



**PREDICTIVE ROLE OF ASSERTIVENESS AND COPING SKILLS IN RELATION
TO PUBLIC HEALTH IN ASTHMA PATIENTS**

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ABSTRACT

This study aim to investigate “Predictive role of Assertiveness and Coping Skills in relation to Public Health in Asthma Patients”. The correspondents of this study includes hundred eighty one (181) asthmatic patients (83 males and 98 females). They were randomly selected from different hospitals in Shiraz, Iran. The study tools consisted of Ratus assertion questionnaire, Hiller Parker Vandy tension Coping Styles questionnaire (CISS), and Goldberg general health questionnaire (GHA-28), universal and multivariate regression techniques were used to evaluate the data gathered statistically. The findings of the study showed that asthmatic patients with higher assertiveness have more public health and patients with a higher assertiveness have lower somatic symptoms and social dysfunction. Patients who use problem-oriented coping method are more general health and general health of patients is predicted by the problem-oriented coping variable. It was further concluded that changes in patients’ general health is predictable by assertiveness variable, and the model is intended to generalize to the community.

Keywords: Assertiveness, Tension Coping skills, General health, asthmatic patients

INTRODUCTION

According to the World Health Organization, health is one of the indicators of the advanced countries. Health quality is

difficult to define and the exact measurement of health is almost impossible. Experts have offered various definitions of this concept, although most agree that health

is self-responsibility and a choice of for a better lifestyle. Psychological health is a prerequisite for the concept of the general health, which itself has been defined in many different ways. This variety of definitions could be due to differences in the various psychological approaches and theorists' priorities that are associated with mental health. In some cases, however, the definition is achieved, considering the results of a number of studies. Based on the definition of World Health Organization (WHO), mental health is a condition of welfare and improvement in which each individual can realize his/her potential abilities (**World Health Report, 2001**). There is a unity and connection between mind and body, as a result of which psychological factors play an important role in the genesis of all physical ailments. It seems that stressful life events increase the risk of disease progression, exacerbating or inducing diseases (**Fotokian, Ghaffari, & Keyhaniyan, 2009**). For instance, Diagnostic and Statistical Manual of Mental Disorders fourth edition revised (DSM-V) recognizes asthma as a psychosomatic disease that occurs due to psychological factors, and this classification is in fact a link between asthma and psychological factors which are taken into consideration. A common viewpoint on asthma views the disorder to be composed of three

dimensions: physical, psychological and social. There are many objective findings indicating that psychological factors interfere with the stimulation of asthma, aggravating or developing the disease. Researchers have stated that there are probably many interactions between medical and psychological factors in patients with asthma.

This can explain the difference in the mortality rate in these patients; thus, psychological factors, overt or covert, are considered risk factors which increase the mortality rate in these patients. The mortality rate among patients with asthma who simultaneously suffer from psychological and psychiatric disorders has been reported to be more, compared to asthmatic patients who did not have these problems. People with asthma, compared to others, show more susceptibility to suffer from mental disorders. Research conducted to examine the general health of patients has indicated that these patients have obvious problems in general health subscales. Another research was conducted to examine the psychological profile of patients through the implementation of MMP-test, revealing that 42% of people with asthma in at least one of the subscales achieved high scores. Psychological problems in many patients are one of the driving factors for asthma symptoms. From among the most important

of these factors some can be mentioned such as stress, depression, anxiety, social isolation, emotional problems and family, and physical problems. Assertiveness has been defined as the appropriate expression of emotions to others without anxiety (Wolpe, 1973).

Assertiveness is thought to be a healthy form of behavior and helps people in personal empowerment. It is an invaluable component for successful professional practice (Kilkus, 1993).

(Wolpe, 1973) has introduced an assertiveness training method, by which a individual, comfortably and without fear, expresses his/her ideas, beliefs, and emotions. Assertiveness training is a more substantive method encompassing guidance, role playing, feedback, modeling, and practice and review of learned behaviors. Assertiveness training can be an effective treatment for depression, social anxiety, and anger problems which are not usually expressed by individuals. Also, for those who wish to improve their self-concept and interpersonal skills, it can serve as a useful method. Assertiveness training is based on the principle that a person should rely on courteous and reasonable ways to express thoughts, feelings and needs to others. When a person cannot simply assert these inner perceptions, s/he may be depressed, anxious, angry, suffering from damaged

self-worth and self-esteem. Therefore, assertiveness training is based on the idea that assertiveness is a substantive learned behavior, and although some people are stronger than others, everyone can receive assertiveness training, learning how to be more decisive. Public health is one of the psychological traits influenced by individual assertiveness.

The purpose of this research, too, is to examine the predictive role of assertiveness and coping skills in asthmatic patients.

Psychosomatic disorders are a type of the physical disorders in which emotions are suspected have a central role. So far, research on psychosomatic disorders is largely limited to diseases such as high blood pressure, peptic ulcers, inflammatory bowel disease, and rheumatoid arthritis. Many researchers have sought to find a relationship between particular diseases and particular personal attitude or practices of an individuals' coping with stressful events (Faramarzinia & Besharat, 2010). Current research suggests that psychological factors are associated with asthma (Vafaiy and PourRahimi, 2004).

Asthma is a chronic airway inflammatory disease that occurs with increased responsiveness of tracheobronchial trees to a variety of stimulants (Rezaei, et al., 2011). Asthma attacks can result in a combination of three factors, namely, allergies,

respiratory infections, and bio-psychosocial arousals such as stress (Buss, 1990). Asthma is one of the most common health threats. Currently, there are 300 million asthma patients worldwide, this figure is expected, by 2025, to reach 100 million people as the world population of asthmatic patients. Despite increased knowledge about the pathophysiology of asthma and development of more effective and specific drugs, the financial and social costs of asthma is still increasing (Fesharaki, Omolbanin-Paknejad & Kurdy, 2010).

Published in 2003, the report of WHO revealed that the prevalence of asthma in the general population was about 5.5% and the prevalence of childhood asthma was reported to be 10% (Mazloomi, Niasar, Saba, Morovvaty & Fallahzadeh, 2012). Emotional factors, especially negative emotions, can trigger asthma: some studies have found a positive relationship between the experience of negative emotions, and asthma (Aliloo, Ansariani, & Etemadinia, 2008).

Psychosocial models, too, suggest that human health can be affected by disease-related phenomena through a multi-faceted interaction of these factors. Although physical problems lead to psychosocial consequences, psychosocial factors such as stress affect the body. Psychosomatic illnesses are clear examples of this two-fold

effect in which the actual destruction of the physiological functions of the organism and the development or aggravation of a physical disorder are all influenced by emotional issues and psychosocial problems. Psychological factors may trigger physiological response to stress, showing or aggravating symptoms of a medical condition (Kiani, Sudanese, Seyedian & Shafi-Abadi, 2010). The WHO's definition of health is a condition in which a person is physically, mentally and socially completely safe and shows no signs of diseases and neurosis (WHO, 2009). Health psychology gives great importance to the role of coping strategies in physical and mental health, identifying coping strategies as mediators between stress and disease (Sarahfino, 2012). Public health is defined as a compatible function with the surrounding environment which can be affected by many physical, mental and social factors. From among all of the factors, stress can have severe negative effects on health of individuals suffering from it, and compared to other people, they are more likely to be affected by common diseases. However, stress can make a person more vulnerable to physical ailments and in the long run lead to their deaths. Through changes in physiological responses of the body including the responses of the endocrine nerves, stress can increase risk of the relapse

of previous illnesses and their sustainability (Vandikshorm & White, 2005). Lenj and Jakubsky (1976) state that assertiveness skills include defending one's rights and expressing one's thoughts, feelings and beliefs to lead an honest way of life, which avoids violating the rights of others. People with poor assertiveness skills engender many problems both for themselves and for others (Motemedin & Badri, 2005). In a case study training on assertiveness training in psychosomatic diseases and mental disorders, four patients received assertiveness training and social skills. This training is a pre-model for the development of social skills which was used to overcome stressful situations (Motemedin & Badri, 2005).

The literature generally shows that the association of assertiveness and coping skills with public health of asthmatic patients has been a topic specifically studied, and so it is necessary to do research on the role of psychological factors in these patients.

METHODOLOGY

This was a descriptive method type of study. The correspondents of this study includes hundred eighty one (181) asthmatic patients (83 males and 98 females). They were randomly selected from different hospitals in Shiraz, Iran. The study tools consisted of Ratus assertion questionnaire,

Hiller Parker Vandy tension Coping Styles questionnaire (CISS), and Goldberg general health questionnaire (GHA-28), universal and multivariate regression techniques were used to evaluate the data gathered statistically.

All asthmatic patients of the center under study in Shiraz were included as the population in this research. They were classified as moderate persistent asthma patients. The symptoms of this asthma include attacks once a day and more than one night per week. A number of 181 asthmatic patients as participants (83 males and 98 females) were randomly selected in analyzing the data, the descriptive statistics included frequency, mean, and so on. Also, inferential statistics were used for testing the first and second hypotheses and the regression single variant and multivariate regression were used for the third hypothesis. The data were analyzed in SPSS 18.

RESULTS AND DISCUSSIONS

In order to investigate "Predictive role of Assertiveness and Coping Skills in relation to Public Health in Asthma Patients" the researcher hypothesized the following hypothesis: 1) Assertiveness can predict the general health of asthmatic patients; 2) Strategies for coping with stress can predict the general health of asthmatic patients; 3) Assertiveness and coping strategies with

stress can predict general health in asthma patients.

The descriptive information for all subjects and based on genera are presented in **Table 1 and 2**. The finding of the study has shown in **Table 2** .indicated that females scored higher than males in assertiveness, emotion-focused coping, avoidance coping, and general health and its sub-scales. Also reveal that males scored higher than females only in problem-focused coping. The statistical information is presented in **Table 3**.

To analyze the first hypothesis, single variant regression was used and the statistical findings are presented in **Table 4**. The results of inferential statistical analysis software SPSS-18, such as correlations between variables, regression and research hypotheses are tested.

According to the results in **Table 6**, is characterized by a variable Assertiveness with a value of $P=0.0001$, can to predict part of the public health variables.

The above analysis shows that the R^2 value of 6.7% general health changes can be explained by assertiveness variable.

Hypothesis 2: Strategies for coping with stress can predict the general health of asthmatic patients.

To analyze the second hypothesis, the single variant regression between these variables was used (see **Table 5**).

According to the results in **Table 5**, it becomes clear that the problem-focused coping variable with a value of $P=0.045$ can be predict to part of the general health variables.

The R^2 in the above analysis shows that general health change variable in the problem-focused coping is described.

To analyze the third hypothesis, coefficient of correlation, multiple linear regression tests were used simultaneously and the findings are showed in **Table 6**.

According to the results in **Table 6**, Assertiveness variable ($P=0.001$) could predict part of general health variables. The above analysis shows that the R^2 value of 7.8% of the general health changes is explained by the assertiveness variable. Also according to $p=0.001$ (regression), It was found that the model is applicable to the society under study. Also, the according to the results in **Table 6**, the regression equation can be formulated as follows:

$$y = X135.0 + 582.14$$

$y = \text{Assertiveness}$
 $X; \text{general health}$

Table 1: Values of the scores, mean, standard deviation, minimum and maximum variables, assertiveness, coping style subscales (tension) and general health subscales of the relevant variables for all subjects

Row	Variable name	Total	Average	Standard deviation	At least	Maximum
1	Assertiveness	15288	464.84	642.17	52	128
2	Problem-focused coping	9124	408.50	947.14	15	80
3	Emotion-focused coping	8551	243.47	357.8	30	76
4	Avoidance coping	8045	447.44	132.10	16	75
5	General health	4075	51.22	879.9	0	50
6	Physical symptoms	1027	67.5	97.2	0	16
7	Symptoms of Stress	697	85.3	869.3	0	17
8	Social dysfunction	2026	193.11	324.5	0	23
9	Symptoms of Depression	325	80.1	778.2	0	17

Table 2: Values aggregated score, mean, standard deviation, minimum and maximum variables, assertiveness, coping style subscales (tension) and variables related to sex and general health subscales

Gender	Variable name	Total	Average	Standard deviation	At least	Maximum
Male	Assertiveness	6564	08.79	281.16	52	115
	Problem-focused coping	4723	90.56	621.12	22	80
	Emotion-focused coping	3707	66.44	496.6	30	60
	Avoidance coping	3644	90.43	652.10	16	75
	General health	1789	55.21	04.10	3	50
	Physical Symptoms	450	42.5	112.3	0	16
	Symptoms of Anxiety	310	73.3	748.3	0	16
	Social dysfunction	895	78.10	238.5	0	21
	Symptoms of Depression	134	61.1	575.2	0	11
Female	Assertiveness	8724	02.89	542.17	55	128
	Problem-focused coping	4401	90.44	603.14	15	78
	Emotion-focused coping	4844	42.49	132.9	34	76
	Avoidance coping	4401	90.44	70.9	26	70
	General health	2286	33.23	717.9	0	50
	Physical Symptoms	577	89.5	843.2	0	14
	Symptoms of Anxiety	387	95.3	985.3	0	17
	Social dysfunction	1131	54.11	397.5	0	23
	Symptoms of Depression	191	95.1	944.2	0	17

Table 3: Pearson correlation matrix to examine the relationship between public health and coping skills

Row	Variable name	1	2	3	4	5	6	7	8	9
1	Public Health	1								
2	Physical Symptoms	0.68**	1							
3	Symptoms of Anxiety	0.75**	0.64**	1						
4	Social dysfunction	0.61**	0.07	0.08	1					
5	Depression symptoms	0.59**	0.31**	0.44**	0.08	1				
6	Problem-solving coping	-0.14*	-0.11	-0.01	-0.14**	-0.02	1			
7	Emotion-focused coping	-.04	-0.006	0.00	-0.05	-0.02	0.01	1		
8	Avoidance coping	0.05	-0.03	0.09	-0.01	0.05	0.33**	0.08	1	
9	Assertiveness	-0.25**	-0.16*	-0.05	-0.32**	-0.05	-0.17*	0.17*	0.1	1

Table 4: Single-variant linear regression

Criterion Variable	Predictor variables	B	T	P(Sig)	R2	F	df
Public Health	Constant factor	10.256	2.941	0.004	0.067	12.89	1
	Assertiveness	-0.145	3.59	0.0001			

Table 5: Single variant linear regression

Criterion Variable	Predictor variables	B	T	P(Sig)	R2	F	df
General Health	Constant factor	27.391	10.633	0.0001	0.021	3.92	1
	problem-focused coping	-1.98	-5.712	0.045			

Table 6: Multiple linear regression method to Simultaneous (inter)

Criterion Variable	Predictor variables	B	T	P(Sig)	R2	F	df
General Health	Constant factor	14.582	3.153	0.002	0.078	7.489	2
	Assertiveness	-0.135	3.293	0.001			
	problem-oriented coping	-0.069	-1.419	0.158			

CONCLUSION The study shows that asthmatic patients with higher assertiveness have more public health and patients with a higher assertiveness have lower somatic symptoms and social dysfunction. Patients who use problem-oriented coping method are more general health and general health of patients is predicted by the problem-oriented coping variable.. It was further concluded that changes in patients' general health is predictable by assertiveness variable, and the model is intended to generalize to the community.

As a suggestion for future research on general health, asthma patients can be studied based on different variables. Assertiveness training programs and problem-oriented coping skills can be implemented to improve the mental health

of asthmatic patients, and based on the outcome, the effectiveness of the training programs can be evaluated.

Specialists can be further familiarized with respiratory diseases, assertiveness training, and stress management skills and training to help asthma patients.

Along with clinical lung and respiratory diseases care, which involves drug therapy for asthma patients, psychologists can teach patients therapy procedures, assertiveness and stress management, and life skills, either in groups or individually.

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