# The Relationship between Cognitive Fusion, Meta-Cognitive Belief and Self-Compassion with Positive and Negative Affection in Female Teenagers

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This study aimed to investigate the relationship between meta-cognitive belief, cognitive fusion and self-compassion with positive and negative affection in female teenagers. This method was correlative- descriptive. The execution method was a descriptive and correlative study. The statistical population of this study included all the female teenagers' high school students of Ardabil in 2016, which by adopting a cluster sampling technique, a sample including 180 individuals of teenage boys were chosen from various locations of the city. Wells' meta-cognitive belief scale, Gillanders' cognitive fusion scale, Reis' self-compassion scale and positive and negative affection of Watson et al. Research data was analyzed using Pearson correlation coefficient. The results of above table show that there is a significant positive relationship between meta-cognitive belief and positive affection ($p < 0.01$). Also there is a significant negative relationship between cognitive fusion and positive affection ($p < 0.01$). Also there are significant positive relationships between self-compassion, human common sense, mindfulness and total self-compassion with positive affection ($p < 0.01$). There are also significant negative relationships between self-judgment, isolation and excessive self-imitation with positive affection ($p < 0.01$). Finally, it can be concluded that there is a significant relationship between meta-cognitive belief, cognitive fusion and self-compassion with positive and negative affection in female teenagers.

*Keywords:* Cognitive Fusion, Meta-cognitive Belief, Self-Compassion, Positive and Negative Affection, Female Teenagers.

**INTRODUCTION**

Adolescence is the indicator of the end of childhood era and the inception of maturity foundation in the three biological, psychological and social aspects(Erikson, 1994; Hardy, 2006). Affection is essential part of the dynamic system of human's character. Features and changes of affection, the quality of establishment of emotional relationship and understanding and interpreting of the others' affection play an important role in the growth, character organization,

moral development, social relations and formation of identity and self-concept(Haviland, Davidson, Ruetsch, Gebelt, & Lancelot, 1994). Chida and Steptoe(Chida & Steptoe, 2008) in their study showed that positive affection is very important to enhance the perception of health. Also Kuppens, Realo and Diener showed that positive affection is positively and negative affection is negatively correlated with life satisfaction(Kuppens, Realo, & Diener, 2008).

Meta-cognition is a concept that involves beliefs, processes and strategies which assesses monitors and controls recognition(Wells, 2011). Meta-cognition is awareness and monitoring of defined thoughts(Iiskala, Vauras, Lehtinen, & Salonen, 2011). In addition, Meta-cognition is thinking about thinking process. The results of a study conducted by Helen et al showed that Meta-cognitive deficit contributes in obsessive-compulsive disorder(Niemeyer, Moritz, & Pietrowsky, 2013). Jared et al concluded that meta-cognitive defect is associated with borderline personality disorder(Outcalt et al., 2016).

The meaning of cognitive fusion is that a person thoughts are influenced in a way that seem totally real and make behavior and experience to be dominant on another resources and that person has less sensitivity to direct results(Gillanders et al., 2014). The cognitive fusion phenomenon happens when a person is trapped in his intellectual context(Hayes, Strosahl, & Wilson, 1999). Hayes et al believed that emotions extensively combine with resulted thoughts from the real interpretation of experiences and make internal experiences of people undiscernible(Hayes, 2004). The results of Samadifard study showed the positive and significant relationship between cognitive fusion and emotional divorce of spouses. In addition; there is negative and significant relationship between cognitive fusion and students' life quality(SamadiFard, 2016).

Self- compassion emphasizes on its acceptance or acceptance of its experience within the kindness framework to self and consciousness of mind(Ghorbani, Watson, Chen, & Norballa, 2012). People with high self-compassion have a little more mental health in comparison with people with low self – compassion. Because the inevitable pain and feelings of failure that all people experience them will not continue by self-cruelly blame of an extreme sense of isolation and extreme replication with ideas and passion. Self- Compassion help to satisfy the basic needs for autonomy, competence and compassion to communicate with others and people who have a higher self-compassion, report more emotional coping skills.

Also in distinction between popular feelings and emotions, the negative emotional states are more powerful. Research evidence shows that compassion lead to emotional resiliency for the people, so that people who have higher levels of these personality characteristics have less imitation thoughts(SamadiFard, 2016). Other research findings show that people who have high self- compassion,

have more boldness in dealing with negative events(Neff, Kirkpatrick, & Rude, 2007). Also concluded that the self-compassion is an important  prediction of mental health and have a role in the expression of pleasure(Hollis-Walker & Colosimo, 2011).

According to the above discussion and since in today's society students constitute a large portion of young people and their optimal performance plays an important role in the development and future of the country; so disruption in students' health status imposes adverse effects on their personal and social performance and will impose irreparable damages on the society. This study aimed to investigate the relationship between meta-cognitive belief, cognitive fusion and self-compassion with positive and negative affection in female teenagers.

**METHODOLOGY**

This method was correlative- descriptive. Research data was analyzed using Pearson correlation coefficient. The execution method was a descriptive and correlative study. The statistical population of this study included all the female teenagers' high school students of Ardabil in 2016, which by adopting a cluster sampling technique, a sample including 180 individuals of teenage boys were chosen from various locations of the city. Wells' meta-cognitive belief scale, Gillanders(Gillanders et al., 2014) cognitive fusion scale, Reis' self-compassion scale and positive and negative affection of Watson et al. were applied to collect data. Data collection tools are described below:

**Wells' meta-cognitive belief scale**: The initial version of Wells' meta-cognitive beliefs questionnaire which contained 65 articles was made by Cartwright Hatton and Wells[19]. Due to the large number of articles, in 2004 Cartwright Hatton and Wells presented a new version of this questionnaire which contained 30 articles. The short form is known as Wales' meta-cognitive beliefs 30. This scale has five subscales as the main form and subscale's scores are added to obtain the total score. This questionnaire is scaled in a four-degree range from I don't agree to I completely agree.

In the original version of this questionnaire the internal consistency is 0.93 for the total scale, 0.91 for the subscales of uncontrollability and danger, 0.92 for positive beliefs on anxiety, 0.92 for cognitive self-consciousness or cognitive self-awareness, 0.93 for confidence in memory or cognitive confidence and 0.72 for the need to control thoughts. Also retest reliability of the questionnaire -within four weeks- was 0.75 and 0.59 to 0.87 for the subscales respectively(Wells & Cartwright-Hatton, 2004). Finally, it should be noted that in the Iranian version of the questionnaire, Cronbach's alpha has been used to determine the internal consistency of the questionnaire and Cronbach's alpha was 0.91 for the whole questionnaire, 0.59 for the subscales of uncontrollability and danger, 0.83 for positive beliefs on anxiety, 0.81 for cognitive self-consciousness or cognitive self-

awareness, 0.64 for confidence in memory or cognitive confidence and 0.65 for the need to control thoughts. Also in this research, Cronbach's alpha was used to determine the reliability of the questionnaire and it was 0.66 for the subscales of uncontrollability and danger, 0.74 for positive belief on anxiety, 0.73 for cognitive self-consciousness, 0.72 for cognitive confidence and 0.73 for the need to control thoughts and 0.83 for the whole questionnaire respectively. It should be noted that in this study data were analyzed through using total score of meta-cognitive belief.

**Cognitive fusion scale:** The Gillanders et al. cognitive fusion inventory (2014) was used(Gillanders et al., 2014). This instrument is in seven-point Likert spectrum from "never is true" to "always true". In addition, in Iran SamadiFard study obtained this coefficient for cognitive fusion as 0.76. In this research, the inventory reliability was obtained 0.87 by Cronbach's alpha coefficient for all participants(SamadiFard, 2016).

**Scale of short form self- compassion**: scale of 12-point short form self-pity was built by Reese, Pamir, oil and Vengachet that is including 6 of kindly planar with the judge about himself, a sense of common humanity in contrary to isolation and awareness of mind against the heightened replication(Raes, Pommier, Neff, & Van Gucht, 2011). The long form of this scale includes 26 points. Respondents should have responded to 5 degree Likert spectrum.

Reese et al in their study reported internal consistency of the scale as 86%(Raes et al., 2011). In study of, Ghorbani and colleagues internal consistency of the scale reported as 83%(Ghorbani et al., 2012). In this research, the inventory reliability was obtained 0.80 by Cronbach's alpha coefficient for all participants.

**Positive and negative affection of Watson et al**: This scale by was presented by Watson, Clark and Tellegen[23] to evaluate the positive and negative moods and affection. In this scale, 20 categories which represent 20 feelings (10 positive and 10 negative feelings) are expressed in words and the opinion of the person who completes the form on these feelings will be assessed in a five-degree Likert scale, from "not at all = 1" to "very much = 5".

Yilmaz and Arsalan reported the reliability of this scale for positive affect and negative affect 0.54 and 0.45, respectively(YILMAZ & ARSLAN, 2013). Also to verify its validity they used Beck Depression Inventory and Beck Anxiety Inventory and the correlation coefficients ranged from 0.22 to 0.48 for positive affection and from 0.47 to 0.5 for negative affection. In a research by Golparvar and Karami Cronbach's alpha for positive affect and negative affect were 0.86 and 0.76, respectively(Golparvar & Karami, 2010). Sheikholeslami et al reported a range from 0.4 to 0.7 for positive affection and a range from 0.36 to 0.76 for negative affection, respectively(SHEIKHOLESLAMI, NEJATI, & AHMADI, 2011).

## RESULTS

**Table 1.** Mean and standard deviation of research variables

| Variable | | M | SD | N |
|---|---|---|---|---|
| Metacognitive Belief | | 10.32 | 3.22 | 180 |
| Cognitive Fusion | | 9.43 | 3.34 | 180 |
| Self-Compassion | Kindness of Own | 7.21 | 2.25 | 180 |
| | Judge about Own | 7.12 | 2.14 | 180 |
| | Human Common Sense | 7.02 | 1.99 | 180 |
| | Isolation | 7.93 | 2.94 | 180 |
| | Increasing Replication | 8.12 | 2.99 | 180 |
| | Awareness of Mind | 78.91 | 1.98 | 180 |
| | Total Self-Compassion | 38.92 | 10.51 | 180 |
| Affect | Positive Affect | 9.07 | 3.10 | 180 |
| | Negative Affect | 9.09 | 3.12 | 180 |

Table 1 presents information about the means and standard deviations of meta-cognitive belief, cognitive fusion, self-compassion and positive and negative affection.

**Table 2.** The correlation coefficients of meta-cognitive belief, cognitive fusion and self-compassion with positive and negative affection of female teenagers

| variables | | statistic | Positive Affect | Negative Affect |
|---|---|---|---|---|
| Metacognitive Belief | | Pearson coefficient | 0.531 | -0.431 |
| Cognitive Fusion | | Pearson coefficient | -0.221 | 0.671 |
| Self-Compassion | Kindness of own | Pearson coefficient | 0.542 | -0.577 |
| | Judge about own | Pearson coefficient | -0.474 | 0.472 |
| | Human Common Sense | Pearson coefficient | 0.723 | -0.455 |
| | Isolation | Pearson coefficient | -0.610 | 0.751 |
| | Increasing Replication | Pearson coefficient | -0.585 | 0.671 |
| | Awareness of Mind | Pearson coefficient | 0.721 | -0.477 |
| | Total Self-Compassion | Pearson coefficient | 0.575 | -0.495 |

The results of above table show that there is a significant positive relationship between meta-cognitive belief and positive affection. Also there is a significant negative correlation between meta-cognitive belief and negative affection ($p$ <

0.01). Also there is a significant negative relationship between cognitive fusion and positive affection and there is a significant positive relationship between cognitive fusion and negative affection ($p < 0.01$). Also there are significant positive relationships between self-compassion, human common sense, mindfulness and total self-compassion with positive affection and there are significant negative relationships between self-compassion, human common sense, mindfulness and total self-compassion with negative affection ($p < 0.01$). There are also significant negative relationships between self-judgment, isolation and excessive self-imitation with positive affection and there are significant positive relationships between self-judgment, isolation and excessive self-imitation with negative affection ($p < 0.01$).

## CONCLUSION

This study aimed to investigate the relationship between meta-cognitive belief, cognitive fusion and self-compassion with positive and negative affection in female teenagers. The first part of results showed that there is a significant positive relationship between meta-cognitive belief and positive affection. Also, there is a significant negative relationship between meta-cognitive belief and negative affection. Since a similar study was not found to investigate the relationship between meta-cognitive belief, cognitive fusion and self-compassion with positive and negative affection in female teenagers; so we couldn't evaluate its consistency or inconsistency with other studies. But in explaining obtained results we must say that Watson and Tellegen[27] have divided affection into two basic categories. Negative affection which indicates that to what extent the person feels unpleasant and unsatisfied? Negative affection is a general aspect of inner despair and not performing an enjoyable activity which is followed by negative mood states such as anger, sadness, disgust, and humiliation, feelings of guilt, fear and anger. On the other hand, positive affection is described as active energy, high concentration and performing an enjoyable activity. Positive affection includes a wide range of positive mood states including happiness, a sense of empowerment, enthusiasm, desire, passion and self-confidence. Different studies have shown that prosperity and success factors result from positive feelings and affection that people create in themselves. On the contrary, unsuccessful people are those who foster their negative feelings and affection. Positive affection represents enjoyable interaction of a person with the environment which consequently he feels very happy and enthusiastic. According to the findings of this study, with increasing meta-cognitive belief in female teenagers, positive affection increases and negative affection decreases and the less meta-cognitive belief are the less positive affection and the more negative affection will be.

Another part of the results showed that there is a significant negative relationship between cognitive fusion and positive affection and there is a significant positive relationship between cognitive fusion and negative affection. This means that the more the cognitive fusion is the less the positive affection and the less the negative affection will be and vice versa.

The last part of the results showed that there are significant positive relationships between self-compassion, human common sense, mindfulness and total self-compassion with positive affection and there are significant negative relationships between self-compassion, human common sense, mindfulness and total self-compassion with negative affection. There are also significant negative relationships between self-judgment, isolation and excessive self-imitation with positive affection. This means that the more self-compassion, human common sense, mindfulness and total self-compassion are in students, the more students' positive affection and the less their negative affection will be and the less these elements are the less their positive affection and the more their negative affection will be. Also the more self-judgment, isolation and excessive self-imitation are in students, the less their positive affection and the more their negative affection will be.

Finally, it can be concluded that there is a significant relationship between meta-cognitive belief, cognitive fusion and self-compassion with positive and negative affection in female teenagers. Of the limits of this study statistical population limitation to the teenage high school students of Ardebil and consequently the impossibility of result generalization are of the constraints of this study.

It is suggested that future studies be conducted in other cities, countries, on male teenagers and also on teenagers of other educational levels, so that results can be more prone to generalization. On the other hand, this is a correlative study and it is not feasible to interpret the data. It is suggested to conduct experimental studies in order to investigate the variables causality

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