

Knowledge, Attitude and Practices (KAP) towards Physical Activity (PA) among Medical Academic Staff in Fiji: A Mixed Method Study

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Abstract

Background: Regular PA is one of the most important practices that a person can do to stay healthy. Physical inactivity has been identified as the fourth leading risk factor for global mortality. Workforces are facing health issues such as non-communicable diseases (NCDs) due to sedentary lifestyle.

Objective: To identify the Knowledge, Attitude and Practice (KAP) towards PA amongst medical academic staff at Fiji National University (FNU).

Methods: This is a mixed methods study design conducted amongst all academic and senior management staff at the 5 schools at College of Medicine, Nursing and Health Sciences (CMNHS) at FNU in 2019. A self-administered questionnaire was used to collect quantitative data which was authenticated and face and content validated in a pilot study. A semi-structured questionnaire was used to guide Focus Group Discussion (FGD) amongst senior managers at CMNHS. Descriptive analysis was conducted for quantitative data while thematic analysis was done to analyze the qualitative data.

Results: The knowledge on PA was seen to be at a medium level 19.2 (± 2.8), while attitude was found to be of high level 32.62 (± 2.86) followed by practice seen as a good practice 11.93 (± 1.39) amongst academic staffs of CMNHS. Four major themes were identified from the qualitative including; types of PA available in schools, university contribution towards PA, barriers of PA in CMNHS and recommendations for PA.

Conclusion: CMNHS needs to strengthen the wellness approaches that increase opportunities towards promoting or engaging into PA related work. Further research is warranted to determine on effective ways to increase PA among academic staff at CMNHS.

Keywords: knowledge, attitude, practice, physical activity, academic staff, Fiji

1. Introduction

Physical Activity (PA) is a broad complex human behavior which refers to activity undertaken in a variety of contexts. PA has emerged as a vital area of public health (CDC, 2011). Nearly two thirds of the world's populations are not sufficiently physically active (WHO, 2007). As revealed by the World Health Organization (WHO) insufficient PA is reported to be the fourth leading risk factor for global mortality and contributes to 6% of deaths globally (WHO, 2010). According to the 2014 Global Status Report on NCDs, insufficient PA contributes to 3.2 million deaths and 69.3 million disability-adjusted life years (DALYs) each year (NCD Alliance, 2017). Lack of PA has been cited as a risk factor for Non-Communicable Diseases (NCDs) such as Cardiovascular Diseases (CVDs), obesity, type 2 diabetes mellitus, hypertension, osteoporosis and cancer (WHO, 2007).

Studies investigating employment and the PA levels of older adults are complex due to different measurements of employment status and PA domains. It has been suggested that consistent employment throughout middle-age and older adulthood is an important factor in maintaining daily activities (Van Domelen et al., 2011; Schrack et al., 2014). Although Hamer et al., (2012) and Schrack et al., (2014) found no association between type of employment and PA; other studies have recognized that the relationship between employment status and PA may depend on education, wealth or occupational class or type (White et al., 2017; White et al., 2020).

In Fiji, one of the major risks to our population is the rising crisis of NCD's. Around 80% of deaths in Fiji are

caused by an NCD and those numbers are growing. Moreover, there had been a projection in Fiji that NCDs will account for 73% of deaths and 60% of the global disease burden by 2020 (Maharaj & Reddy, 2012). There are many factors that increase the risk of developing NCDs. Some of these are known as 'modifiable risk factors' which can be controlled and include: tobacco use, insufficient PA, unhealthy diet and alcohol (Mohammadnezhad et al., 2016).

Academic staffs in the College of Medicine, Nursing and Health Sciences (CMNHS) of Fiji National University (FNU) play a vital role by educating in terms of the importance of PA, ways to conduct PA and most importantly promoting PA to its students and communities with the help of their partnership with the Ministry of Health and Medical Services (MoHMS) since CMNHS is seen to be the major health training institution in Fiji. Also, the staffs of CMNHS are seen as role models in the community and should be taking the lead role in advocating for better health and lifestyle. But as evident from previous literature it is noticeable that usually employees do not have ample time to invest into PA and thus end up gaining weight and being sickly leading to being less productive. It was also noticed from the data reported by the Centre for Prevention of Non-Communicable Diseases (CPOND) in 2018 that 73.1% of academic staff in CMNHS were obese and 11.5% of them overweight (CPOND, 2018).

Knowing the Knowledge, Attitude and Practice (KAP) and its determinants is the first step to develop preventive strategies in many health promotion interventions. Due to lack of previous studies, this study aimed to assess the level of KAP towards PA amongst academic staff of CMNHS 2019. The study also seeks to explore the perceptions of senior managers of CMNHS regarding PA among academic staff and factors affecting their PA. It provides valuable information on whether the current strategies are effective, and it will also help CMNHS to evaluate the need for PA and encourage staff participation in PA.

2. Methods

2.1 Study Design and Setting

This is a cross-sectional, mixed methods study that was conducted in 2019 from May 20th to July 29th amongst academic staffs of CMNHS. Using mixed methods to conduct a study improves an evaluation by better ensuring that the limitations of one type of data are balanced by the strengths of another. This will improve understanding by integrating different ways of knowing (Mertler, 2019). This study was conducted in 5 schools in CMNHS including: School of Medical Science (SMSs), School of Public Health and Primary Care (SPHPC), School of Health Sciences (SHSs), School of Oral Health (SOH) and School of Nursing (SN).

2.2 Population and Sample

This study considered all academic staffs at FNU as the study population. Academic staffs who were working in one of the schools at CMNHS for more than 6 months and were involved in teaching in various disciplines were eligible to participate in the study. Those who were not academic staffs or were not willing to participate were excluded from this study. For the quantitative study, purposive sampling method was used to achieve the study sample. The total numbers of staffs in CMNHS were 203 amongst which 5 staffs were excluded as they were part of the questionnaire piloting procedure as well as 3 supervisors. In addition to that, 12 staffs were excluded as they did not meet the study inclusion criteria therefore, for the quantitative study the sample size came to 183 participants. For the qualitative study a purposive sampling was used and 6 senior managers including the Dean of CMNHS and 5 Heads of Schools were invited to a Focus Group Discussion (FGD).

2.3 Data Collection Tool

For the quantitative study, a structured and self-administrated questionnaire was used to collect data. The questionnaire was developed using literature reviews and also the questionnaires that were used in other similar studies to assess participants' KAP towards PA. The questionnaire had 4 sections (Wareham et al., 2002; Bako, 2019). Section A; including 11 questions on participants demographic such as gender, age group, ethnicity, religion, marital status, number of children, qualification, working experience (years) and salary. Section B; included 15 knowledge-related questions with response of "correct", "I don't know" and "incorrect". They were scored as "correct (2)", "incorrect (0)", and "I don't know (1)". The minimum and maximum scores for knowledge related questions were 0 to 30. Those who scored 0 – 15 were considered as low level of knowledge, 16–23 as medium level and 24 – 30 as high level of knowledge. Section C; had 18 attitude-related questions using Likert scale with "agree", "no idea" and "disagree". They were scored as "agree (2)", "disagree (0)" and "no idea (1)". The minimum and maximum for attitude related questions was 0 to 36. Those who scored 0 – 18 were considered as having low level of attitude, 19–28 as medium level of attitude and 29–36 as high level of attitude. Upon evaluation, an altered Bloom's cut off points were utilized where a score of 80-100% of adjust reactions implied a tall level of information and state of mind, a score of 50–79% was a medium level of knowledge and state of mind and a mo

level of information and demeanor was for the respondents with a score of less than 50% of the proper responses (James, 2011; Abbasi et al., 2018; Yimer et al., 2013). Section D had 6 questions which were practice-related questions where a participant's response was categorized into "good practice" and "bad practice". They were scored as "good practice (1)" and "bad practice (2)". The minimum and maximum for attitude related question was 8 to 16. Those who scored <9 were considered as having good practice and ≥ 9 as having bad practice towards PA.

The questionnaire was prepared in an English language as it targeted academic staffs of CMNHS and all have university qualifications and could understand and speak English quite well.

This questionnaire was piloted on 5 academic staffs from 5 different schools at CMNHS to view the questionnaire and see if they understood the questions for face validation and the questionnaire was changed based on their comments. For content validation, the questionnaire was given to 3 content experts who were content experts and also the academic staffs at SPHPC. After the comments were received from the face validity and content validity, the questionnaire was modified according to the comments. This was done to ensure that the questionnaire aligned well with the study objectives.

For the qualitative study, a semi-structured questionnaire including 6 open ended questions was used to guide FGD. The demographic characteristic form was filled by the participants to collect their demographic information including gender, age, ethnicity, religion, and marital status.

2.4 Study Procedure

For the quantitative study, an email was sent to the heads of schools to inform them about the research and request to inform their staff on the date the researcher will be visiting them to have the questionnaire filled. The heads of schools had arranged with their school personal assistants to help with the research data collection. The information sheet was provided to participants with the consent form which informed the participants about the importance of this study and ensured that the potential participants made an informed decision about whether to take part in this research or not. Their privacy and confidentiality were also protected. They were informed that each questionnaire took approximately 20–25 minutes to fill. If the participants agreed to participate then they were asked to fill the consent form and proceed with filling the questionnaire. The personal assistants of each school facilitated form collection and drop off. Some participants could not fill the questionnaire at the same time they received and had asked for time to fill and return and this was allowed to them in respect of their busy schedules.

For the qualitative study, participants were emailed and informed about the time, date, and venue of the FGD as well as given an information sheet to inform them about the study. The demographic characteristics of study participants were collected and a trained interviewer was enrolled to conduct interview. The interviewer opened the discussion by setting some ground rules such as one person speaks at a time rather than talking over one another and the interviewer actively looked for everyone to participate, with no one person dominating the conversation. Participants' privacy and confidentiality were protected. Each person briefly introduced themselves in English, perhaps focusing on their relationship to the discussion. Then the questions flowed with using the interviewer script. The interview was recorded using digital audio recording as well as handwritten notes. The interview lasted for almost one hour and 20 minutes.

2.5 Data Management and Analysis

Microsoft excel was used to enter the raw quantitative data. Data cleaning processes were used for editing, validation, and imputation prior to data analysis. Descriptive analysis was used to find the mean and Standard Deviation (SD), percentage and frequencies of the data. The results were presented using tables and figures.

In terms of qualitative data, the data gathered was transcribed by the researcher from the digital audio recording to Microsoft Word using handwritten notes. The transcribed results were then verified by the interviewer of the FGD. The transcribed results were then transferred to Microsoft excel and dissected into key words and phrases which have significant meanings. This was done by the main researcher and other co-researchers. These were then organized and consolidated by questions. Each of these words and phrases were entered in one column with the participant's code number. The data was reviewed to remove any duplicate entries. The data were then coded and analyzed using Microsoft Excel. Once the data was reviewed and a great general understanding of the scope and contexts of key experiences were attained, manual coding was done which was based on the research questions and the theoretical framework of the study. Data coding was done until the theoretical saturation was reached. After all texts had been coded then themes were abstracted from the coded data. Each individual cell in Microsoft Excel that had data was reviewed and assigned to a thematic area using a cell color coding. Each color represented a theme

and this sorting helped us to bring all key points for each theme for further analysis. The basic themes were then clustered together based on similar issues. These were the themes that formed the results of the qualitative data. Quotes were also used from the transcribed data to help present the relevant themes (Caulfield, 2019).

2.6 Ethical Considerations

Ethics approval granted from the College Health Research & Ethics Committee (CHREC) of FNU. An approval was also sought from the Dean of CMNHS to conduct study at the College amongst the academic staffs. Heads of Schools were also emailed and informed about the study and permissions were sought to collect data from their schools. All participants were given an information sheet and consent form and privacy was ensured prior to their recruitment to the study.

3. Results

3.1 Demographic and Other Characteristics of the Participants

The sample size of the study was 183 out of which only 165 participants answered the questionnaire completely. The breakdowns of exclusion were as follows: 5 staffs were excluded as they were part of the questionnaire piloting procedure as well as 3 supervisors. These participants were not enrolled in the actual survey as they had been exposed to the questionnaire and this might have created some bias in the study. Another 12 staffs were excluded as they did not meet our inclusion criteria as they had spent less than 6 months at CMNHS. The response rate for the study was 90%. Looking at the demographics, about two thirds (62.4%) of the survey respondents were female and approximately one thirds (37.6%) were males. With respect to age, the majority (38.8%) of the participants were from the age range of 35–44 years of age. Amongst this, the largest ethnic group was found to be I-taukei (51.5%) with two thirds of the participants (61.2%) belonging to Christian religion background and out of which 75.2% were married. Of all that participated, a high number of participants (59.4%) had 1-3 children. Followed by looking at the qualification level it was found that almost one third of the participants (39.4%) had their highest qualifications as postgraduate level which included both postgraduate certificate and postgraduate diploma. Finally, looking into the number of years each participant worked for CMNHS majority of the staffs (45.5%) had been working for CMNHS for more than 6 years and looking into the socio economic level in terms of income level fortnightly, most of the participants (89.1%) had an average income of less than \$2000 (Table 1).

Table 1. Frequency of participants based on their general characteristics (n=165)

| Variables | Categories | N | (%) |
|--------------------|------------------------|-----|------|
| Gender | Male | 62 | 37.6 |
| | Female | 103 | 62.4 |
| Age group | 25-34 | 44 | 26.7 |
| | 35-44 | 64 | 38.8 |
| | 45+ | 57 | 34.5 |
| Ethnicity | I-Taukei | 85 | 51.5 |
| | Fijian-Indian Descent | 63 | 38.2 |
| | Others: Please specify | 17 | 10.3 |
| Religion | Christian | 101 | 61.2 |
| | Hindu | 54 | 32.7 |
| | Muslim | 10 | 6.1 |
| Marital status | Married | 124 | 75.2 |
| | Single | 40 | 24.2 |
| | Others | 1 | 0.6 |
| Number of children | 0 | 55 | 33.3 |
| | 1-3 | 98 | 59.4 |
| | 4+ | 12 | 7.3 |

| | | | |
|-------------------------------|-------------------|-----|------|
| Qualification | Undergraduate | 58 | 35.2 |
| | Postgraduate | 65 | 39.4 |
| | Masters & PhD | 42 | 25.5 |
| Working experience (years) | 6months-2years | 25 | 15.2 |
| | 2years-4years | 37 | 22.4 |
| | 4 years-6years | 28 | 17.0 |
| | More than 6 years | 75 | 45.5 |
| Income (fortnightly FJD) | <2000 | 147 | 89.1 |
| | 2001-2500 | 5 | 3.0 |
| | >2501-3000 | 13 | 7.9 |

3.2 Barriers of PA

Figure 1 shows the barriers of PA as identified by the participants. Majority of the participants (46%) revealed that lack of time was the major barrier followed by 22% agreeing to teaching overload, 16% having lack of motivation, 13% having lack of interest and 3% have inaccessibility of exercise facilities.

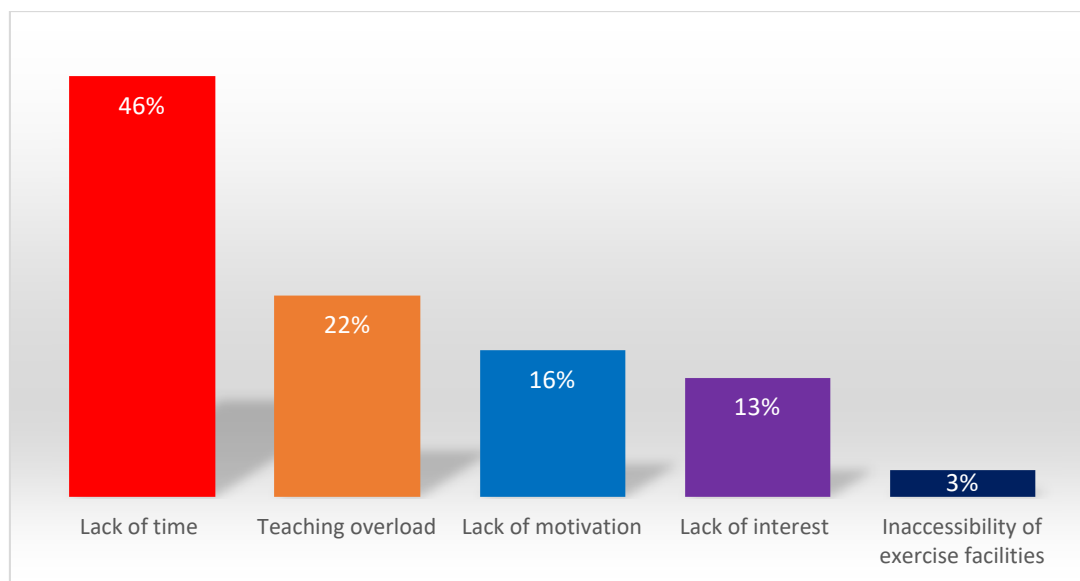


Figure 1. Barriers of PA among academic staff in CMNHS

3.3 Participant's Knowledge towards PA

Table 2 shows the frequency of participant's response to some knowledge related questions on PA. The findings reveal that a high number of participants (63%) agreed that people in different age group require same form of PA followed by 30.3% disagreeing that people in different age group require same form of PA. Almost half (50.3%) of the participants were fully aware that PA does not prevent cancer and heart disease where 43% think that PA does prevent cancer and heart disease. Majority (89.7%) of the academic staffs also showed that they did not know the minimum length of time (in minutes) one needs to be physically active throughout a typical day in order to achieve a health benefit is 30 minutes. More than two thirds (70.3%) of the participants were aware that globally, 1 in 4 adults are not physically active out of which 29.7% had no idea at all about this statement. Overall, 60% of the participants to correctly identify rock climbing as an anaerobic exercise trailed by 26% who could not identify rock climbing as an anaerobic exercise leaving 13.9% who were not aware that rock climbing is a form of anaerobic exercise.

Table 2. Frequency response of participants to some knowledge related questions (n=165)

| Statements | Correct n(%) | I don't know n(%) | Incorrect n(%) |
|--|--------------|-------------------|----------------|
| People in different age group require same form of PA. | 104 (63) | 11 (6.7) | 50 (30.3) |
| PA prevents cancer and heart disease | 71 (43.0) | 11 (6.7) | 83 (50.3) |
| What is the minimum length of time (in minutes) one needs to be physically active throughout a typical day in order to achieve a health benefit? | 0 (0) | 148 (89.7) | 17 (10.3) |
| Globally, 1 in 4 adults is not active enough. | 116 (70.3) | 49 (29.7) | 0 (0) |
| Which one is anaerobic exercise? | 99 (60.0) | 23 (13.9) | 43 (26.0) |

3.4 Participants Attitude towards PA

Table 3 below presents the results of the CMNHS academic staffs attitude to some of attitude related questions towards PA. Results showed that majority of the participants have positive attitude towards PA related questions. A high number (75.8%) consented to completely agree that PA helps them to have more control over their eating behaviors which was also disagreed by 20.6% participants out of which 46.1% that disagree that exercise takes too much of their time to perform their academic work followed by 39.4% that agreed that exercise takes too much of their time to perform their academic work. Quite a high number (83.6%) disagreed that exercise takes too much time for their family responsibilities while 12.7% agreed that exercise takes too much time for their family responsibilities and lastly, out of all participants 58.2% participants disagree to the preference of taking a taxi to walking to town or walking in town.

Table 3. Frequency response of participants on some of attitude related questions (n=165)

| Statements | Agree n (%) | No idea n(%) | Disagree n(%) |
|--|-------------|--------------|---------------|
| PA helps me to have more control over my eating behaviors | 125 (75.8) | 6 (3.6) | 34 (20.6) |
| Exercise takes too much of my time to perform my academic work | 65 (39.4) | 24 (14.5) | 76 (46.1) |
| Exercise takes too much time for my family responsibilities | 21 (12.7) | 6 (3.6) | 138 (83.6) |
| I prefer taking a taxi to walking to town or walking in town | 59 (35.8) | 10 (6.1) | 96 (58.2) |

3.5 Participants PA Practice

Table 4 below shows frequency of participants in terms of their practice of PA. The study revealed that 57.6% showed bad practice in terms the time spent daily doing PA and most of them only spent 0–5 minutes and 6–15 minutes daily. When asked on what they do during free time, it was seen that 80% of them watch TV and do shopping which was regarded as a bad practice. When asked on the number of hours they spent on the computer or watching TV, majority (72.1%) showed bad practice revealing that they spent either 3–4 hours, 5–6 hours or even more than 6 hours a day. It was also noticed that 50.3% spent less than 1 hour in a day to watch TV or DVD movies at home and this was regarded as a good practice. The 27.9% of the participants spent 1 to 2 hours per day on the computer in weekdays out of which 50.3% spent less than 1 hour per day watching TV or DVD movies at home.

Table 4. Frequency response of participants on some of practice related questions (n=165)

| Questions | Good Practice | | Bad Practice | |
|--|---------------|------|--------------|------|
| | n | % | n | % |
| How long do you do PA (any of these examples: rugby, Soccer, net ball, dancing, swimming, fast bicycling or other similar activities) per day? | 70 | 42.4 | 95 | 57.6 |
| What do you do during free time? | 33 | 20 | 132 | 80 |
| How many hours do you spend on the computer or watching TV per day (in week days)? | 46 | 27.9 | 119 | 72.1 |
| How many hours did you watch TV or DVD movies at home per day? | 83 | 50.3 | 82 | 49.7 |

3.6 Participants' level of KAP towards PA

Table 5 illustrates the distribution of the participants' level of KAP towards PA. The results showed that, most (66.1%) of the participants had a medium level of knowledge and only 33.9% had high level of knowledge towards PA. It also revealed that almost all (98.8% of the participants had high level of attitude and only few (1.2%) had a medium level of attitude towards PA. The results demonstrated that almost all (99.4%) were identified as having good practice towards PA followed by only a little number (0.6%) having bad practice towards PA.

The highest score for knowledge regarding PA was 25 while the lowest score was 11. The mean score of knowledge was 19.2 ± 2.8 which shows that the overall knowledge of participants was medium. For the attitude component, the highest score was 36 while the lowest score was 18. The mean was 32.62 ± 2.86 , which shows that the overall attitude of participants regarding PA was high/Positive. The highest score for practice was 15 while the lowest score was 8. The mean of participants' practice was 11.93 ± 1.39 , which shows that the overall practice towards PA was good practice towards PA.

Table 5. Frequency response of participants on KAP related questions (n=165)

| Levels | Frequency (n) | Percentage (%) | Mean (SD) |
|----------------------------|---------------|----------------|------------|
| Knowledge | | | |
| High (24-30) | 56 | 33.9 | 19.2±2.8 |
| Medium (16-23) | 109 | 66.1 | |
| Low (0-15) | 0 | 0.0 | |
| Attitude | | | |
| High (29-36) | 163 | 98.8 | 32.62±2.86 |
| Medium (19-28) | 2 | 1.2 | |
| Low (0-18) | 0 | 0.0 | |
| Practice | | | |
| Good practice (≥ 9) | 164 | 99.4 | 11.93±1.39 |
| Bad practice (<9) | 1 | 0.6 | |

3.7 Results of Thematic Analysis

A total of 5 heads of schools and the Dean of the college were asked to be part of the FGD, out of which only 3 heads of schools and the Dean (n=4) participated out of which 3 were males and 1 female. Respondents' accounts in relation to their KAP towards PA were captured under 4 broad themes: types of PA available in schools, university commitment to PA, barriers towards PA and recommendations in regards to PA.

3.7.1 Theme 1: Types of PA Available in Schools

There are some activities that take place in different Schools at the CMNHS. Every school has their social and wellness committee established which looks into the activities to be carried out on a weekly basis in terms of wellness and PA. Some activities mentioned were inbuilt programs for one of the schools.

“Tuesdays and Thursday’s aerobics. But everyday volleyball or those that are active they go and play rugby, apart from that, there are staff who do their own form of exercise”.

Some staffs were also identified as having self-chosen PA such as being part of some programs that offer health benefits. Based on their opportunity and interest different school include different forms of PA like Zumba and “Bhangra” exercise. The staffs are supposed to do their own PA, but one cannot be sure if staffs actually perform PA or not.

“Yeah because individuals have their own training program ...every Friday afternoon they are supposed to do their PA and I am not too sure on how it operates towards the members on that”.

3.7.2 Theme 2: University Contribution towards PA

Looking at the University in general for what is available for staffs. It was mentioned that University had given an allocated day for PA but there is no way in which staffs can be monitored to see of their participation around the allocated day.

“I am not really sure, it’s hard to see and monitor what everyone on who does what form of exercise or PA, I know the university gives options for 2 days, but there is no way on which we can see and monitor everybody, so it’s very hard to say...for example 60% of our staff do 30 minutes of exercise”

The University also organizes an annual event where staffs are expected to be involved in training for preparations towards this annual even where they compete against other colleges and schools.

Therefore, it can be seen that the University is trying to improve the health state of its staffs by incorporating policies in place but it was also evident that it does not have resources and facilities to cater for its own staff’s development towards health and PA.

“If the gym in Nasinu is up and running for the university, we hope that it will be up and running for the staff as well...if you have a facility for badminton or volleyball here on campus than of course the staff will want to engage in those”.

3.7.3 Theme 3: Barriers to PA in CMNHS

There were some individual barriers identified which revealed that due to certain reasons staffs were not able to meet up with the time scheduled for PA at College and also during their personal time outside work. The reasons disclosed were that it is hard to find a place for PA.

“For example, like the FMF gymnasium, it’s decent but most of the time when you go and book it’s not accessible. Because the rugby team, soccer team and all sorts of things happening there”.

Additionally, looking at individual barriers, it was identified that some groups of people only have time to do PA during their work hours as they have other many commitments outside work hours and hence have to sacrifice the PA time to get things done. Followed by organizational barriers whereby majority staffs also agreed that they did not have proper equipment even though they had a small room allocated as a mini gym. Adding on, the same room used as a gym has now been used as a storage space for the school and the clinic for one of the schools.

“We have a small gym and then we ran out of storage space and the gym was used as a storage facility for our school plus the clinic they also come and put some of their things there”.

Moreover, there were some barriers identified in terms of policy and majority of the participants mentioned that that there are no options provided for the allocated days to stay back in the afternoon or during breaks and even when they have time they are called in for meetings.

“You know for the college the intend was there, like now, the demand is more and plus they have not given us the time in terms of optional and options to like stay in the afternoon like Tuesday or Thursday afternoon like for one hour. In breaks in depends on anybody. Like we have meetings and things to catch up on during this given break; like on morning tea”.

Additionally, looking at the statement that exercise takes too much time for my work and family responsibilities and most of the participants agreed that it does, due to things to be done at home as well as the expectation of the family. They added another reason as traffic that takes most of the time away from them and does not allow them to be able to involve themselves with PA as well as contribute to family commitments.

“That is true to me, I normally bring my change to work so that I can do some physical activities. You know like go up to physio and you know use the machines there...but then the meetings always come and approach me during the lunch hour. You know other things also happen so, there is a means at the end. But at the end of the day I just

want to go straight home, because want to beat the traffic. Because that is what I do in the morning. Leave before 7am in the morning to beat the traffic and get early here. And then the same thing in the afternoon. I want to arrive early here instead of sitting in the traffic. And that is the thing, if you set up the facilities here, you can beat the traffic by being here, you do some exercise”.

3.7.4 Theme 4: Recommendations of PA

The senior managers recommended to promote PA for CMNHS and one of the ways suggested to do this was by making the area we have conducive for usage where we could have closets and other rooms for changing and repairing of old existing showers.

“Yes I think it requires a lot of planning, you know for people to look at existing facilities...All they need to do is have that place or rooms to have closets and other rooms etc. and those kind of things. There is existing shower around, but you just need more repairing and re-structuring so that they are suitable for usage”.

Additionally, it was found that people do not adhere strictly to the time allocated for wellness and the majority of senior managers recommended that it should be made formal and PA be included as part of being an employee of the institution. Furthermore, majority of the participants mentioned that we should make arrangements with some councils and hire their complex for our staffs PA and have trainings preparing for national sports day as well as for PA activities. Moreover, most of the participants recommended to have regular screening programs available for the academic staffs of CMNHS. Correspondingly, majority of the participants recommended to give some form of incentives to staffs to push them to be more active.

“Yeah, we can give them like an incentive of \$1,000.00 a month”.

Followed by, most of the participants mentioning that we need to have flexible programs that allow everyone to be able to participate.

“You know they run through the lunch hour so if there is going to be a program that we do it has to be flexible and somebody is to be able to run it every afternoon or after work you know. But if it's fixed to a time than it does not accommodate everybody”.

Similarly, all the participants agreed to have flexible working hours, so it allows and accommodates staffs to participate and do their PA.

“I think it's flexi hours. I think if the work is structured as being flexi hours then I think that many people would prefer to exercise. For example, it is hard to wake up and do your exercise at 6am in the morning and to beat the traffic and to be here at 8am or 9am”.

4. Discussion

The findings indicate that CMNHS staff had a moderate (medium) level of knowledge with regards to PA and their response towards the knowledge on PA and its consequences on their health. Participants have a positive attitude towards the importance of PA for good health and wellbeing and they knew that PA improves their endurance in performing daily activities and also helps improve their physical health, helps develop good social contacts, and makes one feel less fatigued as well as improves mental health and keeps one alert and strengthens ones bones and makes them live longer as well as to look good. The attitude and practice of participants towards PA appears very high compared with the knowledge.

The participants are highly educated and well-informed group. But when it came to the overall assessment of the knowledge about PA on the part of the participants, the results of the present study suggested that it is moderate. In other words, although, on average CMNHS staffs are familiar with PA and this was also seen through the FGD of the senior managers where they managed to define PA in various ways and agreed while mentioning that any movement is PA and that there is also a difference between PA and exercise. However, generally there is still some room for improvement towards increasing knowledge about PA. Knowledge of PA when compared to barriers to PA showed such factors as demographics, employment and available income play a key role in the development and active lifestyles influencing a cause effect relationship on the strength of a factor that influences academic staff's participation in PA and self-efficacy, or belief in personal ability to perform this health behavior.

One can also point out that there is definitely a lot of space for improvement in the domain of knowledge about PA. Few of the staffs are not aware of the basic information and guideline about PA and are negligible and even among those who satisfactorily showed good knowledge; there are some areas that can be improved. Unfortunately, this study has not produced any profound insights that would explain variation in knowledge about PA among academic staffs of CMNHS. What is certain, nonetheless, is that in contrast to attitudes and practices, knowledge can be improved in a straightforward way, which is by making relevant information widely available (Sewak et al.,

2012). The main recommendation coming out of this section is that there is a need for more awareness in terms of information, benefits and guidelines for PA.

Health promotion campaigns are often aimed at changing beliefs or knowledge on the assumption that such changes are necessary to bring about a change in behavior. Changes in awareness, attitudes, beliefs, and knowledge far from guarantee changes in behavior, although they may be an important step in such process (Biddle, 2008). The result of this study reveals that the attitude for the participants towards PA shows that majority have a high attitude towards PA related questions. Majority of the participants had positive attitude towards PA related questions. This was seen as a high number (75.8%) consented to completely agree that PA helps them to have more control over their eating behaviors which was also disagreed by 20.6% participants out of which 46.1% that disagree that exercise takes too much of their time to perform their academic work followed by 39.4% that agreed that exercise takes too much of their time to perform their academic work. Quite a high number (83.6%) disagreed that exercise takes too much time for their family responsibilities out of which 12.7% agreed that exercise takes too much time for their family responsibilities and lastly, out of all participants 58.2% participants disagree to the preference of taking a taxi to walking to town or walking in town. In contrast, a study conducted by (Oladapo et al., 2015) on KAP of PA among health professionals in a Nigerian tertiary health institution. Whereby, one hundred and three (103) health professionals (HP) working among whom 24.3%, 22.3% and 19.4% were Medical/Dental Practitioners, Medical Laboratory Scientists, and Nurses respectively as participants in the study. They were required to complete a 22-item close-ended questionnaire which was self-administered. Respondents were found to have awareness of the health benefits of PA, 93 (90.29%) believed they were physically fit, 67(65.05%) were able to adequately define physical fitness.

The study revealed that 57.6% showed bad practice in terms the time spent daily doing PA and most of them only spent 0–5 minutes and 6–15 minutes daily. When asked on what they do during free time, it was seen that 80% of them watch TV and do shopping which was regarded as a bad practice. When asked on the number of hours they spent on the computer or watching TV, majority (72.1%) showed bad practice revealing that they spent either 3–4 hours, 5–6 hours or even more than 6 hours a day. It was also noticed that 50.3% spent less than 1 hour in a day to watch TV or DVD movies at home and this was regarded as a good practice. The 27.9% of the participants spent 1 to 2 hours per day on the computer in weekdays out of which 50.3% spent less than 1 hour per day watching TV or DVD movies at home. This was also seen through the FGD participants who were seen to be engaged in PA as soon as they woke up. These was due to them waking up and doing some house chores, looking after children or grandchildren, work and walks around the house and maybe do a bit of gardening and wash their cars but these activities did not seem to be done consistently daily. Some staffs even walked to the office and back home since they lived close to the office. The reason they could not be consistent with their PA is outlined from the quantitative survey which revealed that 27.9% of the participants spent 1 to 2 hours per day on the computer in week days out of which 50.3% spent less than 1 hour per day watching TV or DVD movies at home. Some of the activities that our staffs engage into weekly at their various schools were seen to self-chosen PA by being part of some programs where they have to pay for those services and register. This program helps them to monitor their diet, the activities they do and also has some activities where they engage into rugby, volleyball and Ping-Pong. Some schools offered Zumba and Bhangra dance while others engage into aerobics.

Looking at the relationship between knowledge and attitude the mean practice score is 11.93 ± 1.39 which shows that participants have a good practice. Correspondingly, (Keohane, 2019) conducted a study on PA levels and perceived barriers to exercise participation in Irish General Practitioners and General Practice trainees. This cross-sectional study of Irish General Practice trainers and trainees captured a categorical record of PA as well as a qualitative measure of the perceived barriers to exercise. Only 49% (n=107) of those studied engaged in health enhancing PA while 20% (n=44) were completely inactive. Sixty percent (n=131) demonstrated excessively sedentary behavior. The greatest barriers to exercise were time expenditure and exhaustion. General practitioners and trainees are more likely to engage with promoting PA as a health intervention if its benefits are clearly demonstrable in their own lives. This established trend of inactivity needs to be reversed if physicians wish to realize significant health benefits in their own lives and achieve substantial change in the health behaviors.

Some studies have shown that KAP towards PA maybe one of the factors affecting PA participation (Hopmen et al., 2005). However, current study does not show knowledge of PA benefits to be a primary reason for PA participation. In future this study could help progress existing interventions in promoting PA among academic staff of CMNHS. This study used questionnaires, which included and focused on easy to answer/ need to know questions. Having a large response rate helped achieve the aim of analyzing the KAP of PA amongst academic staffs of CMNHS. This study shows that although CMNHS staff maybe knowledgeable about PA they did not necessarily apply this to their everyday living.

The KAP model tends to show that being aware of the knowledge can help change related attitudes and lead to corresponding behavior modifications (Eval, 2002). This has been shown in many behaviors related studies. The current study supported that relating better to KAP leads to better PA involvement. Quite a few literatures have shown that KAP towards PA maybe one of the factors affecting PA participation (Hopman et al., 2005). However, this study does not show that if one possesses good knowledge towards PA then they are more likely to be involved in PA.

Alternatively, this is considered otherwise from a study conducted (Owen & Baumen, 2002) revealed that indicated opposing results due to different ages and socioeconomic population. In future this study could help have awareness programs targeting PA among academic staffs of CMNHS. This study also utilized questionnaires that were focused on easy to answer/ need to know questions. This study also showed that although the academic staffs of CMNHS had moderate (medium) level of knowledge towards PA but they had a high level of attitude and a good practice towards PA.

4.1 Limitations

There were few limitations of this study. Firstly, the results of this study can only be used in CMNHS, FNU and cannot be generalized to other institutes in Fiji or other Pacific countries. Another limitation was lack of time therefore the lack of doing reliability test for the questionnaire. In addition, another limitation was using only self-administrated questionnaire for the quantitative study that highly depends on participant's memory and answer so the results may change if it was conducted in another stage of time. Lastly, the budget was not given, and the investigator had to folk money out of his pocket to complete this study.

5. Conclusion

This study showed that although the academic staffs of CMNHS had moderate (medium) level of knowledge towards PA but they had a high level of attitude and a good practice towards PA. Academic staffs need a refresher or maybe a workshop on ways to improve their own experiences with PA and ways to achieve their best fitness levels with PA since they are the role models and students as well as the society we belong to looks upon us to provide good examples to them and others. This study along with other studies shows that to encourage PA it is important to include activities of interest to the focused population rather than implementing what we think might be of interest to them. It is also best to setup our environment that would be conducive to PA making our staffs interested to participate more often. Academic staffs have a tough time dedicating time for PA due to responsibilities and commitments at work as well as at outside work. In conclusion, there should be workshops and trainings regarding PA and its benefits for the academic staff of CMNHS as well as for the individuals of Fiji. This is a public health concern and a suggestion that knowledge through awareness and campaigns might change people's attitude and hence the practice. Therefore, future research ought to investigate further and find a solution on effective ways to increase levels of engagement for PA.

Competing Interests Statement

The authors declare that there are no competing or potential conflicts of interest.

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