How Do Children Experience Mixed Emotion? Piloting an Analogue Emotion Scale

Dr Esther Burkitt
Francesca Fotheringham
University of Chichester

Adults report more sequential and simultaneous experiences of mixed emotion when using an analogue emotion scale (AES) than when completing rating scales due to the temporal dimension of the AES. Research is beginning to show that children experience mixed emotion and report simultaneous experiences increasingly between 5-7 years. These reports however may misrepresent the type, and underestimate the frequency of, simultaneous experiences due to the limitations of the measures. This research piloted the utility of an adapted AES to assess subjective mixed emotion types in childhood. 55 children (23 girls, 22 boys) aged between 4 years 2 months - 6 years 2 months (*X*=5 years 3 months) participated in the research. They heard vignettes describing single happy, sad and mixed emotion events in an age and gender matched protagonist and completed AES training and tests measures about the protagonists' experiences. Four different AES mixed emotion types were found highlighting a broader range of mixed emotion experiences than previously found and attesting to the utility of the adapted measure.

Introduction

•Current theories concerning adult populations suggest that mixed emotions can be simultaneously experienced in different ways (Larsen and McGraw, 2014).

• A key measure of the subjective experience of mixed emotion is the Analogical Emotional Scale (AES) (Carrera & Oceja, 2007)

•It was designed to measure subjective emotional experiences throughout the duration of an experience and permit discrimination between two sequential or simultaneous emotions of opposite valence.

•Carrera and Oceja's (2007) assessed subjective experiences of happiness and sadness using affect ratings and AES responses about a recalled event of mixed happiness and sadness, an elicited event, and after participants viewed a film where the sequencing of single and mixed emotions was controlled. They found that adults' AES responses could be grouped as simultaneous, sequential, parallel and combined.

• The ways that children experience mixed emotion across childhood is less understood (Harris, 2000). Studies using interviews show that children report feeling happy and sad at the same time (Burkitt & Sheppard, 2014; Burkitt & Watling, 2015). However interview responses along with responses to rating scales designed to measure two emotions as a reaction to a single event do not capture a temporal measure of the experience.

•This leads to the possibility that the simultaneous or sequential nature of the experience of mixed happiness and sadness is under or overestimated in recent research with children.

•The present pilot research therefore explored the utility of an adapted AES to measure the possible types of children's subjective experiences of mixed happiness and sadness.

Method

Participants: 55 children (23 girls, 22 boys) aged between 4 years 2 months - 6 years 2 months (X=5 years 3 months) participated in the research.

Materials: Vignette (see Burkitt & Watling, 2015) describing happy, sad and mixed happy and sad events experienced by a gender and age matched peer. AES training graph, AES graph.

Procedure: Training: A training phase for the adapted AES for was conducted. Children looked at pictures of two different gender matched children with either a glass of blue fizzy drink or red fizzy drink. The participants were asked to look at the pictures and assess the fullness of the glass. Fullness estimates were graphed at four different points using red and blue pencils signifying different point in the day (breakfast time, lunch time, dinner time, bed time).

Test phase: Children were seen individually in their schools. They were asked to consider how happy and sad the protagonist felt at different points during the vignette and draw each emotion separately on the same AES graph (see Figure 1).

Key:
1. Sam loved the local village school
2. Sam and friends loved playing games together
3. Sam moved to a new town and too far to play games with friends
4. Sam was a little sad about making new friends
5. Sam was happy about making new friends

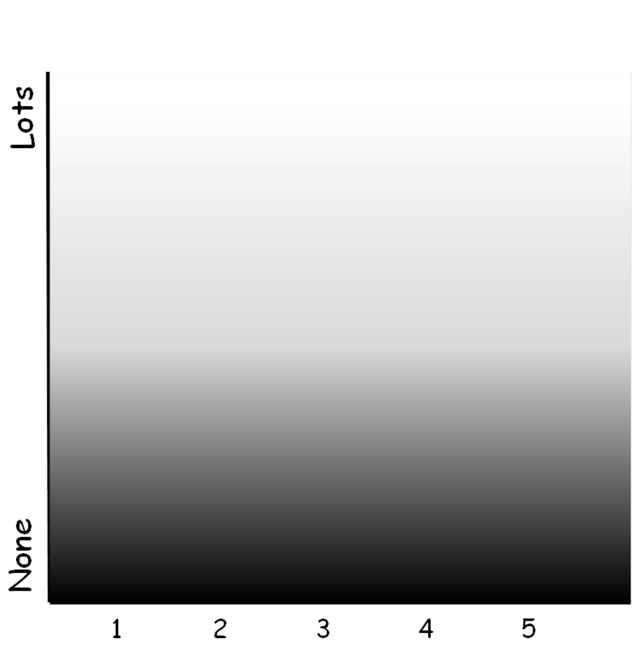

Figure 1: AES axes and emotion key

Results

- The AES graphs were coded using Carrera and Oceja's (2007) categorical scheme: Simultaneous, Sequential, Parallel and Combined

- The simultaneous category is characterised by emotional intensity increasing and decreasing together. The sequential category includes the interaction of opposing emotions, when one emotion's intensity rose, the other fell. The parallel category is characterised by no interaction between emotions and the combined category shows a clear combination of both a sequential and simultaneous interaction of emotional intensity. Figures 2-4 show an example of each category.

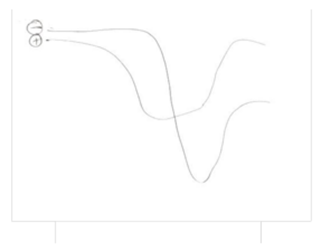

Figure 2: Simultaneous AES category

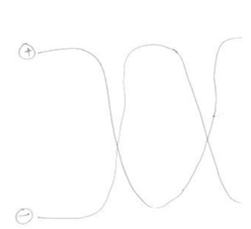

Figure 3: Sequential AES category

Figure 4: Parallel AES category

Figure 5: Combined AES category

The frequencies of each pair of categorical responses as shown in Table 1 were compared. Sequential graphs were more frequent than simultaneous (χ^2 (1) = 0.81, p = .04), parallel (χ^2 (1) = 0.64, p = .04) and combined ones (χ^2 (1) = 0.87, p = .03) , and simultaneous graphs were more frequent than parallel (χ^2 (1) = 0.64, p = .02) and combined (χ^2 (1) = 0.64, p = .03) ones.

Table 1: Frequency of categorical AES response type

AES category	Frequency
Simultaneous	14
Sequential	28
Parallel	8
Combined	5
Total	55

Discussion

- This pilot has shown that children in this age range understood how to use the adapted AES graph.

●The AES shows a wider pattern of subjective experiences of mixed (Carrera and Oceja, 2007) recognised in others than the sequential and simultaneous types previously uncovered in childhood (Burkitt & Sheppard, 2014; Burkitt & Watling, 2015).

●The AES offers a promising tool to assess mixed emotion in a range of assessment contexts.

●Future research could validate the AES across figure types and further pairs of high and low arousal emotion against other emotion measures such as bipolar and relative rating scales, drawings and interview responses.

References

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