



The Relationship Between Psychological Hardiness, Demographic Variables, and Mental Disorders of The Nursing Staff at Be'sat Hospital, Hamadan

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ABSTRACT

Due to the importance of the role of psychological hardiness in moderation, the objective of the present study was to investigate the relationship between psychological hardiness, demographic variables (gender and marital status), and mental disorders of the nursing staff at Be'sat Hospital, Hamadan. This is a descriptive correlational study using regression. 196 nurses were selected from the nursing staff of different sections of Be'sat Hospital, using stratified random sampling. Ahvaz Hardiness Inventory (AHI) and the Symptom Checklist 90-Revised (SCL-90R) were used to assess the variables of the research. The statistical methods of Pearson correlation, univariate and backward regression, and independent t-test were used for data analysis. The study indicated that there is a negative correlation between psychological hardiness and mental disorders. Among the components of the mental disorders, three components (depression, anxiety, and obsession) had the highest correlation with psychological hardiness. Moreover, there is a relationship between demographic variables and mental disorders such that the married and male participants had a high psychological hardiness and a low mental disorder, compared to the single and female participants. The psychological hardiness can predict mental disorders. Furthermore, there is a relationship between gender, marital status, psychological hardiness, and mental disorders.

Key words: Psychological Hardiness, Mental Disorders, Demographic Variables

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INTRODUCTION

Because of the increased mental diseases, the experts of different fields seek to search and identify the factors making or disturbing the mental health. It is obvious that the mental health of a society depends on the mental health status of the members of that society. One of the most important factors of the growth and excellence in any society is the efficient and healthy human force, both physically and mentally, in that society. Because of psychological and personality characteristics of the individuals in the work environment, some are more resistant to

occupational and environmental pressure and stress and continue their activities without experiencing any pressure and disorder. In contrast, some are not able to tolerate the existing pressure and stress and are conflicted with a mental disorder. The researchers believe that there is a kind of personality trait in these individuals called the psychological hardiness. This trait makes them tolerate the pressures without experiencing any disorder. Having such an efficient personality trait in the occupations with high environmental and occupational stress and pressure increases the productivity of the individuals and the staff.

The studies have indicated that there is a negative correlation between psychological hardiness and

mental disorders [1-8]. However, the relationship between hard jobs, psychological disorders, and psychological disorders has been little investigated.

Kobasa [9] is one of the first people who tried to specify the factors deviating the negative effects of the mental pressure. He found out that people who experience a high degree of mental pressure without illness, have a different personality structure. He showed that this personality trait is reflected in a structure called psychological hardiness.

Psychological hardiness is one of the personality traits that operates as a source for resisting against the stressful events of the life. This personality trait describes a kind of the sense of commitment (instead of assignment), sense of control (instead of the lack of influence), and fighting (instead of threat).

In the process of identifying the factors making individual differences, Kobasa mentioned that psychological hardiness, as a personality trait, affects the relationship between stress and illness; also, it is one of the major factors making individual differences. Since then, various studies supported Kobasa's hypothesis and indicated that psychological hardiness, as a personality trait, moderates the relationship between stress and illness [8].

Hardiness is a set of personality traits that operates as a source for resisting against the stressful events of the life [10]. The people with a high psychological hardiness are less likely to be physically or mentally damaged in responding to the mental pressure, compared to the people who have a lower psychological hardiness.

From the perspective of Kobasa, a person with psychological hardiness has the following three general traits:

- a. He believes that he is able to control and affect the events and considers the pressures as changeable.
- b. He is able to deeply feel fusion or commitment towards the activities he does.
- c. He expects that changing an exciting adversity increases growth and considers it as an aspect of life.

In this study, the demographic variables such as gender and marital status have been collected and

their relationship with psychological hardiness and mental disorders has been investigated.

"Mental disorders" is another variable that has been investigated in the present study. Like many concepts in medicine and other sciences, the concept of mental disorders has lacked a fixed definition that covers all situations. The most acceptable definition is that presented by Diagnostic and Statistical Manual of Mental Disorders DSM4-TR. It is defined as a behavior that is clinically significant and a psychological symptom or a pattern which a person gets afflicted with that and is related with distress (painful symptom), disability (disorder in one or several areas of action), increased risk of death, pain, disability or loss of freedom. Furthermore, these symptoms or patterns should not be only the reaction to pain and expectation of a special event like the death of the dear ones. Besides, they should not depend on culture.

The nurse group is the one whose psychological hardiness status has been taken into consideration more than the other groups because of its occupational sensitivity [11]. Stechmiller showed that there are 7 factors making mental burnout in the nurses, the most important of which is psychological hardiness [12].

Since an important part of the individuals' function and productivity in the occupational environment is related to their mental health, it is very effective to investigate the mental health of the staff and their reaction to the characteristics of the workplace in the future actions so as to increase the productivity of the organization.

Regarding the fact that working in different parts of a hospital is one of the hard jobs, it would be very critical and useful to investigate the moderating factors in the relationship between two variables of working at the hospital and the staff's mental disorders and present solutions so as to improve the conditions of the staff.

The relationship between working at the hospital and the incident of mental problems was investigated in the previous studies. However, the variable of psychological hardiness has not been investigated. The present study attempted to investigate these two questions: 1. Is there any relationship between psychological hardiness and mental disorders in the people working at different parts of the hospital? 2. Is there any

relationship between demographic variables (marital status and gender), mental disorders, and the psychological hardiness of the people working at the hospital?

MATERIALS AND METHODS

This is a non-experimental or descriptive study that has a correlational design of prediction type (regression). The researchers sought to predict the variable changes from the predictor variable. The field information was collected by using Ahvaz Hardiness Inventory (AHI) and the Symptom Checklist 90-Revised (SCL-90R). The population included all nursing staff working at Be'sat Hospital, Hamadan. Sampling was done by stratified random sampling. Morgan table was used for sampling because the variance of the population was not specified in the research variables. Finally, 196 nurses from different parts were selected as the sample of the study.

First, the researchers talked with the head of each part of the hospital. The statistics for the total nurses working at the hospital was obtained and the questionnaires were given to the heads of the different parts with regard to the ratio of the total population. Then, the questionnaires were taken from the heads. Two days were determined as the deadline for the completion of the questionnaires. This deadline was determined so that the staff can answer the questioners more precisely in their leisure time.

Ahvaz Hardiness Inventory (AHI): it is a paper-and-pencil self-report scale containing 27 items. This scale was developed by Kiamarsi and Najjarian [13] who conducted factor analysis on 523 students at the Islamic Azad University and evaluates hardiness. This questionnaire was used as the main instrument for evaluating hardiness of the participants in the present study. Obtaining a high score in this questionnaire indicates a high psychological hardiness in the individual.

Reliability: Kiamarsi [13] used the test-retest method and internal consistency so as to assess the reliability of AHI. The correlation coefficient between test and re-test with a 6-week interval in a 119-people sample of participants was reported as $r=84%$, $r=85%$, and $r=85%$ for all participants, female participants, and male participants, respectively. All of them are satisfactory.

Validity: Kiamarsi used concurrent criterion validity to assess the validity of the test and simultaneously applied the psychological hardiness questionnaire with four criterion questionnaires including anxiety questionnaire (ANQ), Ahvaz depression inventory (ADI), Maslow's self-actualization questionnaire (MSAI), and Hardiness Validity Scale (HVS). The correlation coefficient between total scores of the participants in the hardiness and anxiety scales was reported as $r=55%$, $r=70%$, and $r=44%$ for all participants, female participants, and male participants, respectively. It is significant at the level of 001%. These coefficients indicate a significant negative correlation between hardiness and anxiety. Moreover, the correlation coefficient between total scores of the participants in the two scales of psychological hardiness and depression was reported as $r=62%$, $r=71%$, and $r=57%$ for all participants, female participants, and male participants, respectively. It is significant at the level of 001%. Furthermore, the correlation coefficient between total scores of the participants in the two scales of self-actualization and Ahvaz psychological hardiness was reported as $r=55%$, $r=65%$, and $r=45%$ for all participants, female participants, and male participants, respectively ($p<1%$).

The Symptom Checklist 90-Revised (SCL-90R)

Reliability

Derugatis, Rickles, and Rake [14] conducted a study on 219 participants and reported desirable reliability coefficients for the general mental health in each of the nine dimensions of this test using the test-retest method, Cronbach's alpha, and Kuder-Richardson 20 (KR-20). The domain of these coefficients varied from 77% to 90% [16].

Validity: Derugatis, Rickles, and Rake used concurrent criterion validity coefficients to assess the 9-dimensional aspects of this test by using Minnesota multidimensional questionnaire (MMPI); they had a high convergence with (SCL90-R) test between 36% and 70%. All have been significant at the level of 1% ($P<1%$).

Descriptive and inferential statistics were used for data analysis. In the descriptive level, the statistical indicators such as mean, standard deviation, tables, and figures were used for data analysis. In the inferential level, Pearson correlation, univariate regression, backward

stepwise regression, path analysis, and independent t-test were used via SPSS software.

RESULTS

According to the information obtained from the questionnaire, the frequency of the participants in terms of gender is provided in Table and Figure.... Table 1. Frequency distribution related to the gender of the participants.

According to Table 1, 134 participants (68.4%) were female and 62 participants (31.6%) were male.

Table 1: Frequency distribution related to the participants' gender

Gender	Frequency	Percentage
Male	62	31.6%
Female	134	68.4%
Total	196	100%

Table 2: Frequency distribution related to the participants' marital status

Marital status	Frequency	Percentage
Married	143	73%
Single	53	27%
Total	196	100%

Table 2. Frequency distribution related to the marital status of the participants.

As seen in the table, 143 participants (73%) were married and 53 participants (27%) were single. Figure 1. Comparison of the participants' marital status, mental disorders, and psychological hardiness.

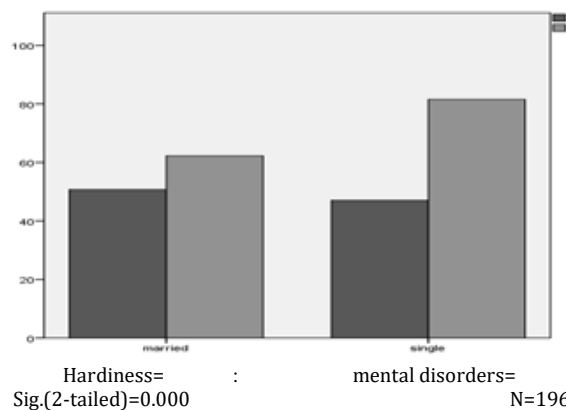


Figure 1: Comparison of the participants' marital status and mental disorders

As it is seen, the psychological hardiness is shown with a dark color and is higher in the married participants compared to the single ones; the mental disorders are shown with a bright color and are less seen among them.

Figure 2. Comparison of the participants' gender, psychological hardiness, and mental disorders. As it is seen, male nurses have a higher psychological hardiness and lower mental disorders compared to the female nurses.

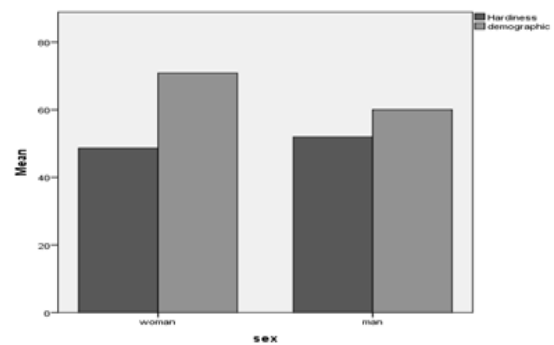


Figure 2: Comparison of the participants' gender, psychological hardiness, and mental disorders

Research hypotheses:

First hypothesis

There is a relationship between psychological hardiness and mental disorders.

Table 3. The correlation coefficient between psychological hardiness and mental disorders. According to the results of the table, because the significance level is less than 0.01, the null hypothesis H_0 is rejected and H_1 stating that "there is a relationship between psychological hardiness and mental disorders" is accepted. As it is seen, there is a significant relationship between psychological hardiness and mental disorders at the level of 99% and its correlation coefficient is -0.407. Of course, this is a negative correlation.

Table 3: The correlation coefficient between psychological hardiness and mental disorders

		mental disorders
psychological hardiness		Pearson correlation=0.407
		Sig.(2-tailed)=0.000
		Number=196

The results of the regression model indicate a significant relationship ($\text{sig}=0.000$; $\alpha < 0.05$) between psychological hardiness and mental disorders. It means that hardiness can predict mental disorders.

The variable which has been entered the regression equation is the main core of the regression analysis. The regression equation can be calculated as follows, using the column of unstandardized coefficients:

Psychological hardiness = $54.914 + (-0.077)$ mental disorders

It can be said that if one unit of each predictor variable increases, it increases by the written coefficient of the criterion variable. Of course, the above relationship is an inverse one.

Second hypothesis: there is a relationship between demographic variables and mental disorders.

This hypothesis is analyzed in two sections.

1. There is a relationship between participants' gender and mental disorders.

Regarding the results of the independent t-test and since the two-way Sig. of the test is higher than 0.05, it can be concluded that there is no difference between participants' gender and mental disorders ($\text{sig}=0.18 < 0.05$). The hypothesis is rejected and the null hypothesis stating that "there is no relationship between participants' gender and mental disorders" is confirmed. It means that there is no significant difference between male and female participants in terms of the level of mental disorders.

2. There is a relationship between participants' marital status and mental disorders.

Regarding the results of the independent t-test and since the two-way Sig. of the test is lower than 0.05 ($\text{sig}=0.04 < 0.05$), it can be concluded that the null hypothesis stating that "there is no relationship between participants' marital status and mental disorders" is rejected and the contrary hypothesis is confirmed. The married participants had lower mental problems compared to the single participants. Furthermore, the variances were considered differently since the sig which was related to F test rejects the equal mode with the probability of 0.98 ($F=5.487$).

Third hypothesis:

There is a relationship between demographic variables and psychological hardiness.

This hypothesis is also analyzed in two sections.

1. There is a relationship between participants' gender and psychological hardiness.

The results of the independent t-test related to the participants' gender and psychological hardiness showed that the value of the two-way sig of the test is less than 0.05 ($\text{sig}=0.033 < 0.05$). Therefore, the null hypothesis is rejected and the contrary hypothesis stating that "there is a relationship between gender and psychological hardiness" is confirmed. Male participants had a higher psychological hardiness compared to the female participants.

2. There is a relationship between participants' marital status and psychological hardiness.

Regarding the results of the independent t-test and since $\text{sig}=0.029 < 0.05$, the contrary hypothesis stating that "there is a relationship between participants' marital status and psychological hardiness" is confirmed. Married participants had a higher psychological hardiness compared to the single participants.

DISCUSSION

This study showed that there is a high negative correlation between psychological hardiness and mental disorders; hardiness can predict mental disorders. These findings are in line with the results of the studies [7, 10, 15, 17-22].

Regarding this finding, it can be said that like a protective shield, hardiness can vaccinate and protect individuals from mental disorders in stressful situations. Psychological hardiness increases the tolerance level of individuals when they need to appropriately tolerate and adapt. It is a mediating variable in the relationship between the high working pressure in the hospital and afflicting with mental disorders.

Moreover, there was not a significant difference between gender and mental disorders; gender cannot predict mental disorders. Regarding this hypothesis, it can be said that this finding probably indicates the cultural orientation of the society to having equal expectations from both men and women and giving equal advantages to them.

Another finding of the study indicated that there is a relationship between participants' marital status and mental disorders. The level of mental disorders in the married participants was lower than the single participants. Moreover, figures also show this difference.

Regarding this hypothesis, it can be said that this finding is in line with the findings of [23]; it shows a positive social support that the spouses do for each other. Family formation can help people become more stably independent than their single period. It increases mental health and reduces mental problems in the married individuals.

Furthermore, there was a difference between psychological hardiness and gender. It means that male participants had a higher psychological hardiness compared to the female participants. Figure 2 also shows this difference. This hypothesis is in line with the studies of [24]. Regarding this hypothesis, it can be said that this difference is probably due to different culture-based parenting styles in men and women. This has made men have a higher hardiness regarding the role the society expects them to play.

Another finding of the present study was that there is a significant difference between participants' marital status and their psychological hardiness. Married participants had a higher psychological hardiness compared to the single participants. Figure 1 shows this difference. It can be concluded that marital status can predict psychological hardiness. This hypothesis is also in line with the studies of [24] and inconsistent with studies 25 and 26. Regarding this hypothesis, it can be said that the sense of responsibility and commitment that is created by family formation and marriage probably increases the individuals' psychological hardiness and resistance against the problems of the life so that they can bear the burden of life.

In the present study, the prevalence of mental disorders in the nurses working at Be'sat hospital was 3.8 percent based on the average of the 9 components of the SCL90-R questionnaire.

The prevalence of mental disorders in the common people was 4.4 percent based on the study [27] and the components of the SCL90-R questionnaire. Moreover, the prevalence of that was 4 percent with regard to the statistics mentioned in the book "Psychopathology in the

Society" written by Whitbourne and Halgin [28] and based on the cases that were consistent with the components of the SCL90-R questionnaire. Regarding the obtained statistics, it can be descriptively concluded that there is not a significant difference between the nurses working at Be'sat hospital and the common people in terms of the mental disorders. There is no relationship between working at the hospital and mental disorders.

Besides, it is proposed to conduct such a research on the physicians and administrative staff in the hospitals so as to identify the administrators with hardiness and increase the productivity of the related organization and office.

It is also proposed to conduct such a research on different regions in the Province and country as well as on other samples so as to achieve more general results that can be generalized to a higher extent.

CONCLUSION

The objective of the present study was to determine the relationship between psychological hardiness, demographic variables, and mental disorders of the nursing staff at Be'sat Hospital, Hamadan. Findings showed that there is a negative high correlation between psychological hardiness and mental disorders. The relationship between gender, psychological hardiness, and mental disorders was investigated and the results indicated that the married participants have a higher psychological hardiness and lower mental disorders compared to the single participants. As such, psychological hardiness is a personality trait that acts as a mediating trait, reduces the environmental stress, and increases the ability of the person against environmental and occupational pressures. Therefore, it may be very effective to hold training classes and workshops so as to create and enhance this positive trait among the staff and increase the productivity and efficiency of the related organization.

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