REVIEW ARTICLE

Periodic Medical Examination: A Systematic Review

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ABSTRACT

A periodic medical examination is also referred to as a health screening, an annual health checkup, a preventive health check or a general health checkup. This study aimed to conduct a systematic review in order to identify the techniques, their origin, and conceptual foundation, as well as the instruments or items that were utilised in evaluating views about periodic medical examinations. Three databases were searched using the PRISMA checklist for publication searches from inception to April 2019. Some of the PICO (population, intervention, comparison, outcome) acronym selection criteria that were looked for included: focusing on general health check-ups and involving adults; and is published in peer-reviewed journals from inception to April 2019, with full-text papers available in English. Of the 2,445 articles identified, 340 were examined, and only 15 were finally included in this review. One study used a mixed method and another two qualitative methods, while the rest were quantitative in nature. The Mixed Method Appraisal Tool (MMAT) was used to evaluate the overall quality of each item that was kept. A multi-factorial impact on periodic medical examination is seen in the practice of periodic medical examination. A lack of awareness, self-practice, and compliance with suggestions from healthcare experts might be responsible. As a medical examination is the initial step of a healthcare intervention, action taken at this stage may help in management later, thus maximising the advantages of health check-ups. In order to get the full benefits of periodic health checks, a wide variety of techniques will be required.

Keywords
Annual Health Checkup, General Health Checkup, Healthcare Professionals, Health Screening, Periodic Medical Examination

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Received: 12th August 2021; Accepted: 28th Feb 2023

Doi: https://doi.org/10.31436/imjm.v22i3

INTRODUCTION

An increased need for frequent medical checkups among the general public is a result of rising living standards. As more consumers become conscious of the rising costs due to the consequences of health issues, the more they need to invest in illness prevention programs. A periodic medical examination (PME) is also termed a health screening, an annual health checkup, a preventive health check or a general health checkup (GHE). All in all, there is a heterogeneous usage of the word due to little agreement on the definition of the phrase, resulting in a large variety of terms used.

PME requires customers to have one or more visits to healthcare providers in order to determine their general well-being and risk factors for preventable diseases through history-taking and a tailored physical examination. The results of past research done on the issue, have yielded contradictory conclusions about the importance of GHEs. Following a search of the literature on this topic, it was found that numerous researchers had investigated the perceptions of patients about the benefits and quality of the medical services provided by healthcare personnel during GHEs, with varying degrees of success and consistency.

Many people at large continue to be doubtful about the utility of periodic examinations of healthy adults, either because they believe that GHEs are expensive, time-consuming, and ineffective or because they question the quality of the examinations provided. The majority of prior studies on GHEs consisted mostly of basic descriptive statistics or comparisons between groups. However, while these analyses have yielded valuable information and conclusions, the limitations of these studies make them unsuitable for the evaluation of inter-variable interactions. This is important if we wish to learn

more about the associations between socio-demographic, psychological, economic, and socio-cultural variables and their effects on perception or behaviors regarding general health programs. It is, therefore, pertinent to investigate the existing gap in the literature concerning periodic medical examinations in an attempt to establish potential approaches and strategies for increased use of such examinations by the public.

Many methodological techniques may be employed to evaluate the knowledge, attitude, and practice of PME. The two most often used approaches are face-to-face interviews with customers and an assessment of the physician's experience with such examinations. The purpose of our literature review is to provide answers to the following research questions:

1. What are the socio-demographic features of individuals taking part in PME and those who do not participate?

2. What are their reasons for not taking part in PME?

Thus, the objective of this study was to find out what methodologies, origins, and conceptual foundations were used in measuring knowledge, attitude, and practice regarding PME and the factors that influenced these outcomes.

MATERIALS AND METHODS

Search Protocol and Selection of Studies

A thorough search on PME was conducted for relevant papers published between the years of inception (1920) and 2019 in the databases of PubMed, Google Scholar, and Science Direct. This study period was chosen because not many original research studies on this subject had been conducted earlier. Following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guide, we conducted this systematic review adhering to the standard techniques available. We adopted an over-inclusive method during the first phase of this iterative search to ensure that all abstracts with the potential for inclusion in our study were found. The PICO tool that focuses on population, intervention, comparison, and outcomes, recommended by the Cochrane Collaboration, was used as an organising framework to identify several keywords related to the main concepts based on our research questions.

We ensured that both medical subject headings (MeSH) and free-text terms were included. The terms that were used are "physical examination" [Mesh] OR "physical examination/prevention and control" [Mesh] OR "medical examination" OR "examination" OR "screening" [Mesh] OR "screen*" OR "annual check-up" OR "general health check-up" OR "community health service" [Mesh] OR "preventive health services" [Mesh] AND "healthcare provider" [Mesh] OR "medical personnel" OR "hospital staff" AND "knowledge" [Mesh] OR "attitude" [Mesh] OR "practice" AND "adult" [Mesh]. We also searched the bibliography of retrieved articles to identify any additional citations we missed during the electronic searches.

The search results were transferred into reference management software (EndNote), and subsequently, duplicates were removed. The titles of all articles and the abstracts of relevant articles were read by two independent reviewers. The articles that did not match the PICO (population, intervention, comparison, outcome) statement were excluded. The selected articles were independently assessed by two reviewers using the eligibility criteria. Any disagreements between authors about what to include were deliberated over and finally decided by an expert in the field.

Inclusion and exclusion criteria

The selection criteria developed by the abbreviation PICO are described in Supplementary Table I. It was necessary for the research articles included in the review to fulfil the following requirements: From its inception until April 2019, the study was published in a peer-reviewed journal; full-text articles were accessible in English; and articles focused on general health checks and enrolled adults. Articles that were reviewed that focused on geriatric health, were disease-specific, published before 2000, and were in a language other than English were excluded from inclusion in our review.

Evaluation of the quality and the possibility of bias

Two of the reviewers evaluated the overall quality of the selected papers as well as the possibility of bias. The tool for critical appraisal used in this review was the latest version of the Mixed Method Appraisal Tool (MMAT). MMAT was chosen based on its ability to assess the content of qualitative, quantitative, and mixed-method studies. For this process, each article was critically assessed by the reviewers. The reviewers first answered two screening questions to ensure that the selected study was an empirical study. Then, the reviewers chose the appropriate category to further rate the selected study according to the criteria listed in the checklist for each category. Any discrepancies found were resolved through discussion with a third reviewer, with the involvement of the expert if necessary. Using this tool, the evidence was then classified as being of low, moderate, or high quality. The results of the critical appraisal of the selected articles are summarised in Supplementary Table II.

FINDINGS

Articles selected for inclusion in the review

In all, 2,445 items were found using an online search. Following the removal of duplicate articles, a total of 2,418 were finally examined. A total of 340 possibly relevant publications for our purposes were identified and obtained for further examination after the titles and abstracts of all these articles were examined. The exclusion and inclusion criteria were met by 15 full-text publications, whereas 325 articles were excluded. The reasons for their exclusion were mainly: articles being disease-specific, published before 2000, and review articles. After completing all steps of identification, screening, and assessment of eligibility, 15 full-text articles were finally included in our final synthesis and analysis. Supplementary Figure I show a summary of the study selection process.

Characteristics of studies

Out of 15 articles examined, two used qualitative methods, one used mixed method (explanatory sequential design in which a qualitative component is followed by a quantitative component), and 12 used quantitative methods. The geographical origins of the included studies were thus: three from America; two from Taiwan; two from Nigeria; two from Denmark; two from Vietnam; and one from Brazil, Greece, Germany, and Finland.

Description of assessment methods

For the included studies, the study instruments used were from different sources. Some researchers would like to begin with a theoretical framework and develop the instruments by employing qualitative methods like focused-group discussions and in-depth interviews. In contrast, some researchers preferred to adapt and use pre-existing questionnaires or instruments. Table III illustrates an overview of the articles included in the study.

DISCUSSION

Methodological Approach

It is possible to examine knowledge, attitude, and practice regarding PME by using a variety of different methodological techniques. The majority of the 15 research articles covered in this review are quantitative and descriptive in nature. When it comes to evaluating the practice of periodic medical check-ups among healthcare professionals, questionnaires have always been one of the most common tools used. The quantitative technique alone, even if there are various tools available to assess PME nowadays, may not be sufficient to give an accurate image of the entire scope of customers' activity. Continuing professional educators must develop curricula based on the knowledge, practice, and attitudes of healthcare professionals delivering services. Questionnaires alone are insufficient for guiding planning, as they suffer from low response rates, poor quality, and missing data, which raise the likelihood of bias and affect the validity of the study. Prior studies have reported that Malaysian primary care physicians found it difficult to recruit customers for research, and the response rate of primary care physicians has remained stagnant despite growing evidence of various recruitment tactics.[1] Further, as self-assessment work has shown, perceptions of

TABLE I: An Overview of Included Studies

No	Author (Year) Title	Setting/Participants	Methods	Results
1	Hsu, H. Y., & Gallinagh, R. (2001) The relationships between health beliefs and utilization of free health examinations in older people living in a community setting in Taiwan.	Taiwan Over 65s are entitled to a free health screening. 100 people took part in the event. There were 100 non-participants.	A cross-sectional survey was conducted. Health Belief Scale administered. A sample of 200 men and women was chosen by stratified random systematic sampling.	High education and socio-economic status, as well as support from family, lead to a higher likelihood of having a health screening. Compared to non-users, users had a greater level of seriousness and vulnerability to illness than those who did not use it.
2	Culica, D., Rohrer, J., Ward, M., Hilsenrath, P., & Pomrehn, P. (2002) Medical Checkups: Who Does Not Get Them?	America 3600 people were included in the sample.	A telephone survey was conducted. 1996's Behavioral Risk Factor Surveillance System" was examined.	Lower chance of getting a health checkup in the preceding 12 months: 25-44 years or over 65, male, single, smoker, with financial obstacles. The likelihood of getting a checkup was higher among those who made more than $75,000 per year and had health insurance. They were also more likely to have chronic diseases; they assessed their health as "well", "fair", or "poor".
3	Akande, T., & Salaudeen, A. G. (2004) Practice of Periodic Medical Examination among Hospital Workers in a Nigeria Teaching Hospital.	Nigeria 274 members of the hospital staff. Aged between 20 and 59 years.	A cross-sectional survey was conducted. Random sampling with stratification. Questionnaire.	82.8 % of employees had undergone a medical checkup, with two-thirds of them doing so to satisfy hospital management. PME was deemed necessary by 86.7 % of those who responded. Only 20.6 % of employees participated in PME, with most of them being urged to do so by their doctors. 35.2 % had done it three times, whereas 35.8 % had done it once, 34 % had done it twice, and 30.2 % had done it three times.
4	Nielsen, K. D., Dyhr, L., Lauritzen, T., & Malterud, K. (2004) You can't prevent everything anyway: a qualitative study of Beliefs and Attitudes about refusing health screening in general practice	Denmark There are six of them. There were 12 ladies in total.	Qualitative A semi-structured interview with a sample of 18 people who did not participate in a randomised control population-based study. Non-participants were selected using stratified intentional sampling procedures.	Reasons for non-attendance include: being too busy, being well, having recently had contact with a general practitioner, not wanting to know whether they are ill, not having any symptoms, having big life events, and having genuine health concerns. The significance of autonomy was emphasized.
5	Engebretson, J., Mahoney, J. S., & Walker, G. (2005) Participation in community health screenings: a qualitative evaluation	America Participants at five different locations: University staff members, attendees at the county fair, clients of the Senior Citizen Center, workers in the local industry, and students at a university. Group of non-attenders.	Focus groups using a qualitative approach. Five with the presence of attendees. One included those who did not show up.	Self-rated health is described as an area of motivation for a presentation as follows: • Personal factors (for example, approval from others or a fear of shame) are also important. • Availability (for example, convenience or a lack of time). • Overlapping between facilitators and obstacles to participation in health screening: what motivates one person may serve as a hindrance to another participant.
6	Cherrington, A., Corbie-Smith, G., & Pathman, D. E. (2007) Do adults who believe in periodic health examinations receive more clinical preventive services?	America There were 4,879 responses.	A telephone survey was conducted. The results were analysed using logistic regression to determine attitudes toward periodic medical checks and the use of preventive treatments.	Non-participants in periodic health checkups got fewer preventive treatments than those who did participate. 8.5 % did not approve of yearly, periodic health checks as a preventative measure. Non-endorsers overwhelmingly consisted of males (odds ratio 1.64), young (OR .87), white (OR 2.91), with a college degree (OR 1.43), and who reported feeling healthy (OR 1.85). Non-endorsers vs. endorsers had a periodic checkup the previous year (42 % against 80 %).
7	Gonçalves-Silva, A. C., Murta-Nascimento, C., & Eluf-Neto, J. (2010) Assessing screening practices among health care workers at a tertiary-care hospital in Sao Paulo, Brazil.	Brazil The number of healthcare personnel is 333, which includes physicians, nurses, and nursing assistants (ages 40- 69 years).	Cross-sectional research was conducted. USPSTF recommendations from 1996 were used to develop this questionnaire, which addressed 17 processes and assigned grades.	The vast majority of respondents were female (68.5 %), average age of 48 years (SD 6.6 years). The majority screened for high blood pressure and dyslipidemia (61.3 %). Females went to get screened for breast and cervical cancer more than men (71.9 % vs. 94.7 %). Only 6 (1.8 %) of the participants had had colorectal cancer screening before the study.

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No.	Author (Year) Title	Setting/Participants	Methods	Results
15	Tolonen, H., Lundqvist, A., Jääskeläinen, T., Koskinen, S., & Koponen, P. (2017) Reasons for non-participation and ways to enhance participation in health examination surveys—the health 2011 Survey	Finland 8135 people (all above the age of 29) A random sample of respondents to the National Health and Nutrition Examination Survey	Both cross-sectional and longitudinal research was conducted. Examination of one's health. Interviews were conducted over the phone. Questionnaire	The most often cited reason for non-participation was the inability to attend the health examination at a time and location that were convenient for them (52.4%). Other reasons were lack of time owing to work family as well as personal responsibilities, being unmotivated, going overseas at the time of the survey and missing the appointment. Factors cited as motivating participation included the ability to choose their own preferred time and/or location, receiving an examination by a doctor and/or the advice of more examinations and laboratory tests, incentives, and a shorter medical checkup.

knowledge and skills among professionals are rarely accurate. Thus, qualitative methods may be better able to fulfil both the objectives of research in general and Malaysia, in particular, to contribute to the scientific debate around PME and the interests of healthcare providers to produce actionable knowledge that is applicable to bring PME into normal practice.

Socio-demographic factors

Medical examinations regularly appear to be undertaken in an inequitable manner according to gender, age, socio-demographic, and economic position.[2] It is found that women are normally believed to be more health conscious compared to men when it comes to their physical health (America, Brazil, Germany, Nigeria). Thus, women had a greater tendency than men to present themselves during general health check-ups, according to some findings.[2–6] The non-attendance rates between males and females differed, respectively, from 8% to 19%.[7] Moreover, 11% of male participants, compared to 6 % of females, were not in favour of medical check-ups regularly (Taiwan).[8] Additionally, it was shown that attendees were, on average, older than non-attendees.[4,5,9,10] Typically, older rather than younger people are targeted during health campaigns.[11] Also, because they are still young and healthy, younger men tend to have less thought that they will get sick. This has been reported in other studies where people only go to the doctor when they have symptoms.[11] On the other hand, several studies have shown that young people are more inclined to go to general health check-ups than older people (America, Brazil).[2,3,7] This is consistent with the demographics of internet users in Malaysia, where 55.9% are between the ages of 20 and 40.[12] Thus, the internet may be an excellent medium for promoting health screening among this "hard-to-reach" population.

The marital status of an individual was also reported to have an impact on the rate of attendance, as most of the non-attenders were single (Germany, Nigeria, Vietnam, America, Denmark).[4,5,6,7,9] According to some research, there may be an interplay between marital status and gender when it comes to explaining health screening attendance. Considering the findings of recent research, which found that married males tended more to be single men to participate in health-screening appointments.[7] According to a study in Malaysia, some males did not consider undergoing health screening before marriage. The participants became more health-aware after marriage because they felt a greater sense of duty and wanted to be healthy for their families.[11] Single, divorced, or widowed women had much higher rates of attendance than those males with the same marital status, according to the study findings (America).[7] The rates of attendance among married women were 88%, but the rates among married men were 84%, showing that marital status appears to greatly influence the rates in males more than it does in women to attend health check-ups. A qualitative study conducted via focused-group discussion reported that the decision to go for health screening is frequently made by the female partner.[13]

Socioeconomic factors

It has been reported that the cost of screening during a health check-up is a key factor for Malaysian when making decisions about screening.[11] If a person has a restricted income and several financial obligations, health screening may not be a top concern. People with low socioeconomic

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No.	Author (Year) Title	Setting/Participants	Methods	Results
8	Zavras, D., Tsiantou, V., Pavi, E., Mylona, K., & Kyriopoulos, J. (2012) Impact of Economic Crisis and other demographic and Socio-economic Factors on Self-rated Health in Greece	Greece There were 10,572 people in total.	A cross-sectional survey was conducted. Data from the two groups were combined. Random sampling with stratification Assessing the effect of various variables on self-rated health by a logistic regression analysis	The SE crisis and worsening financial situations are linked to poor self-rated health and lower usage of health care services. Poor self-assessed health was found to be prevalent among the elderly, the jobless, retirees, homemakers, and those with chronic illnesses. Educated men with high incomes all report better self-rated health than their female counterparts.
9	Hoebel, J., Starker, A., Jordan, S., Richter, M., & Lampert, T. (2014) Determinants of health check attendance in adults: findings from the cross-sectional German Health Update (GEDA) study	Germany 26,555 individuals having statutory health insurance who were 35 years old or older completed the survey.	Data from the German Health Update (GEDA) survey, which was conducted cross-sectionally. Modelling health check attendance using logistic regression in order to evaluate correlations between health check attendance and variables chosen in accordance with Andersen's Behavioral Model	High uptake of health checkups: being older, having a high financial level, married, being more socially and physically active, not smoking, eating more fruits and vegetables, and using outpatient care services. Higher attendance rates were seen among women who drank alcohol and had health insurance from their employers. Higher attendance was shown to be related to improved self-rated health in men.
10	Wu, L. T., Lai, T. Y., Liu, C. S., Lee, C. C., Lin, C. C., & Horng, M. L. (2014) Medical Students' Awareness and Perception of national health examinations	Taiwan 360 students from first to fourth years. Medical students studying medicine.	Survey Convenience sampling. Descriptive statistics, the t-test, and the ANOVA were used to evaluate the data.	When compared to the general population, medical students have a higher overall understanding of the importance of health examinations than the general public.
11	Ilesanmi, O., Omotoso, B., Alele, F., & Amenkhienan, I. (2015) Periodic Medical Check-up: Knowledge and Practice in a Community in South West Nigeria	Nigeria 231 adults took part in the survey.	Cross-sectional research was conducted. Questionnaire Chi-square test to determine the association between categorical variables	Among those who responded, 60.2 % were female and 80.6 % were married, with the majority being over the age of 60. (54.8 %). Only 48.2 % of individuals who have had medical examinations have done so regularly. The most common reasons for not attending a checkup were not being unwell (64 %), not having enough money (20 %), not being aware of the need for a periodic medical examination (12 %), and being too busy (4 %).
12	Vuong, Q. H. (2016) Health communication, information technology and the Public's attitude toward periodic general health examinations	Vietnam Information Technology (IT) with Health Communication and the People's Perception of health examinations Participants were chosen at random from a pool of 2,068 people	Survey Questionnaire To model baseline category logits, statistical methods of categorical data analysis are used (BCL model)	42.12 % of those who took part in the study said they would be willing to utilise IT apps to recognise sickness signs. IT applications (apps) help to decrease apprehension about GHEs. Attendance at periodic GHEs rose as a result of health communication and government subsidies.
13	Bjerregaard, A.-L., Maindal, H. T., Bruun, N. H., & Sandbæk, A. (2017). Patterns of attendance to health checks in a municipality setting: the Danish 'Check Your Health Preventive Program	Denmark There were 4853 users in all, 30 to 49 years of age The information was gathered from the Danish National Registers	'Check Your Health Preventive Program' as an invitation. The factors of attendance were investigated through the use of Poisson regression analysis.	Attendees were of advanced age, immigrants, and cohabiting. Attendees had a higher socioeconomic position, made more use of preventative treatments, and reduced morbidity and mortality rates. A general health checkup was attended by more than half of the general public who volunteered to do so. Attendance rates were lower among those with less financial means.
14	Vuong, Q.-H. (2017) Survey data on Vietnamese propensity to attend periodic general health examinations.	Vietnam 2,479 individuals were chosen at random. ranging in age from 13 to 83 years	Survey (1) Questionnaires are used to collect information. (2) Interviews with individuals in person Utilizing the statistical program R, data coding and analysis were carried out	Female involvement was 64.08 %. majority of them were married (57.35 %). 54.35 % had secure employment. 51.21% of those who had a GHE had one less than a year before. GHE was viewed as a waste of time by 52% whereas health was viewed as a top priority by 81%. People were skeptical about fair prices when it comes to periodic GHEs (86.32%). 42.12% said they were willing to employ information technology in healthcare.

status (SES) have poorer subjective health states and lower grades of satisfaction with their well-being than those who have a higher socioeconomic-status. [9,10] People with low socioeconomic status may also engage in harmful behaviour and have poor health status as a result of their bad health and limited financial resources. On the other hand, participants who had a good socioeconomic position had general health check-ups, health insurance coverage, and secure employment and were found to have higher attendance rates. [4,6,7,9] According to the findings of a study in Greece, poor health was reported most commonly by older people, unemployed men, homemakers, and those with chronic health conditions, whereas men, those with a higher level of education, as well as those with higher income, had a greater likelihood of reporting better health status. [10] The level of education was also reported to have an impact on participation in general health examinations. Those who had attained a higher degree had a good attendance rate for getting regular health check-ups.[2,8,10] According to the findings of a research performed among medical students in Taiwan, the overall awareness of medical students about general health check-ups was good.[14]

Environmental factors

Another factor that impacts the use of healthcare services is environmental influence. This occurs because human behaviour is influenced by the environment in which they live. The suggestions of family or friends are a valuable source of knowledge and a compelling incentive to adhere to a healthcare regimen.[4,8,9] According to the findings of a research performed in Vietnam, most Vietnamese families seek assistance from their families and friends rather than medical experts when it comes to decision-making about clinical care.[6] In the vast majority of countries studied, families are the main place where people learn about health care, and they also have a big impact on how people think about illness and health.

There is also a statistically significant link between cultural views and attendance behaviour. In several surveys done in Greece, Taiwan, Vietnam and Denmark, it was found that health beliefs had an impact on the adoption of health screening. Those who attend screening may do so to alleviate their fears or perceived risks of a disease, but those who do not go may have the same school of thought, i.e. they did not believe they were at risk or were too afraid of what may happen if they did attend.[15]

Health Status

Studies have revealed that a person's health practises have an impact on his or her ability to undergo periodic medical examinations. According to the findings of a Nigerian [5] study, many of the participants did not go for regular health check-ups, despite engaging in other healthy lifestyle habits. According to several studies, non-smokers were more likely to have their health checked than smokers, whereas smokers were less likely to have their health checked.[4,7] Perhaps the same reason applies: being too concerned about the potential consequences. On the contrary, research done in Germany among adults revealed that those who used moderate amounts of alcohol had a higher incidence of health check attendance, presumably as a result of the perceived hazards of alcohol-related health conditions. The frequency with which people have their health checked may also be influenced by their perception of their health. According to the research, people who rated their health as good, fair, and poor were more likely to get health check-ups than those who assessed their health as outstanding.

Stated Reasons for not attending Periodic Medical Examinations

In several studies in Nigeria, America, Denmark and Finland, those who did not visit clinics said that they had a busy routine, felt they were already in good health or recently had a medical consultation as reasons for their absence.[5,13,15,16] Some said that they were aware that they were unhealthy but did not want to realize or were forced to adopt a different lifestyle, while others expressed concern about what they may discover.[2,15] The non-attenders underlined the limits of health check-ups and expressed a desire to not have any probable risk factors disclosed or to have their sense of well-being disrupted. Several factors contributed to the low attendance at the screening. For example, a fear of results, coupled with the

contentment that "what I don't know won't hurt me" [13] and the non-attenders may have no perception of the need for a health check: they may feel well or have no physical symptoms that knowing would not make them any happier, or being afraid of the test results or the implications.[15] Several procedure-related worries emerged as well, including being afraid of needles or generally afraid of physicians and clinical settings, worry about what the tests may entail, and concern about the expertise level of those who were doing the testing.[13]

Participation in community health screenings was shown to be influenced by accessibility to healthcare providers in research[10] on "Participation in Community Health Screenings." Accessibility, location, participation incentives, and being culturally appropriate were all important factors in motivating participants to take part in the study. [16] Others, however, were unable to attend the tests due to the difficulty of not having the time and money for clinical follow-up afterwards. Additionally, huge waiting lines at the locations of health screening implied a lengthy wait period, which some people found to be unfavourable.[16] Thus, more effort and interventions need to be put in place to curb these factors of non-attendance to promote health screening in Malaysia.

STUDY LIMITATIONS

It is possible that relevant articles, as well as any previously unpublished materials, were overlooked because the search strategy relied on keywords and instruments that are relevant to regular health examinations or general health check-ups but were not identified missed as a result of this strategy. Although many additional techniques and tools have been developed to assess knowledge as well as practice regarding periodic medical examinations, this review did not include them since they were outside the scope of the study.

CONCLUSION

The findings of our review show that the practice of periodic medical examination is influenced by a variety of factors. Health education and illness prevention among healthy people are influenced by a variety of broader social, political and administrative aspects that must be taken into consideration. Lack of preparation to deal with the consequences of health check-up results might end up in non-attendance at periodic medical examinations along with an inability to handle the resulting complications. A health check-up is the initial stage of a healthcare intervention. Acting at this verge of time may be beneficial to later management and may maximise the advantages of the health check itself. Patients, on the other hand, may choose not to attend health tests if they are not prepared to deal with the results. If the full advantage of periodic health examinations is to be obtained, a broad variety of techniques may be necessary to be implemented by the health authorities in Malaysia.

RECOMMENDATIONS

The different expectations placed on health professionals offering the service by members of the public would need to be taken into consideration if customization of health check-ups were to become a reality. One of the problems associated with service delivery is the lack of commitment on the part of physicians to preventative counselling guidelines during visits. Alternative approaches include placing a greater focus on opportunistic health checks during normal visits; this can be time-consuming as well as ineffective. It is pertinent for health authorities in Malaysia to develop a theoretically sound framework which recognizes both the complex and diverse demands of people and the challenges that public health officials are now encountering. The ability of Malaysians to participate in health examinations should be critically evaluated and discussed by healthcare practitioners, as well as encouraged, to increase participation in health examinations.

CONFLICTS OF INTEREST

The authors declare no potential conflicts of interest concerning the research, authorship, and/or publication of this article.

FUNDING

The authors received no financial support for the research, authorship, and/or publication of this article.

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