

Prevalence Of Overweight And Obesity Among Healthcare Workers In KSA: A Systematic Review

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Abstract

Background: *This systematic review aimed to investigate the prevalence of obesity and overweight among healthcare workers in the Kingdom of Saudi Arabia (KSA). The primary research question focuses on determining the prevalence of these conditions within the healthcare workforce in KSA, utilizing a comprehensive search strategy adhering to PRISMA guidelines.*

Methods: *Electronic searches were conducted across PubMed, Embase, Scopus, and Web of Science databases using relevant keywords related to obesity, overweight, healthcare workers, and Saudi Arabia. All study designs reporting primary data on prevalence were considered eligible, with screening conducted by two independent reviewers. Data extraction was performed using a standardized form to capture study characteristics, demographics, and prevalence rates.*

Results: *From a total of 123 initial studies identified, 37 full-text articles were reviewed, resulting in the inclusion of one eligible study. Most studies focused on obesity prevalence in the general population or assessing healthcare workers' knowledge and attitudes toward obesity. The included study by Elabd et al. which revealed a concerning prevalence of obesity among healthcare workers in KSA, with 37.8% affected. Furthermore, their research highlighted significant implications of obesity, including reduced productivity and increased healthcare utilization among overweight and obese healthcare workers.*

Conclusion: *The findings underscore the need for targeted interventions to address the rising prevalence of obesity and overweight among healthcare workers in KSA. Strategies aimed at promoting healthier lifestyles and workplace environments are essential to mitigate the adverse effects of obesity on workforce productivity and healthcare utilization. Businesses and*

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healthcare organizations should prioritize initiatives to control and prevent obesity, ultimately fostering a healthier and more productive workforce.

Introduction

The prevalence of obesity, or excess body fat, has reached epidemic proportions in both industrialized and developing nations, making it a major public health problem [1]. Globally, about a third of the population struggles with obesity. More than 2.8 million deaths, 4% of YLL, and at least 35.8 million DALYs (Disability-Adjusted Life Years) occur as a result of obesity on a global scale [2]. Assuming these long-term tendencies persist, 38% of the global population will be overweight by 2030 and 20% will be obese [3]. Obesity is projected to impact 85 percent of American inhabitants by 2030, according to estimates [4].

Between 3% to 18% of young women and 5% to 14% of young men in Gulf countries are overweight or obese [5]. While information is limited from other Middle Eastern nations, there is strong evidence that obesity rates are on the increase. As an example, according to recent studies conducted in Kuwait, 36% of men and 48% of women were obese, while 77% of men and 74% of women were overweight. Despite this, 44% of Saudi women and 28% of Saudi men were determined to be overweight. Nevertheless, it was noted that 71% of women and 66% of men were overweight [6].

Some factors, whether environmental or genetic in nature, are more likely to influence body mass index (BMI). Some examples of such contextual variables are: degree of physical activity, gender, marital status, occupation, degree of education, food, and the presence or absence of co-morbidities such as diabetes, hypertension, heart disease, cancer, endocrine problems, etc. [7]. Rural regions in Saudi Arabia had an obesity rate of 4%. On the flip side, a sedentary lifestyle and increased consumption of fast food have contributed to an obesity rate of 14% in the Eastern area [Hail(34%), Riyadh(22%), and Jizan (12%)] [8]. When comparing the sexes, it was shown that severe obesity impacted more women than men [6, 9, 10, 11]. Particularly in Arab nations, income was a predictor of obesity [12]. When countries like Syria, Jordan, and Lebanon revealed alarmingly high rates of obesity among their uneducated populations, the need of education became abundantly obvious [13, 14]. Overweight and obesity were also more common among married adults [9,10,11, 15,16,17].

An increased risk of morbidity and death from non-communicable diseases (NCDs) is associated with obesity. Insulin resistance, which could cause decreased glucose tolerance [9], metabolic syndrome [18], and dyslipidemia [19], is a preventable and controllable risk factor. After taking age into account, the relative risk of developing diabetes in individuals with a body mass index (BMI) of 35 kg/m² or more was determined to be 60.9 [10]. According to the Framingham research, young persons who are overweight or obese have a relative risk of 1.46 for hypertension and a risk of 1.75 for obesity. In older adults, hypertension is predicted to have an impact, according to the Honolulu Heart Program and a Japanese survey [20, 21].

While 75% of teenagers who had asthmatic episodes were overweight or obese, obesity is also associated with an increased risk of ischemic stroke and obstructive sleep apnea. Obesity has been linked to a number of medical conditions, including GERD, cholelithiasis, osteoarthritis, cancer, mental illness, polycystic ovarian syndrome (PCOS) in women, and infertility and anaemia in men. There was a 20% lower likelihood of marriage, a worse probability of finishing school, a higher rate of family poverty, and lower incomes for obese women compared to non-overweight women [22]. Life expectancy was shown to be noticeably lower in obese adolescents compared to non-obese persons, according to Fontaine et al. [23]. Likewise,

compared to their non-obese counterparts, non-smoking obese men and females aged 40 had a life expectancy of 5.8 and 7.1 years, respectively, fewer.

In place of the overall body fat measure, the World Health Organization (WHO) has adopted the body mass index (BMI) scale for evaluating obesity. This scale is calculated by dividing the entire body weight in kilograms by the square of the height in meters [19]. As a result, a body mass index (BMI) of 30 kg/m² or more may be used to identify obesity. In those with a high obesity prevalence, it often corresponds with the portion of body fat [24]. The World Health Organization reports that a body mass index (BMI) of 25.0–29.9 indicates an elevated risk of co-morbidities, while a BMI of 30 or more indicates a moderate-severe risk.

Methods

Review Question:

This systematic review protocol focuses on investigating the prevalence of obesity and overweight among healthcare workers in the Kingdom of Saudi Arabia (KSA). The primary research question to be addressed is: What is the prevalence of obesity and overweight among healthcare workers in KSA?

Search Strategy:

The search strategy was developed in adherence to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Electronic searches were conducted in databases including PubMed, Embase, Scopus, and Web of Science. Medical Subject Headings (MeSH) terms and relevant keywords related to "obesity," "overweight," "healthcare workers," and "Saudi Arabia" were used. The search was limited to studies published in English or Arabic.

Types of Studies to be Included:

Studies eligible for inclusion in this systematic review encompass those reporting the prevalence of obesity and/or overweight among healthcare workers in KSA. All study designs were considered, including cross-sectional, cohort, and case-control studies. Only studies with primary data on prevalence were included, while reviews, editorials, and commentaries are excluded.

Participants:

The systematic review included studies involving healthcare workers in KSA. Healthcare workers encompass individuals employed in various healthcare settings, including hospitals, clinics, and other healthcare facilities. There were no restrictions based on age, gender, or specific healthcare profession.

Search Keywords:

Searches were conducted using a combination of keywords and phrases relevant to the review question, including "obesity," "overweight," "healthcare workers," "Saudi Arabia," and related terms. The search strategy was tailored to each database and included both controlled vocabulary (MeSH terms) and free-text terms.

Study Selection Process:

Two independent reviewers screened titles, abstracts, and full texts of retrieved articles for eligibility. Discrepancies were resolved through discussion or consultation with a third reviewer. Eligible studies were selected based on predefined inclusion and exclusion criteria, with a focus on studies reporting the prevalence of obesity and overweight among healthcare workers in KSA.

Outcomes:

The primary outcome of interest is the prevalence of obesity and overweight among healthcare workers in KSA. Secondary outcomes may include variations in prevalence based on demographic factors such as gender, age, occupation, and geographical location, as well as potential risk factors associated with obesity and overweight in this population.

Data Extraction and Coding:

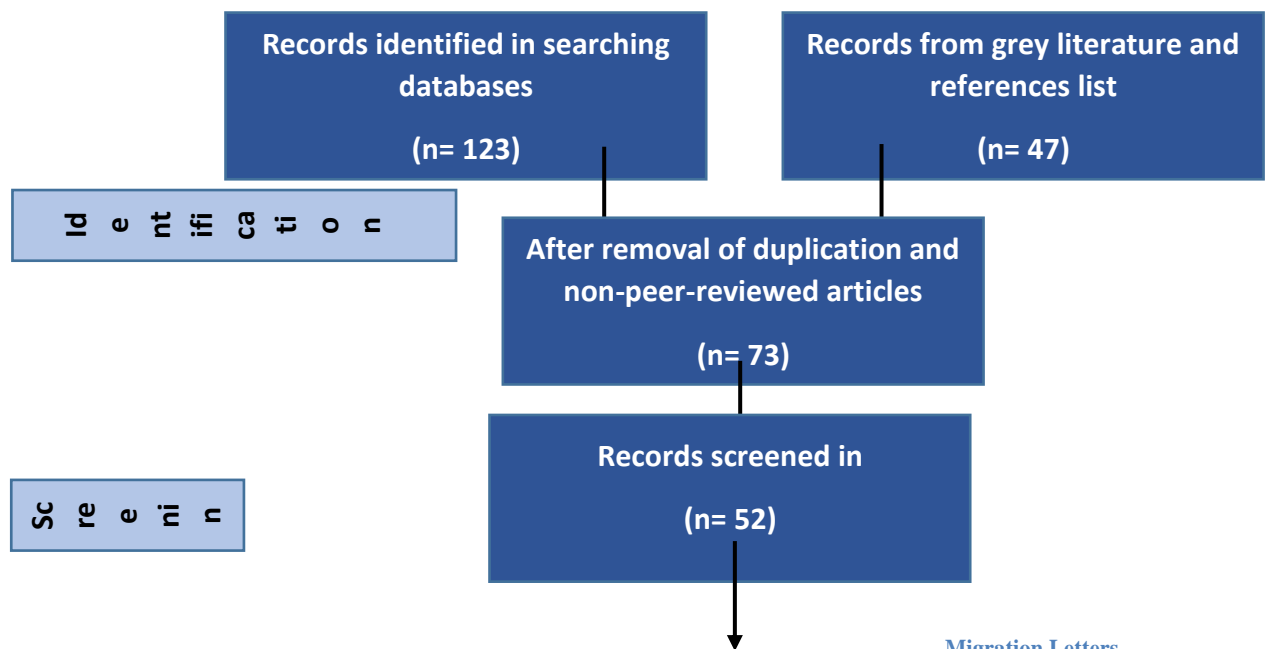
Data extraction was performed using a standardized form to capture relevant study characteristics, participant demographics, and prevalence data. Two reviewers independently extracted data from included studies, with discrepancies resolved through discussion or consultation with a third reviewer.

Data Management:

Descriptive statistics are used to summarize the extracted data, including prevalence rates of obesity and overweight among healthcare workers in KSA. A narrative synthesis is provided to summarize findings across included studies.

Results

The initial search identified a total of 123 studies from PubMed, Embase, Cochrane Library, and CINAHL. There were some duplicates and the 73 studies were screened based on their titles and abstracts. Of these, 37 full-text articles were reviewed, and only one study was eligible for inclusion in this systematic review (Figure 1).



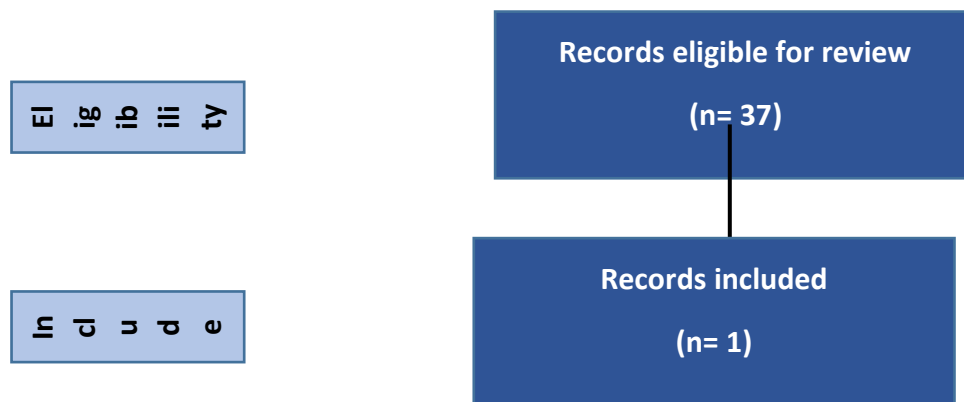


Figure 1: Flow chart of selection process

Most of the study found were aiming to determine the prevalence of obesity among general population or to assess healthcare workers' knowledge and attitude toward obesity. One study was found to assess obesity and overweight among healthcare workers in KSA [25]. The study findings revealed a concerning prevalence of obesity, with 37.8% of healthcare workers affected. Moreover, their research highlighted significant implications of obesity among healthcare workers, including lower productivity and increased healthcare utilization.

Elabd et al. [25] stated that compared to other nations, our hospital employs a younger workforce and has a higher percentage of obese personnel. Obesity rates among male and female workers were similar. Overweight and obesity rates within our workforce have risen substantially in recent years. Overweight and obese workers had more medical issues, more doctor's visits, more sick days, and more pharmaceutical prescriptions than their normal-weight counterparts. In conclusion, healthcare professionals who were overweight were less productive and used healthcare services more often. Consequently, businesses should look at the obesity rate in their company and come up with a variety of plans to control and avoid it so that workers may be healthier, more productive, and use less healthcare.

Discussion

As things are, the hospital staff in [25] has a greater obesity rate than their European counterparts, such as the United Kingdom. In 2021, Elabd et al. research showed that 36.8% of female workers and 38.7% of male employees were fat. About a quarter of nurses and fourteen percent of other medical workers in the United Kingdom were overweight, according to a recent survey [26]. However, compared to our hospital, research in the Middle East has shown a greater incidence of obesity; for instance, in the UAE, the percentage is 47.3% [27].

Obesity prevalence was 13.8% among females, 18.7% among males, 17% among Saudi workers, and 15.6% among non-Saudi employees across the average employment term of our sample (10.19 years, S.D. 6.433) [25]. Presently, Elabd et al. hospital's smoking rate was quite similar to that of other nations, such as the United Kingdom [28]. Twenty-five percent of the workers in our sample reported being physically active on the job. As part of their job, they were often required to perform some walking throughout the workday.

From January 1, 2021 to January 1, 2022, Elabd et al. compared the number of diagnosed obesity-related medical problems, the number of medications taken for these problems, and the number of sick leaves taken per employee. This allowed us to investigate how this rising obesity prevalence is affecting our healthcare organization [25]. Overweight and obese workers took more sick days than their leaner counterparts. Correlation coefficient 0.138, p-value 0.014) showed a connection between obesity and the amount of sick leaves, however this difference was not statistically significant (p-value of 0.054) [25].

In addition, Elabd et al. discovered that class 1 obese people, compared to overweight and class 2 obese people, were more likely to suffer from obesity-related medical complications including type 2 diabetes, hypertension, dyslipidemia, and cardiovascular atherosclerotic diseases. Obesity was also associated with a somewhat higher (but still not statistically significant) risk of hospitalization, diabetes, dyslipidemia, and osteoarthritis of the knees or spine, as well as a higher risk of prescription medication use for these conditions during the study's one-year duration. Medication dosages for workers who were overweight were double those for employees who were of a healthy weight. Obese workers may end up costing healthcare organizations more money than their normal-weight counterparts [25].

Both workers and businesses have long struggled with the effects of obesity on the job [26]. The employer's bottom line may benefit from fixing this problem, thus doing so is crucial. Healthcare institutions, such as our hospital, have a crucial responsibility to support their staff in leading healthier lives and maintaining a healthy weight. To begin, they can determine how much of an influence obesity has on their workers' well-being and productivity on the job. Then, they may implement strategies for creating healthy workplaces and have productive, sensitive conversations about obesity with their staff.

Many companies have begun to provide wellness programs to their workers in an effort to encourage them to adopt healthier eating habits and overall well-being. Initiating workplace weight management programs in collaboration with doctors, nurses, and nutritionists to promote healthy eating, regular exercise, and the cessation of harmful behaviors like smoking is one example. Having nutritious meal alternatives available in the hospital's cafeterias and vending machines. Giving employees frequent breaks to avoid long periods of sitting and encouraging them to use these breaks for some physical activity, offering discounted or free gym memberships to employees, and motivating staff to use the stairs instead of the elevator are all ways to encourage regular physical activity and exercise among employees. In an effort to promote more movement and less sitting, some companies have begun offering standing desks to their employees [25].

To the best of our knowledge, this is the only study in Saudi Arabia to examine the prevalence of obesity among healthcare workers, the health risks it poses to employees, and the financial toll it takes on employers through increased healthcare costs and sick days taken by overweight workers [25].

Conclusion

The systematic review process yielded a single eligible study out of 123 initially identified studies, emphasizing the scarcity of literature specifically addressing obesity among healthcare workers in KSA. Most studies identified were focused on assessing obesity prevalence in the general population or exploring healthcare workers' knowledge and attitudes toward obesity. The included study by Elabd et al. which revealed a troubling prevalence of obesity among healthcare workers, with 37.8% affected, underscoring significant implications such as reduced

productivity and increased healthcare utilization. Their findings also highlighted a concerning trend of rising overweight and obesity rates among healthcare workers in recent years. It was observed that overweight and obese workers experienced more medical issues, doctor's visits, sick days, and pharmaceutical prescriptions compared to their normal-weight counterparts. Therefore, addressing obesity within healthcare organizations is imperative to enhance workforce health, productivity, and reduce healthcare burden, warranting the implementation of comprehensive interventions to mitigate and prevent obesity among healthcare professionals.

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