

## The Relationship between Alexithymia and Types C and D Personalities in People with Depression Disorders

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### ABSTRACT

**Background and Aim:** Patients with depression disorders impose annually huge costs on their families and society. With a meticulous glance to the literature, lack of sufficient studies regarding Alexithymia and Types C and D Personalities are obvious. Thus, the aim of current study is investigation the relationship of Alexithymia with Types C and D Personalities in depressed individuals.

**Materials and Method:** Current study through descriptive-correlation analysis examines the relationship between the mentioned variables on a sample of 150 patients. This sample was selected via simple random sampling method among all the depressed people in city of Tehran (as the statistical population) who in years 2012-2013 had visited treatment and diagnostic centers. The sample patients were asked to answer Eysenck Personality Questionnaire (EPQ) (1974), Denollet Type D Personality Questionnaire (1998), Toronto-Alexithymia Scale 20 (TAS-20) (Bagby, Parker & Taylor, 1994). The obtained data were analyzed using bivariate regression analysis and Multivariate analysis of variance (MANOVA).

**Results:** Findings demonstrated significant relationship between Alexithymia and Type C personality, but there was not significant relationship between Alexithymia and D personality type. In addition, there was no significant difference in terms of personality types between two genders, but women acquired higher score in Alexithymia and Type C personality than men.

**Conclusion:** With respect to research results, close relationship between mood and personality was noticed and women had high vulnerability comparing to men. On this basis, it is necessary for clinicians to implement specific therapy measures to decrease Alexithymia in women.

**Keywords:** *Alexithymia, Depression, Type C personality, Type D personality*

More than 50% of psychological impaired individuals are depressed. At least 5% of men and 9% of women experience depression in their life lives. Adverse effects of this disorder are not limited to specific social group or country or social level and many individuals with varied

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socioeconomic status may suffer from it. Various studies suggest that personality factors can forecast mood alterations on a coarse of time. According to personality studies, personality traits are fairly consistent through coarse of life and mood alterations are less consistent. Mood alterations can be forecasted by a mean of personality scores (Gloninger, 1996). It is worth mentioning that in Gloninger's study, personality assessment baseline in normal population was predictive of 44% variance's change in depression score in the upcoming year (Gloninger, 1996). In past few decades, our society had faced enormous achievements regarding identifying risk factors of diseases and novel therapeutic techniques in curing them (Pederseh, Denollet, 2004). Acute and Chronic stresses correlate with psychopathology of various disorders (Rozanski et al., 1999). Although, defining factors of experience of this stress are less identified (Denollet, 1991). Personality is one of the most substantial factors regarding experiencing stress (Gohm, Clore, 2002). In past few years, C and D personality types had been discussed to play a major role in responding to different situations such as stressful event, disease and etc. (Gohm, Clore, 2002;Pederseh, Denollet, 2004). C personality type can be identified by emotional repression, inability to manage ones psychological behaviors, submissive attitudes, pathological kindness and agreeableness, collaborative behaviors, excessive patience, excessive control of emotional features (Lysaker et al., 2014). C personality type had been discussed as having tendency to Cancer. Theoretical construct of C personality type has stemmed from personality theory and Factor analysis studies and Cluster Analysis. Pathological role of this Type of personality in psychological and physiological aspects are on a basis of general and persistent characteristic of personality. These characteristics are negative emotions and social inhibition (Williams et al., 2011). Negative emotions considered as individual's tendency toward experiencing negative emotions in various circumstances, while social inhibition is individual's tendency to inhibit these negative emotions in social interactions (Pederseh, Denollet, 2004; Denollet, 2008).

Sifneos (1973) discussed Alexithymia for the first time. This personality construct characterized by sub-clinical difficulty in expressing one self's emotions. The core characteristics of Alexithymia are marked emotional awareness disability, social attachment and interpersonal interactions. Additionally, individuals suffering Alexithymia have problems regarding identifying and appreciating the emotions of others which can be considered as unempathic and flawed emotional reactions (Sifneos, 1973). With respect to cognitive science's approach, emotions are characterized as schemas based on information processing, which are consisted of processes and Symbolic/Non-Symbolic projections. Symbolic projections are consisted of images and words while Non-symbolic projections are consisted of somatic/splanchnic arousals, which are experienced by the time of emotional arousal. Symbolic systems such as language enables human to think about his emotional experiences and this may facilitate the process of emotional regulation. It seems that in Alexithymia there is a little ability to symbolic expression of emotions and symbolic projection of emotions are poorly interacting with images and words. Thus, they are less under the influence of cognitive control (Williams et al., 2011). Alexithymia has relationship with symptoms of depression, anxiety (Bagherian, 2007), PTSD (Pederseh, Denollet, 2004), low quality of life, low psychological wellbeing, lack of perceived social

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support, anger, constant tension, pessimism and low self-esteem (Pederseh, Denollet, 2006; Jacobs et al., 2006). For instance, recent study shows that Type D personality is considered to be one of the risk factors regarding incidence of PTSD following heart attack (Pederseh, Denollet, 2004). Studies show that, women report higher level of negative emotions comparing to men (Nolen, 2005). For instance, adult women with chronic diseases tend to experience higher level of negative emotions comparing to men (Westbrook, 2002). In another study, result shows that severity of depression is higher in old women in comparing to old men (Demura, Sato, 2003). Type D personality is considered to be one of the risk factors, which intercommunicates with psychological distresses, exhaustion and adverse clinical consequences (despite proper therapeutic intervention) (Denollet, 2004). Researches results show that Type D personality is predictive factor in diagnosing depression in individuals (Pederseh, Denollet, 2006). Wise, Mann and Hill studied the relationship of Alexithymia of Type C individuals in Psychiatric Patients and they didn't find any meaningful relationship between them (Wise et al., 1990). Furthermore, some studies have been discussed that Alexithymia and emotional suppression and they founded meaningful relationship between these two constructs. Based on aforementioned data, there is no clear relationship between Alexithymia and Type C personality. Thus, one of the goals of this study is to find a relationship of Type C personality and Alexithymia. In a study by Dalbudak, Evren, Aldemir conducted between 85 men and 234 women in Ankara University, they found out that LSAS subscale (fear, anxiety, avoidance) has a positive relationship with depression and Alexithymia (Dalbudak et al., 2012). Nicolo and Colleagues(2011) found out that elevated level of Alexithymia is correlated with boosted level of psychopathology and it is being linked to problematic interpersonal relationships. In their study, they showed that patient with Alexithymia is chiefly avoidant, dependent, passive and sadistic and suffering from depression. Colin and Kory showed that there is a meaningful relationship between Alexithymia, anxiety and lack of interpersonal interactions in individuals. Furthermore, gender's mediating role was assessed and the results showed that Alexithymic women comparing to Alexithymic men need more communion and intimacy (Carpenter, Addis, 2015). Lynn and colleagues found out that positive relationship is existed between Alexithymia and Type D personality. Furthermore, they found out that Type D personality and Alexithymia are two separated constructs (Lynn et al., 2011). Eisazadegan, Shaikhi and Bashirpour (2011) concluded that Alexithymia has positive and meaningful relationship with all of the subscales of Type D personality. Nonetheless, current study has assessed relationship between three variables of Alexithymia, Type C and D personalities among depressed individuals. Indeed, prime goal of this study was identifying the relationship of Alexithymia and Type C and D personalities among depressed individuals and comparing depressed men and women regarding Alexithymia and Type C and D personalities.

## **MATERIALS AND METHODS:**

Research method of current study is retrospective descriptive-correlation.

Statistical society of this study was consisted of all depressed people in zone 1 of Tehran city who in years 2012-2013 had visited treatment and diagnostic centers. 150 individuals(65 women, 85 men) sample was selected via simple random sampling method among all the depressed people in city of Tehran (zone 1) and they answered Eysenck Type C personality test, Grossarth and Maticek questionnaire (Eysenck et al., 1991), Denollet Type D personality test, Toronto Alexithymia. In order to answer the questionnaire, individuals referred to specified hospital, and after signing consent forms and being presented about outlines of the study they answered to questionnaires.

### **Type C Personality Questionnaire:**

This Questionnaire is derived from Eysenck stress questionnaire, which had 182 questions. Type C Personality Questionnaire has 35 questions that should be answered as yes/no. Score higher than 10 in this questionnaire considered as Type C personality. Type C personality is an individual who answered at least 18 questions positively (Yes). In order to insure the reliability and validity of this questionnaire, researcher translated the questionnaire with respect the phrases, which are close to examinee's culture and background. After conducting the questionnaire for the first time, questionnaire reliability was assessed by conducting for the second time between 15 individuals. Reliability estimated to be 92%, which is considered to be high according to statistical tables. With respect to validity, researcher consulted with mental health professionals, psychiatrists. It worth mentioning that content validity (logical validity) is based on logical proofs instead of statistical proofs and assessing the questionnaires with content validity needs a lot hardworking and implementing intuitive and logical approach (Pasha Sharifi, 2003). Furthermore, Cronbach's alpha for two months period reported to be 0.86 for negative emotion and 0.77 for social inhibition subscales. Cronbach's alpha in healthy individuals was assessed as 0.87 regarding negative emotion and 0.75 with respect to social inhibition. Cronbach's alpha in patient group was assessed as 0.84 regarding negative emotion and 0.86 with respect to social inhibition. Furthermore, Cronbach's alpha regarding D Type personality questionnaire assessed as 0.70 (Amad pour et al., 2007).

### **Toronto Alexithymia Scale 20(TAS-20):**

TAS (Bagby et al., 1994) is compromised of 20 questions and it assesses three subscales of <sup>1</sup>DIF (Difficulty Identifying Feeling), which has 7 questions, <sup>2</sup>DDF (Difficulty Describing Feelings), which has 5 questions, <sup>3</sup>EOT(Externally Oriented Thinking), which has 5 questions. Items are rated using 5-point Likert scale whereby 1=Strongly disagree and 5=Strongly agree. The total Alexithymia score is sum of all responses to all 20 items (Bagby et al., 1994). In Farsi version of TAS-20 (Besharat, 2007), Cronbach's alpha regarding total score of Alexithymia and 3 subscales

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(DIF, DDF, EOT) estimated as 0.85, 0.82, 0.75, and 0.72 respectively, which showed proper internal consistency of this scale. Retest validity of this scale in a sample of 67 individuals in period of 2 weeks was confirmed as  $r=0.80$  and  $r=0.87$  regarding total score of Alexithymia and subscales respectively. Synchronic Reliability based on Pearson correlation coefficient between Alexithymia and emotional quotient, Alexithymia and psychological wellbeing, Alexithymia and psychological helplessness were confirmed and assessed as ( $r=0.80, P<0.001$ ), ( $r=0.78, P<0.001$ ) and ( $r=0.44, P<0.001$ ) respectively.

**RESULTS**

Descriptive statistics show that Mean and SD with respect to variables are as Alexithymia (43.05, 17.29), Type C Personality (43.46, 24.19), Type D Personality (45.76, 4.35).

**Table No1: Correlation Coefficient Matrix between Research’s variables**

	1	2	3
Alexithymia	1		
Type C Personality	0.375*	1	
Type D Personality	0.091	0.029	1

According to Table No1, Correlation Coefficient Matrix regarding variables of this study (Alexithymia, Type C personality, Type D personality) is being illustrated. Relationship between Alexithymia and Type D personality was not meaningful.

**Table No2: Summary of Regression Table, effect of Personality types (D,C) on Alexithymia**

Variable	R <sup>2</sup> adj.	Beta	F	P
Effect of Alexithymia on Type C Personality	0/14	0/50	41/22	0/001
Effect of Type Alexithymia on D Personality	0/002	0/05		0/269

As it has been illustrated above, Alexithymia has meaningful effect on Type C personality ( $p<0.05, R^2 \text{ adj.}=0.14$ ) while it doesn't have meaningful effect on Type D personality ( $p>0.05, R^2 \text{ adj.}=0.002$ ).

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**Table No3: T-Test in order to assess the difference between genders in Type C personality**

Variable	Mean		SD		t	df	Sig.
	Woman	Man	Woman	Man			
Type C Personality	54/29	/63 32	32/86	/53 18	-5/99	146	0/001

According to Table No3, there is meaningful difference between men and women with respect to Type C personality. Further assessment shows that women group maintains higher level Type C personality.

**Table No4: MANOVA results in order to assess Type D personality based on gender**

	Statistic	Statistic Value	F	Level of Significance
Group	Peelay Effect	0.02	1.17	0.31
	Wilk's Lambada	0.098	1.17	0.31
	Hotelling Trace	0.02	1.17	0.31
	Roy's greatest root	0.02	1.17	0.31

According to Table No4, with respect to Wilk's Lambada value of F is 0.02, which is not meaningful in Alpha level of 0.05. Thus, difference of at least one variable between men and women is not discussable.

Results show that regarding Wilk's Lambada value of F is 0.870, which is meaningful in Alpha level of 0.01. Thus, difference of at least one variable between men and women can be considered.

**Table No5: Effect of Alexithymia variable and its subscales between two genders**

Dependent Variable	Gender	MD (SD)	DO F	Mean Squares	F	Level of Significance
Difficulty Describing Feelings(DDF)	Man	11.21(6.94)	1	339/39	/61 10	0/001
	Woman	15.43(7.24)				
Difficulty Identifying Feeling(DIF)	Man	9.16(4.21)	1	692/81	/56 14	0/001
	Woman	12.44(5.73)				
Externally Oriented Thinking(EOT)	Man	16.66(2.88)	1	228/72	/51 3	0/063
	Woman	19.34(8.36)				
Alexithymia	Man	37.00(11.53)	1	3722/8	/51 18	0/001
	Woman	47.67(19.47)				

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According to the data on Table No5, DDF( $F=10.61$ ,  $Sig.=0.001$ ) and DIF ( $F=14.56$ ,  $Sig.=0.001$ ) vary between two genders.

### DISCUSSION

Results showed that there is no meaningful difference between Type D personality and Alexithymia. These results are not congruent with the results of the studies conducted by Lynn and Colleagues (2011) and the study conducted by Eisazadegan and Colleagues (2011) who claimed that Type D personality maintain a positive relationship with Alexithymia. Although, these results are congruent with the result of the study conducted by Williams and Colleagues, which claims that Type C personality and Alexithymia are two separate constructs. Additionally, results of various studies show that Type C personality has a meaningful relationship with Alexithymia and it means that with increasing Alexithymia would lead to higher level of Type C Personality. These results are consistent with the results of the study conducted by Lysaker and Colleagues (2014) and Denollet (2005). These researchers concluded that Alexithymia as one of the personality features and it maintain a relationship with Type C personality. These results can be justified based on a theory argued by Sifneos and Colleagues (1973). Based on this theory, Alexithymia can be defined as inability to understand other's emotions, problem in recognizing between physical feelings and nonphysical feelings stemmed from emotional arousals (Pedersen, Denollet, 2004), turbulence of physical feelings due to emotions, few dreams or fantasies due to limited visualization power, logical/realistic thinking. According to Eysenck, Grossarth and Maticcek (1991), Type C personality has a tendency toward depression and they tend to keep their negative emotions unexpressed. Thus, according to aforementioned theories it can be concluded that Type C personality and depression are somehow entangled. These results are consistent with the results of studies conducted by Dalbudak and Colleagues (2012), Nicolo and Colleagues (2011), Colin and Colleagues (2011). Based on these studies, it can be inferred that mood and personality maintain a close relationship. Results showed that with respect to gender, there is meaningful difference with respect to Type C personality. More assessment showed that women tend to have higher level of Type C personality. Based on these data, researches hypothesis was confirmed. These findings are consistent with the results of the studies conducted by Eysenck, Grossarth and Maticcek (1991) and Cloninger (2006). According to aforementioned studies, Denial is one of the defense mechanisms, which is used mostly by women. Hence, women are much more prone to cancer in comparing to men. With respect to gender, no meaningful difference was mentioned in Type D personality. Thus, this hypothesis that men and women have difference in Type D personality was not confirmed. Another finding of this study showed that between men and women groups, there is a meaningful difference between Alexithymia, DIF and EOT. Further assessments show that women maintain higher level of Alexithymia, DIF and DDF. Thus, research hypothesis based on difference between men and women regarding Alexithymia, was confirmed. This finding is consistent with the results of various studies (Jukamaa et al., 1996; Parker et al., 2003; Salminen et al., 1999). This finding can be justified based on study conducted by Sifneos (1973). According to these scientists, women are willing to

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express their feeling easier than men. Although, they have more tendency toward applying repression and denial as defense mechanisms. Thus, women experience higher level and more severe episodes comparing to men. According to above-mentioned data, it can be inferred that personality and mood maintain a close relationship, as they share common specifications. Mood is a pervasive emotional pattern, which tends to repeat in individuals daily life and personality is thinking, emotional and behavioral pattern and it can be regarded as individual's character. Furthermore, it can be discussed that a dysfunctional mood may affect the personality constructs adversely and women tend to have higher vulnerability to Alexithymia and pathologic personality types. Thus, it is vital to implement proper therapeutic process regarding Alexithymia in women. It is worthwhile to implement prevention methods in order to secure this valuable part of the nature (Sifneos, 1973).

### **CONCLUSION**

Based on results of current study, psychological treatments regarding treatment of Alexithymia is advised. Furthermore, implementing new methods such as mindfulness and group therapy may facilitate the process of identifying; expressing thoughts and indirectly it may help the clinicians in treating Alexithymia. Implementing proper therapeutic methods, regarding identifying Alexithymia by conducting correct diagnostic interview and questionnaire may be useful.

#### **Authors' contributions**

MH and NG conceived and designed the evaluation. MBM and MK collected and interpreted the clinical data and drafted the manuscript. All authors read and approved the final manuscript.

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#### **Declaration of interest**

None declared

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