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Research Paper

Community-based Counseling Intervention for Depression and Psychological Well-being in the Elderly: A Pilot Quasi-experimental Study

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ABSTRACT

Background: It has been established that active aging should be a policy objective for aging societies.

Objectives: the present study aimed to test the feasibility and effectiveness of a community-based counseling intervention for active aging.

Materials & Methods: The current quasi-experimental study was conducted on all elderly men who were referred to Salmandan park, the southern side of Zayandeh Rood Bastar Park between the Khajo and Bozorgmehr bridges of Isfahan, Iran in 2022. A total of 30 people were selected through the convenience sampling method. The experimental group (n=15) received eight sessions (60 minutes sessions per week) of Community-based counseling intervention, while the control group (n=15) did not receive any training. Data were collected by Ryff's Psychological Well-Being Scale (PWB) and Geriatric Depression Scale (GDS).

Results: Active aging protocol was effective in psychological well-being ($F_{1,28}$=19.52; P<0.001, η^2=0.764) and depression ($F_{1,28}$=20.36; P<0.001, η^2=0.791).

Conclusion: The findings revealed that the community-based counseling approach improved depression and psychological well-being in the elderly. Increasing evidence suggests that any meaningful activity is beneficial for different aspects of well-being in older people.

Keywords: Community-based counseling intervention, Aging, Depression, Psychological Well-being, Elderly

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1. Introduction

Population aging is a phenomenon that occurs in many countries around the world [1]. Iran's population is aging as well, with unprecedent accretion number of people aged 60 and older increasing and forecast to increase to 22% by 2031 [2]. The medium-fertility variant predicts that by 2050, people aged 60 and older will make up 31% (almost 29 million people) of Iran's population. A projected 22% of the population will be 65 and older (over 20 million) and a projected 3.8% will be 80 and older (around 3.5 million) in 2050, which is almost four times higher than the corresponding figures in 2015 [3]. Many adults in old age are subject to significant and sometimes life-altering stressors, such as losing spouse, retiring, changing their family support system, and having more than one long-term health condition [4]. The life expectancy of those with serious mental illness is shorter than the rest of the population [4]. However, many risk factors, such as diabetes, high blood pressure, smoking, and heart disease, often lead to premature mortality [5]. Depression is one of the most common mental conditions in normal life that can cause many losses and disappointments. Depression in old age is very common and complex. It causes many problems in daily activities [6, 7]. Research shows that the rate of depression in the elderly living in nursing homes is higher than in the general population [8].

Studies show a high prevalence of depression, less satisfaction with life, and more adjustment problems among elderly people living in welfare communities [4-6]. Psychological well-being and quality of life are both essential factors to reduce the rate of depression among the elderly. The rate of depression and mental illness would be decreased by improving psychological well-being, life satisfaction, quality of life, and happiness in the elderly [9]. The improvement in the health situation has led to a reduction in mortality, and on the other hand, an increase in life expectancy and the implementation of birth control policies have led to an increase in the elderly population [7]. Caring for the elderly population is an important mission of the community health system to maintain their long life and well-being. Another reason to support the health of this population is the economy. Older adults contribute to the workforce through volunteer work and unpaid caregiving. To develop policies to support older people, it is important to ensure that the positive experience of a long life is accompanied by continued opportunities for quality of life and well-being [10].

Despite Iranian culture's rich respect for the elderly, and great emphasis on religious teachings promoting respect for elderly citizens, the affairs of the elderly have been marginalized and are not part of national policies [11]. Considering Iran's rapidly aging population, health providers and policymakers must direct more resources to support the aging population at the national level [12]. Throughout Europe and other countries experiencing rapid population aging, active aging is an accepted goal in the policy. In the realms of global population aging management, genetic research, and popular media, active aging has been used extensively. It is a core concept that has been defined differently in different countries and organizations based on their own cultures and values. Despite the lack of a precise and universal definition, this concept has gained widespread usage in many countries in recent years [13, 14]. In the European Union, 2012 was designated as the European Year for Active Aging to raise awareness of older people and their active role in society. Many European countries have developed and expanded their strategies in active aging [15]. Studies conducted by Bowling [16], Stenner et al. [17], and Marsillas et al. [18] found that active aging meant social activities and keeping up with the elderly physical and mental health. A Thai study recognized that active aging is the process of actively engaging in life, meaning that older people take part and achieve happiness by doing things that benefit themselves, their families, and society [19]. In Iran's planning and policymaking system, the history of political discussion on aging does not exceed a decade, and there is still no real evidence to enable correct decision-making based on the analysis of the country's situation. Since the aging phenomenon will have a significant impact on the future healthcare system and patterns of care, ethics must take urgent measures to effectively deal with this phenomenon in the future. Therefore, the purpose of this study was to create an individual counseling intervention that supports older people to increase their participation in their valuable activities and their involvement in meaningful life situations and to evaluate its feasibility and effectiveness. Specifically, we examined the effects of the intervention on well-being and depression.

2. Materials and Methods

Study type and population

The study was quasi-experimental, with a pretest-posttest, and a control group design. The statistical population included all elderly men who were referred to Salmandan park, the southern side of Zayandeh Rood Bastar Park between the Khajo and Bozorgmehr bridges

of Isfahan, Iran from August to October 2022. The inclusion criteria were age range between 65 and 73 years, having no cognitive impairment based on an interview with the individuals and asking about their memories and skills, having at least an elementary school level of education, having written consent to participate in the intervention program, and getting a score lower than the mean on the Psychological Well-being and Depression. The exclusion criteria included; the absence of more than two sessions from treatment and the use of alcohol and addictive drugs. Thirty elderly men who were willing to take part in the study were selected using the convenience sampling method. Then, they were assigned into experimental and control groups. We included 15 elderly men in each group by use of G*power software (ρ=1.7, 1−β=0.95, and α=0.05) [20]. Initially, 60 individuals were interviewed individually for three days after their consent was obtained. Gradually, half of them were excluded because they either became ill or had been absent from the study more than three times, so the analysis was conducted on 30 individuals (Figure 1). Then, they were briefed on the research objectives, stages, confidentiality of the obtained results, and the right to withdraw from the research anytime they wanted.

Intervention

The experimental group received eight sessions (60-minutes group sessions per week) of community-based intervention by a clinical expert at that park while the control group did not receive any training. Table 1 presents a summary of the training sessions. After the intervention program, the posttest was taken from both experimental and control groups under the same conditions. This study adhered to all standards of ethical conduct in research.

Ryff's Psychological Well-Being Scales (PWB): This questionnaire was created by Rief in 1989 and revised in 2000 [21]. This scale has 54 items and six subscales of autonomy, self-mastery, personal growth, purpose in life, being positive with others, and self-acceptance. The sum of these six factors measures psychological well-being as a total score. This test is a type of self-assessment scale that evaluates the opinion of the respondents on a six-point Likert scale from "strongly agree" to "strongly disagree". Questions 2, 8, and 10 of the self-acceptance factor; Questions 1, 4, and 6 are factors of environmental dominance, questions 3, 11, and 13 are factors of positive relationship with others, questions 5, 14, and 16 are factors of having a purpose in life, questions 7, 15 and 17 are factors of personal growth and questions 9, 12 and 18 are the factors of independence. The scoring of questions 3, 4, 5, 9, 10, 13, 16, and 17 is done by the reverse method and the rest by the direct method. A higher score indicated better psychological well-being. The correlation of the short version of Riff's psychological well-being scale with the original scale has fluctuated from 0.7 to 0.89. In the present study, the validity of the scale was calculated using Cronbach's alpha of 0.65. In Darviza and Kahki's research [22], the internal homogeneity calculated by Cronbach's alpha was 0.92. In this research, Cronbach's alpha was 0.83.

Geriatric Depression Scale (GDS): This scale was developed by Yesavage & Sheikh in 1986 to measure depression in the elderly [23]. This questionnaire has two factors depression and psycho-social activities. Based on this questionnaire, the obtained scores were placed in four categories: 0-4 (normal), 5-8 (mild depression), 9-11 (moderate depression), and 12-15 (severe depression). A validation study was conducted by Sheikh and Yesavage [23] in which the GDS-S was compared with the GDS-L in differentiating depression from non-depressed patients. Both measures were successful in classifying the 2 populations accurately, with a reported correlation of r=0.84, P<0.001. The original form of this scale has 30 questions, which has been reduced to 15 questions in the Iranian form, and the alpha coefficient was 0.9 [24]. Cronbach's alpha of scale in this research was 0.94.

Statistical analysis

Data were described in terms of frequency and percentage or mean and standard deviation (SD) according to the type of variable. To check the normality of the continuous data, the Kolmogorov–Smirnov test was used. The pre-test score of psychological well-being and depression of the elderly were considered covariates and their post-tests were considered dependent variables. Multivariate analysis of the covariance method was used to determine the significance of the difference between the two groups in terms of dependent variables. The linearity of the relationship between each dependent variable and its covariate was tested. The linear significance level of the relationship between the pre-test and the post-test of the psychological well-being of the elderly was r=0.76 and depression r=0.72, respectively. According to the obtained data, the assumption of linearity was established for both variables of psychological well-being and depression of the elderly. All statistical analyses were conducted in SPSS version 23.

3. Results

The mean age of participants was 69.08 (SD=9.78) years old (age range: 65 to 73). In total, eighteen participants had a primary education, while the rest completed a high school education or higher. There were eight retired teachers, eight retired farmers, four retired firefighters, five retired mechanics, two retired bankers, and three retired government employees. Twelve widowed participants were included in the study, as well as 18 still-married couples. In total, seventeen participants lived with their spouses, five with their adult children, and eight did not have any family members. According to Table 2, the results of the chi-square test showed that the difference between the two groups is not significant in terms of demographic variables.

According to the Kolmogorov–Smirnov test, psychological well-being (K-S=0.37; P=0.23) and depression (K-S=0.29;P=0.31) met the assumption of normal distribution

The assumption of homogeneity of variances according to Levene's test for a variable of psychological well-being ($F_{1,28}$=0.81, P=0.24) and depression ($F_{1,28}$=0.26, P=0.65) is confirmed. Table 3 shows that psychological well-being scores increased in the experimental (58.61±9.34; 66.16±9.53) and control (59.19±10.14; 59.41±10.13) groups respectively, as compared to their post-test scores. Moreover, the pre-test and the post-test in the experimental (59.28±8.67; 52.34±8.48) and control (58.73±7.91; 56.23±6.34) groups, respectively, showed decreased depression.

The multivariate analysis of covariance for the main effect of an intervention is significant (Wilks Lambda=0.152, F=62.26, P<0.01). As a result, the univariate results were explored to find whether the significant multivariate result was applied to one or both dependent variables. As indicated by the univariate results, there is a significant difference between the groups in terms of psychological well-being (F=19.52, P=0.001, η^2=0.764) and depression (F=20.36, P=0.001, η^2=0.791) between the two groups.

4. Discussion

In this study, researchers applied and tested a community-based counseling approach including life-space mobility and tailored services to meet the diverse needs of participants. An intervention study in a community will give us new insights into the effects of counseling. The results of this pilot study suggest the intervention could be effective in alleviating depression and psychological well-being in older adults. As part of our research, we aimed to examine whether self-motivation will lead to higher participation in personal preferred activities, ultimately decreasing depression and improving well-being. As opposed to earlier studies that focused on the term 'active aging', this study focuses on three basic principles: health, participation, and security. Several studies, including Friedman et al. [25], Noh et al. [26], Rantanen et al. [27], Stearns et al. [28], and Merchant et al. [29], have found results that are similar to this study. Davodi et al. demonstrated that after the intervention, the total active aging score in the intervention group increased significantly [30, 31]. Mendoza-Ruvalcaba assessed the effects of a program to promote active aging in the

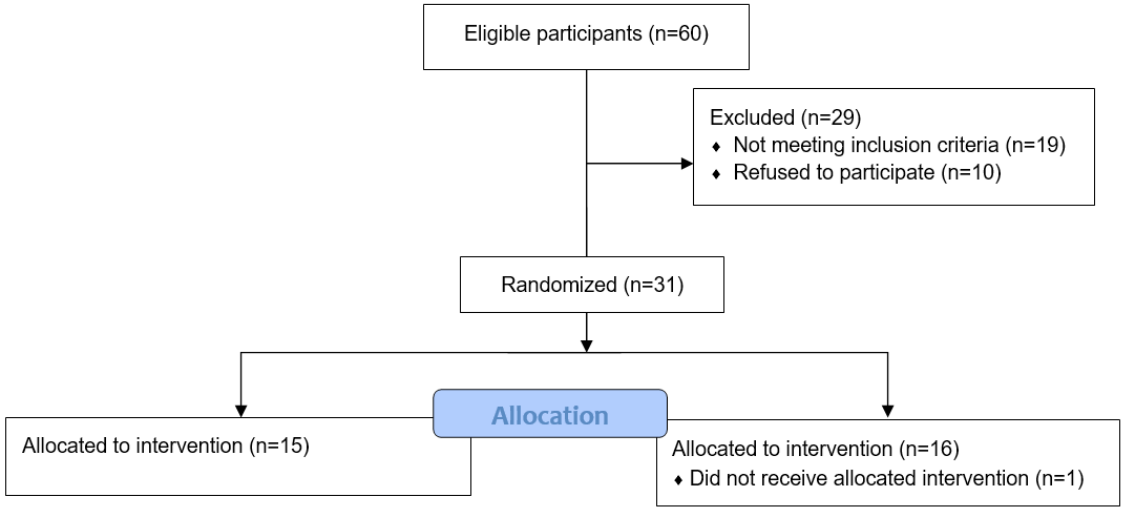

Figure 1. CONSORT flow diagram of the study

Table 1. Contents of community-based intervention protocol sessions [25]

Sessions	Contents
1	The aim of this session was challenge yourself; Focus was on the identification and social benefits of physical activity By adding different types of exercise to your daily routine, you can maintain your fitness as you age. While any exercise is better than none, a combination of cardio, strength, and balance is an ideal combination for people over 65. However, getting motivated to exercise can be difficult. If spending time standing on one leg or walking around your neighborhood doesn't sound too exciting, here are some ways to make exercise more enjoyable. Then, participant was asked to talk about activities that they value to do.
2	The aim of this session was support older individuals' autonomous motivation in seeking to participate in activities that they value. Using new and diverse forms of physical activity can give the elderly more motivation to participate and continue in these activities and exercises. One of the things that can be motivating is playing music during physical activity, which makes the exercises enjoyable.
3	The aim of this session was for individuals to have a key role in setting their goals, planning their actions, and monitoring their progress in the change process. The first step in creating motivation is to determine the purpose of doing physical activity. By setting a goal, we can clearly see what we are going to achieve. Our goals for participation in physical activity programs are determined based on our desires, needs, views, motivations, and abilities. The participant was asked to talk about activities as follows 1. Why do you want to change your current physical activity? 2. What worries you about inactivity and lack of physical activity? 3. What can you do to change your physical activity? 4.. What kind of physical activity and how much do you think you can do in the first step?
4	The aim of this session was "the recording and analysis of a person's psychological and behavioral characteristics, to assess or predict their capabilities in a certain sphere or to assist in identifying categories of people. It is necessary to calculate and evaluate the amount of baseline data in order to plan to improve the level of physical activity and eliminate functional deficiencies.
5	The aim of this session was to determine sources are participants' baseline data on the main areas of their everyday life such as health, social contacts, well-being, and preferred activities and goals.
6	This session's aim was to identify the benefits of outside activity in the convex hull area. In terms of area (km2), the daily convex hull represents the minimum convex polygon enclosing all GPS fixes that day. The convex hull area of GPS points is commonly used to quantify the extent of one's life space. As one travels from one location to another in more diverse directions over the course of the day, the quantity tends to be larger.
7	The aim of this session was based on new knowledge of behavior change techniques, the counseling approach was refined based on self-selected activity. In order to increase the patient's participation, it is necessary to choose a physical activity from activities that are inexpensive, pleasant, and enjoyable, and the elderly must ensure safety and harmlessness. It is also better to turn this activity into a social participation experience. For example, add music to physical activity. Whenever possible, they should do physical activity in a group and get help from their family or caregivers in doing physical activity.
8	Develop new knowledge of the possibilities older people have for promoting their well-being, mobility in life, memory practice, computer use, and advancement in their own lives. Exercise, outdoor activities, maintaining one's appearance, creating a cozy and pleasant home, helping others, maintaining friendships, making one's days interesting, balancing personal finances, getting to know new people, making one's days interesting, practicing artistic hobbies, participating in events, advancing society and the community, and following one's world view.

healthy elderly over 60 years. Similar to the result of the current study, the elderly in the intervention group had self-sufficiency and better quality of life [32]. In addition to significantly increasing PWB, as well as reducing depression and sleep complaints in their study, Friedman et al. found that participants also reported fewer physical symptoms and sleep complaints. Particularly important gains were made in individuals with lower pre-program PWB [25],. Most of the research studies emphasize that psychological well-being and depression will be significantly adjusted by creating motivation and activity of the man of interest in the elderly [27, 30, 31, 33, 34].

The promotion of healthy aging requires the participation of a "village" and the development of a life course approach that incorporates government agencies, nonprofits, industry, academia, and the community [29]. Different features, however, may be important for different types of physical activities. Kerr & Rosenberg [35] proposed that access to destinations, connectivity of streets, and access to transit are likely the most significant factors for transportation walking, whereas safety, aesthetics, and parks are more essential for recreational

Table 2. Demographic characteristics according to the experimental and control groups

Variables	Characteristics	Experimental	Control	χ^2	P
Age	65 to 68 years	6	7	0.22	0.88
	69 to 72 years	4	4		
	73 to 75 years	4	5		
Education	Primary education	9	9	1.23	0.76
	High school education	2	2		
	Academic university	4	4		
Previous job (retired from)	Teacher	5	3	1.11	0.72
	Farmers	4	4		
	Firefighters	2	2		
	Mechanics	3	2		
	Banker	1	1		
	Employee	2	1		
Marital status	Widowed	6	6	0.50	0.64
	Married	9	9		
Residency status	Lived with their spouses	9	8	1.33	0.87
	Lived with their adult children	3	2		
	Lived alone	4	4		

Table 3. Results of multivariate analysis of covariance on outcome variables

Variable	Group	Pre-test	Post-test	P¥
Psychological well-being	Experimental	58.61±9. 34	66.16±9. 53	0.001
	Control	59.19±10. 14	59.41±10. 13	0.894
	P£	0.814	0.001	
Depression	Experimental	59.28±8.67	52.34±8.48	0.001
	Control	58.73±7.91	56. 23±6.34	0.436
	P£	0.826	0.007	

Values are Mean±SD

P¥ was reported from within-group comparison, P£ was reported from between-group comparison

walking [28]. More evidence has been accumulated since these studies have been conducted, indicating that activities outside the home can have health benefits, such as increased physical activity and greater social interaction. Individual health is influenced by a constellation of factors in interpersonal, community, and policy environments, according to the ecological model of age-friendly communities [34]. A recent literature review found that neighborhoods with safe and walkable surroundings, aesthetically pleasing scenery, and easy access to services and destinations are the ones that encourage older adults to engage in regular physical activity [35]. Considering that in the study of Tajvar et al. [31] compared to foreign countries, the elderly have been more active because of financial problems, not only this type of activity will not lead to psychological well-being, but also it is due to the increase of depression and lack of psychological well-being. Nevertheless, these people have to work outside of the home and take part in jobs besides retirement, so what is essential is that in this study the participants, elderly people, did not have any financial concerns, therefore most of them did not have a second job and gathered to spend their free time. Accordingly, studies need to take into account that when using protocols for active aging, keep in mind that these individuals do not work or participate in social life due to financial concerns, and they only participate in activities for fun and creating activity. The main foundation of the theory of active aging is that older people should be able to continue working according to their abilities and preferences and prevent or delay disability and dependence, which is very costly for healthy people, families, and societies. The word "active" refers to continuous participation in social, economic, cultural, spiritual, and civic affairs, not just the ability to be physically active or participate in the workforce. Active aging intends to expand the hope of a healthy life and the quality of life during aging for all people, including the vulnerable, disabled, and those in need of care [31].

The community-based intervention study selected participants using non-probability (convenience) sampling. Consequently, convenience sampling likely reduces the generalizability of this study's findings. The study site is a large city (Isfahan) that provides many activity opportunities for the elderly. Different living environments probably require different study approaches. In this study, no follow-up was conducted to determine whether the intervention effects lasted over time. Another limitation of this study is the lack of random assignment of groups, which is hoped to be taken into account in clinical trial studies. For future studies, it is recommended to take follow-up time into account. For example, different cultures and large cities present different opportunities and challenges for participation.

5. Conclusion

In this study, researchers applied a community-based counseling approach including life-space mobility and tailored services to meet the diverse needs of participants, and tested its effectiveness. The Community-based counseling approach improved depression and psychological well-being in the elderly. Increasing evidence suggests that any meaningful activity is beneficial for different aspects of well-being in older people.

Ethical Considerations

Compliance with ethical guidelines

The Ethics Committee of the Islamic Azad University of Isfahan (IR.IAU.IKH.REC.1401. 131) approved the study. The participants voluntarily participated in the present study, and the subjects and their families signed written informed consent.

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Authors' contributions

All authors equally contributed to preparing this article.

Conflict of interest

The authors declared no conflict of interest.

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