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The Effect of Aerobic Exercise on Quantity and Quality of Sleep among Elderly People Referring to Health Centers of Lar, Southern of Iran: A Randomized Controlled Clinical Trial

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Background: Aging is associated with reduced quality and quantity of sleep. 50% of senior citizens living in the community and 70% of those living in nursing homes suffer from sleep disorders. Moreover, insomnia increases the risk of mortality and morbidity in older adults. We aimed to investigate the effect of aerobic exercise on quantity and quality of sleep among the elderly people referring to health centers of Lar, southern Iran.

Methods: We enrolled 60 elderly people in the age range 60-75 years old (64.8±5.2). Participants were randomly assigned into two groups, each with 30 subjects (case group= 30 and control group=30). The patients in the case group participated in exercise trainings consisted of three one-hour sessions per week for 12 consecutive weeks. Sleep quantity and quantity in the participants was evaluated before and after intervention using Pittsburgh Sleep Quality Index (PSQI).

Results: Independent t-test showed that sleep quality score was improved by 44.46% in the case group (p<0.0001). Furthermore, sleep duration increased by 11.5 minutes (p=0.038) and sleep latency decreased by 7.5 minutes in the case group; while the difference between the two groups regarding the changes in sleep latency was not statistically significant (p=0.089).

Keywords: Quality of sleep; Quantity of sleep; Elderly; Aerobic exercise
A survey on the prevalence of sleep disorders and their management in the elderly in Jahrom, 2014


Background: One of the basic needs of human is sleep. Research has shown that poor quality of sleep is the 3rd problem in the elderly people, being one of their most common complaints and reason to refer to doctors. The objective of this survey was to study the frequency of sleep disorders and how to deal with them.

Methods: This cross-sectional study was conducted on 360 people aged 60 or older, using a self-made structured questionnaire and interview. The data were entered into SPSS, version 11.5. Descriptive and analytical statistics such as Chi square and Fisher exact tests were used to analyze the data.

Results: In this survey, the mean age of the subjects was 67.7±7.33; 70.3% suffered sleep disorders and 81.81% had primary insomnia. Sleep disorders showed a significant relationship with marital status, gender, residency, education and employment. In this survey, 94.5% (239 men) that had sleep disorder used at least one of the non-pharmacological methods and 7.5% used pharmacological methods to cope with sleep disorders.

Conclusion: Considering the fact that most of the elderly people used one of the non-pharmacological methods to cope with sleep disorders but still the prevalence of sleep disorders is high, we can conclude that it can be the result of their inappropriate use. Therefore, we recommend that the health care staff should focus on educating the elderly people on how to use non-pharmacological methods.

Keywords: Sleep, Disorders, Elderly, Insomnia
Health - promoting lifestyle and Quality of life among the Iranian elderly

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Background: As individuals live longer, health promoting lifestyle become even more essential, particularly with regard to maintaining functional independence and improving quality of life (QoL).

Objectives: This study was designed to determine the relationship between Quality of life and Health Promotion Lifestyle (HPL) in the Iranian elderly, living in Shiraz.

Method: This Analytical Cross-sectional study was conducted in 2013 at retirement centers of Shiraz, Iran. The sample included 500 elderly individuals who were over 60 years old. Proportional Stratified random sampling was used to select the elderly from retirement centers. Quality of life was assessed by the Iranian version of Short Form Health Survey (SF-36) questionnaire and Health promoting lifestyle was measured by Health Promotion Lifestyle Profile (HPLP II). Data were analyzed using independent t-test, One-way ANOVA, Pearson’s correlation and stepwise multiple regression using SPSS21 software.

Results: In this research, there were significant differences in QoL in terms of gender, age, education and marital status. There were significant differences in HPL in terms of gender, age and education (p<0.05). There was a statistically significant relationship between quality of life and Health promoting lifestyle in the elderly (r=0.42, p<0.05). The significant predicting factors on QoL of the elderly based on HPLP II constructs consisted of having spiritual growth, stress management and physical activity (p<0.05).

Conclusion: Health providers should improve quality of life in elderly people by facilitating health promoting lifestyle through health promoting interventions which will maintain and increase physical activity, stress management and spiritual growth.

Keywords: Quality of life (QOL); Health promoting lifestyle (HPL); The Elderly
Acetyl cholinesterase inhibitory (AChEI) and Antioxidant activity of Iranian Propolis

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Background: Alzheimer’s disease (AD) has been recognized as the origin of dementia and common neurodegenerative syndrome among older people. The pathogenic background of AD is not comprehensively perceived and it seems that cholinergic system disorders are involved in AD. Recently, Natural medicinal products have gained lots of attention as potential sources of drugs. Propolis is a product produced by honeybee possessing a wide range of biological activities. Moreover, there are a few studies on the AChEI activity of Propolis. At this juncture, there is no report on the biological properties of Iranian Propolis. Herein, we decided to evaluate anti-AChE activity of propolis to develop an effective anti-Alzheimer’s agent.

Methods: Propolis was collected from Damavand Mountains. Hydro alcoholic (Methanol/water) extract of propolis was prepared. Then, AChE inhibitory activity of the extract was evaluated using the modified Ellman method in six concentrations. Also, the antioxidant activity of the same samples were evaluated using DPPH scavenging assay.

Results: Propolis showed effective anti-AChE (IC₅₀ = 86.28µg/ml, comparing with Donepezil as a reference drug) and high antioxidant activities (IC₅₀ = 8.46µg/ml, comparing with Butylhydroxyanisol as a reference drug).

Conclusion: In this work, we introduced a natural, easily available, economic, and safe agent for the treatment of signs and symptoms of AD. Anti-AChE as well as antioxidant activities of Propolis were strongly confirmed by our results and it was revealed that propolis would be useful in drug discovery research for anti-Alzheimer’s agent.

Key words: Acetylcholinesterase inhibitor, Ellman method, Propolis
Preventive health services utilization among elderly people in Kerman
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Background: In addition to improving life style, older adults can benefit from preventive health services, as these services play a significant role in early diagnosis in the elderly.

Methods: This was a cross-sectional descriptive analytic study with multistage cluster sampling, in which 600 elderly people were studied. The data was collected by a structured questionnaire and analyzed using descriptive statistics and logistic regression.

Results: The awareness and utilization of the preventive health services in the elderly was low and higher in women as compared with men. 52.2% of older women and 70.3% of older men had not used preventive health services in the last two years. 11.2 percent of elderly men had done prostate exam and 6.4% had done Fecal Occult Blood Test. 14.2 % of elderly women had done mammography, 7.6% pap smear and 8.4% Bone Mineral Densitometry. Nutrition counseling and Vaccination were low in both groups. Outpatient service utilization in elderly who had used services was less than others (p<0/001), But there was no significant differences in inpatient service Utilization.

Conclusion: According to the significant role of using preventive health services in reducing both non- attendance in outpatient services and health care cost, it is necessary to promote preventive health services in older adults.

Keywords: Elderly, health services, utilization
Relationship between hypertension with BMI and nutritional habits of rural elderly

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Objectives: Many factors contribute to high blood pressure including genetics, obesity, high sodium intake and age. Also, mobility, stress, low potassium and calcium intake and insulin resistance increases blood pressure. According to CDC research, 64% of all men over 75 have high blood pressure. This study aimed at estimating the prevalence of hypertension and some health-related behaviors among the elderly and making appropriate interventions.

Methods: The study was a cross-sectional one in which we randomly selected 220 rural elderly covered by health services, and screened the results of their tests; the documented information was analyzed using SPSS13.

Results: The final sample size was 204 males and females (response rate was 48.03% and 59.8%, respectively ). Mean BMI was 24/99. The mean systolic and diastolic blood pressure was138 and 8.1, respectively. 45.09% were overweight or obese. There was a significant correlation between systolic and diastolic blood pressure with BMI (r=0.4 , p<0.0001). Fruit and vegetable consumption was significantly low in overweight and obese participants (P <0/001). Fish and olive consumption was less than one in month. 58.82 % of participants took antihypertensive drugs.

Conclusion: There is a need to prevent hypertension in community, especially young and obese ones as a social security program to decrease health problems and improve financial issues of the organization simultaneously. Owing to the impact that good nutrition has on health and well-being in later life, nutrition among older people should be given more attention.

Key words: hypertension- BMI -nutritional habits - elderly
Trauma and Medical Emergencies In the Elderly : A Prevalence Study

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Background: Geriatric medical emergencies and trauma, have been a persistent and serious problem for those over 60 years old. Because of physiological changes and pre-existing disease, older adults present clinical manifestations lead to poor prognosis as well as financial burden. This study aimed to assess trauma and medical emergencies in elderly people in Jahrom 1390-1392.

Methods: This was a descriptive cross-sectional study in which 7529 elderly people (above 60 years old) encountered trauma and medical emergencies from 1390 (April) till 1392 (march) that were registered by Jahrom Emergency Medical Service (EMS), were assessed. Data were collected and analyzed by SPSS 16 software.

Results: Total of 7529 geriatrics who called EMS, 4654 were assessed for trauma and important medical emergencies. 3985 persons (85.62 %) of people were affected by medical diseases and 669 persons (14.37%) were trauma cases. All of them were above 60 years old. The most common medical diseases were chest pain (21.1%), hypertension (15.4%), cardiopulmonary arrest (2.53%), respiratory problems (9.92%), decreased level of consciousness (6.89%), hypotension (3.41%), Cerebrovascular accident (8.22%), hypoglycemia (2.40%), vertigo (7.84) and other diseases (such as, headache, seizure, myocardial infarction, poisoning and hyperglycemia, respectively. The most common trauma included vehicle accident (12.24%), falling (0.85%), poisoning (1.26%) and other emergency events such as cuts, lacerations and bites, respectively.

Conclusion: according to results, the prevalence of medical diseases such as cardiovascular problems are more common than trauma emergencies, so strategies should be directed toward prevention and control of these diseases specially hypertension, cardiovascular and respiratory disorders as well as vehicle accident.

Keywords: trauma, medical emergencies, elderly, prevalence
The Effects of Laughter Therapy on General Health of Elderly People Referring to Jahandidegan Community Center in Shiraz, Iran, 2014: A Randomized Controlled Trial

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Background: Aging and its social-biological process naturally impair the functions of different body organs and cause progressive disabilities in managing personal affairs and performing social roles. Laughter therapy is an important strategy which has been recommended by experts for increasing health promotion in older adults. Therefore, we aimed to investigate the effect of laughter therapy program on public health of senior citizens.

Methods: In a randomized controlled trial, we enrolled 72 senior citizens aged 60 and over referring to Jahandidegan (Khold-e-Barin) retirement community center in Shiraz, southwest Iran, during January to February 2014. The participants were assigned into experimental (N=36) and control (N=36) groups. Data were collected using General Health Questionnaire (GHQ-28) and demographic questionnaire. The participants of experimental group attended a laughter therapy program consisting of two 90-minute sessions per week for 6 weeks.

Results: We found a statistically significant correlation between laughter therapy program and factors such as general health (p=0.001), somatic symptoms (p=0.001), insomnia and anxiety (p=0.001). However, there was no statistically significant correlation among laughter therapy, social dysfunction (p=0.28) and depression (p=0.069).

Conclusion: We concluded that laughter therapy can improve general health and its subscales in elderly people.

Keywords: Elderly, General health, Laughter therapy.
A survey of the effect and continuity education on nutritional behavior of elderly women based on health belief model _ Ahvaz 2013

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Background: health care services in recent century cause an increase in elderly population and educational programs to improve elderly nutritional behaviors is essential as well as the importance of education to enhance nutritional behaviors. This study aimed at determining the effect and continuity of education based on health belief model on improve nutritional behaviors of elderly women.

Methods: In this quasi-experimental study, 102 elderly women were randomly divided into two groups, case and control (n=51). A questionnaire was designed according to health belief model constructs and confirming validity and, within three stages (before and after intervention and two months after intervention) in the two groups was completed. The interventional program was designed based on the results of pre-test. The case group received the intervention within 6 sessions. Finally, the data was analyzed using SPSS statistical software and statistical test (Chi-square, Mann-Whitney, independent t-test and Repeated measures).

Results and Conclusion: The findings showed before interventional education, differences in other demographic variables, the mean score of knowledge, Constructs of health belief model and behavior between case and control groups not significant. The mean score of knowledge, perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, perceived self-efficacy and behavior in the case group than the control group significantly have increased immediately after the educational intervention and two months after intervention (p<0.001). According to research findings, implement educational program based on health belief model can improve nutritional behaviors of elderly women.

Keywords: Education, Health belief model, Elderly Women, Nutritional Behaviors.
Evaluation of risk factors in the elderly covered by the Sabzevar University of Medical Sciences in 2014

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Background: Studies have shown that the burden of chronic diseases is rising in the elderly. This study aimed to identify risk factors for providing strategies to reduce disability in elderly covered by Sabzevar University of Medical Sciences.

Method: This Cross-sectional study was done on 4831 people aged over 60 years. Data collection method was voluntary sampling. Risk factors were assessed based on the protocol recommended by the Ministry of Health-Office of Elderly. For data analysis SPSS software version 11.5 was used at a significance level of less than 0.05 and chi-square tests.

Result: From 4831 participants, 57% was women and 43% men. Obese women were 5.1 times more than men (P <0.001). About sliming, there was no significant difference between the sexes (P = 0.5). Smoking in men was 2 times more than women (P <0.001). History of falling and fractures and osteoporosis were more in women and the differences were significant.

Conclusion: This study showed that the most common risk factor was non-continuous exercise; obesity and slimming were common, respectively. High consumption of tobacco in the elderly is an alarm for cardiovascular disease, stroke, chronic lung disease and many cancers. It looks that by creating capacities with the evolution of health system, diseases caused by these agents can be prevented.

Key words: Elderly, risk factors, obesity, smoking
Health promoting self-care behaviors and its relation with health beliefs in elderly


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Background: Health beliefs significantly affect health promoting self-care behaviors. The most important model that designed based on health beliefs is health belief model. This study examined the relationship between health belief model constructs and demographics factors with behaviors in the elderly.

Methods: This descriptive-analytical study was performed on 465 elderly people referring to Tehran's cultural centers recruited with a multi-stage sampling method. The applied instrument was demographic questionnaires of demographic, health beliefs, self-efficacy and a questionnaire of health-promoting self-care behaviors. Data analysis was performed using SPSS-22 software, by Independent T-test, one-way ANOVA and Multiple Linear Regression.

Results: The mean age of subjects was 68.24 ± 12.6 and mean general self-care was 1.79 ± 0.36. Gender (P=0.01), economy (P<0.001), education level (P<0.001) and age (P=0.008) were significantly associated with self-care behaviors. Regression analysis showed that perceived barriers (P<0.001), self-efficacy (P<0.001) and perceived severity (P<0.001) were identified as determinants of the behavior.

Conclusion: According to the results of this study, it is essential that paying special attention to self-efficacy, perceived severity and perceived barriers in designing health education for the elderly.

Key words: Aged; Attitude; Health Promotion; Self Care
The Effects of fun physical activity on pain and Mobility in elderly residents of nursing homes in Mashhad

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Background: Pain in the elderly can decrease mobility, leisure, loss of appetite and sleep. One of the most common pains in the elderly is musculoskeletal pain that can cause disability and reduced quality of life. One of the best ways to treat and prevent escalation of muscle pain in the elderly is an active life. A comparison of the effects of fun physical activity on pain and Mobility in elderly residents of nursing homes in Mashhad.

Methods: It is a controlled randomized trial which was carried out on 63 elderly residents of nursing homes in Mashhad. After convenience sampling, the elderly were randomly assigned to two groups of experimental (n=35) and control (n= 28) groups. The experimental group participated in a two months, 3 times a week for 20 minutes Fun physical activity. Data was collected by Elderly Mobility Scale (EMS) and Visual Pain scale (VPS) and analyzed using SPSS-PC (v.11/5).

Results: The findings showed a significant difference in the mean scores of Elderly Mobility between the experimental and control groups after intervention (P<0.05) and there were significant differences, before and after the intervention in two groups (P < 0.05).

Discussion: Fun physical activity increases the secretion of natural medicines pain-reducing and hormones that affect mood such as endorphin and serotonin. Improved mood and feeling of well-being and Independence in activities of individuals lead to their continued participation in exercise sessions. Therefore, The implementation of fun physical activity recommended in nursing homes.

Key word: Physical activity Elderly- Pain
Reliability and validity of the Persian version of the Falls Efficacy Scale- International
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Aim: Falls efficacy scale international (FES-I) is an instrument that is designed to measure fear of falls in older adults. The present study was performed to assess validity and reliability of Persian version of FES-I in Iran.

Methods: The authors conducted this study with 200 community dwelling older adults between 60 to 84 years, using self-report and structured interviews. After the translation of FES-I, its internal consistency with Cronbach's alpha, test-retest reliability with Spearman-Brown correlation coefficient, construct validity with exploratory and confirmatory factor analysis, and its discriminant validity was investigated by the known groups.

Results: in factor analysis, the instrument items were extracted in two factors. The results of this analysis were confirmed with confirmatory factor analysis. FES-I was sensitive to some group differences: the fear of falls among women, falls history in the past 1 year, living alone, dependence on others to perform routine activities, history of chronic musculoskeletal diseases, weak economic conditions and poor perceived general health were higher (All P<0.05). The internal consistency reliability of the instrument was Cranach’s alpha = 0.95, for the first factor 0.93, and the second factor 0.90. In determining the test-retest reliability, Spearman Brown coefficient (two weeks) for total instrument was 0.84, for the first factor 0.82 and the second factor 0.86.

Conclusion: The Persian version of FES-I can be used as reliable and valid instrument to measure the concern of falls among Iranian older adults.

Key words: fear of falls, reliability, validity, fall efficacy scale international, IRAN
The Effects of Twelve Weeks Functional Training and Different Detraining Periods on Dynamic Balance in Elderly Men


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**Background:** Aging causes physiological changes which are involved in body balance. Therefore, it is important to apply methods which lead to maintenance and improvement of balance. The aim of this study was to determine the effects of twelve weeks functional training and three period times of detraining (4, 6 & 8 weeks) on dynamic balance in elderly men.

**Methods:** Thirty healthy elderly men (Age: 71±3.22 years, height: 168±7.2 cm and weight: 66.8±6.6 kg) voluntarily participated in this study and randomly divided into experimental and control groups. The experimental group performed functional training (12 weeks, 3 sessions per week and 75 minutes per session) and the control group continued their daily activities. Before and after twelve weeks of training and after four, six and eight weeks of detraining, time up and go (TUG) test, were performed to assess dynamic balance and neuromuscular performance.

**Results:** Analysis of variance with repeated measures and one-way ANOVA test showed that neuromuscular performance significantly improved in functional training group (P≤0.05). Also, in this group there was a significant difference after six and eight weeks of detraining compare to post training test (P≤0.05).

**Conclusion:** The results showed that functional training (by focusing on reinforcement of strength, endurance, flexibility and balance) can significantly improve neuromuscular performance in healthy elderly men and persist after four weeks of detraining. Taken together, this new low-cost model of training can be useful for the elderly.

**Keywords:** Functional Training, Balance, Detraining, Elderly, Neuromuscular performance