

Health and Healthcare Service Delivered to Students and Employees in a Tertiary Educational Institution in Central Jamaica

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ABSTRACT

Introduction: Contemporary perspective of health is more in keeping with subjective viewpoint to include happiness, quality of life and self-reported health. Outside of life span, health has a role in economic growth and development; yet, there is no study on the perception of workers and students who attend a tertiary co-educational institution in Central Jamaica on their health and healthcare service delivery.

Objective: They are to: 1). Evaluate the service quality delivered by the Health and Wellness Centre [H&WC]; 2). Determine health status and healthcare seeking behavior of workers and students at a co-educational tertiary educational institution in Central Jamaica; and 3). Guide policy makers with happenings in the health of students and workers at tertiary co-educational institution in an effort to institute social intervention programmes and make the necessary changes for the development of the human capital.

Materials and methods: An associational research design was used to collect data from workers and students at a tertiary coeducational institution in Central Jamaica. A standardized instrument was used to collect data from the sampled respondents. A P value of $\leq 5\%$ (i.e., 0.05) is used to determine the level of statistical significance for this study.

Findings: Almost 4 out of every 10 respondents who visited the H&WC from October 2018 to January 2019 did so because of respiratory conditions (i.e., asthma). Hypertensive conditions accounted for 6.3% of healthcare utilization. One in every 10 patients who were served by H&WC in the studied period is dissatisfied with the service deliverables compared to 51.1% who were at least satisfied with service offerings.

Conclusion: The education of people must be structured around personal as well as educational attributes.

Keywords: Health, Health conditions, Illness, Ill-health, Service delivery, Customer service, Customer satisfaction, Subjective and objective well-being

INTRODUCTION

Historically, health was conceptualized as the absence of diseases and this therefore fashioned teaching in medical schools on patient care. As such, for centuries, healthcare was only based on treatment of diseases and explained the plethora of studies that emerged in the areas of morbidities and mortalities including life expectancy or life span [1-6]. It was not until establishment of the World Health Organization (WHO) in 1946 before an expanded definition of health was forwarded [7]. The concept of health according to the WHO is multifaceted. "Health is state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" [8]. Hence, the absence of disease was simply not health [9,10]. As such the expanded definition of health guided George Engel, a medical practitioner (psychiatrist), in the 1950s to recommend the inclusivity of social and psychological conditions in the treatment of mentally ill patients [11-14]. Dr. Engel theorized that psychosocial and the biological

conditions account for state of ill-health among mentally ill patients. This led Engel into articulating that patient care should be from a biopsychosocial perspective and not just from a biological standpoint (i.e., the illness or morbidity). This was referred to as the biopsychosocial model of health, which was a new model for the assessment of health [12,13].

Engel's works are documented in many scientific publications [11-15] and later began studies in subjective

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well-being to include happiness, life satisfaction, quality of life and self-reported health [16-25]. The birth of subjective well-being, therefore, has struggled with its objective counterparts such as life expectancy, mortality and morbidity in assessing health. Subjective well-being has aided the expanded operationalization of health; but this has come under much criticisms [26,27]. Crisp lambasted the WHO's definition of health stating this it is highly elusive and cannot be measured [27]. From the WHO's perspective, health status is an indicator of wellbeing [27]. Well-being for some, therefore, is a state of happiness – positive feeling status and life satisfaction [16,22,28] satisfaction of preferences or desires, health or prosperity of an individual [8,19,27] or what psychologists refer to as positive effects [29]. Simply put, wellbeing is subjectively what is 'good' for each person. It is sometimes connected with good health. Crisp offered an explanation for this, when he said that "When discussing the notion of what makes life good for the individual living that life, it is preferable to use the term 'well-being' instead of 'happiness", which explains the rationale for this research utilizing the term wellbeing and not good health [27].

Rightfully so as the WHO's definition of health can be singly operationalized; but this does not indicate that the definition is faulty. In fact, it is a milestone that many researchers and scholars have sought to reach in their works. Despite its expanded definition of health, the WHO uses life expectancy (i.e., quantitatively measure by the life table) to determine healthy life expectancy as a proxy for health [30]. The healthy life expectancy is a far cry away from the milestone definition forwarded by WHO in its Preamble to its Constitution, and is more used by demographers than sociologists and psychologists as well as other scholars in evaluating well-being. There has been criticism of even the objective assessment of health, which is no different for the subjective approach in health measurement [26,27,31]. Diener has established that subjective well-being is a good proxy of people's health and is an alternative approach to objective paradigm (i.e., life expectancy, diseases and mortality), which has been supported by other scholars/researchers [24,28,32,33] as well as Diener et al. [23].

Diener in an article titled 'Subjective Wellbeing: The Science of Happiness and a Proposal for a National Index' theorizes that the objectification of well-being is embodied within satisfaction of life. His points to a construct of wellbeing called happiness [17]. He cited that:

People's moods and emotions reflect on-line reactions to events happening to them. Each individual also makes broader judgments about his or her life as a whole, as well as about domains such as marriage and work. Thus, there are a number of separable components of SWB (subjective wellbeing): life satisfaction (global judgments of one's life), satisfaction with important domains (e.g. work satisfaction),

positive affect (experiencing many pleasant emotions and moods) and low levels of negative affect (experiencing few unpleasant emotions and moods). In the early research on SWB, researchers studying the facets of happiness usually relied on only a single self-report item to measure each construct [17].

Contemporary perspective of health is more in keeping with the subjective viewpoint to include happiness, quality of life, and self-reported health. Undoubtedly, there is no denial that health plays a critical role in explaining human existence. Outside of life span, health has a role in economic growth and development; yet, there is no study on workers and students who work or attend a tertiary co-educational institution on their health and the healthcare service delivered by the healthcare centre. Clearly, this human-health phenomenon offers insights to the present and future state of human population. The problem at wellness centre was never examined at this tertiary co-educational institution in Central Jamaica, which is the rationale for the current study. Since health has a role in economic growth and development, it would undoubtedly have a role in the growth and development of the institution. Consequently, the administrators of the tertiary co-educational institution in Jamaica provided the platform that led to an examination of the health status of employees and students at the tertiary co-educational institution in central Jamaica. As such, the purposes of this study are to: 1). Evaluate the service quality delivered by the Health and Wellness Centre, 2). Determine the health status and healthcare seeking behaviour of workers and students at a co-educational tertiary educational institution in Central Jamaica and 3). Guide policy makers with happenings in the health of students and workers at the/a tertiary co-educational institution in an effort to institute social intervention programmes and make the necessary changes for the development of the human capital.

MATERIALS AND METHODS

An associational research design was used to collect data from workers and students at the tertiary co-educational institution in Central Jamaica. A standardized instrument was used to collect data from the sampled respondents. The period of the data collection was from September 2018 and January 2019. The instrument had 32 items. Of the 32 items, there were 5 demographic questions, 22 Likert scale health related questions and 5 general medical items. The survey instrument was developed by Paul Andrew Bourne, statistician from Quality Management and Institutional Research department at Northern Caribbean University in association with health practitioners as well as a research methodologist.

On completion of the development of the instrument, it was pilot tested and modifications were made to the initial items in keeping with comments and suggestions from participants. The final instrument was supplied to the Director of the Health and Wellness Centre. The director and

her team issued the instrument to all the persons who visited the facilities from September 2018 and January 2019. Patients were informed of the research, their rights and responsibilities, including the return of the instrument if they were uncomfortable at any time during the completion-exercise. The inclusion criterion was being a patient at the healthcare facility from September 2018 to/and January 2019. No one was excluded who sought healthcare services from the Health and Wellness Centre during the research period. One hundred surveys were printed and distributed to patients who visited the healthcare facility at the time of the data collection exercise. The data were, therefore, collected during the opening hours of the healthcare facilities (working hours: 8:00 AM to 5:00 PM). The response rate was 91%.

The data were entered by students of a particular university in Central Jamaica under the guidance of their supervisor. Initially, the students were shown how to design the template and enter the data in the software Statistical Package for the Social Sciences (SPSS) for Windows, Version 25.0. Following the initiation exercise, the supervisor allowed and observed each student enter the data for an instrument before they were allowed to sit at a computer station in a lab. The supervisor was present during the entire process, observing the activities and providing guidance to the students (i.e., the data entrants). On completion, the supervisor merged all the data files and checked for accuracy. The verification exercise provided the supervisor with an opportunity to ensure the accuracy of the data entry and validity of the findings.

Descriptive statistics were done for the demographic characteristics as this provided basic information on the sampled respondents. In addition, various graphical methods were used to display the findings. These allowed for a quick and simple understanding of the findings. Cross tabulations were also conducted on selected items in an attempt to provide critical information to address the aim of the study. Finally, factor analysis was performed on two different Likert scale items in order to determine whether or not each adequately assessed the variable in question (i.e., health service deliverables and health conditions), which includes a Cronbach analysis of the pending single construct/variable. A P value of $\leq 5\%$ (i.e., 0.05) was used to determine the level of statistical significance for this study.

FINDINGS

Demographic characteristics

Figure 1 depicts the gender distribution of the sampled respondents. Ninety-one people who visited the tertiary coeducational institution’s health and wellness centre completed and returned a copy of the ‘Health-Service Consumption Survey (HSCS).’ Of the respondents, 76.7% (n=69) were females compared to 23.3% (n=21) being males (**Figure 1**).

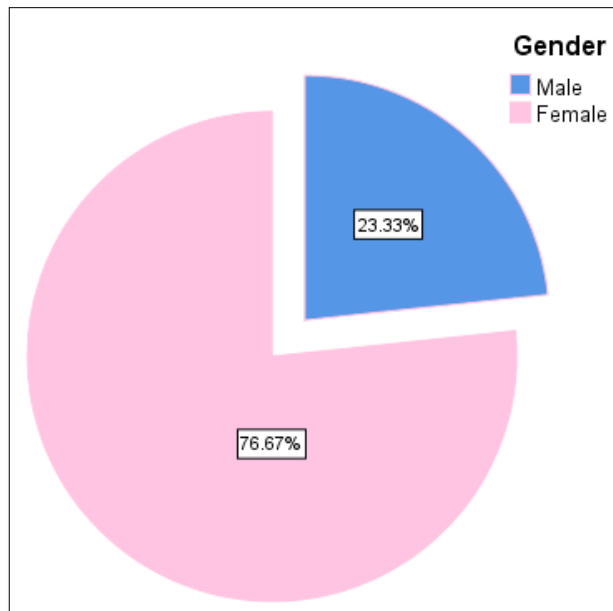


Figure 1. Gender distribution.

Table 1 presents descriptive statistics on the sampled respondents. The average age of the sampled people is 22 years (range=42 years), with the eldest person being 58 years old. A skewness of 3.0 indicates outliers and/or errors in the age distribution of the data, which can be identified in **Figure 2**.

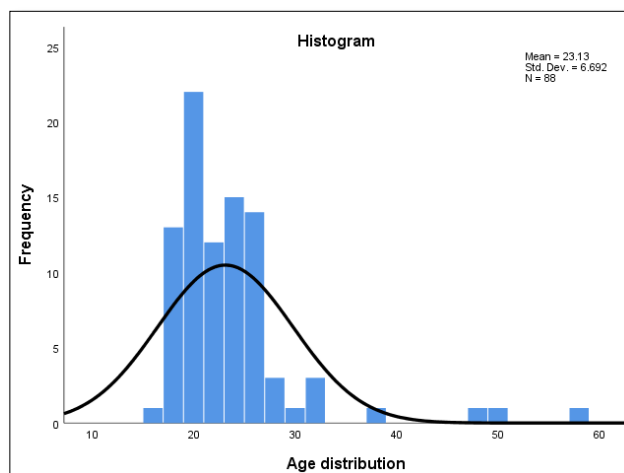


Figure 2. Age distribution: Using histogram.

Table 1. Descriptive statistics of age of respondents.

		Statistic	Std. Error	
Q2	Mean	23.13	0.713	
	95% Confidence Interval for Mean	Lower Bound	21.71	
		Upper Bound	24.54	
	5% Trimmed Mean	22.18		
	Median	22.00		
	Variance	44.777		
	Std. Deviation	6.692		
	Minimum	16		
	Maximum	58		
	Range	42		
	Interquartile Range	6		
	Skewness	3.009	0.257	
	Kurtosis	11.569	0.508	

The majority of the sampled students are registered in an undergraduate degree programme (96.7%; **Figure 3**).

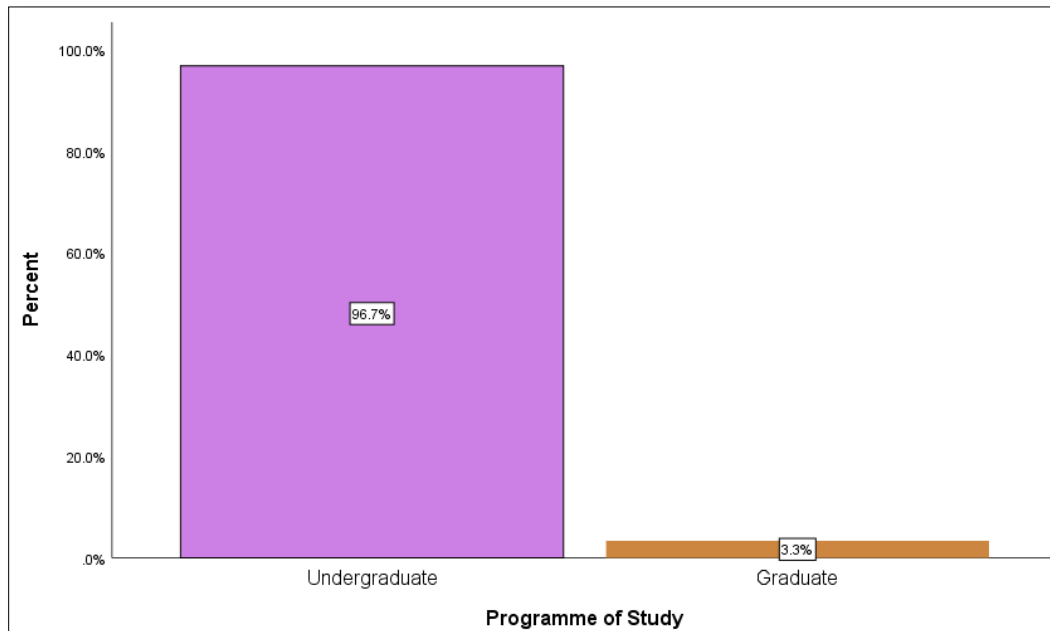


Figure 3. Student enrolment status.

Figure 4 shows a distribution of the workers and students of the tertiary co-educational institution. Almost 10% of the sampled respondents were workers. Of the sampled student population (90%, n=82), the majority who visited the Health

and Wellness Centre, for the period, are registered in the College of Natural and Applied Sciences, Allied Health and Nursing (31.9%) followed by the College of Humanities, Behavioral and Social Sciences (26.4%).

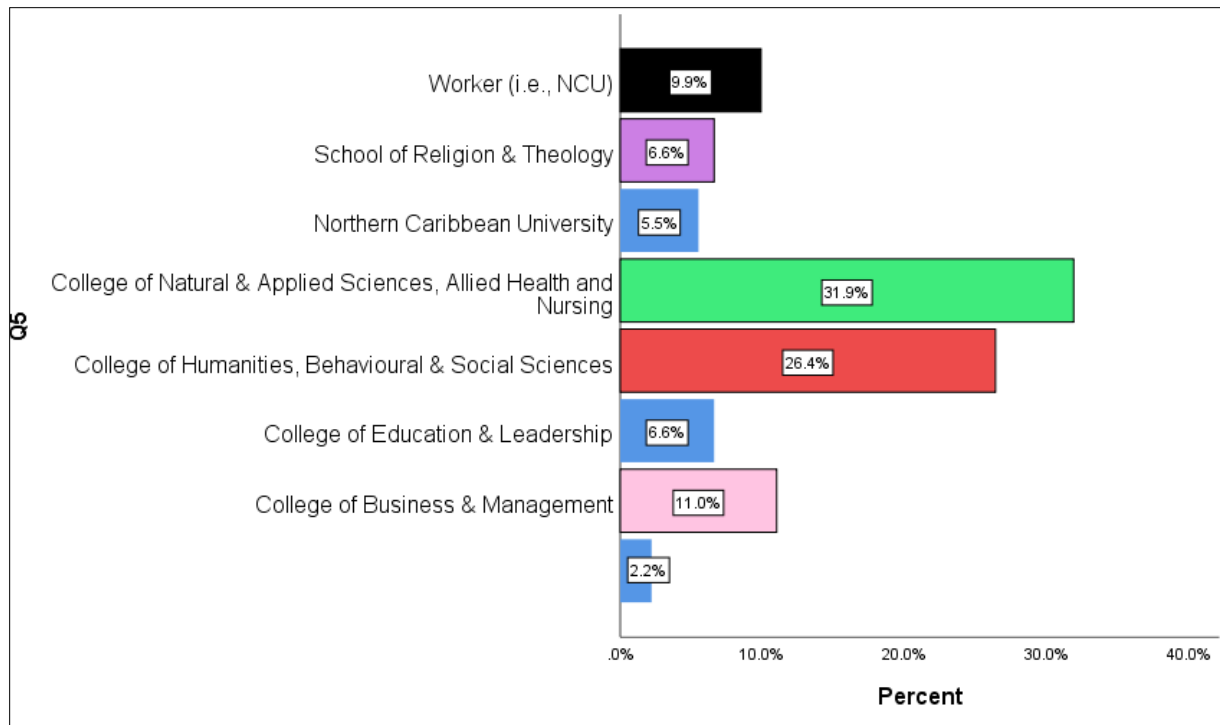


Figure 4. Worker and student distribution.

The responses to the question “Is this your first time visiting the Health and Wellness Centre (H&WC)?” are shown in Figure 5. The findings reveal that six in every 25 persons

(i.e., 23.6%) who visited H&WC during the studied period were first time customers (i.e., 6:19, first time to repeated customer, respectively).

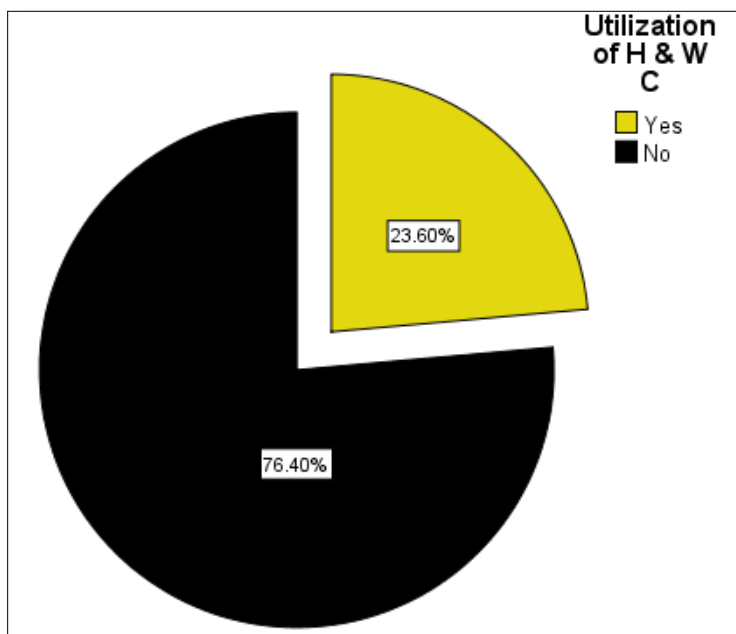


Figure 5. Healthcare Utilization of H&WC.

Figure 6 depicts a box-plot of those who utilize the H&WC for the first time or not as disaggregated by their age distribution. The average age of repeated customers was

23.8 ± 6.6years compared to 19.8 ± 2.8 years for the first time healthcare users (t=-2.676, P=0.009).

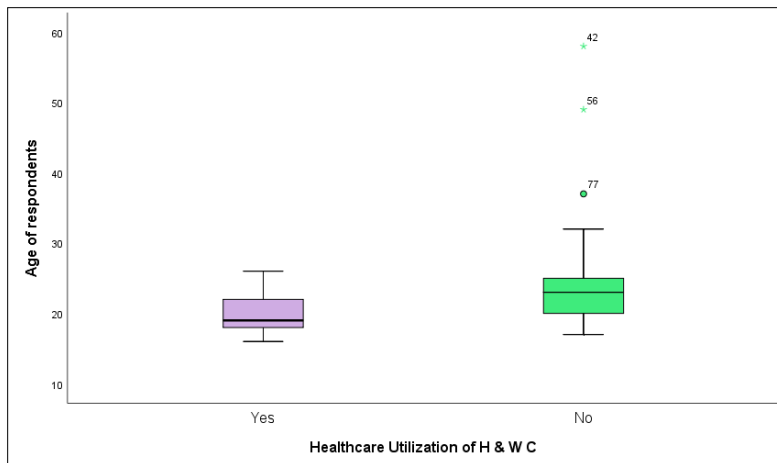


Figure 6. Healthcare utilization of H&WC by age of respondents.

Table 2 presents a cross tabulation between healthcare utilization of H&WC and the gender distribution of the sampled respondents. Although no significant statistical relationship between healthcare utilization of the H&WC and the gender of the respondents (χ^2 (df=1)=1.767, P=0.184), 20.6% (n=14) of the females were first time healthcare users compared to 35% (n=7) of males.

Table 2. Healthcare utilization of H&WC by gender.

Details	Gender		Total
	Male	Female	
Healthcare utilization of H&WC	n (%)	n (%)	n (%)
First time users	7 (35.0)	14 (20.6)	21 (23.9)
Repeated users	13 (65.0)	54 (79.4)	67 (76.1)
Total	20	68	88

A stem-and-leaf plot is used to present the responses of the respondents on the follow-up question of 'How often in a semester do you visit [H&WC]?' (**Figure 7**). Thirty-three respondents indicated once, which represents 52.4% of the repeated customers compared to 24 who stated twice (i.e., 38.1%) and 7.9% mentioned at least thrice.

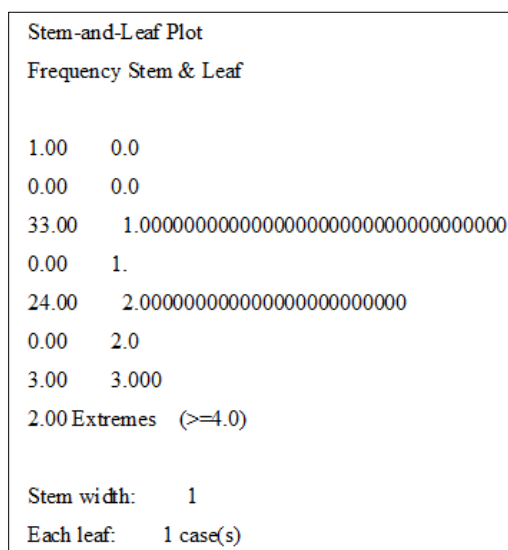


Figure 7. Stem-and-leaf plot of frequency of utilizing H&WC for semester.

This study has provided information/evidence on health conditions of workers and students at tertiary a co-educational institution (Table 3). Almost 4 out of every 10 respondents who visited the H&WC between September

2018 and February 2019 did so because of respiratory conditions (i.e., asthma). Hypertensive conditions accounted for 6.3% of healthcare utilization.

Table 3. Health conditions.

Details	N (%)
Arthritis	4.7 (3)
Asthma (respiratory conditions)	38.0 (27)
Hypertension	6.3 (4)
Heart disease	3.3 (2)
High cholesterol	1.6 (1)
Sickle Cell	3.2 (2)
Other	7.4 (2)

The health status of workers and students who utilized the H&WC between August 2018 and February 2019 are shown on a bar graph (Figure 7). Fifty-seven and five tenths per

cent of the sampled respondents indicated at least good health (n=50) compared to 2.3% (n=2) who mentioned poor health status.

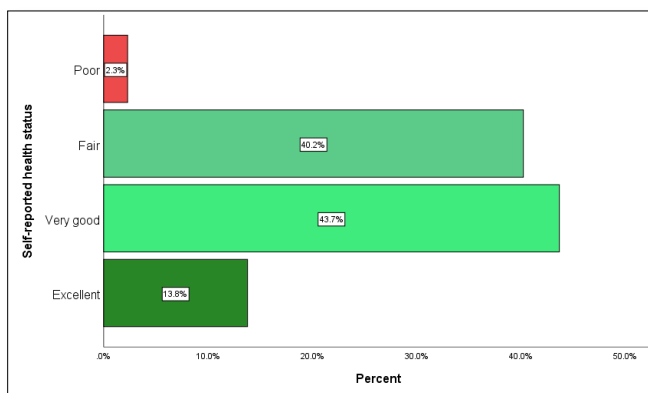


Figure 8. Self-reported health status of respondents.

When the respondents were asked “Compared to one year ago, how would you rate your health in general now?” the responses are depicted in a bar graph (Figure 8). Only 12.3% of the sampled respondents indicated that their health

status currently has deteriorated from 12 months ago compared to 28.3% who stated at least somewhat better than the previous year.

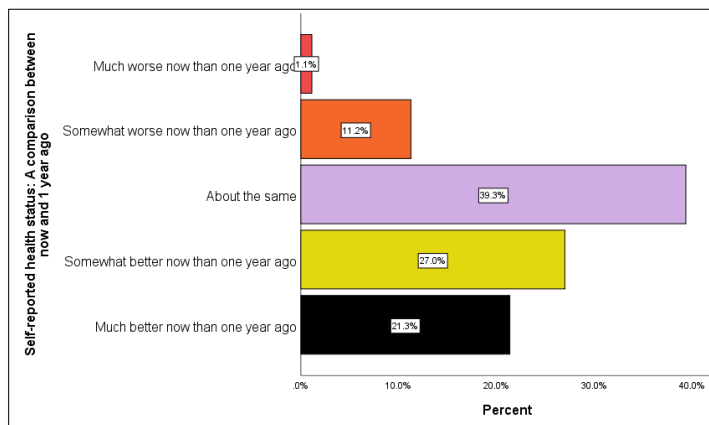


Figure 9. A comparative response of health status currently to 12 months ago.

Service quality index

For this study, an examination was made of the variables that are likely to construct a called Service Quality Index. Reliability testing was conducted on the Service Quality Index and there was a Cronbach alpha of 0.845. The Service Quality Index was constructed of using 5 Likert scale items (**Appendix B**). Based on the high Cronbach alpha value, the items are likely to be used to measure Service Quality. However, this is not sufficient to determine the

appropriateness of an index and as such Principal Component Analysis can clarify this situation. **Table 4** presents the descriptive statistics for the 5 Likert Scale items and they revealed mean scores and standard deviations for each item. Based on the mean values, the minimum value is 3.53, which indicates that the items are appropriate for PCA. Furthermore, normality test was conducted on all the items and it was revealed that they are normally distributed (**Table 5**) and suitable for PCA.

Table 4. Item statistics.

	Mean	Std. Deviation	N
I receive prompt service at the Health and Wellness Centre	3.91	1.015	81
I would attend the Health and Wellness Centre any day if I am experiencing ill-health	3.77	1.277	81
The staffers provide high quality customer service at the Health and Wellness Centre	4.09	0.938	81
I believe the medical practitioner is competent	3.94	1.029	81
If I am ill, I visit the Health and Wellness Centre first	3.53	1.305	81

Table 5. Tests of normality.

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
I receive prompt service at the Health and Wellness Centre	0.324	81	0.000	0.790	81	0.000
I would attend the Health and Wellness Centre any day if I am experiencing ill-health	0.227	81	0.000	0.835	81	0.000
The staffers provide high quality customer service at the Health and Wellness Centre	0.241	81	0.000	0.813	81	0.000
I believe the medical practitioner is competent	0.240	81	0.000	0.822	81	0.000
If I am ill, I visit the Health and Wellness Centre first	0.208	81	0.000	0.874	81	0.000

a. Lilliefors Significance Correction

Table 6 presents values for Kaiser-Myer-Oklin test. The Kaiser-Myer-Oklin value was 0.797, exceeding the recommended value of 0.6 and the Bartlett’s Test of Sphericity [34] reached statistical significance (<0.0001), supporting the factorability of the correlation matrix. It

follows, therefore, that the data are suitable for PCA as it can be deduced that they reject the null hypothesis (i.e., the items are not suitable to assess Service Quality Index) as that there is insufficient correlation between the variables for PCA.

Table 6. KMO and Bartlett's test.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.797	
Bartlett's Test of Sphericity	Approx. Chi-Square	169.728
	Df	10
	Sig.	<0.0001

The inter-correlations among the various sub-item in the index was at most moderately related and this suggests that this was somewhat ideal to evaluate the concept of Service Quality (Table 7).

Table 7. Correlation Matrix^a.

		Q12	Q13	Q14	Q15	Q16
Correlation	Q12	1.000	0.543	0.664	0.629	0.413
	Q13	0.543	1.000	0.570	0.512	0.623
	Q14	0.664	0.570	1.000	0.588	0.371
	Q15	0.629	0.512	0.588	1.000	0.304
	Q16	0.413	0.623	0.371	0.304	1.000
Sig. (1-tailed)	Q12		0.000	0.000	0.000	0.000
	Q13	0.000		0.000	0.000	0.000
	Q14	0.000	0.000		0.000	0.000
	Q15	0.000	0.000	0.000		0.003
	Q16	0.000	0.000	0.000	0.003	

a. Determinant=0.112

Principal Component Analysis with varimax rotation was conducted to determine that all questions were loading on the same component. The results show the 5 Likert Scale items loaded on one component (Table 8 and Figure 10). In fact, the first component accounts for 62.07% of the total variance with an Eigenvalue of 3.104.

Table 8. Total variance explained.

Components	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.104	62.071	62.071	3.104	62.071	62.071
2	0.832	16.632	78.702			
3	0.410	8.202	86.904			
4	0.365	7.309	94.213			
5	0.289	5.787	100.000			

Extraction Method: Principal Component Analysis

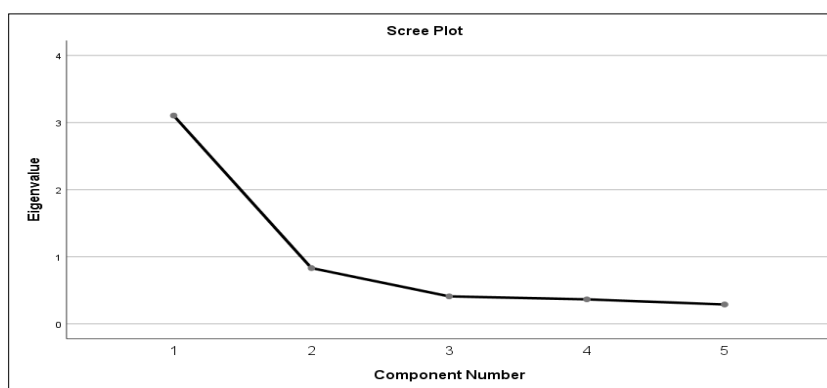


Figure 10. Screen plot of 5 likert scale items that assess service quality.

Communalities show the amount of variance accounted for in the component captured by the factor solution (**Table 9**).

That is, how much of the variance in each of the original variables is explained by the extracted factor.

Table 9. Communalities.

	Initial	Extraction
Q12	1.000	0.699
Q13	1.000	0.681
Q14	1.000	0.676
Q15	1.000	0.604
Q16	1.000	0.443

Extraction Method: Principal Component Analysis

The PCA examination has established that the 5 Likert scale items are suitable and appropriate to assess a single construct called Service Quality offered by H&WC. The Service

Quality offered by H&WC is high (median=4 out of 5) (**Table 10**). This is further explored in a Stem-and-Leaf plot depicted in **Figure 11**.

Table 10. Descriptive statistics of service quality offered by H&WC.

		Statistic	Std. Error	
Service Quality Index	Mean	3.8080	0.09642	
	95% Confidence Interval for Mean	Lower Bound	3.6163	
		Upper Bound	3.9996	
	Median	4.0000		
	Variance	0.818		
	Std. Deviation	0.90452		
	Minimum	1.00		
	Maximum	5.00		
	Range	4.00		
	Skewness	-0.984	0.257	
Kurtosis	1.044	0.508		

A stem-and-Leaf plot shows patients’ perception on the Service Quality offered by H & WC (**Figure 11**). **Figure 11** depicts that one in every 10 patients who were served by H & WC in the studied period (October 2018 to January 2019)

is dissatisfied with the service deliverables compared to 51.1% who were at least satisfied with service offerings by staffers at H&WC.

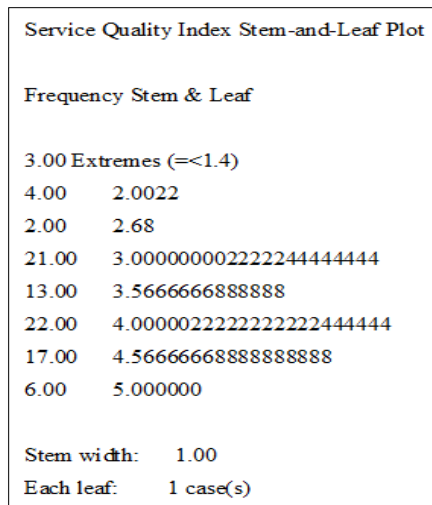


Figure 11. Stem-and-leaf plot of service quality offered by H&WC.

Rating of service deliverables

The responses of respondents on the matter of rating the various services provided by H&WC are presented in **Table 11**. The respondents gave low ratings for the provision of the following services: Blood sugar checks; pre-employment

medicals, incision and draining of abscesses, treatment of sinus infection, and chronic diseases management. However, very high ratings were awarded for the provision of particular services - gynecological issues, basic asthma care, vision screening and vital signs checks.

Table 11. Rating the following services offered by the Health and Wellness Centre.

Items	1	2	3	4	5
1. Vital signs checks (i.e., blood pressure, pulse, temperature)	1.4	18.3	31.0	49.3	-
2. Basic asthma care	3.9	3.9	29.4	41.2	21.6
3. Blood sugar checks	1.9	46.2	26.9	25.0	-
4. Vision screening	1.8	3.6	41.1	33.2	19.6
5. Annual Medical examinations	1.9	32.7	38.5	26.9	-
6. Insurance medicals	2.1	37.5	35.4	25.0	-
7. Pre-Employment medicals	4.7	53.3	22.2	20.0	-
24. PAP-smear and pelvic examinations	2.4	4.8	45.3	26.3	21.4
25. Pregnancy test	2.4	9.8	53.7	19.5	14.6
26. Contraceptive advice	2.5	7.5	52.5	17.5	20.0
27. Incision and draining of abscesses	7.5	40.0	22.5	30.0	-
28. Treatment of sinus infection	6.8	43.2	22.7	27.3	-
29. Abdominal pain treatment	2.4	2.4	53.7	22.0	19.5
30. Chronic disease management (i.e., hypertension, diabetes, etc.)	2.4	53.7	29.3	14.6	-
31. Job related injuries	2.4	2.4	46.3	29.0	19.6
32. Gynecological issues	-	-	29.8	42.6	27.4

Key: 1=Very poor, 2=Poor, 3=Moderate, 4=Good, 5=Excellent

DISCUSSION AND CONCLUSION

The World Health Organization (WHO) has provided an expanded definition of health that has infiltrated how the concept is viewed and patient care is addressed, particularly from subjective viewpoint. Following the works of Dr. Engel [11-15] psychologist Dr. Diener began a discourse of non-quantitative of health [16]. Because Diener accepted and believed that health is more than the absence of diseases or mortality, he forwarded that it can be assessed from a subjective perspective. This subjective perspective included happiness, life satisfaction, and self-reported health [16,17].

Initially, demographers, actuaries and economists, include WHO used mortality to determine the life expectancy of a population/people. Hence, life expectancy a quantitative approach was used to determine health status of a population/people. This dates back to late seventeenth century in the work of John Graunt, which was entitled the Bills of Mortality [35] Even to this day, demographers, United Nations, and many statistical institutions use life expectancies to evaluate the health status of a population [36] This is an objectification of the concept of health [36] In fact, Gaspard provided arguments that support the rationale behind the objectification of well-being [31]. His premise for objective quality of life is embedded within the difficulty as it relates to consistency of measurement when subjectivity is the construct of operationalization. This approach takes precedence because an objective measurement of concept is of exactness as non-objectification; therefore, the former receives priority over any subjective preferences. He claimed that for well-being to be comparable across individuals, population and communities, there is a need for empiricism. The fact is well-being depends on both the quality and the quantity of life lived by the individual, which supports a subjective assessment [24].

The reality is health must be evaluated by more than a quantitative approach .Because this is in keeping with a narrow perspective on the concept. Like the WHO's broad definition of health is it physical, social and psychological wellbeing. This means that health is a biomedical, social and psychological process. Dr. Buzina (Caribbean Food and Nutrition Institute), admits that well-being is fundamentally a biomedical process [37]. This conceptual framework is coming from the Newtonian approach of basic science as the only mechanism that could garner information and that empiricism was the only apparatus that establishes truth or fact. It is still a practice and social construction that numerous scholars and medical practitioners have and continue to advocate the way ahead. Simply put, physical health is equated to well-being (or health or wellness). If such a viewpoint holds any dominance in contemporary societies, then are saying that conditions such as the death of an elderly's lifelong partner; a senior citizen taking care of his/her son/daughter who has HIV/AIDS; an aged person not

being able to afford his/her material needs; someone older than 64 years who has been a victim of crime and violence and continues to be a victim; seniors who reside in volatile/violate areas who live with a fear of the worst happening, the inactive aged, and generally those who have retired with no social support are equally sharing the same health status as elderly who have not on medication because they are not suffering from biomedical conditions to be given drugs?

Although Crisp lamented the elusiveness of the WHO's definition of health, life expectancy is agreed by scholars as being narrow and only focusing on physical well-being. It is because of this limitation that self-reported health holds more width and validity in the health discourse. This is affirmed in a study carried out by Lima & Nova, that found happiness, general life satisfaction, social acceptance and actualizations are all directly related to GDP per capita for a geographic location [37]. Even though in Europe these were found not to be causal, income provides some predictability of subjective well-being more so in poor nations/countries than in wealthy nations [38]. This takes the discussion into a subjective area and its usage to assess health status of a population.

For this study, a subjective viewpoint was taken to the health discourse as this would provide critical information on the health status of workers and students. The current research reveals that the general health status of workers and students are relatively high; but there are still incidences of unhealthy workers and students. In fact, 2.3% of those who visited the Health and Wellness Centre (H&WC) at the tertiary co-educational university from September 2018 to January 2019 are unhealthy, with 40.2% being moderately healthy. The ill-health of people who visited the H&WC include asthma, hypertension, heart disease, arthritis, high cholesterol and sickle cell.

In this research, of the sampled respondents, 38% of them had respiratory conditions. 63% of the asthma patients indicated that the service provided by H&WC was at least good, suggesting that the service deliverables are meeting their health needs. However, the issue of locality must be brought into this discussion because of the kind of health condition. With some 59.3% of the healthcare users to H&WC being from departments on the Main Campus, there is the likelihood of danger if many of those with respiratory conditions become ill and they are far away from the health centre. Another issue is the lengthy stair to enter the H&WC with some patients having respiratory as well as heart conditions. Currently, 3.3% of those who utilize the services of H&WC for September 2018 to January 2019 are diagnosed with heart disease. A health condition that is potentially challenging for patients with arthritic disease, which affects some 5% of visitors to H&WC.

The locality is among the factors that account for the poor service quality rating given to H&WC. Fifty-six and one

tenth per cent of those with chronic health conditions indicated that they are dissatisfied with the service offered by staffers and locality of H&WC. An extrapolation can be made from these findings 'one in every 10 patients who were served by H&WC in the studied period (September 2018 to January 2019) is dissatisfied with the service delivered by the H&WC staffers. Workers and students with chronic diseases are voicing their concerns about the location of H&WC through service quality dissatisfaction. The issue of the location of H&WC may be a concern for those with chronic conditions as the timing to get to the healthcare professionals may account for the difference between life and death.

In concluding, the H & WC is a high service quality provider (i.e., service quality index=3.8 out of 5) and this speaks great/volumes about the health professionals and general staffers in this unit. Despite the sterling contribution of the workers at H&WC, with the number of repeated customers to that unit (76.1%) and the number of workers and students with chronic conditions that utilize its services, policy makers must give urgent attention to issues of workers and students at the institution.

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