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A theoretical formation of emotional intelligence and childhood trauma among adolescents

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Abstract

Problem Statement: Much has been documented on the impact of emotional intelligence (EI) on adolescents in terms of their problem-solving skills (Ajawani, 2012), creativity (Vijaykumar, 2012), and academic performance (Shenoy & Thingujam, 2012). Increasingly, emphasis has been paid on the effect of EI on health among this population. For example, EI has been shown to interact with personality traits to affect psychological well-being (Salami, 2012). EI, based on literature focusing on the adult population, shows that it is a protective factor and can buffer against psychological distress (e.g. Hunt & Evans, 2004; Schmidt & Andrykowski, 2004). However, little is known regarding the role that EI could play in influencing such outcome among traumatized adolescents. Whilst one study has shown that low EI predicted the likelihood for being bullied by peers (Lomas et.al, 2012), no research has focused on the effect of childhood trauma. To what extent EI could interact with the experience of childhood trauma in influencing different degrees of psychological distress among adolescents is unknown.

Purpose of Study: The aim of this paper is twofold. Firstly, it aims to provide a brief review of literature pertaining to the relationship between psychological well-being and emotional intelligence among adolescents. Secondly, it aims to point out the gap in research looking at the link between EI and childhood trauma and to formulate a theoretical model for understanding the foregoing relationship. The theoretical postulate is integrated with theories from trauma and EI literature. In brief, it postulates that the experience of childhood trauma would have a significant impact on the development of traumatized self (Brewin, 2002) among these adolescents. This traumatized self is characterized by altered self-capacities of which interpersonal conflicts or difficulties with oneself and others are part (Briere & Spinazolli, 2005).

Conclusions: This would hinder the development of EI which would in turn affect different degrees of psychological well-being. This theoretical model will be relevant for not only researchers investigating childhood trauma and posttraumatic stress disorder in general but also it will have significant clinical implications for counselor and psychotherapists who work with adolescents

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Keywords: Emotional intelligence among adolescents, childhood trauma, integrative theoretical model of EI

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Formation and development of emotional intelligence among children and adolescents is an important component in establishing qualitatively adaptive personality in living conditions of modern life. The importance and actuality of existence of emotional intelligence (EI) in adolescents – as the ability to control one's own emotions and emotions of others – is generally known [1]. Due to the fact that the age of adolescence is characterized by processes of rapid physiological development and formation of the personality the resulting emotional and behavioural instability may contribute to formation of certain behavioural strategies for the future adult life. The system of values which is formed basing on the available experience of the adolescent can also be of influence to intellectual, psychophysiological and emotional components of his personality during the processes of life activity.

Theoretical conceptualization of the EI problem is based upon one of the idea about individual differences of abilities to reflect and regulate emotions in accordance with the theory of emotional regulation by J. Gross [1,2]. According to this theory, the model of the process of emotional regulation is conceptual structure intending that different forms of emotional regulation have differing consequential effects. Thus, according to J. Gross (1998), there are various existing strategies of emotional regulation such as reappraisal and rethinking of one's own emotions (reappraise), which takes place relatively early in the process of emotions' generation and consists of such alteration (change) of way of perceiving of some originating situation to reduce its emotional repercussion. The second one, suppression (suppress), takes place later on in the emotion – generating process and consists of retardation of characteristic features of externally directed internal sensations. Results of experimental researches evidence that the reappraisal strategy of emotional regulation is frequently more effective than emotions' suppression mechanisms.

It must be noted that the conceptions of EI which formed as a result of foreign research studies appeared to be fairly close in their basic conceptualization to the conceptions of soviet psychologists. In the second half of twentieth century the soviet psychology began to develop new trend for the history of psychology, concerning the research study of ideation as a cognitive process which is proven to be initially under determining influence of emotions (Tikhomirov, 1969, 1984) [3]. These research studies were based on the principle of 'cohesion of affect and intellect' formulated by L.S. Vygotsky in thirties of overpast age (Vygotski, 1992) [4]. The main particularity of these research studies was that the study of the mutual determination of affective and intellectual processes was carried out in the basis of system-wide approach principles. The system – forming factor during that was the cognitive activity of the human which synthesizes all psychical processes and directs them into solving the arising tasks. Psychological conception of the activity developed by A.N. Leontyev allows us to regard all psychical processes as the structural components (subsystems) of cognitive activity (Leontyev, 1975) [5]. That is to say, each cognitive psychical process may be represented in form of separate activity.

Under the guidance of O.K. Tikhomirov there were obtained experimental data concerning the psychological structure and mechanisms of the human's ideational activity which allowed to investigate the problem of mutual determination of ideational and emotional processes (affect and intellect) thoroughly (Tikhomirov, 1984, Vassilyev et al, 1980, Jakupov, 1992) [6,7]. Of utmost importance to our present work are the results of research studies of emotions' regulative functions. "Intellectual emotions", which allow us to monitor the ideational process in general using the psychophysiological correlates of emotions, were experimentally revealed and indentified. This gives us the opportunity to control the ideational activity on the basis of formation and development of intellectual emotions in the educative process (Jakupov, 2012) [7,8].

The reviewed facts result in the idea that alongside with the similarity of the starting positions and in relation to the empirical indicators of research studies between the soviet and foreign works in the field of research of problems of interconnection of intellect and affect there are diversities discovered. They are sufficiently well monitored during the process of comparison of application – oriented aspects of research studies in connection with the attempts of modeling the processes of control of emotions (affect) by the means of intellectual mechanisms as in the EI conceptions, and of research studies modeling the processes of control of ideation (intellect) by the means of emotional mechanisms as in the conceptions of ideational activity (IA).

Thus, at the present time research of the psychophysiological mechanisms of regulation of emotional processes from the position of activity approach acquires special significance for the development of the EI conception. The EI conception reflects the idea of cohesion of affective and intellectual processes. In a broad sense the ability to recognize, comprehend emotions and to control them are qualified as EI; here are meant the subject's own emotions and emotions of other people (D.V. Lusin). It is known that emotional states and their regulation have their own psychophysiological mechanisms reflected in the brain's electrical activity (EEG). In connection with this fact the necessity of establishing interconnection between individual differences of emotional intelligence and emotional correlates of the brain electrical activity is actualizing. Obtained results would allow to move adjacent to

the solution of problem of mutual determination of intellectual and emotional processes and to develop the most effective means and methods of controlling them as a unified system. This means that new possibilities are being opened on the way to effective handling of childhood trauma with the goal of their utilization during the age of adolescence.

According to these thesis's, it's important to review the results of one of our experiment (authors of experiment: A.A. Tolegenova, A.M. Kustubayeva, Gerald Matthews, S.M. Jakupov) where, we have made an attempt in psychophysiological research of the emotional intelligence as a basis of individual differences in human emotional regulation [9]. We hypothesized that the differences in levels of emotional intelligence are interconnected with the activity of cerebral cortex manifesting during the process of emotional regulation. Having stated the goal to research peculiarities of emotional regulation among adolescents aged 17 – 27 years, we studied range of parameters of emotional activity of cerebral cortex that allowed us to formulate certain theoretical assumptions concerning the capabilities of effective emotional regulation.

The goal of our research was definition of EEG rhythm dynamic during the process of self-regulation of emotional states using strategies of rethinking and suppression of emotions in conditions of laboratory experiment. Research tasks were following: 1. Study of EEG rhythms in consequential situations – background with open eyes, demonstration of neutral video fragment, demonstration of video fragment with emotional load of 'fear'. 2. Definition of dynamic differences of spectral power of EEG rhythms in three researched groups: with instruction for using emotional rethinking strategy, with instruction for using emotional suppression strategy and with instruction to employ no regulation during demonstration of the video. 3. Study of influence of regulation efficiency on the brain activity of the examined persons using two strategies of emotional self – regulation.

Test subjects. Experiment incorporated 150 students of Kazakh National University (75 women and 75 men) aged 17 – 27 years. Test subject were randomly divided into three groups differing with their received instructions concerning emotional regulation before demonstration of video fragment which induced the fear emotion: I group (50 participants) was instructed to reappraise / rethink the emotion "fear" (R -"reappraise"); II group (50 participants) was instructed to suppress fear emotion (S -"suppression"); instruction for the III group did not require emotional self - regulation (C - control).

Research methods included psychological and psychophysiological methods: EI questionnaire (TMMS, Trait Meta Mood Scale) – for determination of level of emotional intelligence in participants; five – factor personal McCrae – Costa ("The Big Five") for determination of personal parameters of participants; electroencephalography method (EEG) for measurement of the cerebral cortex electrical activity as the indicator of psychophysiological activity of the emotional intelligence. The registration of cerebral electrical activity was performed using 'Neuron – Spectrum - 1' electroencephalograph in accordance with the 10-20% system from symmetrical points - Fp1, Fp2, F3, F4, F7, F8, C3, C4, P3, P4, T3, T4, T5, T6, O1, and O2 monopolar to ear-clip electrodes. The examined persons were located in the darkened room isolated from noise and electromagnetic waves. The stimulus material feed consisting of instructions and video fragments in PowerPoint was performed by means of media projector.

The summary of that experiment was following:

a) Study of ability to regulate emotions revealed homogeneity of groups of examined persons for the moment of examination by determination of indistinction between three groups of examined persons before the beginning of examination according to parameters of all used questionnaires.

b) There is stable interconnection between the EEG parameters and parameters of EI, "Big Five" confirmed by Pearson's correlation analysis. This interconnection evidences about existence of psychophysiological basis of the emotional regulation process, personal characteristics responsible for the emotional connections and accordance of the psychological processes to the internal physiological condition.

c) In case of gamma rhythm synchronization the correlative interconnection was determined exclusively in the «reappraise» group what testifies the existence of cognitive regulation in the group instructed to rethink their emotions.

d) There exists interconnection of left frontal gamma activity with parameters 'Attention to emotions' and 'Emotions restoration' in the process of emotional regulation using the method of rethinking, testifying that cognitive and emotional regulations are unified and that it is possible to alter one's emotional state using cognitive mechanisms. These results allowed us to determine the fact that the parameters of emotional intelligence are actually predictors of successfulness in the process of emotional regulation.

e) The 'Attention to emotions' parameter had positive correlation with the beta activity in left frontal area which is also the indicator of cognitive regulation.

f) Basing on the results of study of sex differences in levels of emotional intelligence there were obtained interesting facts testifying that parameters of virtually all questionnaires were higher in women; questionnaire parameters included such characteristics as attention to emotions, repair emotions.

It is important to note that individual differences of emotional intelligence are associated with the activity of frontal cerebral cortex during the process of emotional regulation using method of situation reappraisal. This also confirms our assumption that the 'resumption, rethinking of emotions' strategy mostly involves cognitive regulation expressed in activation of 'cognitive rhythms' of left frontal area of cerebral cortex in comparison with the 'emotions suppression' strategy. The most important result is the conclusion that the 'Emotions repair' parameter has emerged to be a prognostic factor for level of activation of frontal cerebral cortex in the process of emotional – regulatory assignment. We also made conclusion that the emotional intelligence bears differences depending on gender, individual personal peculiarities and cerebral background electrical activity.

So what do we know about relationship between trauma and EI?

- First of all EI negatively predicted self-reported traumatic stress and mental health symptoms for firefighters (Wagner & Martin, 2012).
- High EI could buffer against the negative impact of social constraints (Schmidt & Andrykowski, 2004).
- Traumatized depressed participants exhibited lower EI because of reductions in strategic EI ability, as well as lower levels of social support
- EI and social support were significantly correlated.
- EI may be a novel intervention to prevent and treat major depressive disorder (Kwako et al, 2011).
- EI and social support are protective factors against major depression (Rode, 2011).
- Participants with high EI report fewer psychological symptoms relating to the traumatic experiences of victims of different kinds.

With due consideration of findings there were designed diagnostic questionnaires which allow to determine the nature of childhood trauma more specifically, and to perform task consulting and correction for adolescents in need of psychological assistance on that basis. So theoretical analysis allows us to conclude that EI has straight relation to childhood trauma, which is shown in the results of researches in this area. Results of correctional performance testify that our assumptions concerning the superior effectiveness of application studies, which are based upon the synthesis of conceptual statements of soviet and foreign authors, are obtaining empirical validation.

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