

## Prediction of Elders' General Health Based on Positive and Negative Perfectionism and Type-D Personality

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### ABSTRACT

**Background:** Multiple factors such as retirement, work disability, social rejection, physical illness and etc., have an impact on general health of the elders. One factor among others is the role of psychological variables. The study is intended to assess the effect of positive and negative perfectionism and type-D personality (distressed) on general health of the elders.

**Methods:** In this descriptive-correlation study, 80 people (47 male and 33 female) were selected from residents of Nursing Home in Hamadan and Malayer using non-probability (accessible) sampling method. They responded to the questionnaires of type-D Personality, Goldberg and Hillier's General Health and Positive and Negative Perfectionism of Terry-Short *et al.*

**Results:** Positive perfectionism ( $r = 0.30$ ) and type-D personality ( $r = 0.32$ ) had significant correlation with general health. Multiple regression analysis revealed that positive perfectionism and type-D personality could explain at least 49% of the variance in general health. Concerning the variables of negative affectivity, social inhibition and social function, the females' mean was higher than that of males and considering the variables of positive perfectionism, and social functioning, the males' mean was higher than that of females.

**Conclusions:** Positive perfectionism decreases mental disorder of the elders by creating optimistic attitudes and enhancing social functions. On the other hand, type-D personality, unlike positive perfectionism, makes elders susceptible to physical illness and mental disorder.

**Keywords:** General health, perfectionism, Type-D Distressed Personality Or Distressed personality type

### INTRODUCTION

Most older adults enjoy good mental health, but nearly 20% of those who are 55 years and older experience mental disorders that are not part of normal aging. The most common disorders, in order of prevalence, are anxiety disorders, such as phobias and obsessive-compulsive disorder; severe cognitive impairment,

including Alzheimer's disease; and mood disorders, such as depression. Schizophrenia and personality disorders are less common. However, some studies suggest that mental disorders in older adults are underreported. The rate of suicide is highest among older adults compared to other age groups.<sup>[1]</sup> Given the above issues, it can be said that mental health of the old people is one of the main variables in this stage, which deserves precise analysis to take therapeutic or preventive measures and promote wellbeing in health sector. Many psychological variables can be effective in maintaining and promoting health condition of the elders. The fact that the relation between the excitement and personality and the health had been recognized 2000 years ago, indicates that there is a relation between personality and disease.<sup>[2]</sup>

It seems that personality differences and psychological factors are features leading to different reactions against stress and may be the root cause of human death caused by various diseases mainly cancer and coronary heart disease. In fact, when treating different physical diseases and promoting health, it is essential to change negative personality traits which are involved in diseases and take into account the positive aspects of personality which build up people resistance to them.<sup>[3]</sup>

One of the major personality factors that have an impact on mental and physical health is perfectionism. Rice and Dellwo<sup>[4]</sup> believe that perfectionism can be divided into two types: positive perfectionism and negative perfectionism. Negative perfectionists make fundamental mistakes. They have high levels of self doubt and self-critical. These factors by nature are expressive of problematic psychological outcomes such as anxiety, depression, lack of self-esteem and internalized shame. Positive perfectionism, on the contrary, has significant correlation with high personal standards, optimum performance and positive adjustment. There are many research evidences which are indicative of relations between perfectionism and different aspects of mental health in the elders. For example: Between perfectionism and depression; between perfectionism and anxiety, suicidal thoughts, helplessness, negative emotions, compulsive and practical obsession disorder and personality disorders.<sup>[5]</sup> According to Hamachek,<sup>[6]</sup> "neurotic" perfectionists believe they must meet

excessively high standards and leave relatively little margin for error or failure. "Neurotic" perfectionists are often unable to meet these exceptionally high standards because they are unrealistic, which results in stress, low self-esteem, depression, and anxiety. Of greater interest, researchers have begun to distinguish which dimensions of perfectionism are related to maladjustment and psychological problems and which are not. Despite an impressive accumulation of knowledge about perfectionism's relationship to psychopathology in recent years, much less work explores the phenomenology and correlates of perfectionism's dimensions within mental health of elder samples.

Type-D (distressed) personality, among other variables, is another important variable that seem to be related with the old people general health. People with type-D (distressed) personality have high negative emotions and much social inhibition. In the cardiovascular field, Type-D (distressed) personality has become an important research topic in recent years. Type D personality has been described as the tendency to experience a high joint occurrence of negative affectivity and social inhibition.<sup>[7]</sup> People that score high on negative affectivity have the tendency to experience negative emotions, while people that score high on social inhibition have the tendency not to express these emotions, because of fear of rejection or disapproval by others. Persons with high levels on both personality traits are classified as having a Type D personality.<sup>[7]</sup> This type of personality is also recognized by wide range of emotional disorders such as anxiety, cardiovascular and post traumatic stress disorder.<sup>[8]</sup> Systematic reviews among cardiovascular patients,<sup>[9]</sup> non-cardiovascular and healthy individuals<sup>[10]</sup> have shown that personality is a stable<sup>[7]</sup> and powerful predictor of impaired quality of life and mental health status, above and beyond clinical characteristics. These studies on the possible mechanisms behind Type-D personality have led to the assumption that Type-D might not only be a vulnerability factor among cardiovascular patients, but can perhaps also negatively affect the clinical course of other medical conditions as well. Although the literature on Type-D personality in patients with psychological disorder is mounting, less is known about the pathways that are responsible for its negative effects on elder's mental health. Having that agedness is an unavoidable life

stage and given that many factors cause elders (such as loneliness),<sup>[11]</sup> to be vulnerable and deteriorate their general health, it is necessary to research on psychological factors associated with general health of these people. Taking psychological research evidences into account, we can say that psychological variables have significant effects on mental health of this stratum of society, though the results of the researches have not been identical. In view of the fact that little researches have been conducted in the area of the role of psychological factors affecting mental health of the elders in Iran, it is crucial to undertake researches in the field, which analyzes the relation between psychological factors and mental health. In order to achieve such a goal, the present paper is intended to determine the role of positive and negative perfectionism and type-D personality on general health of the elders.

## METHODS

Purposefully the research is fundamental, and methodologically, it is descriptive-correlation study. Statistical population of the study includes all residents of Nursing Home in Hamadan and Malayer. The sample population comprised 80 people (47 male and 33 female) selected by non-probability sampling method. With the average age of ( $64.7 \pm 7.01$ ), the range consisted of the age of 58-83. The participant's educational level included 25% (20 people) illiterate, 28.8% (23 people) primary education, 12.5% (10 people) high school education, 21.3% (17 people) Diploma and 12.5% (10 people) Associate and Master's Degree [Table 1]. The spouses of 62.5% (50 people) of the subjects were alive, 50% (16 people) had died and 17.5% (14 people) were divorced. In order to gather information; the present research utilized three questionnaires as follow.

### Positive and negative perfectionism scale

Positive and Negative Perfectionism Scale was developed by Terry-Short *et al.*<sup>[12]</sup> in 1995. The scale

has 40 items to assess perfectionism defined in terms of positive (20 items) and negative (20 items). Terry-Short reported evidences for the discriminated validity of the scale. For example, perfectionism scores explained 86% of the variance in the group with eating disorder. Hasse and Perapavessis<sup>[13]</sup> have reported Cronbach's alpha coefficient positive and negative perfectionism sub scales as 0.83 and 0.81 respectively. Test-retest reliability coefficient of the questionnaire was 0.86 as well.

### Type-D personality scale

Type-D personality was measured with the 14-item Type D Personality Scale (DS14).<sup>[7]</sup> The DS14 is self administered and takes only a few minutes to complete. The 14 items of this scale are answered on a five-point response scale ranging from 0 (false) to 4 (true). Seven of these items refer to "Negative Affectivity" or the tendency to experience negative emotions in general. The remaining seven items refer to the patient's level of "Social Inhibition" or the tendency to inhibit the expression of emotions in social relationships. Patients were categorized as having a type-D personality using a standardized cut-off score of  $\geq 10$  on both the negative affectivity and social inhibition subscales, following the protocol as previously established.<sup>[7]</sup> The DS14 is a valid and reliable scale with Cronbach's  $\alpha$  of 0.88/0.86 and test-retest reliability over a 3-month period of  $r = 0.72/0.82$  for the two subscales, respectively.<sup>[7]</sup>

### General health

A 28-item General Health Questionnaire is among the most popular screening tools for mental disorders. It includes four subscales as physical symptoms, anxiety, depression and social function. Noorbala *et al.* assessed validity and reliability of this questionnaire among Persian women and men as follows.

The results of the concurrent validity of GHQ and SCL-90 showed significant correlation among the components of these two scales at ( $P < 0.001$ ).

**Table 1:** The gender and education frequency of participants

Education	Illiterate	Primary education	High school education	Diploma	Associate and master's degree	Total
Gender						
Male	8	6	14	10	9	47
Female	10	4	7	8	4	33
Total	18	10	21	18	13	80

Test-retest reliability coefficients ( $r = 0.85$ ) of the questionnaire was assessed as well.<sup>[14]</sup>

In order to carry out the research, the questionnaires were sent out to the elders after facilitating necessary coordination with the officials and administrators of the Nursing Home centers in Hamadan and Malayer. The elders were asked to carefully review the questions and choose the appropriate response. They were invited to not leave any questions blank as possible. Concerning the illiterate elders, the questions were raised verbally and recorded by the questioner. It should be mentioned that the questionnaire was completed individually.

## RESULTS

As it can be seen in Table 2, there is significant relation between the general health and the positive perfectionism ( $P < 0.05$  and  $r = -0.30$ ) and type-D personality ( $P < 0.01$  and  $r = 0.32$ ). There is, also, significant relation between the type-D personality and the positive perfectionism ( $P < 0.05$  and  $r = -0.30$ ) and negative perfectionism ( $P < 0.01$  and  $r = 0.56$ ).

To determine the effect of each variable of type-D personality and positive and negative perfectionism on variance in general health, type-D personality and positive and negative perfectionism, as the predictive variables, and general health, as the criterion variable, were interred to in Regression equation. Table 3 shows the results of stepwise analysis of regression.

The results of stepwise multiple regression analysis indicated that out of the three predictive

**Table 2:** Correlation coefficients of general health, positive and negative perfectionism and Type-D personality

Variable	1	2	3	4
General health	-			
Negative perfectionism	0.09	-		
Positive perfectionism	0.30*	0.58**	-	
Type-D	0.32**	0.56**	0.30*	-

\*There is significant statistical relation ( $P < 0.05$ ), \*\*There is significant statistical relation ( $P < 0.01$ )

**Table 3:** Stepwise regression analysis to predict general health by Type-D personality and positive and negative perfectionism

Model	Predictive	R	R <sup>2</sup>	F	P	B	t	P
1	Type-D personality	0.54	0.39	28.04	0.01	-0.42	-7.2	0.01
2	Type-D personality positive perfectionism	0.73	0.49	52.60	0.01	-0.29	-4.2	0.01

variables (type-D personality, positive perfectionism and negative perfectionism), two variables – positive perfectionism and type-D personality – were included into the regression equation in order. Type-D personality predicts 39% of general health variance. For significant correlation coefficient, the F-test was 28.04 which is significant at  $P < 0.001$ . Positive perfectionism together with type-D personality predicted 49% of variance in general health. For significant correlation coefficient, F-test was 52.60 which is significant at  $P < 0.001$ . Thus, it becomes evident that positive perfectionism by itself can explain 10% of variance in general health. To compare two groups of men and women, the results of MANOVA [Table 4] on the research variables indicated that the mean of men was higher than that of women in relation to the variables of positive perfectionism ( $F = 5.93$ ,  $P < 0.03$ ), social functioning ( $F = 12.94$ ,  $P < 0.05$ ) and likewise, the mean of women was higher than that of men in relation to the subscales of D personality Questionnaire, negative affectively and social inhabitation ( $F = 7.27$ ,  $P < 0.01$ ,  $F = 7.09$  respectively).

## DISCUSSION

The results of the study indicated that Positive perfectionism and type-D personality had significant correlation with general health. These findings are consistent with the reports of Besharat *et al.*,<sup>[15]</sup> Saboonchi and Lundh,<sup>[16]</sup> Denollet *et al.*<sup>[17]</sup> and Whitehead *et al.*<sup>[18]</sup> Perfectionists choose high and reasonable personal standards and put good performance in everyday activities. They demonstrate perfect compatibility with the changes occurred.<sup>[4]</sup> In other words, positive perfectionism, positively affects mental health by strengthening positive intra-psycho backgrounds such as self-esteem and self-confidence and traits like realism, acceptance of personal limitations, contentment and satisfaction of individual performance. Therefore, we can say that perfectionism structure is double-edged; research evidence confirms that perfectionism is not

**Table 4:** The result of MANOVA for comparing variable mean of men and women elders

Indexes dependent variable	MS	DF	SS	F	P
Perfectionism					
Positive	1488.00	1	1488.0	5.39	0.30
Negative	1595.05	1	1595.05	2.11	13.0
Type-D					
Negative affectivity	189.37	1	189.37	7.27	0.01
Social inhibition	165.5	1	165.5	7.09	0.01
General health					
Physical symptoms	354.73	1	354.73	4.59	0.14
Anxiety	143.04	1	143.04	3.53	0.23
Depression	81.23	1	81.23	2.56	0.017
Social function	89.25	1	89.25	12.94	0.01

MS: Mean square, DF : Degree of freedom, SS: Sum of square

necessarily an unsound or negative trait. Positive perfectionism is associated with compatibility in life and positive academic performance.<sup>[19]</sup> General health of negative perfectionists, on the contrary, is reduced especially in the elders by doing actions that are not good for the health such as drug addiction, sense of helplessness in the face of situations – due to establishing high standards beyond the person's ability – and other harmful behaviors. Thus, in order to explain the results, we can say that positive perfectionism can reduce mental disorders and increase wellbeing of the people particularly elders by forming appropriate and compatible lifestyle, lowering harmful-to-health behaviors, creating positive emotions, achieving personal expectations, adopting optimistic attitude and increasing social function. In fact, this finding is what distinguishes this study from other researches; in the study we sought to explore the issue that whether perfectionism can be effective in health in the long term, and it was confirmed by the results. The results also showed the relation between type-D personality and general health of the elders, i.e. type-D personality can be indicative of their physical illnesses and mental disorders. These findings are consistent with those of Pedersen *et al.*,<sup>[20]</sup> Schiffer *et al.*<sup>[21]</sup> and Pederson *et al.*<sup>[22]</sup> Mols *et al.* showed<sup>[23]</sup> that Type-D survivors had clinically meaningful lower levels of general health, social functioning, role-function emotional, mental health and vitality compared to non-Type D's. In the general population Type D is associated with increased prevalence of symptoms of depression,

anxiety, post-traumatic stress disorder,<sup>[9]</sup> suicidal ideation,<sup>[24]</sup> general mental distress and poor health status. To clarify the findings, it can be said that because of positive emotion reduction, social inhibition, lack of emotional support coming from friends and relatives in times of stress, type-D personality causes reduction in life satisfaction and initiates psychological disorders such as social isolation, depression, anger, anxiety and poor performance in various activities. People with type-D personality hardly prefer health beneficial behaviors. These people, compared with non-type-D personality people, sustain health damage caused by the lack of having fun and enjoyable activities, lack of regular medical testing, failure to meet the health care and failure to meet the standards required for general health. Furthermore, these people enjoy low level of social support in their adopted lifestyle. Studies done by Pedersen *et al.*<sup>[20]</sup> indicated that these people smoke and engage in activities, such as drug abuse, that are harmful to health. In addition, due to their unsafe lifestyle and because of failure to comply with health standards, elders with type-D personality are at risk of mental and physical disorders and in danger of decline in different aspects of psychosocial wellbeing or in general health level on the whole.

Today, type-D personality is considered as an independent risk factor in psychological distresses,<sup>[25]</sup> cardiovascular disease<sup>[26]</sup> and bad prognosis of cardiovascular patients. It has been confirmed that type-D personality is associated with the irregularities in the HPA axis followed by increased levels of cortisol and changes in the immune system.<sup>[18]</sup> Perhaps, these processes are intermediary mechanisms between type-D personality and pathophysiology of heart disease. Therefore, when rehabilitating patients with psychosomatic or cardiovascular problems, it is necessary to identify the patients with type-D personality and use interventions to modify their traits. Since this theoretical structure has been proposed in recent years, enough studies in the field of rehabilitation strategies for these people have not been conducted. However, it is expected that cognitive-behavioral treatments, social skills training, interpersonal psychotherapy, progressive muscle relaxation training, meditation training, biofeedback and other treatments be effective in reducing stress of people with type-D personality. In

addition, with the aim of treatment and preventive intervention, psychologists and mental health workers should promote psychological well-being of the elders in coping with life changes, loneliness and bereavement through developing new skills and compensatory mechanisms. The findings of the current review suggest that Type-D is a vulnerability factor that may affect not only people with cardiovascular conditions but also those with other medical conditions. Consequently, it may thus be an important factor to assess in future studies. In fact, Type-D personality has incremental value above and beyond other psychological factors currently examined in the medical setting.

Another finding was that women's mean was higher than that of men in relation to the subscale scores of type-D personality scale (negative affectivity, social inhibition). The findings are in line with the other findings of the field.<sup>[27,28]</sup> The results revealed that because of personality differences existed between women and men, women tend to experience more negative emotion than men do.

The present study has limitations that should be mentioned. Because the sampling method of this research was accessible it is difficult to generalize the finding to other communities. Finally although type-D personality is a stable construct,<sup>[29]</sup> our cross-sectional analyses limit the determination of causal association between Type-D personality and mental health of elders in this study the researchers merely investigate the relation between perfectionism and type-D personality with general health it is suggested that future researchers to conduct longitudinal research on the relationship between these variables.

## CONCLUSIONS

The present findings indicated that positive perfectionism promotes and type-D personality undermines mental health of the elders.

Focusing on positive aspects of perfectionism as well as the low sample size – due to the constraints of statistical population – can be addressed as the limitations of the research. Therefore, the results should be generalized with caution. We suggest that upcoming researches should be armed with large sample population and address negative aspects of perfectionism as well, so that the results can be generalized more confidently.

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