Awareness and Utilization of Health Services Provided to Ain Shams University Students

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Abstract

Background: Though little attention had been paid to health services provided to them and sparse researches had been undertaken exploiting awareness and utilization of such service, University students represent the future of families, communities, and countries. **Objectives:** The present study was conducted to describe health services provided for Ain Shams University (ASU) students, to measure awareness and utilization of such services by ASU students and to measure the degree of satisfaction of students and health care providers of these services. **Methods:** A cross section study was carried out on 1090 Ain Shams University (ASU) students in different faculties, attendants of the university medical centres, hospital and outpatient clinics and 65 health care providers of the services in these sites. Self administered questionnaire was addressed to students inquiring about their awareness and utilization of the university health services and their satisfaction of these services. Health care providers were asked about the types and quality of services they provide and their satisfaction as an internal customer of the service. **Results:** From a total of 1090 students participated in the study, about 81.2% were aware about the services of medical administration and 67.2% of them had a history of utilization of these services. Only 23.8% of students attended health education sessions in their faculties, and 47.3% knew about health education sessions from their friends and 38.2% from posters in the faculty. About half of the students rated different aspects of health services offered by medical administration as poor and average. When asking medical staff about their satisfaction regarding the quality of services provided to students, around two third (67%) of them rated it as 'average' and 'bad' for most of the services. **Conclusion and Recommendations:** Services provided to ASU students are not satisfactory for both the university students and the health care providers. The health services program needs to be developed in order to increase the awareness and the satisfaction of the students by the health services provided to them,.
Key words: university students' health services, utilization, awareness, satisfaction.
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Introduction:

Health services include all services dealing with the diagnosis and treatment of disease, or the promotion, maintenance and restoration of health. They include

personal and non-personal health services. Health services are the most visible functions of any health system, both to users and the general public. Service provision refers to the way inputs such as money, staff, equipment and drugs are combined to allow the delivery of health interventions. Improving access, coverage and quality of services depends on these key resources being available; on the ways services are organized and managed, and on incentives influencing providers and users [1]. University students represent the future of families, communities, and countries. They also face the stresses of achieving success in their academic goals and are expected to be competitive, adding to the demands and burdens and possibly leading to more stress. University is a period of responsibility for choices and lifestyle practices, where students are exposed to the challenges of young adulthood and also tackle the mental and social issues of students' life. Many students confront changes in living conditions, and (health promoting/damaging) adjustments to lifestyle characterized by unhealthy practices or 'habits' could persist into middle/old age to inflict health hazards later in life. Students also deal with issues around financial constraints and financial support, social interaction and loneliness [2]. Ain Shams University (ASU) is the third oldest university in Egypt. It was established in July 1950. It encloses 15 faculties and 2 institutes. First, in Alabassya ,the main campus, together with Ain Shams Hospital and Faculty of Medicine, Faculty of Education and Engineering). Second, compus, in Heliopolis (Faculty of women and Faculty of Education). Third, Shubra Elkheima (Faculty of Agriculture). The Medical Administration of Ain Shams

University (MAASU) is considered the second arm of the University, not only in treatment of diseases but also health promotion of the students to maintain their learning abilities. MAASU is concerned with the health care services for the university students. These services are curative, preventive, promotive and rehabilitative health services provided for the university students [3]. By the services the medical administration provides through their specialty clinics they could facilitate student intellectual, emotional and social growth by increasing self-awareness, improving learning ability, assisting with setting personal goals, meeting and resolving personal challenges and applying new behaviors in day-to-day interaction. Despite such alarming findings from many countries across the globe, and the subsequent implementation of numerous university health promotion programs aimed at students, the health/well-being of university students of Eastern Mediterranean region seem to have not received due attention. Indeed, to date, published data from some countries (e.g. Egypt) has been sparse, reflecting the little research that is undertaken in some of these countries on the subject. This confirms the thin evidence base to guide health promotion interventions in university settings in this region. In contrast, in the USA, periodic/regular surveys monitor the health/well-being of nation-wide samples of university students from public/private colleges and universities [2].

Goal of the study:
Improve utilization of health services provided to Ain Shams University students.

Objectives of the study:

The present study was conducted to describe health services provided to Ain Shams University (ASU) students, to measure awareness and utilization of such services by ASU students and to measure the degree of satisfaction of students and health care providers of these services.

Subjects and methods:

Study population: Ain Shams University (ASU) students in different faculties, attendants of (medical centers, hospital inpatients and outpatients) and health care providers at (medical centers, clinics and hospital). **Study settings:** Main ASU campuses: the two main campuses at Al Abbasia (Faculty of Arts, Law, Science, Computer and information technology) and the other campus includes (Faculty of Commerce, Dentistry, Pharmacy, Alsun and The Higher Institute of Childhood), all medical centers in the different university faculties and students hostels (16 medical centers) and all MAASU main building clinics and the hospital inpatients. **Study design:** A cross sectional study design was implemented. **Sample size:** Assuming a prevalence of university medical services utilization of about 25% up to 30%, a sample size of 825 university students was enough to detect such prevalence at 0.05 alpha error and 0.90 power of the test. Students were selected conveniently from different localities in the faculties (labs, study groups, lecture halls and university campus). All available health care providers in the medical centers, clinics

and the hospital during the period of the study were interviewed. **Study tools:** Previous questionnaires tackling the same subject were revised and some items were included in the questionnaires of the current study. Two self administered questionnaires were designed; one for university students and the other for health care providers. The students' questionnaire included academic data, awareness and utilization of university health services and their degree of satisfaction of these services. The health care providers questionnaire was inquiring about the types of services provided, their awareness regarding job description and the present policies and their satisfaction regarding quality of services provided for students.

Data analysis: Data were coded and entered into the SPSS statistical software program version 18 and cleaning of data were done to ensure quality of data entry. Quantitative data were expressed as mean and standard deviation. Qualitative data were expressed as number and percentage and analyzed by Chi-Square test (X^2).

Ethical Considerations: Approval for study conduction was obtained from the Ethical Committee at Faculty of Medicine Ain Shams University. Verbal consent was obtained from all participants after explaining the purpose and benefits from this study.

Results:

From a total of 1090 students participated in the study, 58.8% were females, different faculties were included in the study as Medicine, Engineering, Pharmacy, Dentist, Agriculture, Law,

Arts, Science, Computer Science, Commerce, Linguistics, Women and Nursing. Their grades are shown in (table 1). About 81.2% of students were aware about the services of medical administration and 67.2% of them had a history of utilization of these services (figure 1). There was a statistically significant relation between awareness of students about services of medical administration and both their gender (85.3% of males and 78.3% of females were aware) and their grades where the awareness of the services increases with the increase of the studying grades (table 2). Regarding utilization of medical services by students, 43.5% of students reported a history of visiting their faculty's health centres. About 28.2% of the students who used the services used it for emergency purposes, 37.7% used the service just once, and 17.9% have regular visits (table 3). Regarding health education sessions offered for students, only 23.8% of students attended health education sessions in their facultices before, 47.3% of those attended knew about health education sessions from their friends and 38.2% from posters in the faculty. There were 18.3% of the participating students suffering from chronic disease, 77.2% of them follow-up their disease in Medical Administration and 92.4% of those follow-up their disease were receiving drugs from the Medical Administration. 48.1% of students with chronic disease visit other doctors outside the Medical Administration occasionally for some health problems and 60.9% stated that the cause is insufficiency of Medical Administration resources (table 4). On asking students with history of utilization of medical administration services to rate quality of different aspects of services, 48.7% of the participating students rated

'regular presence of doctors' as poor and average, 47.4% rated 'Doctor's communication with students' as poor and average, 59.3% rated 'Availability of medications' as poor and average and 50% rated 'Quality of clinical examination' as poor and average (table 5). Regarding medical services offered for hostel's students, about 84.5% of the participating Hostel students gave history of utilization of Hostels' medical center. 81.6% of them rate the presence of doctor for 24 hours as poor and average, 89.1% reported availability of medications as poor and average, 88% reported availability of first aid measures as poor and average and 81.6% reported their overall opinion for the provided services as poor and average (table 6).

Regarding characteristics of the studied medical staff, females represented about 64.6%, physician participants are more than other jobs participated 53.7%. The majority of the participants have diplomas as a higher education level 47% and the medical administration participants represented about 61.2% of the studied medical staff. The mean age of the studied medical staff was 37.67 ± 8.34 years while the mean of years of experience was 14.45 ± 9.25 (table 7). When asking medical staff about their awareness regarding policies regulating the medical administration services 44% of them didn't know the 'Vision' of the medical administration, 18.4% didn't know the mission, 26.2% didn't know the 'Value' and 13.4% were not aware about 'Presence of organizational chart'. Regarding awareness of medical staff about their job description, (table 8) shows that policies and procedures that most of the participants was 'un aware'

about them were sports health assessment 79.7%, supervision on restaurants and cafeterias 79.7%, number of medical staff needed 76.9% and supervision on hostels 70.8%. When asking medical staff about their satisfaction regarding the quality of services provided for students, around two third of them rated 'average' and 'bad' for clinics, emergency, general supervision, sterilization, ambulance, medication availability, hospital referral, laboratory services and preventive care measures. Around 65.1% rated 'good' for medical commission (for confirmation of sick leaves) (table 9). Regarding opinion of medical staff about utilization of health services of medical administration by students, 40.7% of them rated it as 'good utilization', 54.2% rated it as "average" and 5.1% reported it as 'bad'. When asking them about the causes of under utilization of services by students, 21.7% of them reported that the cause is un awareness of students about the services (table 10). When asking medical staff about their awareness regarding their training plans, 17.5% only stated the presence of training plans, 38.1% had attended training courses during last year and 37.5% from those attended rated beneficence from courses as average. Most of the medical staff 52.3% stated that there is no performance assessment for services providers and 54.8% stated that there is no wages-performance relationship (table 11).

Discussion:

The present study showed that most of students were aware about the services of medical administration. Some of them

reported history of visiting their faculty's health centres, specialized clinics and the hospital. Causes of utilization of the services were for emergency purposes, referral and for taking medications. About half of the students were dissatisfied regarding different aspects of the services as presence of doctors, doctor's communication with students, availability of medications and quality of clinical examination. The majority of the participated medical staff was unsatisfied regarding the quality of services provided for students.

The observed unawareness of about 18.8% of the studied students regarding the provided services may indicates the importance for raising students' awareness through efficient publicity and the importance of providing another indication of an organized program to raise the awareness of the students to encourage for better utilization of the services.

About one third of participated students had no history of utilization of medical administration before. This may be attributed to many factors like unawareness of the services provided, insufficient physicians, not enough specialties, unsuitable clinics timings, and unavailability of medications.

Comparing with the results of Abbas 2006 (4), about half of the students were not completely aware of the health services provided by ZUMA (Zagazig University Medical Administration). The higher percentage of students' awareness in the present study could be due to the pre-enrollment physical examination and

the availability of medical centers in each faculty of the university.

About two third of the students in the present study did not attend health education sessions. About half of these students knew about health education sessions from their friends and the rest knew from posters and to the lesser extent by their teaching staff. This may be due to the lower rate of arranging for health awareness lectures and poor lectures announcements. This could also explain that the university's student's affair should increase health education sessions for the university students and/or announce about them either through posters or the working staff in order to increase awareness of youth about their health and the university environment where they live. AUC website, 2015 (5), stated that the medical staff team available provides awareness tips for AUC community by focusing on prevention and wellness. On the contrary Abbass, 2006 (4), stated that the ZUMA students hadn't had any health awareness lectures in their faculties.

On asking students in the present study to rate quality of different aspects of medical administration services, about half of the participating students rated the 'Regular presence of doctors', 'Doctor's communication with students', 'Availability of medications', and 'Quality of clinical examination' Poor and Average. Abbass, 2006 (4), stated that ZUMA students claimed that most of the doctors do not attend regularly according to their attendance schedule and their communication was poor.

AUC website, 2015 (5) and Harvard website, 2015(6) provide a list of the physicians and their specialties and their location and phone numbers, together with the list of practitioner nurses are provided on the web sites for prior appointment taken. This indicates that a list of the attended physicians and their specialties' should be applied with prior reservations and timing on the university website to make it easier for the students to get in contact with the medical administration.

The observed low number of medical staff who were aware of the presence of the vision of the medical administration (16.9%) most probably due to the absence of modality for dissemination of information from the administration to the working medical staff. This could be in the form of periodic orientation seminars and written handbooks to be provided for the health care workers. This opinion may be documented by the finding that considerable percentage of the medical staff (around one third) were unaware of their job description as regards presence on call, requesting for laboratory investigations , students' sick leaves, supplied medication, supervision on the medical centers, students referrals, laboratory diagnosis according to available supplies, and new students medical examination.

In addition, over 50% of the medical staff participants were 'Un aware' of the policies and procedures in supervision on clinics and different hospital departments, supervision on medical centers, number of workers needed,

camps medical examinations, medical examinations for fitness for sports, supervision on hostels, medical care during exams, pests and insects control, health education and dealing with crisis training courses and supervision on restaurant and cafeterias.

When asking medical staff about their satisfaction regarding the quality of services provided for students, around two third of them rated 'average' and 'bad' for clinics, emergency, general supervision, sterilization, ambulance, medication availability, hospital referral, laboratory services and preventive care measures. Moreover, around 60% of the medical staff rated 'Average' and 'Bad' for the utilization of the medical administration services by students.The fact that around 75% of the medical staff rated 'Average' and 'Bad' for most of the services provided to students through (clinics, emergency, general supervision, sterilization, ambulance, medication, availability, hospital referral, laboratory services and preventive care measures) represent an alarm and reflects that the whole organization needs for development and improvement in the type of services it provides to meet both the medical staff and the students' satisfaction.

The finding that more than half of the medical staff reported absence of training plans and more than half didn't attend any training courses during last year could be another contributing factor for their un satisfaction. **Li et al, 2012 (7)** stated that It is necessary to further improve medical staff education through technical training

in order to increase the quality of therapy and thus to meet patients demands.

The finding that the majority of medical staff reported absence of performance assessment of services providers indicates the absence of quality monitoring system which also should be considered seriously by the authority of the university.

More than half of medical staff stated that there is no relation between providing services and financial rewards. This may indicate that financial rewarding may solve the problem of bad quality of the services. Other encouraging modalities could be investigated and tried as appreciation certificates related to the provided medical services. These encouraging modalities may increase working satisfaction and output of the medical staff. Ojakaa et.al, 2014 **(8),** stated that adequate training, job security, salary, supervisor support, and manageable workload were identified as critical satisfaction factors.

Conclusion and recommendations:

The Health care services provided to Ain Shams university students are not that satisfactory for either the university students or the health care providers. The health services program provided to the Ain Shams university students needs to be developed in order to increase the awareness and the satisfaction of the students towards the health services provided to them. Policies and procedures of the Medical Administration of Ain Shams University should be well known

by all the working staff. Also programs for training and continuous education of the health care workers are needed to provide a quality monitored health services.

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Table 1: Characteristics of interviewed students:

Gender:	N (%)
Male	449 (41.2)
Female	641 (58.8)
Total	1090 (100)
Grade:	**N (%)**
Preparatory	97 (11.8)
1st grade	144 (17.6)
2nd grade	63 (7.7)
3rd grade	223 (27.2)
4th grade	222 (27.1)
5th grade	55 (6.7)
6th grade	16 (2)
Total	820 (100)

Table 2: Relation between characteristics of the interviewed students and their awareness about services of the medical administration:

		Awareness			Chi Square test	P value
		Yes	**No**	**Total**		
		N (%)	**N (%)**	**N (%)**		
Gender	**Male**	347 (85.3)	60 (14.7)	407 (100)	7.79	0.01*
	Female	475 (78.3)	132 (21.7)	607 (100)		
Faculties	**Practical**	300 (82.9)	62 (17.1)	362 (100)	0.39	0.53
	Human Sciences	461 (84.4)	85 (15.6)	546 (100)		
Grade	**Prep.**	52 (58.4)	37 (41.6)	89 (100)	30.53	< 0.01**
	First	81 (79.4)	21 (20.6)	102 (100)		
	Second	49 (77.8)	14 (22.2)	63 (100)		
	Third	183 (82.1)	40 (17.9)	223 (100)		
	Fourth	184 (82.9)	38 (17.1)	222 (100)		
	Fifth	49 (89.1)	6 (10.9)	55 (100)		
	Sixth	14 (87.5)	2 (12.5)	16 (100)		

*Significant at (0.05) level   **Significant at (0.01) level

Table 3: Types, causes and frequency of utilization of the medical services by students:

Service used:	N (%)
Health center	234 (43.5)
Specialized clinics	87 (16.2)
Hospital	84 (15.6)
More than one answer	133 (24.7)
Total	538 (100)
Causes of using the service:	**N (%)**
Emergency	29 (28.2)
Referral	29 (28.2)
Medication	25 (24.3)
More than one answer	20 (19.4)
Total	103 (100)
Frequency of utilization of the services:	**N (%)**
One time	198 (37.7)
Two times	116 (22.1)
Three times	31 (5.9)
More than three times	86 (16.4)
Regular	94 (17.9)
Total	525 (100)

Table 4: students with chronic disease and their utilization of the service:

Suffering from chronic disease:	N (%)
Yes	173 (18.3)
No	773 (81.7)
Total	946 (100)
Follow-up in Medical Administration:	**N (%)**
Yes	132 (77.2)
No	39 (22.8)
Total	171 (100)
Receiving drugs from Medical Administration:	**N (%)**
Yes	122 (92.4)
No	10 (7.6)
Total	132 (100)
Visiting doctors outside Medical Administration for some health problems:	**N (%)**
Yes	75 (48.1)
No	81 (51.9)
Total	156 (100)
Cause of not visiting the Medical Administration:	**N (%)**
Medical Administration cannot treat me	14 (21.9)
Insufficient resources in Medical Administration	39 (60.9)
Don't know	7 (10.9)
More than one answer	4 (6.3)
Total	64 (100)

Table 5: Rating quality of different aspects of medical administration services by the interviewed students:

	Poor N (%)	Average N (%)	Good N (%)	Excellent N (%)	Total N (%)
Presence of doctors	91 (15.5)	195 (33.2)	244 (41.6)	57 (9.7)	587 (100)
Doctor's communication with students	109 (18.5)	170 (28.9)	224 (38)	86 (14.6)	589 (100)
Availability of medications	169 (29.2)	174 (30.1)	177 (30.6)	59 (10.2)	579 (100)
Quality of clinical examinations	110 (19)	180 (31)	230 (39.7)	60 (10.3)	580 (100)

Table 6: Rating different aspects of quality of hostels' medical services by the participated students:

	Poor N (%)	Average N (%)	Good N (%)	Excellent N (%)	Total N (%)
Presence of doctor for 24hrs	61 (38.6)	68 (43)	26 (16.5)	3 (1.9)	158 (100)
Availability of medications	104 (66.7)	35 (22.4)	17 (10.9)	0 (0)	156 (100)
Availability of first aid measures	85 (53.8)	54 (34.2)	19 (12)	0 (0)	158 (100)
Overall opinion	53 (33.5)	76 (48.1)	28 (17.7)	1 (0.6)	158 (100)

Table 7: Characteristics of the studied medical staff:

Age groups:	N (%)
25-	2 (3.8)
30-	23 (44.2)
35-	10 (19.2)
40-	7 (13.5)
45-	2 (3.8)
$\geq$ 50	8 (15.4)
Total	52 (100)
Mean $\pm$ SD	37.67 $\pm$ 8.34
Minimum-Maximum	25 – 56
Years of experience:	**N (%)**
5-	31 (44.9)
10-	8 (11.6)
$\geq$ 15 years	25 (36.2)
Total	64 (100)
Mean $\pm$ SD	14.45 $\pm$ 9.25
Minimum-Maximum	5 – 35
Gender:	**N (%)**
Male	23 (35.4)
Female	42 (64.6)
Total	65 (100)
Position:	**N (%)**
Physician	36 (53.7)
Nurse	11 (16.4)
Pharmacist	11 (16.4)
Dentist	9 (13.4)
Total	67 (100)
Qualifications:	**N (%)**
Bachelor	16 (24.2)
Diploma	31 (47)
Master	16 (24.2)
PhD	3 (4.5)
Total	66 (100)
Department:	**N (%)**
Medical administration	41 (61.2)
Health centers	26 (38.8)
Total	67 (100)

Table 8: Medical staff' awareness about their job description:

	N (%)
Working in outpatient clinics	43 (64.2)
Working with emergency cases	28 (43.1)
Supervision on different hospital departments	21 (31.8)
Requesting laboratory investigations	48 (72.7)
Supervision on medical centers	21 (33.3)
Determination of number of medical staff needed	15 (23.1)
Students sick leaves	41 (64.1)
Supplying drugs	47 (72.3)
Student's referrals	55 (83.3)
Performing laboratory investigations according to available resources	52 (80)
Camps health assessment	27 (42.9)
Sports health assessment	13 (20.3)
Supervision on hostels	19 (29.2)
Medical care during exams	29 (43.3)
New students medical examination	38 (58.5)
Pests and insects control	20 (31.3)
Health education	22 (33.8)
Attendance of courses for health education and management of crisis	20 (30.8)
Supervision on restaurants and cafeterias	13 (20.3)

Table 9: Medical staff' satisfaction about the quality of services provided for students:

	Good	Average	Bad	Total
	N (%)	N (%)	N (%)	N (%)
Clinics	23 (34.8)	34 (51.5)	9 (13.6)	66 (100)
Emergency	16 (26.2)	26 (42.6)	19 (31.1)	61 (100)
General supervision	14 (24.6)	22 (38.6)	21 (36.8)	57 (100)
Sterilization	18 (30.5)	24 (40.7)	17 (28.8)	59 (100)
Ambulance	22 (36.7)	30 (50)	8 (13.3)	60 (100)
Medical commission	41 (65.1)	21 (33.3)	1 (1.6)	63 (100)
Medication availability	15 (23.1)	36 (55.4)	14 (21.5)	65 (100)
Hospital referral	12 (22.2)	37 (68.5)	5 (9.3)	54 (100)
Laboratory services	19 (31.1)	41 (67.2)	1 (1.6)	61 (100)
Preventive care measures	5 (8.6)	33 (56.9)	20 (34.5)	58 (100)

Table 10: Causes of under utilization of Medical Administration services as perceived by medical staff:

	N (%)
Shortage of services	1 (2.2)
Shortage of specialties	3 (6.5)
Unawareness about the services	10 (21.7)
Unavailability of medications	3 (6.5)
More than one cause	29 (63)
Total	46 (100)

Table 11: Medical staff' awareness about the presence of performance assessment methods for services providers:

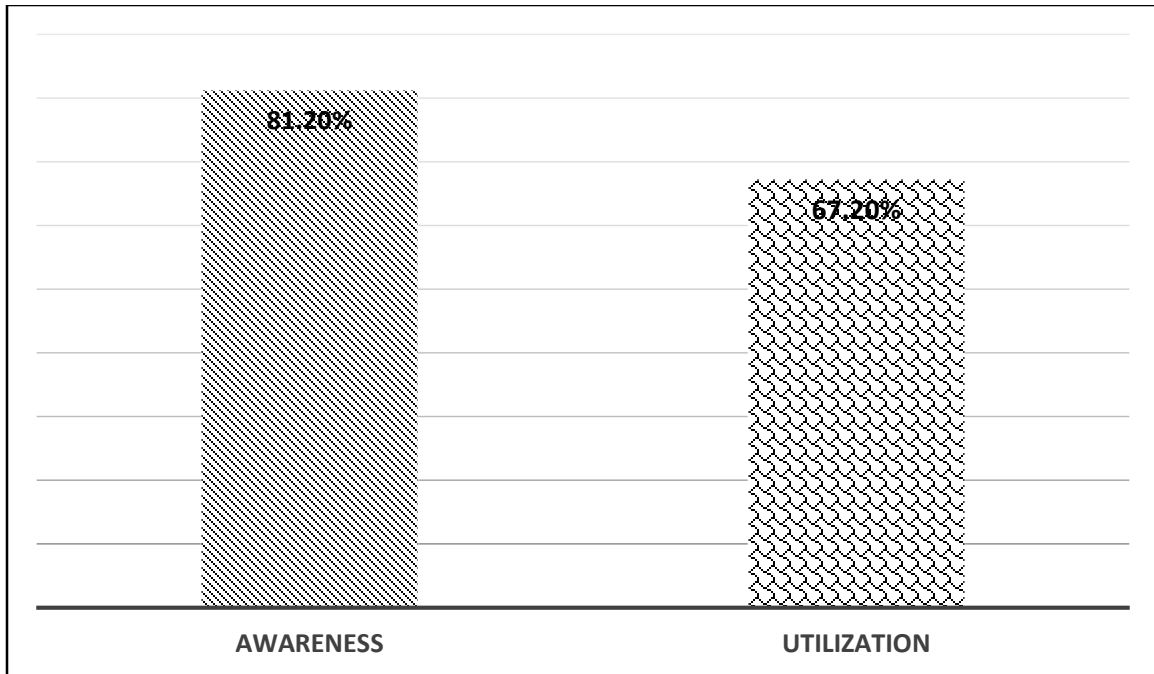| Presence of performance assessment of service providers:	N (%)
Yes	7 (10.8)
No	34 (52.3)
Don't know	24 (36.9)
Total	65 (100)
Wages-performance relationship:	**N (%)**
Related	7 (11.3)
Not related	34 (54.8)
Don't know	21 (33.9)
Total	62 (100)

Figure 1: Awareness and utilization of health services provided to students