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ASSESSMENT OF KNOWLEDGE OF OSTEOARTHRITIS AMONG ELDERLY PATIENTS

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ABSTRACT

Aim: To assess the knowledge and of elderly patients regarding Osteoarthritis (OA).**Sample and setting**: Consecutive sample of 55elderly patients attending the rheumatology and rehabilitation outpatient clinic of Al-Qasr Al-Aini Hospital were included in the study**Tools:**two tools were used, first a structured sociodemographic tool, Second, a customized version of the Osteoarthritis Knowledge Questionnaire (PKQ-OA) was employed..**Statistics:**Pearson's correlation coefficient was used to examine relationships between the PKQ-OA mean score and personal data. Analysis of variance was used to determine the differences between demographic, clinical, and socioeconomic variables (ANOVA).**Results:** A total of 55 OA elderly were included and fitted to the study. The mean PKQ -OA score was 15.48 ± 4.05,a maximumof 30. Average ratings were found in all domains, however the combined protection/energy conservation domain had the lowest.. PKQ-OA showed a negative correlation with age (r =-0.63) and a positive correlation with the level of education(r = 0.05). The PKQ-OA showed no correlation with gender, but PKQ-OA increases in married elderly and diploma elderly. **Conclusion**: The elderly with OA had average disease-related knowledge level.**Recommendation**: Based on thecurrent study's findings, it was recommended to conduct training programs for elderly patients with OA to improve their knowledge of the disease, resulting in better disease control.

Keywords: Elderly patients,Knowledge, Osteoarthritis

INTRODUCTION

Osteoarthritis (OA) is a chronic, degenerative disorder that affects about 10% to 15% of all adults aged over 60 who have some degree of OA. It could result in permanent joint damage and a decline in function (1). In Egypt, OA cases in rural and urban regions are more than five million (2). The burden of osteoarthritis on the elderly is great, especially on their caregivers and the community. In between 51 and 59 percent of the elderly, severe osteoarthritis can lead to functional impairment, which is defined as the complete cessation of daily activities. Prognosis is undefined, and treatment is often complex, particularly in developing countries, including long-term pain medication and control, maintaining energy preservation, and avoiding joint malformations, even though current therapies have become available in the last decades (3).

Kloppenburg &Berenbaum(2020)added that OA is the most frequent articular disease in developed countries, causing persistent impairment and the possibility of joint failure. OA is one of the most widespread conditions that lead to disability, particularly among the elderly. Females are more likely than males to be diagnosed with OA in their knees and hands, especially after menopause(4). Martel-Pelletier et al.(2016)stated that pain and stiffness are two of the most prevalent symptoms of OA, resulting in a reduction in physical activity and a reduction in life quality. It also affects the joints of the knees, hands, and hips. Osteoarthritis may be Primary and secondary OA are two: primary OA is a genetic illness, whereas secondary OA develops after a stressful event(5).

Controlling pain, optimizing function, modifying the OA process, and educating the elderly about their condition and medications are all nursing care goals that form the therapy plan's basis. Elderly can be advised to use different nonpharmacological pain treatment such as acupressure and other non-invasive technique to reduce pain and be able to cope with the disease(6) . Elderly patients with osteoarthritis usually need health education which is especially crucial because long-term care relies on the elderly's willingness to cooperate and stick to therapies like exercise. Many patients also require analgesics and nonsteroidal anti-inflammatory medicines

(NSAIDs), which can have adverse side effects, especially in the elderly. Indeed, one of the 'essential' identified is education(7) .

Nurses have a critical role in the holistic assessment and care of osteoarthritis patients. They can improve management by ensuring that all patients receive the three basic therapies of information, activity, and exercise, as well as weight-loss interventions if necessary, through adequate health education.(8).

According toTick et al.(2018), osteoarthritis inthe elderly receives education about health conditions and the available treatments; the elderly must learn how to cope with the ever-changing activity of daily living(ADL) and the pain of OA(9). Women, in particular, with their everyday responsibilities of cooking and washing, which are a heavy responsibility in a country like Egypt. To assess the disease-specific knowledge of OA, a number of questionnaires have been developed.

Significance of the study

Assessing the extent of the elderly's knowledge of osteoarthritis helps the community health nurse and the geriatric nurse in developing plans and strategies to improve the extent of the elderly's information about the nature of the disease, as well as cooperating with health care teams from different disciplines to reach the maximum coexistence of the elderly with a diseased(10). The evaluation of information is like a stone The basis for any educational program as a first step of the evaluation stages on which all steps of the following health education programs are built. Health education is an essential task for nursing, which is one of the first tasks that all theories of the development of the nursing profession have advocated(11).

Not only is education and dissemination an essential part of management, but it is also one of the practitioner's responsibilities and one of the most basic ethical, legal, and professional requirements(12). However, offering instruction can be time-consuming and thus costly. Thus, it is critical to evaluate its effectiveness. One approach to achieve this is to assess patient knowledge before and after receiving instruction or information, and using knowledge questions is the quickest and easiest approach to do it(13)

Methods

Research Design: exploratory-descriptive study design was used to fulfill this study.

Setting: the study was conducted in the Rheumatology and rehabilitation outpatient clinics affiliated to Qasr Aliniteaching hospital

Sample: A convenient sample of a total number of 55 elderly patients over 60 years of both genders diagnosed with osteoarthritis wasincludedin the study.

Tools: Two tools were used in the study.First; The elderly's sociodemographic questionnaire includes sociodemographic data such as age, gender, marital status, and family income. The second tool;An adapted version of the patient knowledge questionnaire of Osteoarthritis PKQ-OA by Hill & Bird's customized version of the patient knowledge questionnaire for osteoarthritis (PKQ-OA) (2007), was used to assess the knowledge level of OA elderly regarding their disease(14).

Ethics: Ethics Committee approved the study of the faculty of nursing, Cairo University, Egypt. Following the declaration of the Deputy Director-General of Cairo University Hospitals for Scientific Research Affairs, the study was carried out,Before enrolment, all participants gave their informed written consent.. The registration no. of the study was RHDIRB 2019041701.

Data Analysis: Data was examined using descriptive statistics such as mean and standard deviation, and standard deviation (SD) were employed. Pearson's correlation coefficient was used to determine the correlations between PKQ scores and sociodemographic parameters. To test if there was a significant difference between demographic, clinical, and socioeconomic factors, an ANOVA was used.SPSS statistics version 26 was utilized for the statistical analysis. The findings are presented as frequencies, percentages, and ranges for average data, and as means and standard deviation for non-average data.

Procedure: Official permission was obtained from the Research Ethics Committee, and the related committees at the Faculty of Nursing- Cairo University; the investigator explained to the elderly the purpose and steps of the study and their ethical research rights. Then, written consent was obtained from the elderly who accepted to participate in the study.

The elderly were assessed using two tools;the first toolassessed demographic data of the older people such as age and sex, and social support system and also assessed medical histories such as having other chronic conditions, then were assessed by tool II to assess the knowledge regarding osteoarthritis such as causes aggregating factors of the pain and elevating elements.Sheets were distributed to each elderly patient diagnosed with osteoarthritis and interviewed separately

RESULTS

As shown in table (1), a total of 55 OA elders were included in the study, with no refusals. Their mean age of the elderly was 68.3± 3.8 years. Males made up 39 (70.9%) of the elderly in this study, with 16 males (29.1%). There were 50 married people (90.9%), four widowed people (7.3%), and one single person (1.8%).

Also, the results illicit that 78.18 % can write and read, while 14.5% had preparatory education. In terms of monthly income, most elderly (89.1%) had enough but did not save, whereas the same number, 5.5 percent, had enough but did not save or did not have adequate family income. Furthermore, it was founded that all older adults pay for their health care.

As presented in table(2), the mean knowledge score was 15.48 (SD 4.05) out of a total of 30, with values ranging from 4.00 to 23. In terms of osteoarthritis in its broadest sense (OA), includes the cause, symptoms, and lab tests, the mean score was 5.48(SD ± 1.55) (maximum score = 9). The questionnaire covers osteoarthritis arthritis medicines. On a scale of one to seven, how well did you do?The patients' mean score was achieved by the patients 3.76 (SD ± 1.3). The third component refers to exercises, and the mean score was 3.6 (SD ± 1.60) (maximum score = 7). The last part covers joint protection and energy conservation, with a maximum score of 7. The mean for the population studied was 3.41 (SD ± 1.45).

In this series, as shown in(table 3), The PKQ-OA score of 15.3(1.2) was highest in the 60-65 year old group., those aged 66-70 years had 14.8(±1.6), and 71-75 years PKQ-OA score was 9.5(±1.1), (difference nonsignificant p = 0.88). It was observed that males had higher scores than females, with 13.86(± 3.76). and females had 9.91 (± 3.73) : the difference was statistically significant (p < 0.001).In those who are married, the PKQ-OA score was 15.50 (±1.97); for widowed elderly, the PKQ-OA score was 9.84 (±4.05): The difference (p 0.001) was statistically significant. As regarded to educational level, elderly who have preparatory had a score of 11.50 (±5.03), who can read and write had a score of 9.55(±3.8)

Age had a significant negative correlation with the PKQ-OA (p=0.001).anda positive correlation with Education(p=0.05). Also, The PKQ-OA has a nonsignificant correlation with gender (p= 0.063) and marital status (p= 0.14),as been shown in table 4.

Discussions

The current study aimed to assess the level of knowledge of older people regardingosteoarthritis. The elderly with osteoarthritis showed PKQ-OA scores range from 4 to 23 to a maximum of 30, with PKQ-OA values ranging from 4 to 23 to a maximum of 30.. these results were higher than Hill & Bird (2007)when they developed the PKQ-OA questionnaire and found PKQ scores ranging from 3 to 28(14). The mean PKQ-OA score for the 55 evaluated elderly patients was 15.48 (SD= 4.05), this was less than Hill & Bird (2007) and higher thanKamruzzaman et al.(2020), as they found PKQ was 9.43; however, it must be emphasized that the number of participants of the current study was 55 elderly who fitted the selection criteria(15).

Also, in the study ofKamruzzaman et al.(2020), who studied 165 Bangladesh patients with rheumatoid arthritis using the same tool, and found the mean general knowledge score was 3.03 (SD= 1.57) of a total score of 9, while in the current study, the mean general knowledge score was 5.48(SD= 1.55)(15), this increase in the score may be related to the continuing education offered by the Qasr Al-Ainyhospital staff for the patient about their disease, also elderly tend to ask more about their health conditions., On the same approach, the PKQ-OA showed a significant correlation with age. In the same line,Darlow et al. (2021) observed in their study related to Knowledge about Osteoarthritis that knowledge scores increase in young adults(16).

Although,Wallis et al. (2019) in the systematic review research aboutthe experience of living with knee Osteoarthritis, found that age has a significant correlation with knowledge, they added that knowledge increases with advancing age and focuses on their study on elderly knowledge(17). In the current study, it was noted that the mean knowledge score increased in the age group of 60-65 years or younger old;this may be due to that younger elderly are more liable to get the knowledge related to the disease more than older adults

The elderly in the current study showed less knowledge about medication (3.76 ± 1.3) out of 7, exercise (3.6 ± 1.60) out of 7, and joint protection (3.41 ± 1.45) out of 7. similarly, Alyami et al. (2020) in a study of general population knowledge of osteoarthritis and its related risk factors in Jeddah, Saudi Arabia, it was discovered that the parts referring to medicines and exercises had the lowest PKQ scores in individuals with various illness durations(7).

Concerning medication, the most incorrect answer (46%) was that pain killers should be taken on a full stomach. The most frequently stated side effect (47%) was indigestion. Kamruzzaman et al. (2020) also found that 48.5% of the elderly reported that the most prevalent side effect mentioned was indigestion and dyspepsia(18).

Controversially. In a systematic review about the effects of self-management education programs on self-efficacy for osteoarthritis of the knee byUritani et al.(2021),The majority of patients expressed a desire to get information/brochures on the side effects of OA medicine. The poor performance of the elderly in the current study regarding questions about joint protection and energy conservation could be related to confusion about the two concepts; for instance, half of the elderly said carrying objects with both hands would save energy while acting as if they did not have arthritis (14.3 %), gripping objects securely (around third), and administering heat or ice to the joints (5.4 %) would be measured to protect the joints(19).

However,Izzeddin, and Sarsak (2018)reported in his review in KSA that a higher score in this topic of joint protection and energy conservation observed the same difficulty in distinguishing between the two

concepts(20). Also, in the study by Mohamed et al. (2019)in Egypt titled "Effect of Local Heat Application on Complaints of Patients with Moderate Knee Osteoarthritis"A substantial percentage of patients said they used ice or heat to protect their joints(21). A substantial percentage of patients said they used ice or heat to protect their joints.

It's worth mentioning that the elderly's reasonably high performance on questions on exercise and OA. Exercises, according to one-third of respondents (34.9%), help to prevent joint deformities, and around two-thirds of respondents (57.65%) believe that walking is one of the most significant ways to exercise and that workouts (54.7%) Instead of sleeping all day in the active period of illness, it should be tailored to the individual's flexibility.. It's worth noting that the original PKQ was released in the 1980s. The modified instrument for osteoarthritis was published in 2007, so the prescription of physical activities in OA patients has evolved. Even in the early phases of the condition, the improved drug therapy has resulted in patients suitable enough to be coached on developing muscle strength and conducting aerobic workouts(14).

There was a significant correlation between the level of education and knowledge score, which climbed in the group with higher educational level, implying that persons with higher education have a higher Knowledge score.; This may be because the high level of education in individuals facilitates the process of acquiring information and the ease of searching for information related to the disease, and on the other hand, the high level of education improves practices related to the disease., Kamruzzaman et al.(2020)found the same results in their study in Bangladeshi, as they find a significant correlation between education and knowledge regarding arthritis(15).

Also, the current study showed a significant correlation between marital status and knowledge score; also, it was observed it was increased in the married elderly group.Barbosa et al.)2021)found that knowledge score had increased in married elderly and affected knowledge acquisition and stated that having a partner encourages the elderly to get more information about his disease or health condition(22).

Commitments are required to maximize the impact of patient education. In general, patient education has a limited impact on patient knowledge and behavior, and it does not continue for long periods of time, even with booster sessions.(23). Also, asConti-Ramsden et al.(2018) advocated, the effect of group education is generally low and not long-lasting. As a result, new approaches to boosting patient Knowledge about their disease and treatment should be sought, particularly in poorer countries. As the current study shows, broad public knowledge about osteoarthritis illnesses has a significant impact on patient Knowledge(24).

On the other hand, it's shocking how many people have incorrect ideas about the origins and management of osteoarthritis. In the Netherlands, the media's main focus on OA disorders was on patients' experiences and traditional and alternative therapies(25); this will undoubtedly be comparable in Egypt.

Conflict of Interest: No conflict of interest

Conclusion

In this study, it was concluded that older adults with osteoarthritis had an average score across all areas of the patient knowledge questionnaire; also, there were correlations between mean knowledge score and age and level of education

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Recommendations

Based on study findings, it was recommended to conduct a training program for the elderly patients with OA to improve their knowledge regarding the disease, activating the role of geriatric health nurses in helping older people improve their knowledge regarding the disease in different settings especially in outpatient clinics.

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