

LEVEL OF WRONG AWARENESS ABOUT OSTEOPOROSIS IN AL-MADINA AL-MONWRA IN KSA

Hosam Salah Aljohani^{1*}, Khawla Alhazmi², Khaled Mahmoud Ghabban³ and Sara Yousef Alkeraim⁴

^{1*,3,4}College of Medicine, Taibah University, AL-Medina AL Monwra, Saudi Arabia.

²College of Medicine, Umm Al-Qura University, Makah, Saudi Arabia.

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*Corresponding Author

Dr. Hosam Salah Aljohani

College of Medicine, Taibah
University, AL-Medina AL
Monwra, Saudi Arabia.

ABSTRACT

Background: globally, osteoporosis is a health problem leading to an increased risk of fractures and other serious complications. However, awareness and perceptions of susceptibility and belief in the seriousness of a disease and risk factors can help in its prevention and reduce the incidence of complications. **Objective:** To assess the level of Wrong awareness about osteoporosis in Al-Madina Al-monwra. **Methodology:** A Cross-sectional study was conducted in Al-Madina Al-Monwra. Data were collected by using a questionnaire that designed according to osteoporosis knowledge assessment tool

(OKAT) with some modifications. The questionnaire involved two main aspects, the first one was about the demographics data and Second part was comprised of true or false questions about general knowledge, risk factors, prevention and treatment of osteoporosis. **Result:** A total of 835 responders were included in our study, wherein 94.1% of our responders were aged range from 20-60 years, 86.9% were female and 80% of responders were university educated or more. We found that 40.4% of responders have wrong awareness about general knowledge of osteoporosis and only 31.2% of responders have true awareness. However, 96% of responders know that osteoporosis increase risk of fracture but unfortunately 88.5% of responders they have wrong awareness or do not know that osteoporosis is asymptomatic before fracture. Also, we found that 35.3% of responders have true awareness about Risk factor of osteoporosis while in 64.7% of responders unfortunately do not know or have wrong awareness. **Conclusion:** Knowledge and attitude among Saudi population were very poor and raise of wrong awareness about osteoporosis will lead to increase the risk of disability, poor quality of life, and premature death. However, Increase the level of education and reduce

spreading of wrong awareness towards osteoporosis will leading to avoid late complications and to safe highly cost methods of treating such as this conditions.

KEYWORDS: Osteoporosis, Wrong awareness, Madina, level of awareness, knowledge.

INTRODUCTION

Osteoporosis is one of the most common systemic skeletal diseases with serious clinical consequences that lead to reduced bone strength and increases fracture risk.^[1] It is a major public health problem^[2], which affects millions of people around the world and its frequency increases by age.^[3] It affects almost: one of ten women above sixty years, one of five women above seventy years, as well as two of five women above eighty years^[4] but men are also at risk^[2], and the Kingdom of Saudi Arabia (KSA) is not an exception.^[3] It was also considered as one of the major contributors to mortality and morbidity among elderly people.^[2] According to WHO, There are approximately 75 million people in Europe and America are complaining of osteoporosis and 9 million fractures worldwide result from osteoporosis every year.^[5] In 2011 a review of published articles mentions that the prevalence of osteoporosis among Saudi population was estimated at 34%.^[6] Several studies have been conducted to evaluate BMD in middle East population such as Lebanon, Saudi Arabia, Kuwait, Qatar and Iran in compare to western population, All these studies, conducted mainly on female populations and it found that middle East have lower BMD than the standard established for the United State and European reference data, except the Kuwait study, where the BMD reference range was similar.^[7] As we are still studying the true incidence of osteoporosis in Saudi Arabia, the assessment of the incidence of osteoporosis-related fractures is still far away.^[8] Sunlight exposure can increase the bone mineral density of vitamin D deficient bone and lead to the prevention of non-vertebral fractures.^[9] In KSA, there is a great concern about the knowledge of osteoporosis, its risks, and preventive measures. However, many studies have reported a poor knowledge score about osteoporosis.^[10,11] Thus, this study aimed to assess the level of awareness of Saudi population about osteoporosis and finding the association between the subject's demographics and level of knowledge.

OBJECTIVE

To assess the level of Wrong awareness about osteoporosis in Al-Madina Al-monwra.

METHODOLOGY AND MATERIAL

A Cross-sectional study was conducted in Al-Madina Al-Monwra in KSA. Data were collected by using the questionnaire that designed according to osteoporosis knowledge assessment tool (OKAT) with some modifications. The questionnaire involved two main aspects, the first one was about the demographics data which were; age groups, gender, and educational level. The second part was comprised of true or false questions about general knowledge, risk factors, prevention and treatment of osteoporosis. The questionnaire was consist of multiple choices questions with each question having 3 answers: true, false, and I don't know. The questionnaire was initially translated into Arabic and later was translated back into English to check maintain of the questions validity. The recruitment of subjects was done by posting the online self-administered questionnaire link in social media networks. The sample size was calculated by using www.openepi.com. Gathered data was processed by using Statistical Package of Social Sciences version 22. We take consent from all participants, all participants have the rights to withdraw from the study at any time and participants' confidentiality was assured. The data were analyzed and the result were used for the scientific presentation and publication in a scientific peer-reviewed journal.

RESULT

A total of 835 responders were included in our study, wherein Fig 1 showed that 94.1% of our responders were aged range from 20-60 years and only 1.3% of responders above 60 years. In Fig 2 showed 13.1% of our responders were male where most of our participants (86.9%) were female. In Fig 3 showed that 80% of responders were university educated or more and only 9.5% of responders was High school or less. In table 4-A and Fig 4-B showed that 40.4% of responders have wrong awareness about general knowledge of osteoporosis and only 31.2% of responders have true awareness while 28.2% of responders need education. Also, 96% of responders know that osteoporosis increase risk of fracture while 88.5% of responders they have wrong awareness or do not know those osteoporosis cause symptoms before fracture. In table 5-A and Fig 5-B showed 35.3% of responders have true awareness about risk factors of osteoporosis while 41% of responders do not know and 23.7% of responders have false awareness. Also, only 9.2% of responders have true awareness about that there is a small amount of bone loss after the onset of menopause while 90.2% of responders have wrong awareness or do not know. In table 6-A and Fig 6-B showed 37.2% of responders have true awareness about treatment and prevention of osteoporosis while 40.7% have no information and 22.1% have false awareness. Also, 19.5% of

responders have true awareness about there are effective treatments for osteoporosis and 80.5% of responders have wrong awareness or need education.

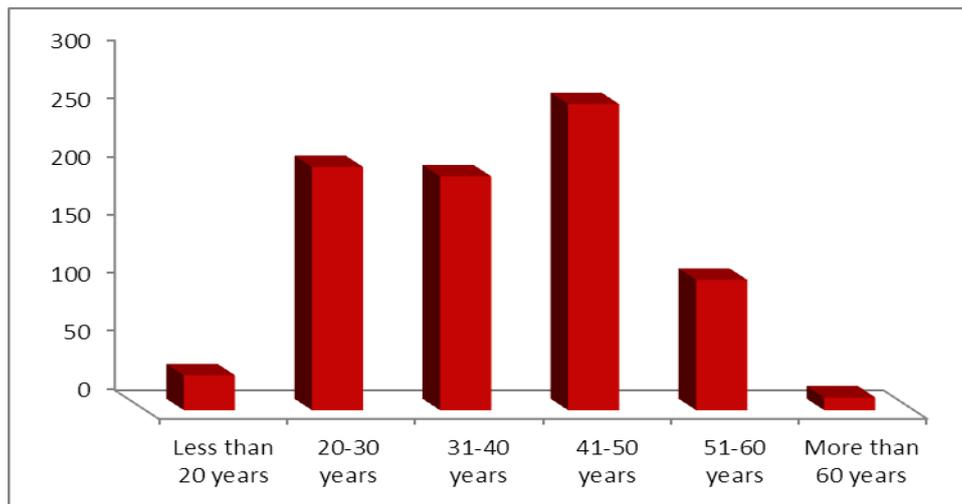


Fig 1.

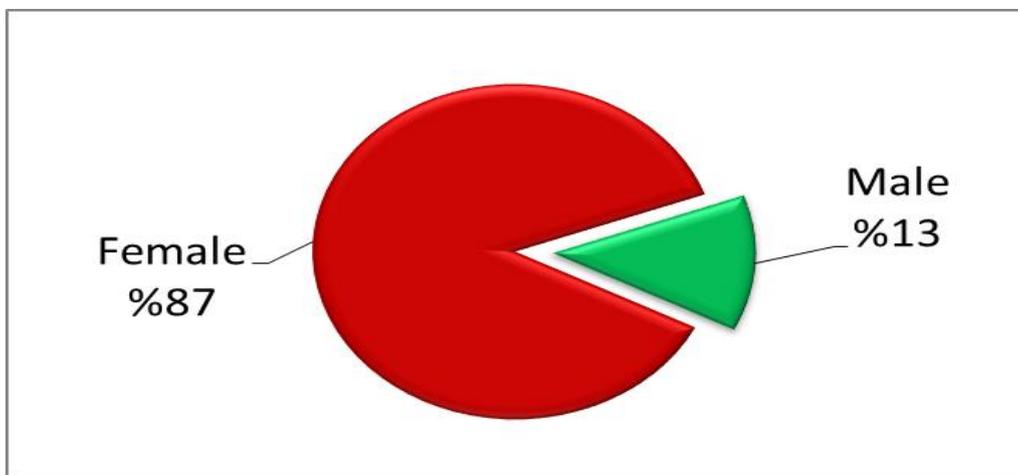


Fig 2.

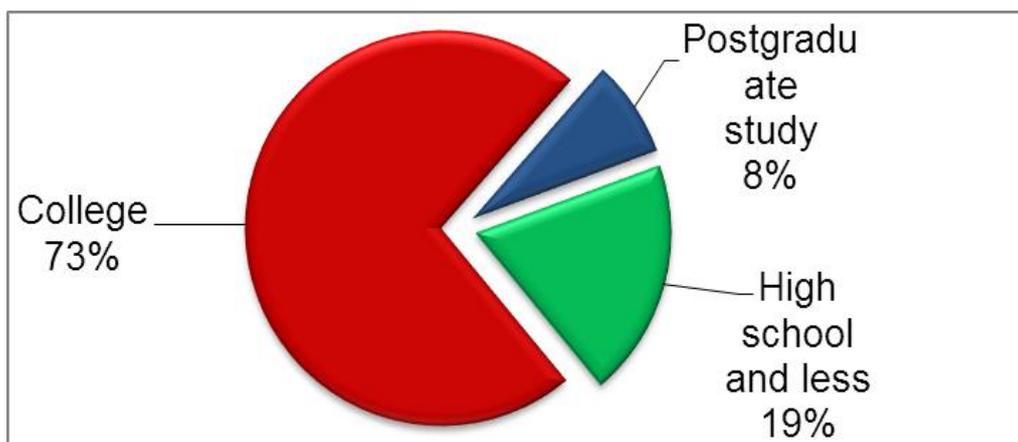
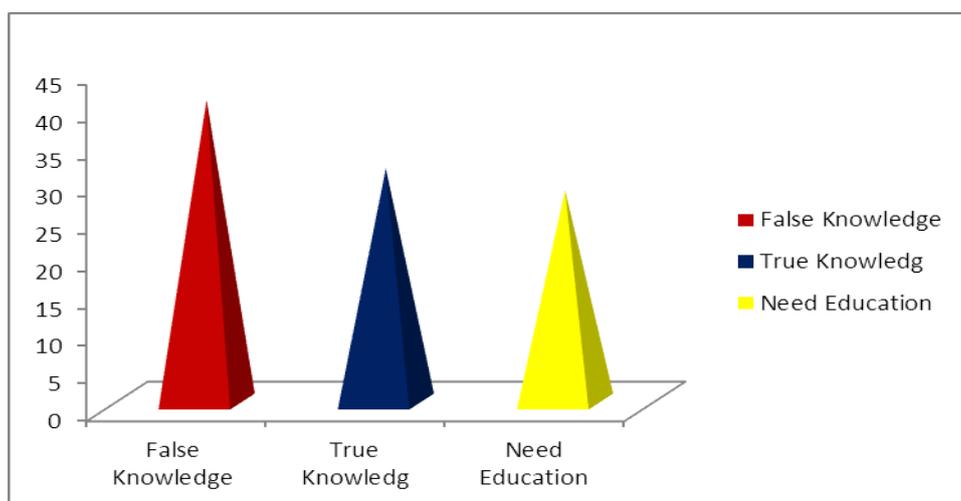


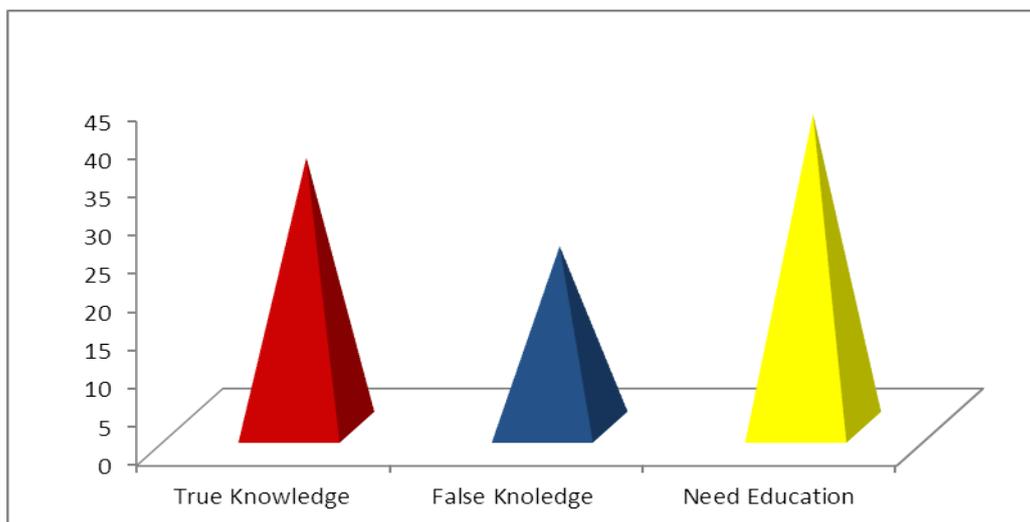
Fig 3.

(4) Level of general knowledge of osteoporosis**Table. 4-A.**

Question	True No. (%)	False No. (%)	I don't know No. (%)
Osteoporosis leads to an increased risk of bone fractures. True	802(96%)	7(0.9%)	26(3.1%)
Osteoporosis usually causes symptoms (e.g. pain) before fractures occur. False	611(73.2%)	96(11.5%)	128(15.3%)
Having a higher peak bone mass at the end of childhood gives no protection against the development of osteoporosis in later life. False	331(39.7%)	107(12.8%)	397(47.5%)
White women are at highest risk of fracture as compared to other races. True	229(27.4%)	193(23.1%)	413(49.5%)
A fall is just as important as low bone strength in causing fractures. False	531(63.6%)	93(11.1%)	211(25.3%)

**4-B Fig.****(5) Level of knowledge about risk factors of osteoporosis****5-A Table.**

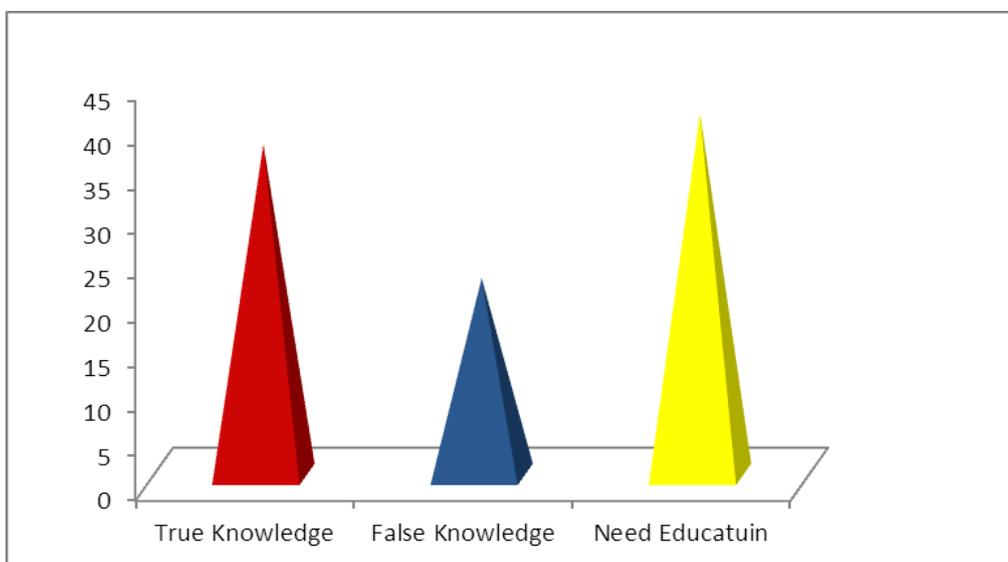
Question	True No. (%)	False No. (%)	I don't know No. (%)
From age 50, most women can expect at least one fracture before they die. True	238(28.5%)	291(34.9%)	306(36.6%)
There is a small amount of bone loss in the ten years following the onset of menopause. False	373(44.7%)	77(9.2%)	385(46.1%)
Sardines and broccoli are good sources of calcium for people who cannot take dairy products. True	497(59.5%)	41(4.9%)	297(35.6%)
White women are at highest risk of fracture as compared to other races. True	229(27.4%)	193(23.1%)	413(49.5%)
Calcium supplements alone can prevent bone loss. False	167(20%)	431(51.6%)	237(28.4%)
A high salt intake is a risk factor for osteoporosis. True	301(36%)	120(14.4%)	414(49.6%)



5-B Fig.

(6) Level of knowledge about prevention and management of osteoporosis**6-A Table.**

Question	True No. (%)	False No. (%)	I don't know No. (%)
There are no effective treatments for osteoporosis available until now. False	335(40.1%)	163(19.5%)	337(40.4%)
Hormone therapy prevents further bone loss at any age after menopause. False	225(26.9%)	49(5.9%)	561(67.2%)
An adequate calcium intake can be achieved from two glasses of milk a day. True	533(63.8%)	138(16.5%)	164(19.6%)
Sardines and broccoli are good sources of calcium for people who cannot take dairy products. True	497(59.5%)	41(4.9%)	297(35.6%)



6-B Fig.

DISCUSSION

Osteoporosis is a serious metabolic bone disease associated risk of fracture, from which more and more people in the world are suffering of it. It leads to disability, costly rehabilitation, poor quality of life, and premature death.^[12] We conducted the study to assess the level of awareness in Al-Madina Al-Monwra where 835 responders include in our study. The majority of our responders were aged range from 20-60 years (94.1%) which represent whole community members (Fig 1) and 86.9% of participants were female (Fig 2). Where in, the osteoporosis is female dominant disease.^[12] The majority (80%) of our responders were university educated or more so our study represents people with high level of education. Unfortunately, we found the high level of wrong awareness about general knowledge of osteoporosis as shown in Fig 4-B where 40.4% of responders have wrong awareness about general knowledge of osteoporosis and only 31.2% of responders have true awareness while 28.2% of responders need education which was similar to other studies conducted in KSA.^[13-14-15] Also, 96% of responders know that osteoporosis increase risk of fracture but unfortunately, 88.5% of responders they have wrong awareness or do not know that osteoporosis cause symptoms before fracture which may be delay diagnosis of osteoporosis and increase the risk of complications. In table 5-A and Fig 5-B showed 35.3% of responders have true awareness about risk factors of osteoporosis while on the other hand, 41% of responders do not know and 23.7% of responders have false awareness about risk factors which are mostly preventable. Regarding risk factors, our study showed 9.2% of responders have true awareness about the small amount of bone loss after the onset of menopause while 90.2% of responders have wrong awareness or do not know that a higher peak bone mass is protective against osteoporosis which was to other studies.^[16-17] 59.5% of participants have true awareness about dietary Calcium sources while 40.5% of participants have false awareness or do not know which was similar to other findings among Saudi females in Riyadh, KSA and employees of Tanta University, Egypt that reported (49%) and (44.2%).^[12,18] In table 6-A and Fig, 6-B showed that only 19.5% of responders have true awareness about there are effective treatments for osteoporosis and 80.5% of responders have no idea or false awareness which may lead to affect the quality of life and will delay treatment of patients until complication developed.

Recommendations

We recommend directing further research about of a similar field with bigger sample size to improve the precision of the discoveries, to involve more male group to have a more

extensive and relative perspective of awareness of osteoporosis and to orchestrate instructive projects to expand the level of mindfulness towards osteoporosis. The investigation discovering features the need of setting up of essential medicinal services programs in regards to osteoporosis for Al-Madina Al-Monwra particularly for ladies. Wellbeing training programs for open in broad communications is compulsory. Preparing of medicinal services experts is likewise critical with weights on the significance of physical activities, satisfactory admission of eating regimen rich in calcium and vitamin D and how to speculate the ailment. Incorporate early identification and administration of osteoporosis in rheumatology outpatient centers.

CONCLUSION

Raise level of wrong awareness about osteoporosis will lead to increase the risk of disability, poor quality of life, and premature death. However, Increase the level of education and reduce spreading of wrong awareness towards osteoporosis will leading to avoid late complications and to safe highly cost methods of treating such as this conditions. Our finding is similar to other studies done in the kingdom in different cities, but there was no response. So this will enhance health authorities to create program to upraise the awareness of the community for this important disease, especially at primary health care levels and at school.

CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

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