

Research Paper

The Relations of Locus of Control and Behavioral Approach and Inhibition Systems to General Health in Elderly Nursing Home Residents in Dubai



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Locus of control, Behavioral approach system, Behavioral inhibition system, General health; Elderlies, Elderly home

ABSTRACT

Objectives This article aimed to study the relations of locus of control and behavioral approach/inhibition systems to general health in elderly nursing home residents in Dubai.

Methods & Materials In a cross-sectional study, 100 elderlies (60 male and 40 female) living in two nursing homes in Dubai were selected through categorized sampling. Participants completed the Locus of Control Scale (LCS), the Carver and White's BIS/BAS Scales and the Goldberg's General Health Questionnaire (GHQ). Data were analyzed by Pearson's correlation and multiple regression using SPSS software V. 21.

Results The Mean±SD of the ages of the men and women were 62.10±11.08 and 61.12±10.76, respectively. Also, the Mean±SD of internal locus of control, external locus of control, behavioral activation System (BAS), Behavioral Inhibition System (BIS) and general health were 4.32±3.21, 5.51±3.98, 29.66±5.79, 8.45±5.83, and 15.08±12.64, respectively. The results showed that all BAS subscales, BIS, and internal and external locus of control were related significantly to general health (P<0.01). BAS and its subscales correlated with depression (P<0.05, P<0.01). BIS and internal and external locus of control were connected to all subscales of general health (P<0.01).

Conclusion Elderlies with external control and behavioral inhibition systems are at increased risk for mental health problems, while those with BAS and internal locus of control have a better mental health.

Extended Abstract

1. Introduction

The increase in the elderly population is such that it has been called the silent revolution [1]. According to the World Health Organization, when a country over the age of 60 reaches more than 7%, that country will be considered elderly [2]. According to the 2006 and 2011 censuses, Iran has become an elderly country with 7.2% and 8.2% of people over the age of 60, respectively.

The aim of this study was to answer the question of whether there is a significant relationship between the source of control and behavioral activation/inhibition systems with general health in the elderly living in nursing homes in Dubai. To answer this question, the following hypotheses were proposed: 1. The source of internal and external control has a significant relationship with general health and its subscales in the elderly; 2. Behavioral Activation/Inhibition (BIS/BAS) systems have a significant relationship with general health and its subscales in the elderly.

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2. Methods & Materials

The present study was a cross-sectional descriptive-correlational study. The statistical population included all the elderly living in a nursing home in Dubai. There were 153 Iranian elderly people living in two centers in Dubai that provided 24-hour services and accommodation to the Iranian elderly, of which 100 elderly people were selected by stratified sampling method according to the inclusion and exclusion criteria. Participants completed the Rutter's control source questionnaire [4], the Carver & White's Behavioral Activation/Inhibition Systems Scales [5], and the Goldberg General Health Questionnaire (GHQ) [6]. Data were analyzed using Pearson's correlation coefficient and multivariate regression using SPSS software V. 21.

Inclusion criteria included expressing desire and submitting written consent to participate in the study, being over 65 years old, having literacy, not having psychological disorders according to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, according to the psychiatrist. Exclusion criteria included reluctance to participate in the study, illiteracy, and withdrawal. In this study, in order to observe ethical principles, participants were asked to complete the questionnaires of their own free will, and if they did not wish, there was no obligation for them. They were also told that these questionnaires were in line with the research and that their information would remain confidential. They were also told that they did not need to write their name when filling out the questionnaire.

3. Results

The Mean±SD of age of male and female participants were 62.10±11.08 and 61.12±10.76, respectively. Also,

the M±SD of the scores of internal control source, external control source, behavioral activation system, behavioral inhibition system, and general health were 4.32±3.21, 5.51±3.98, 29.66±5.79, 8.45±5.83, 15.08±12.64 respectively. Demographic characteristics showed that 25% of the elderly had middle school education, 55% had a diploma and 20% had a bachelor's degree or higher. Among the elderly, 68% were married and 32% were divorced. A total of 70% of the samples lived in a nursing home for less than 5 years, 16% for 5-10 years, and 14% for more than 10 years. Statistical assumptions such as normality of statistical data and independence of errors in regression were observed.

The results of examining the relationship between internal and external control source, behavioral activation system and its subscales, and behavioral inhibition system with general health and its subscales are shown in Table 1. The results of this study showed that the source of external control ($r=0.50$) and internal control ($r=-0.48$), and three subscales of behavioral activation system including hedonism subscale ($r=-0.24$), drive subscale ($r=0.27$), and reward subscale ($r=-0.24$), and behavioral inhibition system ($r=0.38$), had significant correlations with general health ($P<0.01$). Behavioral activator system and its subscales had a significant inverse relationship with depression ($P<0.01$, $P<0.05$). The source of internal and external control and behavioral inhibition system were significantly associated with all four subscales of general health including "depression", "anxiety and insomnia", "social dysfunction" and "physical symptoms" ($P<0.01$) (Table 1).

According to the results obtained from the study of these relationships, both research hypotheses were confirmed. General health prediction model based on control source and behavioral activation and inhibition systems showed

Table 1. Relationships between internal and external control source, activation systems and its subscales, and general health behavioral inhibition system and its subscales

Variables	Total General Health and Its Subscales					
	Total Health	Depression	Anxiety and Insomnia	Social Dysfunction	Physical Symptoms	
Source of control	Source of internal control	-0.48*	-0.58*	-0.32*	-0.55*	-0.24*
	Source of external control	0.50*	0.44*	0.56*	0.24*	0.55*
General behavioral activation system and its subscales	Behavioral activation system	0.17	-0.20**	0.04	0.08	0.16
	Activation system, hedonism	-0.24*	-0.22**	-0.11	-0.18	-0.20**
	Activation system, drive	-0.27*	-0.28*	-0.14	-0.15	-0.22**
	Activation system, reward	-0.24*	-0.24*	-0.01	-0.16	-0.22
Behavioral inhibition system	0.38*	-0.34*	0.23*	0.39*	0.42*	

* $P<0.01$; ** $P<0.05$

that internal control source (Beta=0.59, $t=4.26$, $P<0.001$) (in reverse) and external control source (Beta=-0.39, $t=-3.23$, $P<0.01$), behavioral inhibition system (Beta=0.39, $t=5.43$, $P<0.01$), activation system subscale including drive (in reverse) (Beta=-24.2, $t=-2.75$, $P<0.01$) were able to significantly explain 36% of the variance of general health ($R^2=0.36$, $F=10.71$). Also, the behavioral activation system and its subscales, including hedonism and reward, could not significantly predict general health.

4. Conclusion

Behavioral activation and inhibition systems and source of control are effective on the general health of the elderly. The more external the source of control, the less general health, and the more internal the source of control, the better the public health [7, 8]. Also, according to Gray's theory of personality [9], it can be said that the elderly with behavioral inhibition system are likely to have less mental health, and the elderly in whom the behavioral activation system is more active have more hope, ecstasy and happiness and have a positive attitude towards stressors. They use an effective solution in dealing with the stressors, and as a result, their mental health is at a desirable level.

Therefore, the elderly with a source of external control and behavioral inhibition system are at greater risk for mental health problems, while the elderly with a behavioral activation system and a source of internal control have better mental health. Elderly people placed in nursing homes have less social and economic support and a greater need for care, thus putting their general health at risk. Strengthening the source of internal control and directing them to behavioral activities can help the elderly live their lives in high mental health.

This research faced limitations such as: 1. Cultural differences in the elderly might call into question the power of generalization to other societies; 2. This study was a cross-sectional study; 3. In this study, self-report scales were used; responding to self-report scales could be influenced by personal biases.

Ethical Considerations

Compliance with ethical guidelines

All ethical principles are considered in this article. The participants were informed about the purpose of the research and its implementation stages; they were also assured about the confidentiality of their information; moreover, they were free to leave the study whenever they wished, and if desired, the research results would be available to them.

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Authors' contributions

Both authors contributed equally in preparing all parts of the research.

Conflicts of interest

The authors declared no conflict of interest.

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