

Developing Tailored Interventions to Promote Healthy Lifestyles in the Military Personnel: A Study Protocol

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Abstract

Introduction: Military personnel are expected to maintain optimal health to carry out their duties effectively. Therefore, promoting a health-enhancing lifestyle among military personnel is crucial. This study aims to provide a protocol for designing a tailored intervention to promote a healthy lifestyle among military personnel.

Methods: This study will be conducted in several stages, including a scoping review, a qualitative study, the development of a conceptual framework for a health-promoting lifestyle among military personnel, the development and validation of a questionnaire based on the conceptual framework, a cross-sectional study to assess the current status of a health-promoting lifestyle among military personnel and its influencing factors, and the development of the structure and content of a tailored intervention based on the collected data.

Conclusion: This study contributes to the body of knowledge on promoting a healthy lifestyle among military personnel. The results of this study have the potential to have a significant impact on military health policies and programs. By providing comprehensive evidence on the factors influencing a health-promoting lifestyle among military personnel, decision-makers and policymakers will be equipped with the knowledge to develop tailored interventions and allocate resources effectively.

Keywords: Lifestyle, Health Promotion, Military Personnel, Study Protocol.

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Introduction

Nowadays, the promotion of a healthy lifestyle has garnered increasing attention. It is one of the goals of the World Health Organization (WHO) to foster a healthy lifestyle within different communities ¹. A healthy lifestyle is a valuable asset in reducing the occurrence of diseases, as well as their associated complications and fatalities. It serves as a means to enhance the quality of life and an effective strategy for managing healthcare costs ². For instance, a significant proportion of cardiovascular diseases (65-80%), type 2 diabetes (75-90%), and certain cancers (20-30%) can be attributed to the adoption of an unhealthy lifestyle, that should be

modified as maintaining a nutritious diet, engaging in regular and sufficient physical activity, and refraining from smoking³.

Evidences indicate that lifestyle-related diseases account for 40% -70% of mortality in developed countries and 50%-80% of mortality in developing countries⁴. Additionally, the studies show that over 70% of chronic diseases, including obesity, cardiovascular diseases, diabetes, cancer, and osteoporosis, are linked to lifestyle factors that may be prevented by appropriate lifestyle modifications⁵. Non-communicable diseases, often referred to as lifestyle diseases, cause approximately 40

million deaths annually, accounting for about 70 percent of total global deaths⁶. These diseases are chronic and closely associated with lifestyle choices.

In light of these findings, several studies conducted in different populations revealed that more than 50% of individuals' quality of life and health depend on their lifestyle and personal behavior⁷⁻⁹. However, healthcare investments have predominantly focused on disease diagnosis and treatment, overlooking the significant potential for prevention through lifestyle planning and interventions¹⁰.

Military personnel constitute a unique population with specific characteristics, and their health has been a concern in various countries. They face various challenges, including separation from family, exposure to war, marital instability, mental health issues, and housing-related problems, along with other lifestyle-related issues specific to military personnel¹¹. While it is expected that military personnel generally have better health and lifestyle compared to the general population, there are instances where their health status and overall lifestyle can be affected, thereby potentially impacting their performance and duties. For instance, studies have estimated the prevalence of high blood pressure among military personnel to be around 13 to 18 percent¹². A study conducted in the United States reported that 39.6%, 24.5%, and 51.2% of military personnel engaged in alcohol consumption, smoking, and were overweight/obese, respectively¹³. The US Department of Defense spends a considerable budget annually to cover medical care related to obesity, alcohol consumption, and tobacco use¹⁴. Promoting healthy behaviors has been a priority within the US Army for many years, and since 1986, the US Department of Defense has emphasized health promotion and disease prevention, providing goals and guidelines for a healthy lifestyle among military personnel¹³.

Findings from a study conducted in Jordan revealed that 36% and 16.8% of military personnel were overweight and obese, respectively¹⁵. Similarly, a study conducted among Iranian military personnel indicated an increased prevalence of diseases such as obesity, diabetes, high blood pressure, heart attacks, and gastrointestinal diseases due to lifestyle-related factors¹⁶. Evidence demonstrates a high prevalence of overweight and obesity among Iranian military personnel, with respective rates of 41% and 13%¹⁷.

The health and efficiency of military personnel are directly linked to national security, as the preservation of a country's security relies on the well-being of its

military forces. The high prevalence of sedentary lifestyles¹⁸, smoking¹⁹, stress²⁰, high blood pressure²¹, overweight and obesity, and elevated cholesterol²² among military personnel underscores the need for greater attention to their lifestyle. Evidence indicates that military personnel with chronic conditions and diseases are four times more likely to experience a decline in productivity²³. Therefore, military personnel must strive for optimal health to fulfill their responsibilities and missions effectively. Consequently, the promotion of a health-enhancing lifestyle among military personnel is of utmost importance. With this in mind, the present study aims to propose a protocol for designing a tailored intervention to promote a health-enhancing lifestyle among military personnel.

Method

This article outlines the various stages and components involved in designing a tailored intervention to promote a healthy lifestyle among military personnel. To develop a tailored intervention, the following stages will be undertaken: a scoping review, a qualitative study, development of a conceptual framework for a health-promoting lifestyle among military personnel, creation and validation of a questionnaire based on the conceptual framework, implementation of a cross-sectional study to assess the current status of a health-promoting lifestyle among military personnel and its influencing factors, and finally, based on the data collected in the preceding stages, the structure and content of a tailored intervention to promote a health-enhancing lifestyle among military personnel would be presented (Figure 1).

Scoping Review

The scoping review may be conducted following a five-stage framework designed for doing scoping review²⁴ since it may provide a comprehensive approach based on previous experiences to conduct scoping reviews. This framework provides structured and precise guidelines for the design, conduct, and reporting of the scoping review. The stages of this guideline include: identifying the research question, identifying relevant studies, selecting studies, extracting and tabulating the data, and summarizing and reporting the findings.

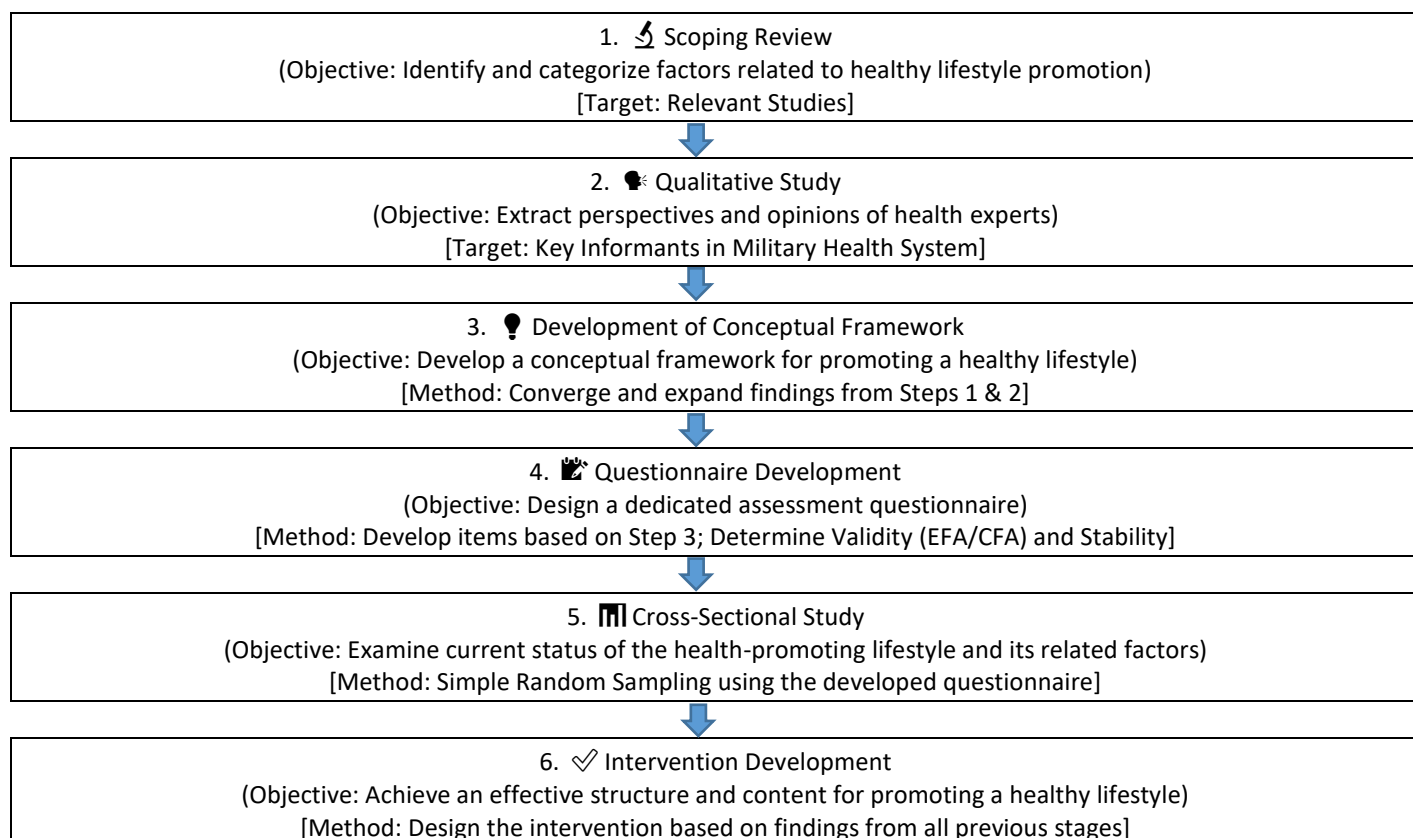


Figure 1. Process of developing an intervention program to promote healthy lifestyle among military people.

The objective of this review study is to identify and categorize the factors that influence the promotion of a healthy lifestyle among military personnel. The review study is expected to provide the research team with evidence to develop an initial framework for promoting a health-enhancing lifestyle among military personnel. The findings also would be helpful to ask relevant questions in the qualitative study. Additionally, the aim is to determine the structure and preliminary content for designing interventions. Therefore, the research questions for the review study are as follows: What are the factors that influence the promotion of a health-enhancing lifestyle among military personnel? What types of interventions have been employed to promote a health-enhancing lifestyle among military personnel?

The research team intends to conduct a comprehensive scoping review. Therefore, a comprehensive search strategy will be developed. Relevant studies will be identified by searching electronic English-language sources such as Web of Science, PubMed, Scopus, and Google Scholar, as well as Persian-language electronic sources such as SID, Magiran, IranDoc, and IranMedex. Additionally, the reference lists of selected articles will be manually reviewed. Keywords such as lifestyle, healthy lifestyle, health-promoting

lifestyle, health-promoting behaviors, healthy behaviors, military personnel, and their equivalents will be combined using appropriate combinations of the AND/ OR operators to conduct the search and identify relevant studies.

The selection of articles for entry into the study will be based on specific inclusion and exclusion criteria. The following criteria could be used for inclusion: articles published from 2000 to current date (to have a comprehensive yet not outdated literature review), articles targeting military personnel as the study population, articles published in Persian, and articles published in English with full-text accessibility. Quantitative and qualitative studies addressing health-promoting lifestyle among military personnel will also be included. Review articles and editorials will be excluded from the study. Additionally, articles without full-text access or only having a published abstract will be excluded. After the search for relevant articles, all eligible articles will be imported into the EndNote software, and duplicates will be removed. Two members of the research team will independently review the titles and abstracts of the articles based on the inclusion and exclusion criteria and remove studies that do not align with the objectives of the review study. Subsequently, the full text of the articles

will be screened by two researchers. Any disagreements or uncertainties will be resolved with the assistance of the corresponding authors of the articles.

Once eligible articles are selected, data extraction will be conducted based on the following criteria: article author, year of publication, study objective and type, sample size, and study population, study execution details, and a summary of the key findings relevant to the research questions. The obtained findings will then be categorized and reported in the form of a table. The PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews) Checklist ²⁵ will be utilized for reporting the findings of the conceptual review.

Qualitative study

In the qualitative study, we aim to extract and elucidate the perspectives and opinions of experts on the military health system. The qualitative study will be guided by the conducted content analysis. To collect qualitative data, individual in-depth interviews will be conducted. The interviews will be guided by the Hsieh and Shannon content analysis approach ²⁶ and will begin with a general question asking participants to evaluate the status of the health-promoting lifestyle among military personnel. Those who have education, expertise, and experience related to the health of military personnel will be interviewed.

The interviews will be conducted based on semi-structured questions related to the concepts and factors derived from the scoping review, and they will continue until data saturation is reached. We believe that saturation may be reached after conducting 15-30 interviews. The following semi-structured questions will be initially considered for the qualitative interviews: How do you evaluate the status of the lifestyle among military personnel? Which factors are effective in promoting a healthy lifestyle among military personnel? What actions can be taken to promote a health-promoting lifestyle among military personnel? However, additional questions related to the concepts and factors derived from the scoping review will be added to these questions.

To collect qualitative data and conduct individual interviews, necessary coordination will be made with relevant institutions, and their support will be sought for the research. The interviews will be conducted with prior coordination and, if possible, in person. However, if face-to-face interviews are not feasible, arrangements will be made with the interviewees, and the interviews will be conducted over the phone. At the beginning of each interview session, the study objectives will be fully explained to the interviewees, and they will be assured

that their participation in the study is voluntary, and their information will remain completely confidential. Their opinions, perspectives, and quotations will be reported with a code.

At the start of each interview, the interviewees will be asked for consent to record the conversations. If they agree, the conversations will be recorded; otherwise, all conversations will be noted down in writing. The basis for collecting qualitative data is to obtain rich data and achieve saturation in data collection. After the sessions are completed, the recorded conversations will be transcribed and prepared for analysis. The collected data will be analyzed using MAXQDA software and based on the five-step framework analysis ²⁷. This method consists of the five stages including familiarization: the researchers will immerse themselves in the data, reading and re-reading the interviews to become familiar with the content; identifying a thematic framework: the researchers will identify key themes and concepts emerging from the data, creating a thematic framework; indexing: the data will be indexed according to the thematic framework, organizing it into meaningful segments; charting: the indexed data will be charted systematically, creating matrices or tables to analyze patterns and connections; mapping and interpretation: the researchers will interpret the data, mapping relationships between themes and providing a comprehensive analysis.

Through this rigorous analysis process, the qualitative data will be systematically analyzed, enabling a deeper understanding of the factors influencing the promotion of a healthy lifestyle among military personnel.

A conceptual framework for a health-promoting lifestyle among military personnel

The conceptual framework will be developed by integrating data from the scoping review and qualitative study. Integration aims to examine the convergence, expansion, and complementarity of the findings from these two sources. Convergence involves assessing whether the results from the scoping review and qualitative study provide similar responses to similar questions. For example, are the qualitative interview data consistent with the findings from the scoping review regarding the factors influencing a health-promoting lifestyle among military personnel? Expansion involves identifying unexpected findings within one set of data that can be explained or further elucidated by data from another study. For instance, are there any findings from the scoping review that can be expanded upon or better understood with the help of qualitative data? Complementarity refers to the integration of qualitative data into the scoping review data that aims to contribute

to the overall understanding of the study's key findings. This step assesses whether the incorporation of qualitative data enhances and complements the insights gained from the scoping review.

By integrating the findings from the scoping review and qualitative study, the compatibility and discrepancy between the two sets of data will be evaluated. This process will help identifying the concepts and factors that are strongly correlated with a health-promoting lifestyle among military personnel.

Development and Psychometrics of a Questionnaire

A questionnaire will be developed based on the data collected from the scoping review, qualitative study, and the conceptual framework of a health-promoting lifestyle among military personnel. Draft items for measuring the factors influencing a health-promoting lifestyle will be formulated, taking into account the results of the previous stages and the conceptual framework. Face validity will be assessed using both quantitative and qualitative methods. In the qualitative face validity assessment, the difficulty level, appropriateness, and clarity of the items will be examined and revised if necessary. Following the qualitative assessment, a quantitative approach will be used to evaluate the impact of each item on item reduction and determine the importance of each item.

Content validity will also be assessed using both qualitative and quantitative methods. The qualitative assessment will focus on language clarity, appropriate word choice, item placement, and scoring. For the quantitative assessment, experts in the relevant field will be asked to rate the questions to measure the content validity index and content validity ratio.

Once the face and content validity are confirmed, the questionnaire will be administered to a sample about of 300 individuals from the target group to assess its structural validity. This sample size is considered sufficient for exploratory factor analysis and confirmatory factor analysis, based on credible sources. Necessary coordination will be made with relevant military authorities to ensure the completion of the questionnaire. If feasible, an electronic version of the questionnaire will be provided, along with a link for responding to the questions. Alternatively, a printed version of the questionnaire and a written consent form will be provided to the military personnel for completion.

To assess the reliability of the questionnaire, internal consistency and stability will be evaluated. Internal consistency will be measured using Cronbach's alpha coefficient. To determine the stability of the instrument, the questionnaire will be completed by a subgroup of 30 individuals from the target group twice, at

a two-week interval. The scores obtained in these two stages will be compared using the intra-class correlation coefficient.

By conducting these psychometric assessments, the questionnaire will be validated for its reliability and validity in measuring the factors influencing a health-promoting lifestyle among military personnel.

Cross-Sectional Study and Designing the Intervention

In this stage, status of the military personnel's lifestyle will be assessed. The developed questionnaire will be administered to military personnel who express their willingness to participate by completing and signing a consent form. The sample size for the study will be determined using an appropriate formula such as those proposed by Wang & Ji, in 2020. According to this reference a power of 0.8 with 95% confidence interval would be appropriate ²⁸. After determining the required sample size, the researcher will visit selected military centers and collect data preferably using probability sampling methods like simple random sampling. This method of sampling may increase the chance of generalizability of findings because all people may have an equal chance for inclusion. If we want to increase the generalizability further, we may choose even the military centers by simple random sampling from the available military centers. For this, first a number should be assigned for any military center and then using a random table or random number generator, the sample military centers may be selected. Within the selected military centers also by assigning a unique number to all people working in the centers we may choose them randomly. However, it would be an ideal form of recruiting the sample, and regarding the regulations, dispersion of the population and limited access to military population we may have to modify our sampling based on the conditions. Data analysis will be conducted using SPSS software. First, the normality of the data will be assessed, and then appropriate parametric or non-parametric statistical tests will be used based on the distribution of the data.

After completing the data analysis, the findings from the qualitative study, scoping review, and cross-sectional study will be used to design the structure and content of a tailored intervention aimed at promoting a healthy lifestyle among military personnel. The intervention will be designed to address the specific needs and challenges identified through the research process. The conceptual framework obtained through scoping review and qualitative study may be used as a guideline to progress across the intervention. However, we may use other well-designed theoretical frameworks such as

PRECEDE–PROCEED model or the Trans-theoretical model to develop the conceptual model or utilize them individually to perform a theory/model based intervention. This will help us to have a step-by-step guideline to progress as organized and accurately. We believe to conduct such an intervention, at least one month for implementation of the intervention, six months for follow-up, and evaluation tools such as self-report behavioral questionnaires, alongside objective criteria such as measuring blood pressure and laboratory tests (e.g., serum lipid profile, and blood glucose level) are required.

Discussion

High prevalence of lifestyle-related risk factors and conditions among military personnel underscores the importance of addressing these issues to improve their overall health. By focusing on lifestyle modifications significant improvements can be made in the health status and performance of military personnel. Indeed, the results from proposed protocol provide valuable insights into the factors influencing a health-promoting lifestyle among military personnel. These findings can serve as a foundation for designing tailored interventions that take into account the unique challenges and needs of this population.

In fact, utilizing a systematic six-step approach in this study protocol was considered to ensuring a comprehensive and evidence-based intervention program to promote healthy lifestyle behaviors among the target group. By starting the process with a scoping review, we were able to gather existing knowledge and identify gaps in the literature regarding interventions targeting this specific population. This foundation allowed us to move forward with confidence in the subsequent steps. Using scoping review to find any gaps in the literature for developing new strategies and conceptual frameworks have been recommended by several authors^{29,30}.

The qualitative study provides valuable insights into the perspectives and experiences of experts in the military health system, shedding light on the contextual factors and individual perspectives that influence health-promoting behaviors. This qualitative data adds depth and richness to the overall understanding of health-promoting lifestyles among military personnel. Moreover, the experts' perspectives not only informed the development of our conceptual framework but also ensured that the intervention program was tailored to the specific needs and circumstances of military personnel. Indeed, qualitative studies as indicated in prior evidence may serve as a basis to develop a conceptual framework based on professional viewpoints from localized experts who

may address many issues that might be ignored by previous researchers³¹.

The drawing a robust conceptual framework may be served as a road map for guiding the subsequent stages of questionnaire development, cross-sectional study, and intervention development³². This framework integrated insights from the scoping review, qualitative study, and existing theoretical models, ensuring a holistic and multifaceted approach to promoting healthy lifestyle behaviors among military individuals. The conceptual framework may also be considered a bridge between the theoretical basis of the process and the practical section of this protocol that may include steps such as developing the scale for measurement and applying it in a cross-sectional study to find better strategies to design improved and evidence-based interventions³³.

Furthermore, development and validation of a questionnaire specific to assessing a health-promoting lifestyle among military personnel will further enhance the ability to measure and monitor the impact of interventions³⁴. The cross-sectional study provides a snapshot of the current status of the lifestyle of military personnel, allowing for a better understanding of the prevalence of risk factors and identifying areas that require targeted interventions. The implementation of a cross-sectional study using this specific scale allowed us to assess the current prevalence of unhealthy lifestyle behaviors within the military population, providing baseline data for evaluating the effectiveness of the intervention program. By establishing a clear understanding of the factors contributing to unhealthy behaviors, we were better equipped to design targeted interventions that address the specific needs of military personnel³⁵.

Overall, the comprehensive approach used in this study is a significant strength, as it acknowledges the complexity and interconnectedness of factors influencing a health-promoting lifestyle among military personnel. By integrating findings from scoping review and qualitative studies, a comprehensive understanding of the behavioral and non-behavioral factors, as well as the background factors, will be achieved. This holistic perspective will contribute to the development of a robust conceptual framework that captures the multidimensional nature of a health-promoting lifestyle among military personnel.

Designing and validation of an exclusive questionnaire based on the conceptual framework is another strength of this study. The questionnaire will provide a standardized and reliable tool for assessing the current status of health-promoting lifestyles among military personnel.

Limitations of the proposed protocol

Although we believe this protocol would be helpful to direct researchers based on a step-by-step approach to develop well-designed interventions to promote healthy lifestyle in this population, there are some limitations in this approach that should be noted. First, there is some concerns regarding the generalizability of the findings. In fact, the findings may not be fully generalizable to all military people due to likely differences in demographic characteristics, cultures, training requirements, and deployment conditions in different military units or branches. Second, reliance on the self-reported data such as dietary habits, exercise plans. And health related behaviors This data may be susceptible to inaccuracies, biases and social desirability impacts that may unexpectedly affect the validity and reliability of data yielded from intervention program. Third, there may be some difficulties in accessing the military samples. Indeed, recruiting samples from military setting may include some challenges such as confidentiality issues, compliance with military rules, and readiness of people to participate in the program that also may decline the representativeness of the sample and the study generalizability. Finally, constraints in time and resources to develop an intervention using such protocol should be considered, and it is needed to ensure adequate findings and human resources on the ground to use such an approach before commencing the process.

Conclusion

In conclusion, this protocol may provide a comprehensive framework for designing a tailored intervention aimed at promoting a healthy lifestyle among military personnel. By following the outlined steps, it is anticipated that a thorough understanding of the factors influencing a healthy lifestyle among military personnel can be achieved. This knowledge can then be used to design and implement tailored interventions to promote a healthy lifestyle among this population. By implementing the proposed protocol, it is expected to contribute to the improvement of the health of military personnel and enhance their overall performance and effectiveness. Moreover, the outcomes of this study have the potential to inform and equip decision-makers and policymakers with the knowledge to develop tailored interventions and allocate resources effectively.

Highlights

What Is Already Known?

Military personnel constitutes a unique population with specific characteristics, and their health has been a concern in various countries.

The high prevalence of lifestyle-related risk factors and conditions among military personnel underscores the importance of addressing these issues to improve their overall health and well-being.

What Does This Study Add?

This protocol provides a comprehensive framework for designing a tailored intervention aimed at promoting a healthy lifestyle among military personnel.

The outcomes of this study have the potential to inform policy and practice, ultimately contributing to the promotion of a healthy lifestyle among military personnel.

Authors' Contributions

MM and MS conceived the idea and designed the study, with advice from MK and MR. MM wrote the first draft of the report, which was critically reviewed and edited by all authors. All authors approved the final article.

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Conflicts of Interest Disclosures

The authors have no conflict of interests to declare.

Consent For Publication

Consent for publication was not required because this manuscript does not contain any personal or identifiable information. However, all authors reviewed the manuscript and agreed with its content.

Ethics approval

This study protocol has undergone review and approval by the Ethics Committee of Baqiyatallah University of Medical Sciences with the code IR.BMSU.REC.1400.165. All individuals involved in the study will be provided with a clear explanation of the study objectives, procedures, and potential risks and benefits. Informed consent will be obtained from all participants, and their participation in the study will be voluntary. The privacy and confidentiality of participants' personal information will be strictly maintained throughout the study. Any personal identifiers will be removed or anonymized in the reporting of the study results to ensure the confidentiality of the participants. The study will be conducted under ethical principles and

guidelines, and any potential conflicts of interest will be disclosed and managed appropriately.

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The extent of AI use

AI tools were used only for minor language editing and proofreading. All scientific content, interpretation, and conclusions were developed and verified by the authors.

References

1. Bryndin E, Bryndina I. Formation of public health care on basis of healthy lifestyle. *International Journal of Psychological and Brain Sciences*. 2017;2(3):63-68. [Doi:10.11648/j.ijpbs.20170203.11](https://doi.org/10.11648/j.ijpbs.20170203.11).
2. Boltayevna ZF. Requirements for a healthy lifestyle. *Academia Globe: Inderscience Research*. 2021;2(5):1-4. [Doi: 10.17605/OSF.IO/U7WFZ](https://doi.org/10.17605/OSF.IO/U7WFZ).
3. Li Y, et al. Healthy lifestyle and life expectancy free of cancer, cardiovascular disease, and type 2 diabetes: prospective cohort study. *BMJ*. 2020;368. [Doi:10.1136/bmj.l6669](https://doi.org/10.1136/bmj.l6669).
4. Zhang YB, Pan XF, Chen J, et al. Combined lifestyle factors, all-cause mortality and cardiovascular disease: a systematic review and meta-analysis of prospective cohort studies. *J Epidemiol Community Health*. Jan 2021;75(1):92-99. [Doi:10.1136/jech-2020-214050](https://doi.org/10.1136/jech-2020-214050).
5. Herrero P, Val P, Lapuente-Hernández D, Cuenca-Zaldívar JN, Calvo S, Gómez-Trullén EM. Effects of Lifestyle Interventions on the Improvement of Chronic Non-Specific Low Back Pain: A Systematic Review and Network Meta-Analysis. *Healthcare (Basel)*. Feb 20 2024;12(5) [Doi:10.3390/healthcare12050505](https://doi.org/10.3390/healthcare12050505).
6. Tabish S. Lifestyle diseases: consequences, characteristics, causes and control. *J Cardiol Curr Res*. 2017;9(3):00326. [Doi: 10.15406/jccr.2017.09.00326](https://doi.org/10.15406/jccr.2017.09.00326).
7. Amiri S, Mahmood N, Junaidi S, Khan MA. Lifestyle interventions improving health-related quality of life: A systematic review and meta-analysis of randomized control trials. *J Educ Health Promot*. 2024;13:193. [Doi:10.4103/jehp.jehp_1156_23](https://doi.org/10.4103/jehp.jehp_1156_23).
8. Charalampopoulou M, Tamiolaki EE, Tryfonopoulos D, et al. The Impact of Lifestyle Medicine on Quality of Life in Female Breast Cancer Survivors: A Systematic Review. *Am J Lifestyle Med*. Apr 21 2025;15598276251334325. [Doi:10.1177/15598276251334325](https://doi.org/10.1177/15598276251334325).
9. Neale EP, Rosario VD, Probst Y, Beck E, Tran TB, Lambert K. Lifestyle Interventions, Kidney Disease Progression, and Quality of Life: A Systematic Review and Meta-analysis. *Kidney Med*. Jun 2023;5(6):100643. [Doi:10.1016/j.xkme.2023.100643](https://doi.org/10.1016/j.xkme.2023.100643).
10. Rabbani SA, Patni MA, El-Tanani M, et al. Impact of Lifestyle Modifications on Cancer Mortality: A Systematic Review and Meta-Analysis. *Medicina (Kaunas)*. Feb 10 2025;61(2) [Doi:10.3390/medicina61020307](https://doi.org/10.3390/medicina61020307).
11. Koehlmoos TP, et al. Racial disparities in the military health system: a framework synthesis. *Military Medicine*. 2022;187(9-10):e1114-e1121. [Doi:10.1093/milmed/usab506](https://doi.org/10.1093/milmed/usab506)
12. Saffari M, et al. A comparison between impact of a health education program using in-situ training and text-messaging on lifestyle and blood pressure in military personnel at risk of hypertension. *Iranian Journal of Health Education and Health Promotion*. 2019;7(1):74-83. [Doi:10.30699/ijhehp.7.1.74](https://doi.org/10.30699/ijhehp.7.1.74).
13. Corry NH, et al. Association of military life experiences and health indicators among military spouses. *BMC Public Health*. 2019;19(1):1-14. [Doi: 10.1186/s12889-019-7804-z](https://doi.org/10.1186/s12889-019-7804-z).
14. Manz KC, Waters TM, Clifton HE, et al. Cost-Effectiveness of a Weight Loss Intervention: An Adaptation of the Look AHEAD Lifestyle Intervention in the US Military. *Obesity (Silver Spring)*. Jan 2020;28(1):89-96. [Doi:10.1002/oby.22681](https://doi.org/10.1002/oby.22681).
15. Atoom O. Prevalence of obesity and overweight among military personnel in north of Jordan and some associated risk factors. *JRMS*. 2018;25(2):19-26. [Doi:10.12816/0049830](https://doi.org/10.12816/0049830).
16. Sepandi M, Taghdir M. Prevalence of metabolic syndrome in personnel of a military center. *Journal of Military Health Promotion*. 2020;1(2):78-84.
17. Salimi Y, et al. The prevalence of overweight and obesity among Iranian military personnel: a systematic review and meta-analysis. *BMC Public Health*. 2019;19:1-9. [Doi:10.1186/s12889-019-6484-z](https://doi.org/10.1186/s12889-019-6484-z).

18. Malkawi AM, et al. Dietary, physical activity, and weight management interventions among active-duty military personnel: a systematic review. *Military Medical Research*. 2018;5(1):1-12. [Doi: 10.1186/s40779-018-0190-5](https://doi.org/10.1186/s40779-018-0190-5).
19. Chu NF, Lin FH, Wu YC. Prevalence and trends of cigarette smoking among military personnel in Taiwan: results of 10-year anti-smoking health promotion programs in military. *Military Medicine*. 2017;182(7):e1933-e1937. [Doi:10.7205/MILMED-D-16-00361](https://doi.org/10.7205/MILMED-D-16-00361).
20. Obuobi-Donkor G, et al. A scoping review on the prevalence and determinants of post-traumatic stress disorder among military personnel and firefighters. *International Journal of Environmental Research and Public Health*. 2022;19(3):1565. [Doi:10.3390/ijerph19031565](https://doi.org/10.3390/ijerph19031565).
21. Günlü S, Karahan MZ. Prevalence of hypertension in military personnel: A study conducted in Türkiye. *Black Sea Journal of Health Science*. 2023;6(2):274-278. [Doi:10.19127/bshealthscience.1208858](https://doi.org/10.19127/bshealthscience.1208858).
22. Baygi F, et al. Global prevalence of cardiometabolic risk factors in the military population: a systematic review and meta-analysis. *BMC Endocrine Disorders*. 2020;20(1):1-17. [Doi: 10.1186/s12902-020-0489-6](https://doi.org/10.1186/s12902-020-0489-6).
23. Gharasi-Manshadi M, Meskarpour-Amiri M, Mehdizadeh P. Lost productivity among military personnel with cardiovascular disease. *BMJ Military Health*. 2018;164(4):235-239. [Doi: 10.1136/jramc-2018-000920](https://doi.org/10.1136/jramc-2018-000920).
24. Tricco AC, et al. A scoping review on the conduct and reporting of scoping reviews. *BMC Medical Research Methodology*. 2016;16:1-10. [Doi: 10.1186/s12874-016-0116-4](https://doi.org/10.1186/s12874-016-0116-4).
25. Tricco AC, et al. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. *Annals of Internal Medicine*. 2018;169(7):467-473. [Doi:10.7326/M18-0850](https://doi.org/10.7326/M18-0850).
26. Vaismoradi M, Turunen H, Bondas T. Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing & Health Sciences*. 2013;15(3):398-405. [Doi: 10.1111/nhs.12048](https://doi.org/10.1111/nhs.12048).
27. Feters MD, Curry LA, Creswell JW. Achieving integration in mixed methods designs—principles and practices. *Health Services Research*. 2013;48(6pt2):2134-2156.
28. Wang X, Ji X. Sample Size Estimation in Clinical Research: From Randomized Controlled Trials to Observational Studies. *Chest*. Jul 2020;158(1s):S12-S20. [Doi:10.1016/j.chest.2020.03.010](https://doi.org/10.1016/j.chest.2020.03.010).
29. Martin GP, Jenkins DA, Bull L, et al. Toward a framework for the design, implementation, and reporting of methodology scoping reviews. *J Clin Epidemiol*. Nov 2020;127:191-197. [Doi:10.1016/j.jclinepi.2020.07.014](https://doi.org/10.1016/j.jclinepi.2020.07.014).
30. Colombani F, Encrenaz G, Sibé M, Quintard B, Ravaud A, Saillour-Glénisson F. Development of an evidence-based reference framework for care coordination with a focus on the micro level of integrated care: A mixed method design study combining scoping review of reviews and nominal group technique. *Health Policy*. Mar 2022;126(3):245-261. [Doi:10.1016/j.healthpol.2022.01.003](https://doi.org/10.1016/j.healthpol.2022.01.003).
31. Mhatre SK, Sangsiry SS. Development of a conceptual model of health-related quality of life among hepatitis C patients: A systematic review of qualitative studies. *Hepatol Res*. Jan 2016;46(1):29-39. [Doi:10.1111/hepr.12521](https://doi.org/10.1111/hepr.12521).
32. Kramer F, Labudek S, Jansen CP, et al. Development of a conceptual framework for a group-based format of the Lifestyle-integrated Functional Exercise (gLiFE) programme and its initial feasibility testing. *Pilot Feasibility Stud*. 2020;6:6. [Doi:10.1186/s40814-019-0539-x](https://doi.org/10.1186/s40814-019-0539-x).
33. Deenik J, Vermeulen JM, Teasdale SB, et al. Lifestyle psychiatry: a conceptual framework for application in mental healthcare and support. *BMJ Ment Health*. Nov 25 2025;28(1) [Doi:10.1136/bmjment-2025-301980](https://doi.org/10.1136/bmjment-2025-301980).
34. Kuan G, Kueh YC, Abdullah N, Tai ELM. Psychometric properties of the health-promoting lifestyle profile II: cross-cultural validation of the Malay language version. *BMC Public Health*. Jun 13 2019;19(1):751. [Doi:10.1186/s12889-019-7109-2](https://doi.org/10.1186/s12889-019-7109-2).
35. Wang X, Cheng Z. Cross-Sectional Studies: Strengths, Weaknesses, and Recommendations. *Chest*. Jul 2020;158(1s):S65-S71. [Doi:10.1016/j.chest.2020.03.012](https://doi.org/10.1016/j.chest.2020.03.012).