

# PSYCHOLOGICAL WELL-BEING AND CREATIVITY

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**Abstract** - The aim of this study was to determine the psychological well being associated with the cognitive and emotional creativity. To this end, 60 students from third level of secondary schools and high schools in Isfahan with the age range of 14 to 17 years selected randomly and completed the scale of psychological well being (Ryff, 1989) Abedi creativity test (1372) and Averill's emotional creativity questionnaire (1999). The results revealed that fluency can predict psychological well-being. It may be that because of fluency role in ability to face situation without apparent answers.

**Keywords** - Cognitive Creativity, Emotional Creativity, Psychological well being.

## I. INTRODUCTION

In 1961, Dr. Halbert Dunn used the term wellness and provided an early definition of the term that is now used synonymously with the term well-being (Warner, 1984). Two broad conceptualization of well-being is hedonic versus eudaimonic well-being (Ryan and Deci, 2001). In hedonic view, well-being is people's effective and cognitive evaluation of their lives (Diener, 2000); Ryff (1989) believed that psychological functioning and personal growth is well-being in eudaimonic approach; but Conventional conceptions of well-being have come from the clinical perspectives of health, or the psychological perspectives of mood or affect (Hattie, et al, 2004). The clinical tradition has generally operationalised well-being as the absence of negative conditions such as depression, distress, anxiety or substance abuse, whereas the psychological tradition has tended to operationalise well-being as the prevalence of positive self-attributes (Keyes, 1998; Ryff and Singer, 1996). In the psychological tradition, the term well-being is mostly used as a generic qualifier of the degree to which a person exhibits an attribute that is valued. For example, psychological well-being has been described as positive affect, academic well-being as academic achievement and mental and physical well-being as mental and physical health (Carr-Gregg, 2000; Marks & Fleming, 1999; Rickwood, et al 2002; Wyn, et al, 2000). Over the past decade and more, Ryff and her colleagues (e.g., Ryff & Singer, 1998) have

successfully established a model of psychological well-being, or positive mental health, that consists of six aspects of functioning autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Her model has been widely studied across the world (e.g., Antonelli & Cucconi, 1998; Casullo & Castro-Solano, 2001; Clarke, et al, 2001; Van Dierendonck, 2004). Many variables are related to psychological well-being, specifically researchers showed that creativity dimensions can predict psychological well-being (e.g., Khosravani and Gilani, 2007; Abdollahi et al, 2008). Creativity refers to the production of novel and useful ideas by an individual or by a group of individuals working together (Amabile, 1988; Madjar, et al, 2002; Shalley, et al, 2000 and Zhou and Shalley, 2003). Creativity in individuals is made possible by a confluence of cognitive, emotional, environmental and motivational variables. Psychologists have identified many cognitive factors related to creativity, such as divergent thinking (Guilford, 1950, 1959a), styles of thinking (Sternberg, 1997) and openness to experience (George and Zhou, 2001). Guilford (1956, 1959b, 1960, 1986) considered creative thinking as involving divergent thinking, which emphasizes fluency, flexibility, originality, and expansion. He defined them as follows in table 1:

**Table 1: Classification of cognitive creativity components**

Number	Component	Meaning of component
1	fluency	the ability to produce ideas and different answers
2	flexibility	the ability to find different answers
3	originality	the ability to produce a new and novel product
4	expansion	to notice details related to an idea

Other dimension of creativity is emotional creativity. Averill's (1980), defines emotional creativity as

ability to experience and express a mixture of emotions in a novel and impressive way (Hashemi,

2009). Emotional creativity consists of 4 measures that classifies in table 2(Averill and Knowles, 1991):

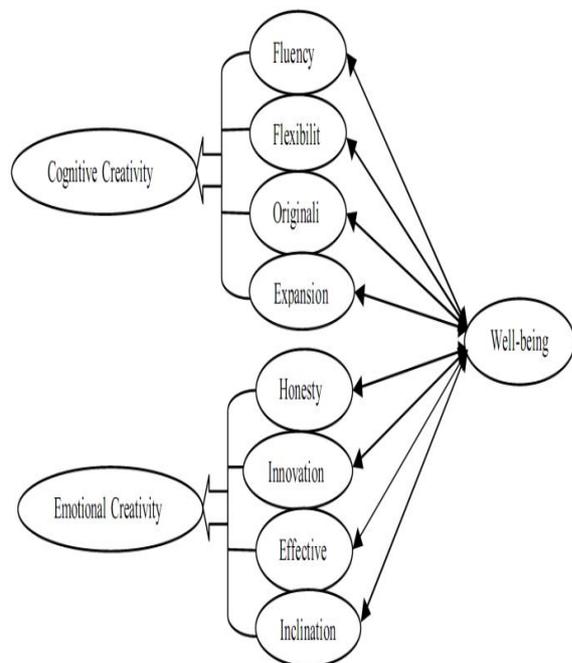
**Table 2: Classification of emotional creativity components**

Number	Component	Meaning of component
1	honesty	expressing one's experiences and values honestly.
2	innovation	making changes in usual emotions or coming up with new emotional states.
3	effectiveness	conformity between the emotion and the situation that is beneficial to the person or the group in the end.
4	inclination	the ability to understand emotion and willingness to recognize it

Because of importance of psychological well-being in educational environment, this study investigates the relation between psychological well-being and creativity dimensions (Fig1). The main question of the study is to what extent cognitive creativity and emotional creativity can predict students' psychological wellbeing. Finally, the hypotheses of current study are as the following:

H1: There is a significant relation between cognitive creativity dimensions and psychological wellbeing.

H2: There is a significant relation between emotional creativity dimensions and psychological wellbeing.



**Fig1: Conceptual model of this study**

## II. METHODOLOGY

The present study is a descriptive-correlative study. The research population consists of girl students of secondary school and high school in Isfahan and 60 were chosen (age 14-17) by cluster sampling.

## III. INSTRUMENT

The scales employed in current study have all been used in earlier research in Iran and Present good psychometric properties. Three questionnaires (Abedi's Creativity Questionnaire (1993), Averill's Emotional Creativity List(1999) and Ryff's

psychological well-being Scale(1989)) were used in this study. The questionnaires are as follows:

*Abedi's Creativity Questionnaire (1993):* This Questionnaire consists of 60 items and measures four dimensions of fluency (16 items), flexibility (11 items), originality (22 items) and expansion (11 items). The test's score range from 1 to 3. Abedi has reported in his study the Cronbach's Alpha for fluency component 0.75, for originality 0.67, for flexibility 0.61 and for expansion 0.61(Abedi, 1993)

*Averill's Emotional Creativity List(1999):* This scale consists of 30 questions and evaluates honesty, innovation, inclination and effectiveness dimensions. This questionnaire is scored by Likert scale of 1-5. Averill, using Cronbach's Alpha, estimated the total reliability of 0.91 for emotional creativity and he also estimated reliability coefficient for inclination subscales as 0.85, for honesty 0.80, for effectiveness 0.89 and for innovation 0.85. To assess validity, factor analysis methodology was used.

*Ryff's psychological well-being Scale (1989):* This scale has 84 items and six subscales consists of self-acceptance, positive relations with others, autonomy, Environmental Mastery, purpose in life and Personal Growth. The consistency coefficients assessed by Ryff were 76%, 90%, 87%, 91%, 90% and 93% for autonomy, Environmental Mastery, Personal Growth, positive relations with others, purpose in life and self-acceptance respectively. The external reliability was calculated 81% to 85% in 6 weeks (Ryff, 1989). Ryff correlated psychological well-being scales with other scales in order to achieve the questionnaire validity. One such correlation was the one with emotional balance which was between 0.25 (Personal Growth scale) and 0.62 (Environmental Mastery).

The analysis of the data was performed in two levels of descriptive (frequency, percentage, means and standard deviations) and inferential level (correlation coefficient, stepwise multiple regression), using SPSS 18 statistical software.

## IV. FINDINGS

In terms of demographic characteristics, 21.7%, 18.3%, 26.7% and 33.3% of the population was respectively in the age groups of 14, 15, 16 and 17; which all of them were girl's students.

Table 3 provides means, standard deviations and relation between cognitive creativity, emotional creativity and psychological well-being is identified and explained.

Table 3. Means, Standard deviations, and correlation among the variables under study

variables	M	SD	1	2	3	4	5	6	7	8	9	10	11
1. fluency	28.53	6.21	1										
2. flexibility	14.93	3.85	.479**	1									
3. originality	19.23	5.34	.682**	.689**	1								
4. expansion	11.20	4.27	.593**	.525**	.649**	1							
5. cognitive creativity	73.90	16.58	.858**	.769**	.905**	.810**	1						
6. honesty	22.53	5.51	.305*	.514**	.502**	.261*	.462**	1					
7. innovation	32.22	10.2	-.13	.211	.185	.109	.132	.540**	1				
8. inclination	13.42	3.5	.229	.415**	.293*	.292*	.352	.525**	.467**	1			
9. effectiveness	25.97	4.89	.245	.231	.182	.089	.227	.497**	.569**	.627**	1		
10. emotional creativity	94.13	19.71	.18	.383**	.333**	.203	.316*	.774**	.891**	.720**	.792**	1	
11. psychological well-being	343.33	47.02	.432**	.336**	.396**	.310*	.447**	.299*	-.036	.201	.101	.126	1

\*p&lt;.05

\*\*p&lt;.01

The findings of the study indicated a significant relation between the components of cognitive creativity and honesty of emotional creativity with psychological well-being. According to table3, there was not significant relationship between emotional creativity and psychological well-being. Whilst, relationship between cognitive creativity and well-being was significant( $r=0.447$ ,  $P<0.01$ ) Also honesty has positive significant relationship with cognitive

creativity ( $r=0.462$ ,  $P<0.01$ ), but other relationships were not significant. Among components of cognitive creativity, fluency has the most correlation with psychological well-being( $r=0.432$ ,  $P<0.01$ ), it is lowest for expansion( $r=0.310$ ,  $P<0.05$ )

To ascertain role of cognitive creativity and emotional creativity in predicting of psychological well-being, we used multiple regression analysis (Cohen and Cohen, 1983).

Table 4. Results of stepwise regression analysis

Criterionvariable	Predict variable	R	R square	F	B	Beta	t	P
Psychological well-being	fluency	.432	.187	13.34*	3.275	.432	3.653*	.001

Table 4 presents the results of regression analysis using the four dimensions of cognitive creativity and four emotional creativity factors to predict psychological well-being. Stepwise regression analysis revealed that among all subscales of cognitive and emotional creativity, just fluency enters in regression equation of psychological well-being. Fluency can explain approximately 19% of variance of psychological well-being. Also according to table4, the other components of Cognitive creativity and all subscales of emotional creativity were eliminated from regression equation because of not being significant.

## V. DISCUSSION

The main purpose of current study was to examine the relationship between cognitive creativity and emotional creativity to psychological well-being among students in Isfahan. The expected relations between all components of cognitive creativity and psychological well-being were confirmed, whilst about emotional creativity, it is only about honesty. This finding is in line with those of Wright and Walton (2003); Peyvastegar, Dastjerdi and Dehshiri (2010). An explanation to these findings is that cognitive creativity consists of abilities which develop step by step. In compare emotional creativity, education has more effect on cognitive creativity. In Future, researchers can extend this

avenue of research by determining education role in the relationship of cognitive creativity and psychological well-being. About honesty, it may be that for ability of self-assertiveness that empower individuals without inhibition to express all ideas in their mind. it can decrease occupying how expression ideas and corollary stress.

Also stepwise multiple regression indicates that only fluency enter to regression equation for predicting psychological well-being in students. It may be that fluency to regulate the emotions and affects to face of events and issues that perceived risky. because fluency increase self-confidence that a problem have more than one way to solve it. Therefore, high-fluency individuals search and produce more answers and when one answer fail, search another solving and not involved stress and other elements can danger well-being. These were in line Peyvastegar, Dastjerdi and Dehshiri (2010), although they found that flexibility enter in step2.

## CONCLUSION

According to findings of the research, invest to provide cognitive creativity can led to increased well-being among students. Therefore, we suggest for decreasing costs of health and develop social capital, education should direct toward cognitive creative.

## LIMITATIONS

Most important limitation of the study is that over generalization of these findings to large samples and statistical populations. Another limitation of this study is that all of our samples were girl; It can be different about boys. It is recommended that the gender role of the participants and the variety of samples in other cultures be considered in future studies.

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