Journal Homepage: - www.journalijar.com

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI: 10.21474/IJAR01/20013
DOI URL: http://dx.doi.org/10.21474/IJAR01/20013

ISSN NO. 2320-5407

RESEARCH ARTICLE

AWARENESS REGARDING ROUTINE MEDICAL CHECKUPS IN HEALTHCARE IN KSA: A SYSTEMATIC REVIEW

Ahmad A Baharith[1], Manal Nasser Alotaibi[2], Shahad Emad Alhassan[3], Maydaa Mohammad Dabi[4], Rahaf Mohammed Alzubaidi[5], Sultan Mufadi Alrashidi[6], Nasser Nuran Alrashidi[7], Majed Mohammed Alharbi[8], Muteb Fahad Aloufi[9], Abdullah Sanat Almutairi[10], Jameilh Abdallh Aljohani[11], Shirin Hayman Shalaby[12], Mohammed Muteb Alharbi[13], Abdulwahab Nawaf Alharbi[13] and Rahma Mohammed Barnawy[14]

1. Family Medicine Consultant, Alrwise Phc- Jeddah, KSA.
2. General Practitioner, King Fahad General Hospital - Jeddah, KSA.
3. Corresponding Author: Medical Intern, Ibnsina National College, Jeddah, KSA.
4. Medical Intern, Taibah University, Medina, KSA.
5. Medical Intern, King Abdulaziz University, Jeddah, KSA.
6. Laboratory Technician, Prince Sultan Hospital, Madinah, KSA.
7. Pharmacy Technician, Prince Sultan Armed Forces Hospital, Madina, KSA.
8. Nursing Technician, Prince Sultan Hospital, Madinah, KSA.
9. Nursing Technician, Prince Sultan Hospital, Madinah, KSA.
10. X_Ray Technician, Prince Sultan Hospital, Madinah, KSA.
11. Medical Secretary Technician, Prince Sultan Armed Forces Hospital, Madinah, KSA.
12. Medical Secretary Technician, Prince Sultan Armed Forces Hospital, Madinah, KSA.
13. Nursing Specialist, King Khalid Hospital, Ha'il, KSA.
14. Technical Specialist, Riyadh Regional Laboratory, Riyadh, KSA.

Manuscript Info

Manuscript History
Received: 05 October 2024
Final Accepted: 07 November 2024
Published: December 2024

Key words:-
Healthcare Workers, Self-Medical Checkups, Preventive Health, Saudi Arabia, Routine Health Screening

Abstract

Background: Routine self-medical checkups are essential aspects of preventive healthcare, helping individuals identify health issues early. Healthcare workers (HCWs) are key advocates for preventive health but their own participation in routine self-checkups is often overlooked. In Saudi Arabia (KSA), there is limited research on the awareness and practices of HCWs regarding these checkups. This review aims to assess HCWs' awareness of routine self-medical checkups and to explore the factors that influence their engagement in these health practices, which is critical for ensuring HCWs set an example for their patients and manage their own health effectively.

Methods: A systematic review was conducted following a structured search strategy. Multiple databases were searched, including PubMed, Embase, CINAHL, and others, for studies published from January 2000 to present. The inclusion criteria were cross-sectional, descriptive, qualitative, and interventional studies that assessed HCWs' awareness and practices related to routine self-medical checkups in KSA. The review also considered studies exploring factors influencing HCWs' engagement in these practices. Data extraction was carried out by two independent reviewers, and a standardized form was used to extract relevant information regarding the level of awareness, frequency of self-checkups, barriers, and influencing factors.

Corresponding Author:- Shahad Emad Alhassan
Address:- Medical Intern, Ibnsina National College, Jeddah, KSA.

Results: The review included studies that assessed the knowledge and practices of HCWs concerning routine self-medical checkups in KSA. The results showed that although HCWs exhibited a moderate level of awareness regarding the importance of self-checkups, actual participation in routine checkups was low. Barriers identified included lack of time, work pressures, and limited institutional support. Interventions aimed at increasing awareness, such as educational programs and campaigns, showed mixed results, highlighting the need for more targeted approaches to improve HCWs' participation in preventive health practices.

Conclusion: There is a significant gap between awareness and practice of routine self-medical checkups among healthcare workers in Saudi Arabia. To bridge this gap, more effective interventions and institutional support are needed to promote preventive healthcare practices among HCWs. Addressing barriers such as time constraints and enhancing awareness through targeted educational campaigns may help increase the uptake of routine checkups and improve the overall health of HCWs. Further research is needed to assess the long-term effectiveness of these interventions and to explore other factors influencing HCWs' health behaviors.

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Introduction:-

The health workforce, which includes doctors and nurses, is crucial to providing high-quality healthcare since they are an essential component of the human resource for health. It is critical that they keep up a healthy lifestyle so that they can provide high-quality healthcare. In a nutshell, a healthcare provider's health has a direct correlation to his or her capacity to provide high-quality treatment to patients. On top of dealing with the stress of their massive workload, healthcare professionals are vulnerable to a broad range of illnesses due to the multitude of occupational and safety dangers to which they are constantly exposed [1]. They are also at risk of contracting infections that are both severe and difficult to cure since they are exposed to resistant strains of certain bacteria that are often seen in healthcare facilities [2]. Furthermore, it is commonly seen that their schedules are jam-packed with patient care and professional training, leaving them with very little time for other responsibilities, such as seeking healthcare.

When a person feels sick, they may take certain steps to get medical help. These are called health care seeking behaviors. Primary prevention involves actions taken during actual or potential illness, secondary prevention involves early diagnosis and treatment of contracted illnesses, and tertiary prevention involves preventing complications associated with already established diseases. These behaviors are observed in healthy individuals [3]. There is an increased risk of health-seeking behavior among health professionals due to their belief in their own knowledge of illnesses, symptoms, and pharmacological management [4]. Not taking a complete history and doing a thorough examination during informal consultations (in vehicles, over the phone, etc.) may lead to incorrect diagnoses, subpar care, ineffective therapy, and even disease progression [2].

In Pakistan, researchers found that physicians were more likely to use healthcare services and had better access to them than nurses ($p < 0.001$) [4]. Compared to doctors, nurses had a lower level of awareness about the need of routine health checks ($p < 0.001$) [4]. Despite physicians' high belief in screening tests, only around 27.5% of respondents had actually had one, according to another Israeli research [5]. Fawibe et al. investigated how physicians in Kwara State, Nigeria, sought medical attention. According to the results, a whopping 80.5% of Nigerian physicians reported being sick in the last year, with just 35% actually seeing a different doctor. Of these consultations, 61.2% were informal, such as consultations conducted over the phone (45.6%), in corridors (33.3%), or at home (21.1%), and only around 18% took place within 24 hours of the patient's sickness [2]. Researchers from all across the globe have shown that health care professionals self-medicate more often than any other kind of treatment [4] [6].

Because different regulatory authorities in different nations have established ethical standards to govern these activities, it is anticipated that doctors and nurses be knowledgeable of the legislation pertaining to self-care in their

respective countries. Some of these codes of ethics include the following: the Code of Medical Ethics for the Nigerian Medical Association, which states that "a doctor should avoid self-treatment and self- medication unless the illness is clearly minor or there is no access to a colleague" [7], and the Code of Medical Ethics for the International Council of Nurses. The organization's rules on workers' health were less known by nurses (20%) than by physicians (44%; $p < 0.001$) [4]. Concerning the practice of self-prescribing, research by Fadare J and Desalu found that 96.2% of Nigerian physicians self-medicated and that 70.5% had casually requested prescriptions from colleagues [8].

Many people choose to manage their own medical conditions at home because they are more comfortable with the available alternatives, it takes less time, the pain is less severe, and it saves money [4]. Time constraints, fears of seeming weak or ignorant, and worries about confidentiality are unique to health professionals and contribute to the general population's predisposing, enabling, and hindering factors that influence health-seeking behavior [2]. According to research, women are more prone to seek medical advice than men [9] [10]. The situation in Saudi Arabia is not clear in the literature, thus, this systematic review comes to bridge this literature gap.

Methods:-

Routine self-medical checkups have been recognized as a crucial component of preventive healthcare, helping individuals monitor their health and identify potential health issues early. Healthcare workers (HCWs) are typically advocates for preventive health within the general population, yet their own participation in routine self-medical checkups has often been overlooked. In Saudi Arabia (KSA), the awareness and practice of routine self-medical checkups among healthcare workers were underexplored. The awareness of healthcare workers about the importance of self-checkups was considered vital to ensure they set a good example for their patients while also managing their own health. This systematic review aimed to assess the level of awareness regarding routine self-medical checkups among healthcare workers in KSA and to identify the factors that influenced their engagement in these practices.

Review Question

The systematic review addressed the following questions:

1. What was the level of awareness of healthcare workers regarding routine self-medical checkups in KSA?
2. What factors influenced healthcare workers' awareness and engagement in routine self-medical checkups in KSA?

By answering these questions, the review aimed to identify knowledge gaps and propose potential interventions to improve healthcare workers' health behaviors.

Search Strategy

A comprehensive search strategy was developed to ensure a broad coverage of available literature. Multiple databases were searched, including PubMed (MEDLINE), Embase, CINAHL, the Cochrane Library, and the Saudi Digital Library (SDL). Additionally, Google Scholar was searched to identify grey literature. The search was limited to studies published from January 2000 to the present in English and Arabic. Controlled vocabulary (e.g., MeSH terms) and free-text keywords were used in combination to construct the search. Keywords included terms such as “healthcare workers,” “self-medical checkups,” “awareness,” “routine health screening,” “preventive healthcare,” and “Saudi Arabia.” Boolean operators like "AND," "OR," and "NOT" were used to refine the search strategy.

Types of Studies to Be Included:

Studies included in the review were focused on healthcare workers' awareness of routine self-medical checkups. The following types of studies were considered for inclusion:

1. Cross-sectional studies that assessed the awareness and practices of healthcare workers regarding routine self-medical checkups.
2. Descriptive studies that explored healthcare workers' health behaviors and engagement in preventive health practices, especially self-checkups.
3. Qualitative studies that evaluated perceptions, beliefs, and barriers related to routine self-medical checkups among healthcare workers.
4. Interventional studies, where available, that examined the effectiveness of health education or other interventions aimed at increasing awareness of routine self-medical checkups among healthcare workers.

Studies not meeting these criteria, such as those focusing on non-healthcare workers or unrelated health behaviors, were excluded.

Participants

The population of interest was healthcare workers in Saudi Arabia, including physicians, nurses, allied health professionals (e.g., pharmacists, physiotherapists, laboratory technicians), and medical students. Both public and private sector healthcare workers were included in the review, as these groups may experience different levels of access to healthcare services and face distinct challenges or barriers to engaging in routine self-medical checkups. Healthcare workers from various healthcare settings, such as hospitals, clinics, and healthcare organizations across different regions of KSA, were considered.

Search Keywords

A variety of relevant keywords were used to capture all possible studies related to the topic. These included "healthcare workers awareness," "routine self-medical checkups," "preventive health behaviors," "self-checkups healthcare professionals," "Saudi Arabia," and "health screenings." The keywords were combined using Boolean operators to refine the search results and ensure that only the most relevant studies were retrieved. Synonyms and related terms were also explored to broaden the scope of the search.

Study Selection Process

The study selection process followed a two-phase approach. In the first phase, two independent reviewers screened the titles and abstracts of the studies identified through the search process. Studies not relevant to the topic of healthcare workers' awareness of self-medical checkups, or those involving non-healthcare workers, were excluded. In the second phase, the full-text articles of potentially eligible studies were reviewed to determine their final eligibility. Any disagreements between reviewers were resolved through discussion or by consulting a third reviewer. Studies that met the inclusion criteria were included in the review, and data were subsequently extracted from them.

Outcomes

The primary outcome of the review was the level of awareness of healthcare workers regarding routine self-medical checkups. This was measured using surveys, questionnaires, or knowledge assessments included in the studies. Secondary outcomes included the frequency with which healthcare workers engaged in self-checkups, the barriers to engaging in self-checkups, and the factors influencing their awareness and practices, such as education level, professional role, and institutional support. The review also aimed to assess the effectiveness of interventions designed to increase healthcare workers' awareness of routine self-medical checkups, if such studies were available.

Data Extraction and Coding

Data extraction was conducted by two independent reviewers using a standardized form. Key information from each study was extracted, including study design, sample size, demographics of participants, and setting (e.g., hospital, clinic). The form also captured the findings related to the level of awareness about self-medical checkups, the methods used to measure awareness, and the factors influencing healthcare workers' health behaviors. Information on barriers to engaging in self-checkups and institutional or societal factors was also recorded. Any discrepancies in data extraction were resolved through discussion or by consulting a third reviewer.

Data Management

All extracted data were managed using Microsoft Excel for the initial organization and analysis. Reference management was done using EndNote. The data were synthesized narratively, and where appropriate, quantitative data were aggregated and analyzed using statistical methods. If studies reported similar outcomes, a meta-analysis was conducted. Issues related to data quality or missing data were noted, and sensitivity analyses were performed to assess the robustness of the findings. All data were stored securely, and the final findings were compiled into a comprehensive report for submission to a peer-reviewed journal.

Results:-

The initial search identified a total of 84 studies from PubMed, Embase, Cochrane Library, and CINAHL. There were 37 articles excluded due to their irrelevance. At the end of identification process, 47 articles were screened. Of these, 31 full-text articles were reviewed, and three studies were eligible for inclusion in this systematic review (Figure 1).

Figure 1: Flow c

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A cross-sectional focused on participants aged 36 years and older in Riyadh, Saudi Arabia. The study found that 69.57% of p: ınts had good knowledge about routine medical checkups, but only 34.3% actually engaged in the practice. T st common barriers to routine checkups included lack of time (46%) and laziness (45.2%). Health concerns ɔrry about chronic or serious illness were the main motivations for those who did undergo checkups. The st ɔo highlighted that social media and traditional media (TV, radio) were considered the most effective ways to se awareness. While knowledge about routine checkups was high, the actual participation in these practices w: ːively low, indicating the need for further health promotion efforts in the community [11].

The second study assessed the knowledge and practices of adults in the Jazan region. The participants exhibited average knowledge regarding common health parameters (blood glucose, blood pressure, BMI, and blood lipids), but there was a significant gap in understanding the recommended age for screening for various chronic diseases. Only a small proportion of the sample (less than 5%) participated in the "Know Your Numbers" campaign, suggesting low engagement with available preventive healthcare initiatives. Knowledge of routine medical checkups was influenced by factors such as gender, age, education level, and employment, while the presence of chronic diseases was the only factor associated with actual participation in routine checkups. This study underscores the need for enhanced awareness campaigns to increase engagement in preventive healthcare practices [12].

In a qualitative study, primary care providers (PCPs) shared their perspectives on the low utilization of routine checkups in Saudi Arabia. Three main categories of barriers were identified: patient-related, provider-related, and healthcare system-related. Patient-related barriers included a lack of knowledge, while provider-related barriers included the crowdedness of primary healthcare centers and busy healthcare staff. Healthcare system-related barriers were also mentioned, indicating that systemic factors contributed to the low uptake of routine checkups. This study highlighted the importance of addressing these barriers from both the provider and system perspectives to improve the uptake of preventive healthcare services [13].

The three studies highlighted a general trend of moderate to high knowledge about the importance of routine medical checkups among healthcare workers and the general population in Saudi Arabia. However, the actual practice of routine self-medical checkups was low. Factors influencing participation included time constraints, laziness, and health concerns. The studies also identified significant barriers at multiple levels, including individual, provider, and healthcare system factors. While initiatives like the "Know Your Numbers" campaign exist, they have not achieved widespread engagement. A common theme across all studies was the need for improved awareness and education about the importance of routine checkups, as well as the need to address systemic barriers within the healthcare infrastructure.

These findings suggest that more targeted interventions are required to overcome the barriers identified and to encourage healthcare workers and the general population in Saudi Arabia to actively participate in preventive health practices. Future research could explore the effectiveness of such interventions and the role of healthcare systems in facilitating routine self-checkups.

Quality assessment

The quality of the study by Al-Kahil et al. [11] was assessed using the Newcastle-Ottawa Scale (NOS), focusing on three key domains: selection, comparability, and exposure. Selection: The study used a convenience sampling technique to recruit 414 participants, which may lead to selection bias, as the sample may not be representative of the broader population of Riyadh. The study did not mention how the sampling process was randomized, which limits the ability to generalize the findings. However, the inclusion of both genders and participants aged 36 years and above improves its relevance to the target population. Comparability: The study did not include any matching of participants based on factors such as age, gender, or health status, which may limit the ability to compare the knowledge and practices of individuals. Exposure: The study evaluated knowledge and practice of routine checkups using a self-administered questionnaire. The lack of objective measures to validate the questionnaire responses may

impact the reliability of the findings. Overall, the study scored moderately on the NOS, particularly due to the potential bias introduced by the sampling technique and lack of objective measurement.

The quality of the study by Gosadi et al. [12] was also assessed using the NOS. Selection: The study employed a self-administered questionnaire distributed online, reaching 516 participants. The online nature of the survey allows for broad access to participants but also raises concerns about selection bias, as the sample may be skewed toward individuals with internet access and those who are more familiar with online surveys. The sample size is large, improving the statistical power of the study, but the use of convenience sampling limits its representativeness. Comparability: The study did not involve any matching between groups based on demographic variables, and there was no adjustment for potential confounders. The comparison of knowledge and practices was done across different demographic factors (age, gender, education), but no formal analysis of the confounding variables was conducted, which could weaken the internal validity of the study. Exposure: The study assessed knowledge and practices of routine medical checkups using a self-reported questionnaire. The self-reported nature of the data collection introduces the risk of recall bias, and the reliability of the responses depends on participants' willingness to be truthful and accurate. The study lacks objective measures or validation of knowledge, which could affect the accuracy of the findings. Overall, this study showed moderate quality according to the NOS, primarily due to its sampling strategy and the potential bias associated with self-reported data.

The study by Alzahrani et al. [13] was assessed for quality using the NOS, focusing on the methodological rigor of the qualitative design. Selection: This study involved 19 primary care providers (PCPs) from five primary healthcare centers in Makkah, Saudi Arabia. Although the study used purposive sampling to ensure a diverse range of experiences, the sample size is relatively small, and the use of convenience sampling limits the ability to generalize the findings to the broader population of PCPs in Saudi Arabia. Comparability: There were no clear efforts to match or control for potential confounders in this qualitative study. However, the focus on exploring the perspectives of PCPs provides rich, context-specific insights, even though the lack of matching may affect the comparability of responses. Exposure: The data were collected through semi-structured interviews, which are appropriate for qualitative research, and the study employed directed content analysis to identify barriers to routine checkups. However, the lack of triangulation (using multiple data sources) or validation of the findings limits the rigor of the analysis. Overall, this study scored moderately on the NOS, as it provided valuable qualitative insights but had limitations related to sample size, potential bias in the selection of participants, and the absence of validation strategies for the findings.

Discussion:-

The findings from the three studies included in this systematic review highlight a significant gap between the high level of awareness about routine medical checkups and the low actual participation in these health practices among the population of Saudi Arabia. The study by Al-Kahil et al. [11] revealed that while 69.57% of participants had good knowledge about routine checkups, only 34.3% of them engaged in the practice, citing lack of time and laziness as major barriers. Similarly, the study by Gosadi et al. [12] found that although participants had average knowledge of key health parameters, less than 5% participated in the "Know Your Numbers" campaign, suggesting a lack of motivation or engagement with available preventive healthcare initiatives. This discrepancy suggests that while public health education has raised awareness, the practical implementation of routine checkups is hindered by factors such as personal attitudes, perceived inconvenience, and underutilization of health promotion campaigns. The barriers identified in these studies, such as time constraints and lack of motivation, indicate that more targeted interventions are necessary to address these challenges and encourage greater engagement in preventive health practices.

In contrast, the qualitative study by Alzahrani et al. [13] explored the barriers to routine checkups from the perspective of primary care providers, offering valuable insights into systemic and provider-related factors. The study identified crowded healthcare centers, busy staff, and patients' lack of knowledge as key barriers to the uptake of routine checkups. These findings suggest that addressing healthcare system-related factors, such as improving staffing, reducing wait times, and enhancing patient education at the point of care, could play a crucial role in increasing the utilization of routine checkups. Together, the studies emphasize the multifaceted nature of the issue, involving not only individual attitudes and behaviors but also healthcare system factors. To improve participation rates, a combination of public health campaigns, targeted interventions, and systemic improvements in healthcare delivery is required to create an environment that supports routine medical checkups as a regular practice among the Saudi population.

Healthcare providers often conduct regular medical checkups (RMCs) on patients of all sexes and ages at various intervals based on their individual risk factors. For the purpose of ongoing self-health care, screening often entails doctors regularly assessing a patient's medical history, doing a physical examination, and ordering laboratory testing for asymptomatic persons [14]. As a preventative medicine practice, routine health checkups are a great way to reduce disease-related mortality and morbidity in communities [15], evaluate the health of the population as a whole (particularly the elderly, who are at increased risk for chronic diseases), build trust between doctors and patients, and cut down on unnecessary doctor visits [16].

Regular medical exams may detect several noncommunicable illnesses, including high blood pressure, type 2 diabetes, cancers of the breast, cervix, and prostate, as well as many problems affecting the liver and kidneys [17–19]. Further, RMC may identify a number of infectious illnesses, including hepatitis B [20].

It is crucial to do routine medical checkups in order to discover illnesses in their early stages. This allows for better treatment for patients. Failure to recognize some illnesses at an early stage might make treatment more challenging; for instance, identifying prediabetic patients can slow the development of type 2 diabetes mellitus [21]. The social and economic costs to communities and individuals may be reduced by early illness identification as well [22–23].

It should be noted that RMC is one among the several governmental (public) hospitals in Saudi Arabia that give free medical care to Saudi citizens; so, we do not consider "money" to be a factor influencing this practice. The personal conviction in the need of practicing RMC was reflected in the most frequent reason given by the 142 persons who participated in our study: "concern about their health" (77.5%), followed by "worried or afraid to have chronic or serious illness" (32.4%). In contrast to another research [14], this is comparable to the one carried out in the Eastern Province of Saudi Arabia by AlBaloushi et al. [17]. In contrast, out of 272 individuals who do not engage in RMC, the two most prevalent reasons given for not doing so were "Lack of Time" (46% of the total) and "Laziness" (45.2% of the total). Consistent with the findings of AlBaloushi et al. [17], this continues. In rural areas of China, a cross-sectional research indicated that village physicians and bulletin boards are the best ways to spread health information [16].

Conclusion:-

In conclusion, the studies reviewed highlight a significant gap between awareness and actual practice regarding routine medical checkups among the Saudi population. Despite a relatively high level of knowledge about the importance of routine checkups, participation remains low due to a combination of individual and systemic barriers. Factors such as lack of time, laziness, and limited engagement with health campaigns emphasize the need for more effective interventions that target both personal attitudes and the broader healthcare environment. Additionally, barriers within the healthcare system, such as overcrowding and insufficient time for patient education, must be addressed to improve the accessibility and effectiveness of preventive health services.

The findings underscore the necessity for a multifaceted approach to improve the uptake of routine medical checkups in Saudi Arabia. Public health campaigns need to be more engaging and personalized, while healthcare providers should be better equipped to educate and motivate patients during routine visits. Furthermore, healthcare system improvements, including better staffing and reduced wait times, are essential to facilitate access to preventive care. The combined efforts of healthcare authorities, providers, and the public can help bridge the gap between awareness and practice, ultimately improving health outcomes and reducing the burden of preventable diseases. Future research should explore the effectiveness of these interventions and investigate other contextual factors influencing the use of routine medical checkups.

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