adapt a similar approach when dealing with and reacting to negative experiences. The analysis of non-verbal cues will play a critical part in investigating this claim, as non-verbal behaviour offers information about feelings and emotions, even in instances where the affected

may try to hide or shield these (Ekman, Davidson & Friesen, 1980). Hence, this report will focus on establishing a connection between how children react to a negative situation and how these non-verbal reactions will differ based on gender. While previous academic work has established gender differences in displays of (negative) emotion, there is a substantial research gap in terms of how these are expressed by children. In order to eliminate any errors or biases, that may occur due to placing children in an unknown and monitored environment, this research will utilise home-shot videos, uploaded to the internet (i.e. YouTube) and solely focus on the non-verbal aspects of children's emotional displays. Moreover, these YouTube videos will aid in establishing whether genders differ in non-verbal displays; and more specifically whether there is a statistical significant difference in the use of body language and facial expressions utilised by boys and girls. Establishing significant behavioural differences in terms of children's reactions and concretely determining gender differences in responsive actions, will be the focus of the home-video analysis. All types of reactions will be analysed, both positive, negative, and neutral. This will serve as an indicator whether there is a general difference in the way children engage in non-verbal reactive expressions. However, the main expressive behaviors analysed for the purpose of this research will centre around anger, upset, disappointment, and frustration; all of which have been established to be negative emotions. As mentioned previously, all other analysed data will serve as a reference point and will be conducted for the purpose of more generalised insights. All types of emotional reactions and comprehension, including that of negative emotions, have the potential to be expressed in several differentiated ways e.g. body language and facial expressions. We expect to analyse both reactive actions displayed through outburst of emotion as well as physical violence and aggression. While negativity has been depicted to be an emotion experienced by both boys and girls, we expect the non-verbal displays of it to substantially differ depending on the gender. Hence, the specific research question investigated throughout the following research will be: To what extent is the expression of negative emotions amongst children, affected by gender?

Theoretical framework

In order to investigate this research question it is vital to understand how emotions are formed, influenced, and expressed. Negative emotions are considered to be very versatile and can be expressed in various sub-categorical emotional states. These include, but are not limited to, anger, disappointment, frustration, sadness, and loss. One common reaction of negative emotion is that of anger (Kaiser & Wehrle, 1996). Anger is a negative emotion which is correlated with the assertion of authority (Algoe, Buswell, & DeLamater, 2000; Averill, 1982). Anger can be expressed in two ways, anger-in (directed inward) or anger-out (directed outward) the self. While these classifications have often times been used in direct correlation with anger, they appear to also hold true for a variety of other negative emotions.

Through negative emotions being directed inwards, individuals try to deny or restrain the effects of that specific emotional state, and to avoid the expression of it. However, when such emotions are expressed in an outwardly fashion they are usually conveyed through facial expressions, physical gestures, and/or aggressive body movements (e.g. kicking and punching). Moreover, these observations do not only hold true in the scenario of adults but they are also manifested by young children. Examples of this present themselves in vocalization of emotions, facial expressions, and global movements affecting the whole body of the child (Maltese, Agata, Romano, Palmira, D'Oro, & Lucrezia, 2017). As previously mentioned, these expressions of emotions are often visible in the context of anger, however disappointment in general often times displays similar trademark behaviour (Zeelenberg & Pieters, 2004). Disappointment is similar to the feeling of sadness and the lack of control over the situation, therefore indicating a distinct alignment with other negative emotions (Vaan Kleef, De Dreu, & Manstead, 2010). Feelings of disappointment often appear when a goal does not meet the expectations (Carver & Scheier, 1990) and/or when a desired outcome is not accomplished (Bell, 1985).

As certain negative emotions such as disappointment are often times harder to detect than those of explicit anger and aggression, it is of heightened importance to investigate how the non-verbal expressions of negative emotions in general manifest themselves among adults and children. Facial expressions and body movements are considered to be the two main indicators of a negative emotional state.

Facial Expressions and Body Movements

Facial expressions are one of the most valuable signals in non-verbal communication. They transmit information about the emotional state of the individual and their intentions (Mühlberger, Wieser, Gerdes, Frey, Weyers & Pauli, 2011). Negative emotions in general are an essential part of interpersonal interactions, and have a cross-culturally recognizable facial expression (Ekman, 1973; Sell, Tooby, & Cosmides, 2009). These expressions of a negative emotional state are usually recognized through facial mimic such as the raise of mouth and cheekbones, lips pressing, nose widening, and eyebrows frowning (Ekman & Friesen, 1978; Sell et al., 2009).

However, body movements are as well a form of nonverbal communication which convey important information about the attitude and feelings of an individual (Walk & Homan, 1984). Besides facial expressions, negative emotions are expressed through body movements as well, such as punching, or leaning forward. Also, negative emotions (e.g. anger) are expressed through strong, direct, and fast movements, like stomping the feet (De Meijer, 1989).

Gender Differences

Certain gender differences in the expression of emotions, have previously been found (LaFrance & Banaji, 1992). For instance, females are more willing to express their emotions openly compared to males (Kashdan et al., 2009). Although females are believed to be more emotional and experience emotions more profoundly than males, there are some particular emotions, such as anger, that males are considered to express more than females (Kashdan et al., 2009).

There are also clear gender differences in children's expression of anger. Boys are more likely than girls to express their feelings when they experience negative emotions. This finding is generally consistent with other studies which propose that males express their anger more instigative, provocative, and aggressive than do females (Doyle & Biaggio, 1981), whereas females try to diminish the conflict more frequently than do males (Miller, Danaher, & Forbes, 1986). Furthermore, the findings of Davis (1995) have shown that boys express more the feeling of disappointment than do girls. One potential reason for these gender differences might be that girls and boys have different objectives regarding their reaction to negative emotions. Girls often times use coping strategies to maximize interpersonal harmony, and try to be more relationship oriented than boys (Block, 1973; Maccoby & Jacklin, 1974). Accordingly, there is the possibility that girls are more concerned than boys about hurting the adult's

feelings (Garner & Power, 1996). Moreover, it was found that girls and boys feel angry equally often, but it was reported that girls communicate negative emotions more through facial expressions than do boys (Underwood, Coie, & Herbsman, 1992). Based on the discussed literature, the following hypotheses are formulated:

H1: *Girls, in comparison to boys, will more frequently express negative emotions through the use of facial expressions.*

H2: *Boys, in comparison to girls, will more frequently express negative emotions through the use of (aggressive) body gestures.*

Method

Stimuli collection

For this study, 50 short fragments were collected. 25 fragments consisted of boys who were disappointed by their parents, and the other 25 consisted of girls who got disappointed by their parents. The clips that were included in this study were part of an annual returning event of the talkshow 'Jimmy Kimmel live'. This annual event is called 'Hey Jimmy Kimmel I told my kids I ate all their Halloween candy' and consists of parents pretending they ate all their kids' Halloween candy and posting a video of it to YouTube. The clips were collected on the online video platform YouTube. Since the event is popular, it was decided to only include videos uploaded by the official Jimmy Kimmel Live channel. Videos on this channel consisted of compilations of the best videos that the talk show received that specific year. To include the most recent clips, only compilations of the past three year were included in this study.

However, not all clips from the compilation videos were included. Inclusion of the clips was done by the researchers based on a number of criteria. Firstly, it was required to see both the face and the bodily features of the child displayed. The researchers decided that it was not required to get a full view of the body. The video's that should be included, should be at least filmed from the waist and up. This decision was made since the researchers noted after watching the compilations, that movements with the arms were more prominent than movements with the legs. When it was decided that only children showing their full posture were included, the number of clips would not be sufficient. The other criteria included was the quality of the clip. Since most clips were filmed by the parents with a mobile phone, quality varied within the compilation. Since quality is especially important when focusing on the facial expressions, only clips that had

sufficient quality to show the faces of the children with detail were included. When the facial expressions were not totally clear, the specific clip was not included.

Coding procedure

For coding the bodily and facial expressions, some features were derived from the DOCS (Dyadic Observed Communication Scale) coding scheme (Hadley et al., 2013). The DOCS was developed to capture the communication components between the child and the caregiver. Domains such as eye contact, nodding and gestures were included in the DOCS coding scheme. The average reliability of this coding scheme is .82. Not only the DOCS coding scheme was used, features were also created by the researchers based on the behavior of the children displayed in the clips (e.g. kicking and beating). Table 1 shows the final categories included in the developed coding scheme.

To ensure that the inter-reliability for this coding scheme was sufficient as well, a total of three coders coded the features of the clips independently. The gender of the children in the clips was evenly divided between the coders. After coding, the intercoder reliability was checked by double coding 10 percent of the clips included in this study. At first the Kappa of Shock had a Kappa of .545. After discussing, this item was taken together with Stare, resulting in a higher Kappa. Most of the variables had a Kappa of 1. The lowest Kappa of .616 was the 'Checking the box' item; Frowning had a Kappa of .769, and the Crying and Screaming items both had a Kappa of .8. Resulting in all the final Kappa's indicating a sufficient intercoder reliability with substantial Kappa's.

Table 1: Coding categories and features.

<i>Category</i>	<i>Feature</i>
Facial	1. Frowning
	2. Staring
	3. Eye contact
	4. Shock
	5. Crying
	6. Screaming
	7. Sticking tongue out
Bodily	8. Show middle finger
	9. Kicking
	10. Beating
	11. Pointing
	12. Falling on floor
	13. Walk away
	14. Check candy box
	15. Touch candy wrappers
	16. Put arms in the air
	17. Touch head

Results

To test whether boys would display more non-verbal cues overall when expressing negative emotions than girls would do, an independent samples t-test was performed. In this sample, boys who were disappointed by their parents ($M=3.72$, $SD=1.49$) demonstrate slightly more non-verbal cues than girls who were disappointed by their parents ($M=3.68$, $SD=1.60$). The Levene's test showed that the variances of the groups were equally assumed, $F(48, 47.74)=0.042$, $p=.838$. The difference between boys and girls when displaying non-verbal cues, $Mdif=-0.04$, BCa 95% CI [-0.92, 0.84], was not significant $t(48)=0.09$, $p=.927$. Therefore, it can be concluded that this study does not support the notion that boys will use more non-verbal cues in general when

expressing negative emotions compared to girls.

To test whether boys would display more bodily non-verbal cues when expressing negative emotion than girls would do, an independent samples t-test was performed. In this sample, boys who were disappointed by their parents ($M=1.08$, $SD=0.95$) demonstrate slightly more bodily non-verbal cues than girls who were disappointed by their parents ($M=0.88$, $SD=0.83$). The Levene's test showed that the variances of the groups were equally assumed, $F(48, 47.14)=0.082$, $p=.776$. The difference between boys and girls when displaying bodily non-verbal cues, $Mdif=-0.20$, BCa 95% CI [-0.71, 0.31], was not significant $t(48)=-.790$, $p=.434$. Therefore, it can be concluded that this study does not support the hypothesis that boys will use more bodily non-verbal cues when expressing negative emotions, compared to girls.

Lastly, to test whether girls would display more facial non-verbal cues when expressing negative emotions than boys would do, an independent samples t-test was performed. In this sample, girls who were disappointed by their parents ($M=2.80$, $SD=1.00$) demonstrate slightly more facial non-verbal cues than boys who were disappointed by their parents ($M=2.64$, $SD=1.25$). The Levene's test showed that the variances of the groups were equally assumed, $F(48, 45.7)=2.607$, $p=.113$. The difference between boys and girls when displaying facial non-verbal cues, $Mdif=0.16$, BCa 95% CI [-0.49, 0.81], was not significant $t(48)=0.5$, $p=.620$. Therefore, it can be concluded that this study does not support the hypothesis that girls will use more facial non-verbal cues when expressing negative emotions compared to boys.

Discussion/conclusion

Although the results were in the direction we expected, as boys showed slightly more bodily displays of disappointment and girls showed slightly more facial displays of disappointment, they were not significant. Therefore, it can be concluded that there were no significant differences in gender regarding the facial and bodily displays of disappointment in children.

This is not in line with previously discussed literature, which suggested that boys more often express their anger compared to girls (Kashdan et al., 2009; Shields, 2002), and that girls express their anger more often via facial expressions compared to boys. Hence, since anger is one of the ways in which people can react to disappointing situations, it was expected that boys would be more expressive in displaying their disappointment. However, this was

not the case in the current study. Several reasons could be appointed to explain this discrepancy.

First, anger is one emotion people use when experiencing disappointment. However, other emotions can be displayed as well, such as sadness or surprise (e.g. when people did not see the disappointment coming). Although it was tried to consider other emotions than anger, this emotion was the one the authors were focused on. Consequently, the results may be biased, as anger was stressed disproportionate. In the current study, it could be that no significant differences were found because the boys and girls did not just display anger, but various other emotions as well (e.g. sadness/surprise/understanding). Therefore, while boys would be more expressive when they are feeling angry, girls could potentially be more expressive in instances of being sad/surprised. This would result in both groups being evenly expressive when it comes to the display of negative emotions. As a result, no effects were found.

Another factor that could have played a role, was the age of the children in the YouTube videos. From the videos it is hard to establish exact age, but most children do not look older than six or seven. In this age category, children have less inhibition of their emotions (Carlson & Wang, 2007). As a possible consequence, they are more expressive in displaying them, regardless if they are a boy or a girl. It could be that more gender differences would be found when the sample consists of children in an older age group.

With regard to the methodology, it should be noted that the coding of facial expressions was much after own interpretation. More specifically, since the intercoder reliability of *shock* was very low, *shock* and another, similar facial expression (*blank stare*) were combined in order to increase this intercoder reliability. However, although they are similar, it is not the exact same expression. Therefore, some emotions otherwise coded as being different from each other, were now coded as the same. This could have been too general, and as a result information might have been lost.

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