

Information

A. Title: Is There an Emotional Component to Giftedness?: The Effect of Cognitive Manipulation on the Emotional Experience of Gifted and Ordinary Children.

Author: Dr. Neta Revhon–Damti and Dr. Naomi Bat-Zion.

Affiliation: School of Education, Bar Ilan University.

Author's affiliation: The Center for Interdisciplinary Emotion Research on emotions, University of Haifa.

B. Form of Presentation: Oral

C. Characterization of Approach: The study presented in this proposal is built on the assumption that emotion is a complicated reaction to various stimuli. Emotion is also considered as a significant capacity in the whole personality. In the same time, emotion involves interactions with other mental elements, such as cognition. Emotions characterized by cognitive properties, while cognitive features, like giftedness, involve reasonably emotional elements. The emotions studies here are discussed in light of two aspects: (a) *What* is the experienced emotion, and (b) *What* is the *intensity* of the experience. My approach to modeling emotion is the structure of emotional clusters: similar emotions are taking part in every experience, and they belong to the same cluster (one or more). Finally, the current work evaluates the emotion's influence on cognitive performance, and the emotion's significance for the giftedness phenomenon. This study may clarify some aspect in the relations between emotion and cognition.

The present contribution

Dr. Neta Revhon-damti and Dr. Naomi Bat-zion

Bar-Ilan university

In this study emotion and cognition are considered parts of the mental experience. Bower (1991) and Isen (1985, 1999) proposed theoretical models of the relation between the cognitive content of memory and the emotions it arouses. Empirical studies examined, for example, how various emotional states affected the performance of cognitive tasks, or how cognitive elements are integrated into the formation of the emotional experience. The present study contributes to the accrued knowledge in several ways: it examines every type of emotion; it differentiates between ordinary and continuous emotional situations and the immediate and short-lived emotional response; and it differentiates between positive and negative emotions.

Cognition is presented in the current study in three ways: in a comparison between gifted (those with unique cognition) and ordinary children; in an examination of the effect of manipulation (by cognitive means) on the emotional experience; and in an

assessment of the degree of the influence of emotions on the level of performance of a cognitive task.

As for the gifted children, the psychometric approach views the gifted as having a measurable amount of cognitive ability, higher than that of the ordinary population. More modern definitions add aspects of quality or even non-cognitive attributes, such as social, moral, or artistic abilities. Piechowsky (1986) defines the gifted as having also a unique emotional quality. In his opinion, the gifted have more positive emotions and these are of higher intensity. A further basis for an assumption of emotional difference between gifted and ordinary children may be found in studies that detect a clear impact of cognition on emotion (see Gnepp, et.al., 1987; Linville 1987). Furthermore, there are studies that prove that highly developed and effective cognition in highly intelligent individuals is related to differences in the emotional experience (see McAlpine 1991; Laible and Thompson 1998). An assumption of the present study is that the differences will manifest themselves in that the emotional experience of the gifted children will include more kinds of emotion and that their intensity will be lower than that of ordinary children.

The components of the emotional experience studied in the current research are the types of emotion experienced and the intensity with which they are experienced. As mentioned above, the emotional experience is measured both in an ordinary situation and immediately after an event. The “event” constitutes the manipulation of our subjects into a positive or negative emotional state, by means of highly positive or highly negative feedback of the cognitive task performed (minimal relation between the feedback and the actual achievement was assured). Variables such as gender (boys/girls) and age (7th / 9th grades) were also included in this study.

The cognitive aspect was evaluated using three tests of skill: verbal analogies, the completion of shapes, and the completion of numerical sets. The tests were conducted in two versions – before and after the emotional manipulation.

The emotional experience was evaluated using self-reporting questionnaires that included 67 different types of emotion. It was measured before and after the emotional manipulation.

The experiment involved 222 gifted and 223 ordinary children, all junior high school students.

The 67 different types of emotion were assigned to nine groups, i.e., nine basic emotions. The results were statistically analyzed and the following is the gist of the results.

Results

A. Emotions in ordinary situations: the everyday emotional experience of the gifted youth is consistently stronger than that of the ordinary youth, but it does not encompass more types of emotion. All subjects demonstrate a considerable tendency to experience more positive emotions more intensely.

B. Emotions following cognitive manipulation: a pronounced difference was evident between the positive and negative manipulation. After both manipulations, positive and negative, subjects experienced more positive emotions more intensely. The emotional experience after the manipulation was not consistent with the nature of the manipulation (positive emotions following a positive manipulation and negative emotions following a negative manipulation) but rather reflected a state of confusion and misunderstanding. It appears that the manipulation narrowed the gap between positive and negative emotions, though the positive emotions were still more apparent. Though this was true for all subjects, the gifted were evidently less affected by the manipulation.

C. The effect of the emotional state on cognitive performance: the effect of the emotional manipulations on the subjects was analyzed, and it was found that cognitive performance fell after both the positive and the negative manipulations. A reevaluation of the effect of emotions on cognitive performance revealed a minor but clearly evident effect. The effect is differential: emotions of *surprise* and *anger* were seen to enhance cognitive performance, whereas emotions of *fear* and *sadness* were seen to disrupt cognitive performance.

Conclusions

A. The effect of emotion on cognitive performance: The current study provides support for this conjecture. Different emotions may enhance or disrupt cognitive performance. However, there are factors that are of greater importance to cognitive performance, such as intelligence (60%).

B. The normal emotional profile of Israeli youths: their current emotional profile is clearly positive. Both the number and intensity of positive emotions are greater than those of negative emotions. Obviously, caution should be taken not to generalize from this current positive profile to other populations or periods.

references

- Bower, G. H. (1991). Mood congruity of social judgment. In J. Forgas (Ed.), **Emotion and social judgment** (pp. 64-89). South Wales: Pergamon.
- Isen, A. M. (1985). The asymmetry of happiness and sadness in effects on memory in normal college students: Comment on Hasher, Rose, Zacks, Sanft & Doren. **Journal of Experimental Psychology: General**, **114**, 388-391.
- Gnepp, J., Mc'Kee, E. & Domanic, J. A. (1987). Children's use of situational information to infer emotion: Understanding emotionally equivocal situations. **Developmental Psychology**, **23**, 114-123.
- Laible, J. D. & Thompson, R. A. (1998). Attachment and emotional understanding in preschool children. **Developmental Psychology**, **34**, 1038-1045.

Linville, P. W. (1987). Self complexity as a cognitive buffer against stress related illness and depression. **Journal of Personality and Social Psychology**, **52**, 663-676.

Mc'Alpine, C. (1991). Recognition of facial exxpressions of emotion by persons with mental retardation. **American Journal of Mental Retardation**, **96**, 29-36.

Piechowski, M. (1986). The concept of developmental potential. **Roeper Review**, **8**, 190-197.