Knowledge and Utilization of Periodic Medical Check-Ups and their Impact on Health Outcomes among University of Port Harcourt Staff

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Abstract

This study investigated the level of knowledge and extent of utilization of Periodic Medical Check-up (PMC) and their impact on health outcome among University of Port Harcourt Staff. A cross-sectional descriptive survey design was adopted, targeting 60 years and above workers in the University of Port Harcourt. A total of 137 participants were selected using convenience sampling. Data were collected using a structured self-questionnaire titled "Knowledge and utilization of Periodic Medical Check-up Questionnaire (KUPMCQ)." Analysis was performed using SPSS Version 27, employing descriptive statistics, chi-square tests, and regression analysis to assess associations between knowledge, sociodemographic variables, and PMC utilization. The results revealed a poor level of PMC knowledge, with an aggregate of 44.5% correct responses, and 55.5% incorrect responses. Only a few areas, such as questions on regularly seeking periodic health examination at specific and regular time while he / she is healthy, engage in regular physical activity. Since you don't go for periodic medical check-ups and that periodic medical check-ups can help detect health problems early, 59.9%, 57.7% and 56.2% showed relatively good knowledge but remained below satisfactory levels on routine check-up during birthday periods. The mean extent of PMC utilization was 2.70 ± 1.20. The majority of the responses were below the cut-off mean, suggesting poor utilization of PMC among University of Port Harcourt Staff aged 60 and above. However, some have undergone periodic medical check-ups in the past years (3.32 ± 1.18), and for diagnostics purposes (3.34 ± 1.16) reveal moderate level of utilization, and higher impact level. Conclusively, this research thus accomplished that there is a poor level of knowledge of PMC among aged sixty years and above workers in university of Port Harcourt towards healthy lifestyles. It is imperative to sustain and expand its initiatives. Health Educators and Health promoters should enhance PMC's awareness campaigns.

Keywords: Knowledge, Utilization, Periodic Medical Check-ups, Impact, Health outcome, and sixty years above.

Introduction

Periodic medical check-ups are essential for maintaining a healthy lifestyle, especially among older adults 60 years and above. Regular health check-ups can help detect health problems early, prevent complications, and improve overall health outcomes. Periodic medical checkup

is essential as it helps detect medical conditions early even before the symptoms appear. The significance of this is that such diseases are tackled early, reducing morbidity and mortality. The practice of Periodic Medical checkups has been poor among so many groups in society (Ocheifa et al, 2023). Periodic medical check-ups are a crucial aspect of preventive healthcare, enabling individuals to monitor their health status, detect potential health issues early, and receive timely interventions. Regular health check-ups have been shown to improve health outcomes, reduce morbidity and mortality rates, and enhance overall quality of life. Despite these benefits, studies have revealed disparities in the uptake of periodic medical check-ups, with certain demographics exhibiting lower adherence rates. It has been an integral part of medical practice for centuries, notwithstanding the lack of consensus on its significance in health promotion and illness prevention (Boulware et al, 2007). The History of periodic Medical checkups started far back in 1861. The concept of routine medical checkups was proposed by Doorbell as a measure to manage optimum health and ward off related: health conditions such as Tuberculosis, diabetes, and hypertension (Blood pressure). Most individuals, especially in Africa, do not attach much importance to medical checkups, medical checkups or examinations are only carried out during times of ill health and pre-employment (Of et al, 2017).

According to Behera (2021) Early detection and prevention help detect age-related health issues, such as diabetes, hypertension, and cancer, at an early stage, preventing complications and improving treatment outcomes. Management of chronic conditions during periodic medical check-ups enable healthcare providers to monitor and manage chronic conditions, such as arthritis, heart disease, and respiratory diseases, reducing the risk of complications. Promoting healthy ageing: regular health check-ups encourage healthy behaviours, such as exercise, balanced diet, and stress management, promoting overall well-being and healthy ageing, Reducing Risk of Cognitive Decline during Periodic medical check-ups can help identify risk factors for cognitive decline, such as dementia and Alzheimer's disease, allowing for early interventions, enhancing Quality of Life during Regular health check-ups can improve physical function, reduce pain, and enhance overall quality of life, enabling older adults to maintain their independence and engage in activities they enjoy, preventing Falls and Injuries during Periodic medical check-ups can help identify risk factors for falls and injuries, such as osteoporosis, vision impairment, and medication side effects, allowing for preventive measures.

According to Kamath and Ganguly (2020), a routine medical checkup (RMC) is an aspect of preventative medicine that involves the medical assessment of a healthy individual, carried out at regular intervals by health personnel, to enhance the early detection of the risk of medical conditions. Frequent medical checkups provide 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 includes a general physical assessment and laboratory investigation of the body fluids, such as blood and urine samples, x-rays, ultrasounds, and electrocardiograms (Kamath & Ganguly, 2020). The growing burden of chronic diseases in developing countries contrasts with the low uptake of regular health check-ups (Danquah et al., 2020) Several factors influence the practice of routine medical examinations, including age, with older individuals more likely to undergo regular check-ups; socioeconomic status, with those of higher economic standing more likely to prioritize preventive care, marital status, education level, and gender, which can impact health-seeking behaviors, occupation, with certain jobs posing unique health risks; and individual health status, with those experiencing health issues more likely to seek regular medical attention (Bjerregaard et al., 2017). In a study conducted on health workers in Tanigle Teaching Hospital in Ghana Surazu et al 2023) were highly knowledgeable with regards to routine medical checkups as a very important practice, consistent with Eke et al., 2012). This study aimed to investigate the knowledge and utilization of periodic medical checkups and their impact on health outcomes among 60 years and older at the University of Port Harcourt.

Statement of the problems

Despite the importance of periodic medical check-ups (PMCs) in maintaining health, preventing diseases, and promoting healthy aging, many individuals aged 60 years and above do not undergo regular health check-ups. This leads to delayed detection and management of age-related health issues, increased morbidity and mortality rates, and reduced quality of life globally.

Research questions

1) What are the sociodemographic variables associated with periodic medical checkups among University of Port Harcourt staff aged 60 years and above?
2) What is the level of knowledge among University of Port Harcourt staff age 60 years and above about periodic medical check-ups?
3) To what extent do University of Port Harcourt Staff aged 60 years and above utilize periodic medical check-ups?

4) What is the impact of medical checkups on health outcomes among University of Port Harcourt staff aged 60 and above?

Methodology

This study used a cross-sectional descriptive research design. A total sample of 137 older adult workers, 60 years and above was drawn from Uthe university of Port Harcourt. The sampling technique was convenient and accidental which included any participant who was willing and available for the study and had met the inclusion criteria as highlighted in box 1. University of Port Harcourt staff Aged 60 years - above were selected using a convenience sampling method. Data was collected using a structured self-developed questionnaire known as the Knowledge and Utilization of Periodic Medical Check Up's Questionnaire (KUPMCQ) which had a reliability index of 0.89. The questionnaire determines the level of knowledge and the utilization of PMC at the University of Port Harcourt. In data analysis, the Statistical Package for Social Sciences (SPSS) Version 27 was employed. Frequency and percentage distributions, means, and standard deviations were used to describe demographic attributes and responses.

Inclusion Criteria	**Exclusion Criteria**
1. Staff of the university of port Harcourt who are 60years and above in Rivers State. 2. University of Port Harcourt staff who provided informed consent to participate in the study.	1. University staff who are less than sixty years workers on leave, absent, or unavailable during the data collection period. 2. University of port Harcourt workers who declined consent or chose to withdraw from the study at any stage.

Box 1: Participants Inclusion and exclusion criteria Socio-Demographic variable of University of Port Harcourt Staff Aged 60 and above on periodic medical checkups for healthy lifestyles

Factor	Groups	F=137	%100
Age	69 years and above	36	26.28
	60-64 years	44	32.60
	65-68years	57	41.61
Gender	Male	60	43.80
	Female	77	56.20
Designation	Lecturer	38	27.74
	Professional	54	39.42
	Junior Staff	11	8.02
	Administrative Staff	19	13.87
	Technical Staff	15	10.95
Marital status	single	25	18.25
	married	112	81.75

2) What is the level of knowledge among University of Port Harcourt staff aged 60 years and above about periodic medical check-ups?

Table 2: Knowledge of University of Port Harcourt Staff Aged 60 and above on periodic medical checkups

	n = 137	**Correctly Answered**		**Incorrectly Answered**	
Item No	**Statement**	**f**	**%**	**f**	**%**
1	Do you have any prior information about periodic health examinations for adult	54	39.4	83	60.6
2	According to your information, the periodic health examination (for adults) means a person visits primary healthcare centers and hospitals only in cases of illness or complaint	59	43.1	78	56.9
3	Quoting you, the regular health seasonal (for adults) means regularly seeking periodic health examinations at specific and regular times while he/she is healthy	82	59.9	55	40.1
4	Do you go for routine check-ups during birthday periods?	55	40.1	82	59.9
5	Do you believe that periodic medical check-ups can help detect health problems early?	77	56.2	60	43.8
6	Do you engage in regular physical activity, since you don't go for periodic medical check-ups?	79	57.7	58	42.3
7	Do you go to the Hospital every three months to know your health status	59	43.1	78	56.9
8	Do you go to the hospital for at least six months to know your health status?	45	32.8	92	68.2
9	Have you ever undergone a periodic medical check-up?	40	29.2	97	70.8
	Aggregate	**61.1**	**44.5**	**75.9**	**55.5**

Note: 1-49% = Poor; 50-69%=Good; 70% and above =Excellent

Table 2: above shows the summary analysis of the responses and the general knowledge of PMC towards a healthy lifestyle by the workers who are 60 and above at the University of Port Harcourt is low with an average of 44.5% correct responses. This shows that the staff of the University of Port Harcourt who are 60 years and above have a limited understanding of the role of PMC's in the improvement of healthy lifestyles. A majority of the items received less than 50% correct responses, and the few that received slightly better results are still in the 'poor' category and these include questions on routine check-ups during birthday periods. The 55.5% of wrong answers reveal the imperative need for the advocacy campaign and capacity-building activity to raise the performance of the workers to subscribe to PMCs towards healthy lifestyles and to improve the University community.

Research Questions 2: To what extent do University of Port Harcourt Staff aged 60 and above engage in periodic medical check-ups?

Table 3: Mean analysis of the extent of the utilization of periodic medical check-ups among University of Port Harcourt Staff aged 60 and above

S/N	Statement	VO	O	NO	NVO	N	Mean	St.Dev
1	I have undergone periodic medical check-ups in the past years 1-2times	37	33	26	24	17	3.32	1.18
2	I rely on a self-digital Stethoscope to examine myself or other health-related challenges.	9	18	36	35	38	2.37	1.2
3	I use home stethoscope tools like wristwatches for diagnostic purposes.	40	30	26	24	17	3.34	1.16
4	I utilize natural fruits to avoid periodic medical check-ups.	6	47	26	32	25	2.76	1.21
5	I receive satisfied periodic medical check-ups or diagnoses to support my clinical decision-making.	4	33	31	29	31	2.62	1.2
6	I participate in periodic medical check-ups awareness campaigns or workshops to prevent health related-risks.	8	32	31	35	31	2.56	1.22
7	I use periodic medical check-ups opportunity to know if my current health status has improved or declined.	9	30	35	36	23	2.71	1.19
8	I go whether I utilize regular health checkups	2	33	30	34	34	2.47	1.16
9	I use wearable health devices or mobile health apps to provide personal health care.	5	32	28	36	36	2.43	1.19
10	I have educated patients about using periodic medical check-ups, to manage health.	6	36	23	32	40	2.44	1.26
	Aggregate	**13**	**32**	**29**	**32**	**29**	**2.70**	**1.20**

Note: VO=Very Often; O=Often; NO=Not Often; NVO=Not Very Often; and N=Never
Critical mean=3.0; 1-2.59=low extent; 3.0-4.0 moderate extent; 4.1-5.0 High extent

The mean analysis of PMC utilization among University of Port Harcourt Staff aged 60 and above workers (Table 3) shows that the overall mean is low at 2.70 ± 1.20. The majority of the responses are below the cut-off mean of 3.0, suggesting poor utilization of PMC among University of Port Harcourt Staff aged 60 and above. However, some have undergone periodic medical check-ups in the past years (3.32 ± 1.18), and diagnostics purposes (3.34 ± 1.16) reveal moderate level of utilization. These were followed by those who utilize natural fruits to avoid periodic medical check-ups to avoid schedule or manage patient appointments (2.76 ± 1.21) and those who use periodic medical check-ups opportunity to know if their current health status has improved or declined (2.71 ± 1.19) for have mean close the critical mean of 3.0 which also indicate their utilization though still poor. These results support the call for focused efforts in PMC advocacy campaign and supporting structures for the optimization of the use of PMC in the University of Port Harcourt among that are 60years and above workers

4) What is the impact of medical checkups on health outcomes among University of Port Harcourt staff aged 60 and above?

Table 4: Impact of medical checkups on health outcomes among University of Port Harcourt staff aged 60 and above

Statement	Incorrectly answered		Correctly answered	
	F	**%**	**f**	**%**
Have periodic check-ups helped you detect any health issues early?	53	38.68	84	61.32
Have check-ups improved your health and Quality of life	67	48.91	70	50.09
Do you feel more in control of your health due to periodic check-ups	43	31.39	94	68.61
Have medical check-ups helped reduce your hospital visits or severe health complications?	84	61.32	53	38.68
If yes, what condition(s) were detected diabetes/hypertension or others	60	43.79	77	56.21
Aggregate	**61.4**	**44.82**	**75.6**	**55.18**

Note: 1-49% = Poor; 50-69%=Good; 70% and above =Excellent

Table 4 below shows the summary analysis of the impact of PMC on the workers who are aged 60 and above at the University of Port Harcourt was high with an average of 55.18% correct responses. This shows that the staff of the University of Port Harcourt who are aged 60 years and above have health benefits from the role of PMCs. A majority of the items received more than 50% correct responses, and the few that received slightly declined results

included questions on have medical check-ups helped reduce your hospital visits or severe health complication38.68%.

Discussions

While it might seem counterintuitive; it is indeed possible to have a low outcome on knowledge of periodic medical checkups and still have a higher impact on periodic medical check-ups among those aged 60 years and above. This could be due to limited health literacy lack of access to health education and cognitive decline or dementia. The impact of period medical checkups can be influenced by various factors beyond knowledge, such as trust, social, habit formation, and perceived benefit. The Sociodemographic findings revealed that aged 65-68 years dominated having 41.61%, followed by 60- 64 years. Females dominated with 56.29%and the professional staff participated at 39.42%, followed by the lecturer, and the majority, 81.75% were married. This study is in opposition to Surazu et al, (2023). The male Gender dominated the study with 65.7%. However, the method employed to collect data, where the researchers collected contacts of participants for them to answer the questionnaire also contributed to the male dominance of the study. 91.3% of the population have ever undergone routine medical checkups compared to 94.0% of females. This study with those aged 60 years and above contrary to Ocheifa et al (2023) who study were 40-45 years. Male dominated here which is similar to the study. In knowledge, Ocheifa et al (2023) have high knowledge (99.1%) unlike this study which had 41.05%.

This study aligns with previous findings that Females tend to undergo routine medical checkups more frequently than their male counterparts as was also reported by Eke etc al., 2012). Though the participants were just professionals which is different from this study variable of missed designation of both the academia and the non-academic. where 39.4% of females regularly examine their health compared to 29.4% of males. However, studies from Australia reported no difference in medical examination between males and females (Brunner-Ziegler et al 2013)

56% of the participants were single at the time of data collection. This might be because most of the participants, 67.3% are between the ages of 20-30yrs. About the practice of medical checkups, 89.8% of single participants have ever undergone a medical checkup, compared to 95.3% of the married population. Married couples tend to undergo routine medical checkups more in this study 81.75% were married up compared to the single population, this was also reported by Ali et al. (2012) and Appiah & In (2019).

The level of Knowledge was poor 44.5% compared to 55.5% of incorrect answers. This study result is the reverse of that reported by Surazu et al, (2023,) Early detection of diseases such

as hypertension and diabetes can prevent complications later in life. Counseling and health education are essential in health checkups Surazu et al., (2023) studied PMC among health workers in Teaching Hospital Ghana. Findings were contrary to this finding because there was a high level of knowledge, and practice, unlike this study. This finding is similar to that of several other studies such as Ojong et al., (2020) who reported a knowledge prevalence of 92.8% among health personnel in a teaching hospital in Nigeria. Also, the findings are however considerably higher than that reported from a study in Saudi Arabia, where 69.6% of the participants are reported to have adequate knowledge about Medical Checkup (Liu et al., 2020) In knowledge Ocheifa et al (2023) have high knowledge (99.1%) unlike this study which had 41.05%. The majority is this study did not very often when I asked, I go whether they supported the utilization of regular health checkups. This is different from Ojong et al (2020) study When asked whether they support the practice of regular health checkups, 99.0% 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 who is above 40 years. This finding differs from that reported by Ojong et al. (2020) where only 58.7% said health check-ups should be undertaken by all age groups. In a related finding, 99% of participants in this study said they would encourage their colleague health workers to practice periodic medical check-ups. The final objective of the study was to assess the practice of Routine Medical check-ups among healthcare personnel. This is considerably higher than reported from Saudi Arabia, 22.5% (Al-Kahil et al., 2020), Nigeria, 46% (Ojong et al., 2020)
The overall utilization mean was low at 2.70±1.20. The majority of the responses were below the cut-off mean of 3.0, suggesting poor utilization of PMC. Except for some who have undergone PMC in the past years at 3.32±1.18, and for diagnostics purposes 3.30±1.16 that reveal a moderate level of utilization. The majority is this study did not very often when I asked, I go whether they supported the utilization of regular health checkups. This is different from Ojong et al (2020) study When asked whether they support the practice of regular health checkups, 99.0% 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 who is above 40 years. This finding differs from that reported by Ojong et al. (2020) where only 58.7% said health check-ups should be undertaken by all age groups. In a related finding, 99% of participants in this study said they would encourage their colleague health workers to practice periodic medical check-ups. The final objective of the study was to assess the practice of Routine Medical check-ups among healthcare personnel. This is considerably

higher than reported from Saudi Arabia, 22.5% (Al-Kahil et al., 2020), Nigeria, 46% (Ojong et al., 2020)

The impact of PMC among those aged 60 years and above was high with an average of 55.18% correct responses. This shows that the state of the University of Port Harcourt aged 60 years and above has health benefits from PMC. The majority of the items received more than 50% correct responses, and the few that received slightly declined results included questions on whether having a medical checkup helped reduce your hospital visit or severe health complications 38-68%. This study was similar to Ahmed et al (2023) who studied periodic medical examination: a systematic Review. Using a multi-factorial impact on periodic medical examinations like this study that uses self-structured questionnaires only.

Conclusion

The majority of the participants exhibited a low level of knowledge and utilization of medical checkups was very low among participants, aged 60 years and above. While it might seem counterintuitive; it is indeed possible to have a low outcome on knowledge of periodic medical checkups and still have a higher impact on periodic medical check-ups among those aged 60 years and above. Those who knew any PMC and were aware of an existing policy on periodic Medical checkups were more likely to practice periodic check-ups than the others. except for monthly

Recommendations

Based on the conclusion above, the following recommendations were made:

1) University Management should provide Health facilities to conduct, at least yearly medical checkups for their staff
2) Health Educators should be encouraged to conduct regular monthly breast examinations.
3) The University Management should provide an advocacy campaign on periodic health checkups
4) Health Educators should educate the university community on health awareness on periodic medical checkups.
5) the university authority should improve on health literacy and lack of access to health education and cognitive decline or dementia.

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