Assessment of Osteoporosis Knowledge among Female Medical Interns And Students at Tabuk University

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ABSTRACT

Introduction: Osteoporosis is a common disease that is characterized by low bone mass and skeletal fragility, leading to higher risk of fracture. The disease is medically diagnosed as having reduced bone mineral density that is 2.5 standard deviations below the adult peak mean. Approximately 34 % of Saudi female are osteoporotic, to treat and prevent osteoporosis our health care providers should have adequate level of knowledge about osteoporosis.

Methods: This study was carried out among medical interns at Universities of Tabuk, Saudi Arabia. A pre-tested self-administered questionnaire was used to assess knowledge, beliefs, and practices towards osteoporosis. Osteoporosis Knowledge Assessment Tool (OKAT), a validated tool was used. This consists of 20 questions to assess knowledge.

Results: Rate was 100 % with a total 81 female students from the University of Tabuk. A 45.6 % of the participants were medical interns, 32% were fifth year medical students and 22.4% were sixth year medical students. 83.9% of the participants correctly identify the relation between the age and osteoporosis, 67.9% knew that smoking is one of osteoporosis risk factors, and 46.9% correctly consider present of family history of osteoporosis as a risk factor. 55.9% participants felt eating calcium rich food was difficult. 87.7% felt that if they had osteoporosis that it would change their whole life.

Conclusion: Majority of participants had a acceptable level of knowledge on osteoporosis, Steps such as education about osteoporosis risk factors and preventing methods are required to improve the heath states of the community.

Keywords: Osteoporosis, Postmenopausal, Tabuk, Saudi Arabia.

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INTRODUCTION

Osteoporosis, a chronic, progressive disease of multifactorial etiology. It has been most frequently recognized in elderly white postmenopausal women. Osteoporosis is a common disease that is characterized by low bone mass and skeletal fragility, leading to higher risk of fracture, specially at the spine, hip, wrist, humerus and pelvis.1 The World Health Organization has defined diagnostic thresholds for low bone mass and osteoporosis based upon bone mineral density (BMD) measurements compared with a young adult reference population (T-score). The disease is medically diagnosed as having reduced bone mineral density that is 2.5 standard deviations below the adult peak mean.2 They may be diagnosed as an incidental finding on chest or abdominal radiographs. The clinical manifestations of symptomatic vertebral fractures include pain and height loss. Men may also have symptoms of disorders that are known to cause osteoporosis, such as hypogonadism, malabsorption, and hyperparathyroidism.

An estimated prevalence of osteoporosis showed that about 34% of healthy Saudi women, and 30.7% of men, aged between 50-79 years are osteoporotic, which expected to increase further.3 For the prevention and treatment of osteoporosis, it is vital that health care providers have adequate knowledge about osteoporosis to ensure that they can effectively treat individuals with this disease.

The awareness of medical students about osteoporosis were studied in many studies, a lot of studies shown that medical students know the definition of osteoporosis, but lack knowledge of its complications and preventive measures.4 In this study we are aiming to assess the level of medical student’s awareness about osteoporosis.
METHODOLOGY
This study was carried out among medical interns at Universities of Tabuk, Saudi Arabia. A pre-tested self-administered questionnaire was used to assess knowledge, beliefs, and practices towards osteoporosis. Osteoporosis Knowledge Assessment Tool (OKAT), a validated tool was used. This consists of 20 questions to assess knowledge about osteoporosis.

Ethical Considerations
Study was explained to participants and informed consent was taken from the participant.

Statistical Analysis
The collected Data were entered and analyzed using the Statistical Package for Social Sciences (SPSS) statistical program version 19.

Table 1: Descriptive characteristics of the participants

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>81</td>
<td>100%</td>
</tr>
<tr>
<td>Smoking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non Smoker</td>
<td>1</td>
<td>1.2%</td>
</tr>
<tr>
<td>Smoker</td>
<td>1</td>
<td>1.2%</td>
</tr>
<tr>
<td>Ex-Smoker</td>
<td>79</td>
<td>97.5%</td>
</tr>
</tbody>
</table>

Figure 1: Osteoporosis Risk factors identified by the participants.

Figure 2: Percentage of osteoporosis risk factor identified by participants.
Table 2: Assessment knowledge about osteoporosis symptoms.

<table>
<thead>
<tr>
<th></th>
<th>Agree</th>
<th>Disagree</th>
<th>Don not know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interns</td>
<td>48.6%</td>
<td>45.9%</td>
<td>5.4%</td>
</tr>
<tr>
<td>6th year</td>
<td>55.5%</td>
<td>33.3%</td>
<td>11.1%</td>
</tr>
<tr>
<td>5th year</td>
<td>61.5%</td>
<td>23%</td>
<td>15.3%</td>
</tr>
</tbody>
</table>

Table 3: Assessment knowledge about osteoporosis fracture risk.

<table>
<thead>
<tr>
<th></th>
<th>Agree</th>
<th>Disagree</th>
<th>Don not know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interns</td>
<td>18.9%</td>
<td>45.9%</td>
<td>35.1%</td>
</tr>
<tr>
<td>6th year</td>
<td>55.5%</td>
<td>10.8%</td>
<td>10.8%</td>
</tr>
<tr>
<td>5th year</td>
<td>26.9%</td>
<td>42.3%</td>
<td>30.7%</td>
</tr>
</tbody>
</table>
RESULTS
The response rate was 100% with a total 81 female students from the University of Tabuk. A 45.6% of the participants were medical interns, 32% were fifth year medical students and 22.4% were sixth year medical students. 97.5% were non-smoker, 1.2% smoker and 1.2% ex-smoker. (Table 1)

As shown in figure 1, 83.9% of the participants correctly identify the relation between the age and osteoporosis, 67.9% knew that smoking is one of osteoporosis risk factors, and 46.9% correctly consider present of family history of osteoporosis as a risk factor. In figure 2, age and family history of osteoporosis were mostly identified by fifth year medical students, where smoking mostly identified by sixth year medical students.

Perceptions, towards benefits of calcium intake revealed that 55.9% participants felt eating calcium rich food was difficult, and 9.8% felt that calcium rich foods are too expensive. (Figure 3)

On assessing the perceived seriousness of osteoporosis, 87.7% felt that if they had osteoporosis that it would change their whole life and would make daily activities more difficult. As shown in Table 2, approximately 50% and more of female medical students and interns believe that osteoporosis usually causes symptoms. Only 18.9% and 26.9% of medical interns and 5th year medical students aware that fracture is one of osteoporosis complication. (Table 3)

DISCUSSION
The aim of the study was to assess knowledge, beliefs and practices regarding osteoporosis among female medical interns and students at Tabuk University. Knowledge about osteoporosis preventive and it is risk factors are important in preventing and minimizing it is complication. However, most of study participants truly identify most of osteoporosis risk factors, including and not limited to advance age, smoking and present of family history of osteoporosis. Low calcium intake is associated with increase osteoporosis risk. optimal calcium intake is important to reach optimal peak bone mass, which is protective agonist osteoporosis and it is complication, 44.1% of our study participant believe that eating calcium rich food is difficult.6

CONCLUSIONS
Majority of participants had a acceptable level of knowledge on osteoporosis, Steps such as education about osteoporosis risk factors and preventing methods are required to improve the health states of the community.

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Conflict of Interest: None Declared.

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