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Periodic Medical Checkup among Health Workers at a Teaching Hospital in Ghana

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ABSTRACT

Introduction: Periodic medical checkup is an essential component of preventive medicine and health promotion. Assessing the knowledge, perception and practice of health care professional on routine medical checkup set the tone for the general public.

Methodology: A cross-sectional study was conducted among 300 health care personnel, nurses, doctors and medical laboratory scientist, using a convenience sampling method, to assess their practice of periodic medical checkup. Data was collected through self-administered questionnaire, with questions classified under demographics, knowledge, perception and practice. Data processing was carried out using Microsoft excel. Data was checked, cleaned and analyzed using Statistical Package for Social Science, SPSS version 21.

Results: The study found a high prevalence of knowledge among the participants. There was, at least, above 90% on all questionnaire items assessing knowledge. Similarly, participants exhibited a positive perception towards medical checkups. 98.7% said medical checkups are important whilst 99% said they would encourage the practice of periodic medical checkup. Prevalence of periodic medical checkup was 91%. Most of the participant's recommended medical checkups are covered by health insurance whilst health facilities should also ensure an annual examination of its staffs. Conclusion: There is a high prevalence of medical checkup among health care personnel at the teaching hospital under study, positive attitude as well as a high level of knowledge regarding the practice.

Keywords: Medical checkup; Examination; Knowledge; Health workers; Perception and practice

INTRODUCTION

Communication Routine medical checkup has been an integral part of medical practice for centuries, notwithstanding the lack of consensus on its significance in health promotion and illness prevention [1]. In 1861, the concept of routine medical checkup was proposed by Doorbell as a measure to maintain optimum health and ward off conditions such as tuberculosis. In the early 1920 through to 1970, the American medical association repeatedly advocated for an annual medical checkup to maintain good health. Accordingly, an annual health check close to one's birthday became a routine for many Americans [2].

Medical checkups commence during fetal life. Fetuses are examined to detect congenital malformation *in vitro*. Further assessment occurs at the time of birth, where newborns are examined for birth defects. As such, medical checkups should continue from childhood, through to adolescence and adulthood. Unfortunately, this is not the case. Most individuals, especially in Africa, do not attach much significance to medi-

cal checkups, Medical examination are only carried out during times of ill health and pre-employment [3]. A Routine Medical Checkup (RMC) is an aspect of preventive medicine [4], which involves the medical assessment of an apparently healthy individual, carried out at regular intervals by health personnel, to enhance the early detection of risk of medical conditions [5]. RMC provides an asymptomatic individual the opportunity to have a health assessment with a physician. It is carried out with the hope of detecting conditions that would have gone unnoticed. It involves a general physical assessment, laboratory investigation of body fluids such as blood and urine samples, radiologic investigations such X-rays, ultrasounds and electrocardiograms [6].

In some western countries such as Germany, the statutory health insurance, which covers about 90% of the German population states that, regular medical examination must be carried out in all primary health care facilities. German citizens above the age of 35 years, who are under the statutory health insurance, have the right to a medical examination once every two years for the early detection and risk factors of diabetes, cardiovascular and renal conditions [7]. Contrastingly, the practice of RMC is poor in developing countries, despite in increasing prevalence of chronic diseases [8]. Some factors which determines the practice of RME includes advance age, economic status of the individual, marital status, educational level, gender, nature of one's job and the health state of the individual [9]. A study conducted on RME among traders in Nigeria reported that, there is a high level of awareness of RME among the participants of the study, however, a statistically insignificant number actually practice RME. Majority of the traders who practiced RME were in the advanced age bracket of 40 years-49 years [10]. A similar study conducted among traders at the Kaneshie market in Ghana revealed adequate knowledge about RME, practice was however reported to be poor [11].

General Objectives

The general objective of this study is to assess the practice of routine medical checkup amongst doctors, nurses and Medical Laboratory Scientists (MLS) in the Tamale Metropolis.

Specific Objectives

1. To determine the proportion of nurses doctors and MLS who practice routine medical checkups.

2. To assess their perceptions and reasons for or not practicing routine medical checkups.

MATERIALS AND METHODS

A cross-sectional study was conducted among health care personnel, nurses, doctors and MLS at a teaching hospital in Ghana. A total of 300 participants took part in the study, comprising 175 nurses, 83 Medical Doctors and 42 MLS. The formula used to calculate the sample size was n=(Z²pq)/e2, Z² is the desired level of confidence (standard value of 1.96) e² is desired level of precision or level of acceptable error=0.05 p is the proportion of RME in the population from a previous study. 68.1% prevalence of RME at in Tema Community 20 [12] and Q is 1-p. This formula was used because of the difficulty in involved in getting the size of the total population. The estimated sample size was 335

participants. However, the researcher and his team were able to recruit 300 participants. Self-administered questionnaire was developed using Google forms and distributed *via* various social media platforms in the hospital [13].

The questionnaire was divided into four categories; demographics, knowledge, perception and practice. The demographics section solicited information such as age, which was categorized, sex, religion, marital status and profession. There were a number of questions, mostly close ended, under the other sections which were directed towards those objectives. The questionnaire was pre-tested and appropriate corrections made. Face validity was further confirmed by experts in the field of nursing. Permission to conduct the study was obtained from the research and development unit of the hospital. Consent was further obtained from the participants after a brief explanation about the study was given, assuring participants of maximum confidentiality. Participation was absolutely voluntary. Data collection lasted for 8 weeks, with two research assistants aiding the principal investigator. Data was processed using Microsoft excel, checked and analyzed using Statistical Package for Social Sciences, (SPSS) version 21.

RESULTS

Demographics

Age was captured as a categorical variable, ranging from 20 years-30 years, 31 years-40 years, 41 years-50 years and 51 years-60 years. Majority of the participants, 67.3% were between the ages of 20 years-30 years, and the least represented age range was 51 years-60 years, with only 0.3% of the participants. 65.7% of the participants were males, whilst the remaining 34.3% were females. Majority of the respondents, 56.0% were single, 43.7% were married, whilst 0.3% had lost their partners. The predominant religion was Christianity, making up 55.7%, Islam had 43.3% whilst the African traditional religion and agnostic beliefs made up the remaining percentage. Majority of the participants were nurses, comprising 58.3% of the respondents, medical doctors made up 27.7%, whilst the MLS 14.0% [14]. The first objective of the study was to assess the knowledge level of health personnel with regard to RME (**Table 1**). To assess this, various questions were asked related to RME, the first of which was the definition of RME which was defined as the process of assessing and individuals' state of health so as to detect, treat and prevent illness. Various options were provided which ranges from strongly agree to strongly disagree (**Table 2**).

Table 1: Participants Demographic Information.

Demographic	Frequency	Percentage
Age		
20-30	202	67.3
31-40	93	31
41-50		41.3
51-60		10.3
Total	300	100%
Marital Status		
Single	16856	

Married	131	43.7
Widowed	10.3	
Total	300	100%
Religion		
Islam	130	43.3
Christianity	167	55.7
Traditional	20.7	
Agnostic	10.3	
Total	300	100%
Gender		
Male	197	34.3
Female	103	65.7
Total	300	100%
Profession		
Nurse	17558.3	
Medical doctor	83	27.7
MLS	42	14
Total	300	100%

Table 2: Definition of RME.

Response	Frequency	Percentage
Strongly agree	160	53.3
Agree	127	42.3
Neutral	1	0.3
Disagree	2	0.7
Strongly disagree	10	3.3
Total	300	100%

The table above illustrates the responses of participants with regard to the definition of RME. 53.3% of the participants strongly agreed with the definition RME provided, 42.3% agreed, 0.3% were neutral, 0.7 disagreed, whilst 3.3% strongly disagreed. Next on the list of questions to assess level of knowledge was the question "RME is important for asymptomatic adults" (**Table 3**). 126 representing 42% of the participants strongly agreed that RME is important for asymptomatic adults. 49.3% agreed, 2.3% were not sure, another 2.3% disagreed, whilst 4% strongly disagreed that RME is important for asymptomatic adults [15]. The next question asked to assess the knowledge level of respondents was "periodic medical examination helps to establish a health baseline". 43.0% strongly agreed, 51.5% agreed, 0.7% were not sure, another 0.7% disagreed, whilst 3.3 strongly disagreed that RME helps to establish a health baseline (**Table 4**).

Table 3: Responses on whether RME is important for asymptomatic adults.

Response	Frequency	Percentage
Strongly Agreed	126	42
Agreed	148	49.3
Not sure	7	2.3
Disagreed	7	2.3
Strongly Disagreed	12	4
Total	300	100%

Table 4: Responses on whether RME helps to establish a health baseline.

Response	Frequency	Percentage
Strongly agree	129	43
Agree	155	51.7
Neutral	2	0.7
Disagree	2	0.7
Strongly disagree	10	3.3
Total	298	99.30%

The next question asked to assess the level knowledge on RME was whether examination should involve as assessment of one's entire body's system (**Table 5**). 155 participants representing 51.7% strongly agreed that health examination should involve an assessment of the entire body system. 131 participants constituting 43.7% agreed 2 respondents representing 0.7% disagreed, whilst 12 respondents representing 4% strongly disagreed. When asked whether females above 30 years should a cervical smear and males above 40 years should have a PSA done annually, 38.3% strongly agreed, 50.0% agreed, 7.0% were not sure, 1.7% disagreed whilst 2.7% strongly disagreed [16]. Assessment on level of knowledge continues with the next question asking respondents whether early detection of diseases such as diabetes and hypertension helps to prevent complications (**Table 6**). 190 respondents constituting 63.3% strongly agrees that, early detection of diseases helps to prevent complications. 30.7% agrees, 0.7% were neutral and not sure, 0.3% disagrees, whilst 4.3% strongly disagrees (**Table 7**).

Table 5: Responses on assessment of entire body's system.

Response	Frequency	Percentage
Strongly agree	155	51.70%
Agree	131	43.60%
Disagree	2	0.70%
Strongly disagree	12	4%
Total.	300	100%

Table 6: Responses on annual cervical smear by females and PSA by males.

Response	Frequency	Percentage
Strongly agree	115	38.3
Agree	150	50
Not sure	21	7
Disagree	5	1.7
Strongly disagreed	8	2.7
Non response	1	0.3
Total	300	100%

Table 7: Early Detection of Diseases Prevents Complications.

Response	Frequency	Percentage
Strongly agree	190	63.3
Agree	92	30.7
Not sure	2	0.7
Disagree	1	0.3
Strongly disagree	13	4.3
Total	198	99.30%

Respondents were then asked if counseling and health education is an essential component of RME. 135 respondents representing 45.0% strongly agrees, 46.7% agrees, 3.0% were not sure, 1.7% disagrees, whilst 3.3% strongly disagrees. 0.3% did not respond to this question (**Table 8**). The next objective of the study was to assess the perception of health personnel with regard to the practice of RME. A number of questions were asked to assess this objective. Participants were first asked if it is necessary to practice RME. Options provided were Yes or No 296 respondents; equivalent to 98.7% responded "Yes", 1 respondent said "No", whilst 3 participants did not respownd (**Table 9**). Participants were then asked to what extent they agree or disagree with the statement that, medical examination is only necessary for people who are sick [17].

Table 8: Counselling and health education essential in RME.

Response	Frequency	Percentage
Strongly agree	135	45
Agree	140	46.7
Not sure	9	3
Disagree	5	1.7
Strongly disagree	10	3.3
Total	299	99.70%

Table 9: Is RMC necessary?

Response	Frequency	Percentage
Yes	296	98.7
No	1	0.3
No Response	3	1
Total	300	100%

Participants were then asked their perception on whether RME prevent nosocomial infections among health care workers (**Table 10**). 100 participants, representing 33.3% strongly agrees that RME helps to prevent nosocomial infections, 48.7% agrees, 5% were not sure, 9.7% disagrees, whilst 3.0% strongly disagrees. To assess the perception on the frequency of RME, participants were asked to what extent they agree with the statement "Medical examination should be done yearly in adults" (**Table 11**). 15% of respondents strongly agreed on annual examinations, 55.3% agree, 12% were not sure, 15.0% disagrees whilst 2.0% strongly disagrees [18]. 2 participants did not respond to this question (**Table 12**). Next under perception was

participants view on whether health check-ups should be covered under the national health insurance system. 29.7% strongly agrees, 50.7% agree 7.3% disagrees whilst 12.3% strongly disagreed (**Table 13**).

Table 10: RME is only necessary for people who are sick.

Response	Frequency	Percentage
Strongly agree	5	1.7
Agree	1	0.3
Not sure	1	0.3
Disagree	105	35
Strongly disagree	186	62
Total	198	99.30%

Table 11: RMC prevents nosocomial infections.

Response	Frequency	Percentage
Strongly agree	100	33.3
Agree	146	48.7
Not sure	15	5%
Disagree	29	9.70%
Strongly disagree	9	3.00%
Total	99	99.30%

Table 12: RMC should be done annually.

Response	Frequency	Percentage
Strongly agree	45	15
Agree	166	55.3
Not sure	36	12
Disagree	45	15
Strongly disagree	6	2
Total	298	99.30%

Table 13: RMC should be covered by NHIS.

Response	Frequency	Percentage
Strongly agree	89	29.7
Agree	152	50.7
Not sure	0	0
Disagree	22	7.3
Strongly disagree	37	12.3
Total	300	100

The participants were then asked their views on whether the hospital facility should ensure an annual examination of its entire staff. 58.7% strongly agrees that the hospital should ensure an annual examination of its staffs. 35.0% agrees 1.3% disagrees whilst 5% strongly disagrees (**Table 14**). Next on perception was the question, do you support the practice of RME? With the options been yes or no, 99.0% of participants supported the practice of RME, whilst only 1.0% objected to the practice of RME (**Table 15**). The final question on perception was to assess the views of participants on which age groups should practice RME with the question, only individuals above the age of 40 years should practice RME. 3.0% strongly agrees, 2.7% agrees, 2.0% were not sure, 51.3% disagrees whilst 40.0% strongly disagrees

that only individuals above 40 years should practice RME [19] (**Table 16**).

Table 14: Hospital ensure annual checkup of all staff.

Response	Frequency	Percentage
Strongly agree	176	58.7
Agree	105	35
Not sure	0	0
Disagree	4	1.3
Strongly disagree	15	5
Total	300	100

Table 15: Support of RMC.

Response	Frequency	Percentage
Yes	297	99
No	3	1
Total	300	100

Table 16: Only Individuals above 40 years should practice RMC.

Response	Frequency	Percentage
Strongly agree	9	3
Agree	8	2.7
Not sure	6	2
Disagree	154	51.3
Strongly disagree	120	40
Total	297	99.00%

The next objective of the study was to assess the practice of RME or periodic medical checkup among health personnel. Respondents were asked various questions to achieve this objective. The first question on practice was, have you ever undergone an RME? 91% of the participants, of which 160 were nurses, 72 doctors and 41MLS, have ever undergone a medical checkup, 7.7% said they have never undergone a medical checkup, whilst 1.3% did not respond to the question (**Table 17**). Participants were then asked what type of examination they had undergone [20]. 60.3% indicated they have ever undergone a general examination, 13.7% indicated blood pressure checkup, 9.3% went in for visual examination, 3.0% indicated dental examination. 6.3% did not respond to this question, whilst 10.4% indicated other examinations such as cervical screening, viral hepatitis, and cholesterol examination (**Table 18**).

Table 17: Practice of RMC.

Response	Frequency	Percentage
Yes	273	91
NO	23	7.7
No Response	4	1.3
Total	296	98.70%

Table 18: Types of checkups undergone.

Examination	Frequency	Percentage
General Exam	181	60.3
Blood Pressure	41	13.7
Visual Exam	28	9.3
Dental Exam	9	3
Others	22	10.4
Non Response	19	6.3
Total	300	100%

Participants were then asked to indicate when last they had RME. 26.3% indicated they had undergone a medical checkup a year ago, 24% a month ago, 6% within the last six months, 23% could not remember, 18% in the last 5 years, whilst 2.7% did not respond (**Table 19**). The next question that was asked respondents was why they went for a medical checkup. 58.3% of respondents indicated they underwent a medical checkup for personal reasons. 20% for employment reasons, 9.3% for a follow up, 3.3% for travelling purposes 4.3% did not response to this question, 1.7% for educational purposes whilst 2.0% for marriage (**Table 20**). Next on perception, participants were asked to indicate how often they think individuals should have medical checkups. 9.3% of participants felt individuals should have monthly medical checkups, 56.3% indicated every six months, 28.3% felt medical checkups should be done yearly, 2.3% indicated other periods of time such as when one is sick, when necessary, when exposed to risk factors and so on whilst 2.77% did not respond (**Table 21**).

Table 19: When last RMC was done.

Response	Frequency	Percentage
A month ago	72	24
6months ago	18	6
A year ago	79	26.3
Last 5yrs	54	18
Can't remember	69	23
No response	8	2.7
Total	300	100%

Table 20: Reasons why RMC was done.

Response	Frequency	Percentage
For personal reasons	175	58.3
Employment	60	20
Follow up	28	9.3
Travel	10	3.3
School	5	1.7
Marriage	6	2
No response	16	4.3
Total	300	100%

Table 21: How often RMC should be conducted.

Response	Frequency	Percentage
Monthly	28	9.3
Every 6 months	169	56.3
Annually	85	28.3
Every 5 years	3	1
Others	7	2.3
No response	8	2.7
Total	300	100%

The next question still under practice of RME was, according to participants, what are the factors that prevents their colleagues from undergoing medical checkups? 15.7% said because they

are not sick, 40.3% cited financial constraints, 16.7% cited their colleagues felt medical checkups are not necessary, 24.7% indicated time constraints, whilst 2.6% indicated other factors as breach in confidentiality, lack of privacy, medical doctors not willing to conduct examinations and so on (**Table 22**). Participants were then asked whether they will encourage their colleague health workers to undergo medical checkups. 99% said yes, 0.3% said no, whilst 0.7% did not respond (**Table 23**). The final question on practice, which also doubles as the final question of the study was, do you conduct monthly breast self-examination? 17.3% of respondents said yes, 56.7% said no, 20.7% said not regularly, whilst 5.3% did not respond (**Table 24**).

Table 22: What Inhibits the Practice of RMC?

Response	Frequency	Percentage
Not sick	47	15.7
Financial constraints	121	40.3
Not necessary	50	16.7
Time constraints	74	24.7
Others	8	2.6
Total	300	100%

Table 23: Will you encourage the practice of RMC?

Response	Frequency	Percentage
Yes	297	99
No	1	0.3
No response	2	0.7
Total	300	100%

Table 24: Do you conduct monthly breast self-examination?

Response	Frequency	Percentage
Yes	52	17.3
No	170	56.7
Not regularly	62	20.7
No response	16	5.3

DISCUSSION

Demographics

A total of 300 participants were recruited for the study, representing 90% of the estimated sample size. Majority of the participants, 58.3% were nurses, this is normal as nurses form the majority of the health care force, followed by medical doctors which constituted 27.7% whilst the MLS constituted 14%. The male gender dominated the study with 65.7%. This is partly due to the male dominated medical and medical laboratory professions. However, the method employed to collect data, where the researcher collected contacts of participants for them to answer questionnaire also contributed to the male dominance of the study. 91.3% of the male population have ever undergone routine medical checkup compared to 94% of females. The female gender undergoes routine medical checkups than their male counterparts, as was also reported by Eke et al., 2012, where 39.4% of females regularly examine their health compared to 29.4% of males [12]. However, studies from Australia reported no difference in medical examination between males and females [9].

56% of the participants were single at the time of data collection. This might be due to the fact that, most of the participants, 67.3% are with the ages of 20 years-30 years. With regard to the practice of medical checkups, 89.8% of participants who are single have ever undergone a medical checkup, compared to 95.3% of the married population. Married couples tend to undergo routine medical checkups compared to the single population; this was also reported by [5,6]. For religious affiliations, 93.8% of Muslims have ever undergone medical checkup, compared to 91% of Christians. The first objective of the study was to assess the level of knowledge of participants regarding RME. Series of questions were asked and analyzed (**Table 2**).

The first question that was put before participants to assess their knowledge was the definition of RME, which was defined as the process of assessing an individual's state of health so as to detect, treat and prevent illnesses. 56.6% of nurses strongly agreed with the definition, 49.4% of doctors strongly agreed whilst 47.6% of medical laboratory scientists strongly agreed. 39.4% of nurses agreed, 45.8% of medical doctors agreed, whilst 47.6% of laboratory scientists agreed. Cumulatively, 95.6% of the participants either strongly agreed or agreed with the definition. This is similar to a study conducted in Nigeria, where 100% answered yes to the same definition [2]. This is however comparatively higher than that reported by Appiah and In, 2019, who reported 38.6% [6].

Next on assessing knowledge was the question, health checkup is important for asymptomatic adults. 40%, 45.8% and 42.9% of nurses, doctors and medical laboratory scientist respectively strongly agreed, whilst 48.6%, 50.6% and 50% of nurses, doctors and laboratory scientists respectively agreed. Cumulatively, 91.3% of the participants either strongly agreed or agreed to the statement that, medical checkups are necessary for asymptomatic adults. This is similar to that reported by Appiah and In, 2019, where 92.1% also strongly agreed or agreed to the assertion that, medical checkup is important for asymptomatic adults [21]. Periodic health checkups help to establish a health baseline was the next question put before participants to assess their knowledge. 42.8%, 49.4% and 33.3% of nurse, doctors and laboratory personnel respectively strongly agreed to the statement, whilst 52.2% of nurses, 45.8% of doctors and 61.9% of laboratory personnel agreed to the statement. Cumulatively, 94.5% of participants either strongly agreed or agreed to the statement. This is similar to that reported by Appiah and In, 2019, where 96% either strongly disagreed or agreed to the statement [6].

General medical checkups should involve an assessment of one's entire body system. This was the next question under knowledge category to 56% of nurses. 50.6% of doctors and 35.7% of laboratory staffs strongly agreed. 40%. 43.4% and 43.7% of nurses, doctors and laboratory scientist respectively agreed to the statement. Cumulatively, 95.3% of participants either strongly agreed to agree to the statement. Similar results were reported by Females above 30 years and males above 40 years should have cervical smear and PSA done respectively [22]. 37.1%, 44.6% and 31.7% of nurses, doctors and laboratory staffs respectively strongly agreed to the statement, whilst 49.7%, 47% and 58.5% of nurses, doctors and laboratory staffs respectively agreed to the statement. Cumulatively, 88.3% of participants either strongly agreed or agreed to the statement.

This is higher than that reported from a study conducted among medical students, which reported 61% [19].

Early detection of diseases such as hypertension and diabetes can prevent complications later in life. 94% of participants either agreed or strongly agreed to this statement. 65.9%, 69.9% and 42.9% of nurses, doctors and laboratory scientists strongly agreed, whilst 30.1%, 25.3% and 45.2% of nurses, doctors and laboratory staffs agreed to the statement. Counseling and health education is essential in health checkup. 44% of nurses, 54.2% of doctors and 31.7% of laboratory scientists strongly agreed to this assertion, whilst 48%, 39.8% and 56.1% of nurses, doctors and laboratory personnel respectively agreed. Accumulatively, 91.6% of participants either agreed or strongly agreed to this statement. According to a study conducted by Priscilla et al., 2019, this assertion was rated "very important" and ranked as second most important by participants [23].

The study finds a high level of knowledge among health care personnel, nurse's doctors and medical laboratory scientists. More than 90% of the participants either agreed or strongly agreed to all questionnaire item related to knowledge. This finding is similar to that of several other studies such as Ojong et al., 2020, who reported knowledge prevalence of 92.8% among health personnel in a teaching hospital in Nigeria [24]. This finding is however considerably higher than that reported from a study in Saudi Arabia, where 69.6% of the participants is reported to have adequate knowledge about medical checkups [4]. There were no significant differences between the three professions. The next objective of the study was to assess the perception of health care personnel towards routine medical checkup. Series of questions were asked to assess this objective. First on the list was to elicit the views of participants as to whether medical checkups are necessary. 99.7% of participants responded yes, that medical checkups are important. This was considerably higher than that reported from Saudi Arabia, where 88.9% said medical checkups are important [25].

Next on perception was the question, medical checkups are only necessary for people who are sick. A cumulative 97% of participants either disagreed or strongly disagreed to the statement. 56.5%, 31.7% and 11.8% of nurses, doctors and laboratory personnel respectively strongly disagreed, whilst 36.8%, 28% and 42.9% of nurses, doctors and laboratory personnel disagreed. The results of this study was considerably higher than that reported by Eke et al., 2012, where 36,4% said medical checkups are only necessary for people who are sick [14]. Medical checkups help to prevent nosocomial infections among health personnel. 30.3%, 42.2% and 29.3% of nurses, doctors and laboratory staffs respectively strongly agreed, whilst 49.7%, 45.8% and 51.2% of nurses, doctors and laboratory staffs respectively agreed to the assertion. Cumulatively, 82% of participants either agreed or strongly agreed to that statement. This finding is higher than that reported by Ojong et al., 2020, where in a similar study among health care workers in a teaching hospital in Nigeria, 45.9% said health checkups reduces the incidence of nosocomial infections [26].

When asked about the frequency at which health checkups should be done, 13.2%, 20.7% and 11.9% of nurses, doctors and laboratory personnel respectively strongly agreed that, medical checkups should be done yearly, whilst 57.5%, 54.9% and 50.0%

of nurses, doctors and laboratory personnel respectively agreed that, medical checkups should be done yearly. Cumulatively, a total of 70.3% of the respondents believed medical checkups should be conducted annually. This finding differs from that of Eke et al., 2012, where 59.9% of respondents felt medical checkups should be conducted monthly [14]. Participants were sked whether they wanted medical checkups to be captured under the National Health Insurance Scheme NHIS. 32.0%, 32.5% and 14.3% of nurses, doctors and medical laboratory scientists respectively strongly agreed that, health checkups be captured under the NHIS, whilst 48.0%, 58.2% and 50.7% of MLS agreed. Cumulatively, 80.3% of participants either agreed or strongly agreed that, health checkups be captured under the NHIS. Several studies, including this current study reported cost of financial constraints as a major obstacle to the practice of health checkups. In their study, Appiah and In, 2019 reported that, 41.6% of participants cited cost the main reason for not undergoing health checkups [27]. Similarly, 41.3% of the participants of this study cited cost as the main reason for not undergoing medical checkups. Similarly, 93.6% of participants either agree of strongly agreed that, the hospital should conduct yearly medical checkups for all staffs. This clearly indicates a positive attitude or perception of participants towards health checkups.

When asked whether or not they support the practice of regular health checkups, 99% of participants responded in the affirmative. This is further cemented by the finding that, 91.3% of participants believed health checkups are necessary for everyone, and not just the elderly or those above 40 years. This finding differs from that reported by Al-kahil et al., 2019, where only 58.7% said health checkups should be undertaken by all age groups [28]. In a related finding, 99% of participants in this study said they will encourage their colleague health workers to practice periodic medical checkup. The final objective of the study was to assess the practice of Routine Medical Checkup among health care personnel. To this effect, a simple question put before participants; "have you ever under gone routine medical checkup?" 94.2%, 89.2% and 90.5% of nurses, doctors and MLS responded yes, thus have ever under gone medical checkup. Cumulatively, 91% of participants have ever undergone medical checkup. This is considerably higher than reported from Saudi Arabia, 22.5% Nigeria, 46% Tema [5,25].

Community 20, 68.1% Kaneshie market, 46.7% India, 36% as well as Austria, 41.8% [6,9,26]. However, when participants were asked whether they conduct monthly breast self-examination, only 17.3% responded yes, whilst 20.7% said not regularly. Only 36.8% of female participant conduct monthly breast examination. This finding though one would have expected a high prevalence rate is still higher than that reported among medical students in Kenya, with BSE prevalence rate of 19.2% [22]. Participants were asked to indicate the type of checkup they had undergone. General examination was the highest checkup undergone with 64.6%. This is similar to that reported from where Nigeria, where 61.8% of respondents underwent general examinations [14], but slightly higher than that reported by Appiah and In, 2019 where 52.2% underwent general examination [29]. This might be attributed to high level of knowledge exhibited by the participants. Blood pressure examination was undergone by 14.6%. This is in contrast to that reported by Ojong et al., 2020, where 61.3% had blood pressure checkups [25]. This may be

due to the fact that blood pressure examination is included in general medical checkups. Other checkups were Random Blood Sugar, Cholesterol examination, dental and visual examinations, hepatitis, and cervical examinations.

Participants were asked to indicate the last time they went for a medical checkup. 56.3% had undergone medical checkup within the previous year. This is slightly higher than that reported by Ojong et al., 2020 where 44.9% undergone medical checkup within the past year [30]. Majority of the participants, 58.3%, had undergone medical checkups for personal reasons. This might be due to the fact most of participants regard medical checkups as important, due to their level of knowledge. This finding was higher than that reported by Priscilla et al., 2019, where 35.4% of participants went for medical checkups for personal reasons as well as that reported by Albaloushi et al., 2015 40.7% [5,26]. It was however lower than that reported from Saudi Arabia, 77.5% [5]. 21% undergo medical checkups for employment, whilst 9.9% as a follow up on treatment. This finding differs significantly from that of Varshini et al., 2020, where 64% percent undergo medical checkups only when they are sick [31].

When asked how often individuals should undergo medical checkups, majority of the patients, 56.3% recommended every six months, whilst 28.3% said annually. This was in contrast to that reported by Eke et al., 2012, who reported that, 59.9% of respondents said individuals should undergo medical checkups monthly whilst 12.4% of their participants did not know how often medical checkups should be done [14]. The major obstacle that impedes the practice of periodic medical checkup is financial constraint, 40.3%, followed by time constraints, 24.7%. This was similar to the study conducted at Kaneshie market, where 41.6%, 40.7% and 39.8% respectively cited high cost of service, time constraints and not been sick enough to be major challenges towards the practice of RMC [32]. A handful of the participants cited issues such as privacy and confidentiality [33].

CONCLUSION

Majority of the participants exhibited a high level of knowledge and positive attitude towards periodic medical checkup. Practice of medical checkup was high among participants, except for monthly breast self-examination, which surprisingly was on the lower side. The study recommends stake holders consider the inclusion of periodic medical checkups in the NHIS. Health facilities are also recommended to conduct, at least, yearly medical checkups for their staffs. Health care personnel, most especially females are encouraged to conduct regular monthly self-breast examination.

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ETHICAL ISSUES

The study was exempted from ethical consideration. However, permission to conduct the study at the facility was granted by the head of research department of the facility. The permission was granted after a careful scrutiny of the research proposal.

COMPETING INTEREST

There are no competing interests associated with this study as the study was self-financed.

REFERENCES

1. Adeko OO, Ariba AJ, Olatunji AA, Toyobo OO (2017) Routine chest radiograph in pre-employment medical examination for healthcare workers: Time for a review of the protocol. 24(2):93-96.

2. Adom D, Hussein EK (2018) Theoretical and conceptual framework: Mandatory ingredients of a quality research. Int J Sci Res. 7(1).

3. Ago Y, Force CT, Examination H, Force T, Society AC, et al. (1984) The periodic health examination and internal medicine. Ann Intern Med. 101(6): 866–868.

4. Al-kahil AB, Khawaja RA, Kadri AY, Abbarh SM, Alakhras JT, et al. (2020) Knowledge and practices toward routine medical checkup among middle-aged and elderly people of Riyadh. 7(6), 1310–1315. https://doi.org/10.1177/2374373519851003

5. Albaloushi A, Ali SI (2015) Attitude towards performance of medical check-ups: A survey from eastern province of Saudi Arabia. 27(27): 57–59.

6. Appiah HK, In L (2019) University of Ghana Digital Collections (UGSpace). University of Ghana.

7. Bjerregaard A, Maindal HT, Henrik N, Sandbæk A (2017) Patterns of attendance to health checks in a municipality setting : The Danish 'Check Your Health Preventive Program'. Preventive Medicine Reports, 5, 175–182.

8. Boulware LE, Marinopoulos S, Phillips KA, Hwang CW (2007) Systematic review: The value of the periodic health evaluation. Ann Intern Med. 146(4):289-300.

9. Brunner-ziegler S, Rieder A, Stein KV, Koppensteiner R, Hoffmann K, et al. (2013) Predictors of participation in preventive health examinations in Austria.

10. Dosoo F, Adongo R, Kuuder CW (2020) Medical tourism potentials of Tamale Teaching Hospital in Ghana.

11. Dryden R, Williams B, Mccowan C, Themessl-huber M (2012) What do we know about who does and does not attend general health checks? Findings from a narrative scoping review. BMC Public Health. 12:723.

12. Edie EB (1916) Health examinations past and present and their promotion in Pennsylvania. 602–606.

13. Egamova N, Sabitova R, Malikov Y (2013) Role of health check-ups in non-communicable diseases' detection at primary health care. Int J Public Health. 2(4): 129–136.

14. Eke C, Eke N, Joe-ikechebelu N, Okoye S (2012) Perception and practice of periodic medical checkup by traders in South East Nigeria.

15. Han PKJ (2015) Historical changes in the objectives of the periodic health examination. Ann Intern Med. 127(10):910-917.

16. Health MOF (2012) National policy for the prevention and control of chronic non-communicable diseases in Ghana. 1-27.

17. Hoebel J, Lampert T (2013) Social status and participation in health checks in men and women in Germany. Dtsch Arztebl Int. 110(41): 679-685.

18. Investigation O (2005) Support of evidence-based guidelines for the annual physical examination. Arch Intern Med. 165(12):1347-1352.

19. Issn B, Wu L, Lai T, Liu C, Lee C, et al. (2014) Medical students' awareness and perception of national health examinations. 4(3): 35–45.

20. Kamath V, Ganguly S (2020) Are periodic health checkups useful or necessary? 51–55.

21. Kushitor MK, Boatemaa S (2018) The double burden of disease and the challenge of health access: Evidence from access, bottlenecks, cost and equity facility survey in Ghana. PLoS One. 13(3):e0194677.

22. Kimani SM, Muthumbi E (2008) Breast self-examination and breast cancer: Knowledge and practice among female medical students in a Kenyan university. 37–42.

23. Ngo TT, Hoang PN, Pham HV, Nguyen DN, Bui HTT, et al. (2021) Routine medical check-up and self-treatment practices among community-dwelling living in a mountainous area of Northern Vietnam. Biomed Res Int. 2021:8734615.

24. Of A, Medical R, Among DE, Tema AIN, Priscilla E, et al. (2017) University of Ghana Digital Collections (UGSpace).

25. Ojong IN, Nsemo AD, Aji P (2020) Routine medical checkup knowledge, attitude and practice among health care workers in a tertiary health facility in Calabar, Cross river state, Nigeria. 12(8): 27–37.

26. Priscilla E, Danquah B, Agyemang SA, Amon S, Priscilla E, et al. (2019) Routine medical and dental examinations : a case study of adults in Tema community 20 in Ghana adults in Tema community 20 in Ghana. Int J Health Promot Educ. 58(6): 1-13.

27. Omokhua HA, Ehizele AO (2020) Routine medical check among dental health workers in edo state. 5(1): 20–29.

28. Sadiq T, Asim M, Aziz SA (2017) Awareness among medical and non-medical students about the practice of periodic medical examination. J Islam Int Med Coll. 12(2): 116–119.

29. Schuster BL, Editor A, Chacko KM, Anderson RJ (2007) Office management: General internal medicine The Annual physical examination: Important or time to abandon? Am J Med. 120(7): 581–583.

30. Agency for Healthcare Research and Quality (2014) The guide to clinical preventive services.

31. Varshini A, Rani SL, Brundha MP (2020) Awareness of annual doctor checkups among general population. Drug invention today. 14(2): 8–10.

32. Virgini V, Meindl-fridez C, Battegay E, Zimmerli L (2015) Check-up examination: Recommendations in adults. Swiss Med Wkly. 145:w14075.