

## Comparing mental performance and hardiness of rural and urban university students in Ahwaz

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### ABSTRACT

The aim of the present study was to compare mental performance and hardiness of rural university students with urban university students in Shahid Chamran University of Ahwaz. This study had causal-comparative design. Samples were chosen randomly from 159 students (88 urban students and 71 rural students). Data were obtained from General Health Questionnaire (GHQ) and Psychological Hardiness Inventory (AHI). SPSS16 software was used to analyze the data. Descriptive and inferential analysis (t-test for independent groups) was conducted. Findings showed that there was no significant difference in two major variables (GHQ and AHI) between urban and rural students. The results of this study indicate that the people place of residence affect the severity of depression and somatic symptoms in rural and urban students.

**Keywords:** Mental performance, hardiness, place of residence

### INTRODUCTION

Environment is crucial for the development of mind and behavior as much as genetic

backgrounds. Environment consists of affective factors, which combine to support mental health. While some psychologists limit the development of a person to the environment and events which surround that

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person, Bronfenbrenner in 1979 described the environment as series of nested structures which include home, school, neighborhood and workplace. In his theory, he explained the role of micro system, mesosystem, exosystem and macro system [1]. The better these systems function, the more likely that the child grows up with healthier mind and personality in that particular system.

Kobasa, Maddi and Zola define hardiness as a combination of beliefs about one self and the world. Hardiness is consisted of commitment, control and challenge [2]. The belief in change, transformation and the dynamicity of life and also the view that every incident is not necessarily a threat to one's life and health, will bring about cognitive flexibility and resilience in the face of stressful and obscure situations. In other words, hardiness is a personality trait which by adopting novel viewpoints, helps people to turn stressful situations into opportunities for growth [3]. People with high degrees of hardiness believe in their capabilities and that they can influence the course of their life [4]. Based on the studies which have demonstrated a positive relationship between hardiness and mental performance, it can be concluded that hardiness functions as an inner resistance force and helps the person to mitigate the

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negative effects of stress and reduce the chance of developing psychological and physical complications[5-7].

World Health Organization (WHO) does not define health as the absence of disease or disorder. Instead, health is defined as social, physical and mental wellbeing and fulfillment. According to WHO, mental performance is defined as the ability to connect with others in a balanced and stable manner, to change personal and social environment and to solve inconsistencies and personal desires logically and fairly.

Based on definitions, personal and social compatibility is the ability to face stressful situations in daily life and environment [8]. In other words, a compatible person can achieve satisfactory personal and interpersonal relationships and experience positive feelings towards himself and others. The person attitude won't create disputes with others and it will not cause mental suffering [9].

Some studies have shown that the chance of developing mental disorders, from mild to severe, is 22 % higher in urban residents than rural residents. Although, when demographic information is also considered, this rate will decrease to 17 %. Studies [10] also show that there is a meaningful difference in key indicators of health,

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including mental performance, between residents of small and big cities [11]. Izutsu et al. in 2006 compared mental health, quality of life and nutritional status among adolescents who lived in slum with adolescents from non-slum neighborhoods, and concluded that there is a difference in the mentioned parameters between these two groups. Also there were behavioral differences between these two groups and adolescents from slum neighborhoods displayed more behavioral abnormalities [12].

Peterson et al. in 2009 compared contextual associations with self-reported mental performance status in rural and urban areas. They observed significant differences in the association of mental performance with availability of health care resources, but no differences in other contextual domains [13]. Boogar and Asgharnejad, in 2008 reported that there is a positive relationship between psychological hardiness and mental performance [14].

So the aim of the present study is to investigate the mental health and psychological hardiness in rural and urban residents.

## **MATERIALS AND METHODS**

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Statistical population of the study included all of the students in Shahid Chamran University of Ahwaz who entered the university in 2009-2010 semesters. Subjects consisted of 159 students chosen by random sampling. First, students were asked if they were living in urban or rural area, and then some of them were chosen randomly. After students completed the questionnaires, data were coded and extracted. Data were analyzed by SPSS16 software. We used descriptive and inferential statistic (t-test for independent groups) methods to analyze the data.

General Health Questionnaire (GHQ) was first introduced by Goldberg [15]. The original questionnaire consists 60 items, but the shorter versions have 30, 28 or 12 items [16]. In the present study, we used 28 item GHQ. Goldberg and Hillier introduced 28 item version by performing factor analysis on the longer version of GHQ [17]. The items on this questionnaire assess the mental status of people during last month of their life. This questionnaire consists 28 items with 4 subscales: somatic symptoms, anxiety and insomnia, social dysfunction and severe depression. Each of these subscales has 7 items [16]. All of the items have 4 choices and there are two methods for their rating. One method is (1,1,0,0) which makes the highest score 28 and lowest score 0. Second

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method is Lickert scale. Each item has 4 choices (0,1,2,3) and thus the final score varies between 84 to 0 [16]. Goldberg and Williams reported the credential validity of GHQ to be 0.95 [18]. Ahwaz hardiness scale has been developed and validated by Najarian, Mehrabizade honarmand and kiamarsi in 1999. This scale consists 27 items and each item has 4 choices: never, rarely, sometimes and almost always. Each item is rated from 0 to 3. Items 6,7,10,13 and 17 are rated inversely. Kiamarsi have

*Mental performance and hardiness* evaluated reliability of AHI with alpha Cronbach and retest method and alpha Cronbach was reported about 0/75 [19].

## RESULTS

### *Findings of the hypothesis*

Questionnaire results have been depicted in Tables 1 and 2. As demonstrated in table 1, there was no significant difference in mental performance (P=0.46), psychological hardiness (P=0.518) between rural and urban students.

**Table 1.** The t-test results of the study variables

Variable	Group	Average	Standard deviation	T	Significance level
Hardiness	Rural	52.78	7.82	0.741	0.46
	Urban	51.86	7.70		
Mental performance	Rural	24.94	12.34	0.64	0.518
	Urban	26.31	14.23		
Anxiety and Insomnia	Rural	4.46	4.71	14.06	0.278
	Urban	7.28	4.91		
Social dysfunctions	Rural	7.59	2.79	0.915	0.362
	Urban	8.07	3.72		
Depression	Rural	3.60	3.37	2.31	0.022
	Urban	5.20	4.96		
Somatic symptoms	Rural	7.05	3.57	2.32	0.021
	Urban	5.77	3.26		

As shown in Table 2, there was a significant, but not strong correlation between GHQ and its subscales with psychological hardiness. It should be mentioned that the higher score in hardiness shows higher degrees of hardiness and lower score in mental performance means stronger mental performance. So higher score in hardiness scale means that the person is healthier from a psychological point of view. Also higher

score in subscales represents more severe depression. As can be seen, there is negative correlation between subscales and hardiness. This means that higher degrees of psychological hardiness are correlated with lower degrees of depression, anxiety, insomnia, social dysfunctions and somatic symptoms.

**Table 2.** Simple correlation between GHQ and subscales variables with mental health

Variable	Hardiness	
	Correlation coefficient	Significancy
Somatic symptoms	-0.20	0.01
Anxiety and insomnia	-0.21	0.005
Social dysfunction	-0.24	0.002
Depression	-0.23	0.003
Mental performance	-0.267	0.001

## DISCUSSION

The aim of the present study was to investigate mental performance and psychological hardiness of Shahid Chamran University students. Our results demonstrated that there is no significant difference between students from rural and urban areas in mental performance, hardiness, social dysfunction. Our results contradict the results reported by Izutsu et al. 2006[12], Peterson et al. 2009 [13] and Dhingra *et al.* 2009 [10]. Following remarks should be mentioned in order to interpret the results of the present study: Health and leisure status within rural communities have developed and became more similar to urban communities. Expanded communication between rural and urban areas. People with higher degrees of hardiness perceive psychological stressors in a more positive way and thus suffer from less mental performance problems. Since there was no significant difference in hardiness between two groups, this might explain the similarity in mental performance between two groups as well. The samples in the present study were university students. Since students are among successful and healthy populations of their communities,

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this might also explain the absence of any significant difference between two studied groups.

But our results showed that there was a significant difference between rural and urban students in two subscales of depression and somatic symptoms ( $P < 0.05$ ). Depression was more expressed in urban students than in rural students. Montazeri *et al.* 2013 also reported a significant difference in the rate of depression between rural and urban residents. It was concluded that depression was more prevalent in big urban cities than in rural or small city communities [20]. There are few explanations for our observations: first, Technology and urban lifestyle might make people emotionally cold and affect their relationships in a negative way. Secondly, somatic symptoms were more expressed in students from urban communities. Since people who have been raised in rural communities do not usually express their emotions and do not give attention to their inner feelings very much, they express their mental issues as physical signs. But in urban communities, people learn to express their emotions and this might lead to less somatic symptoms. Also, since people in rural communities do more hard labor, and people who live in urban

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communities have less physical activity, it is more likely that rural residents will suffer from more somatic symptoms.

Another finding of the present study was the presence of a negative correlation between psychological hardiness and the results of GHQ and its subscales. The higher degrees of hardiness were correlated with stronger mental performance and less depression, anxiety, insomnia, somatic symptoms and social dysfunctions. This result is in line with the results reported by Maddi and Kobasa in 1983 which showed a negative correlation between psychological hardiness and anxiety, depression, physical illness, interpersonal sensitivity and the symptoms of Hopkins syndrome [2]. Our results are also consistent with the findings of Boogar and Asgharnejad which found a positive correlation between psychological hardiness and mental performance [14].

### CONCLUSION

The results of this study indicates that the people's place of residence affect the severity of depression and somatic symptoms in rural and urban students.

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