

**ASSESSING UNDERGRADUATE STUDENTS' MOTIVATION TO STUDY
PHARMACY, ATTITUDES AND FUTURE CAREER PROFESSIONAL
CHOICES IN UNIVERSITIES OF UGANDA**

BY

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**A RESEARCH REPORT SUBMITTED TO SCHOOL OF PHARMACY IN
PARTIAL FULFILMENT FOR THE AWARD OF BACHELOR DEGREE
IN PHARMACY AT KAMPALA INTERNATIONAL UNIVERSITY**

DECEMBER, 2018.


DECLARATION

I Mugabo Eddy declare that this research report set for the award of Bachelor degree of Pharmacy is my Personal, prepared and compiled original work after carrying out extensive inquiries and compilation in the Universities around Uganda and has never been submitted to any other institution of higher learning for an academic award.

Therefore, it's not a duplicate of anyone's report. Apart from references indicated

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APPROVAL

This report write-up has been prepared under guidance of my university supervisor and has been submitted upon his approval.

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List of abbreviations

UK	United Kingdom
NHS	National Health Service
KIU	Kampala International University
PSU	Pharmaceutical Society of Uganda
MUK	Makerere University
MUST	Mbarara University of Science & Technology
B. Pharm	Bachelors degree of Pharmacy
MOH	Ministry of Health

Definition of terms

Intrinsic motivation is motivation that is animated by personal enjoyment, interest, or pleasure.

Intrinsic motivation energizes and sustains activities through the spontaneous satisfactions inherent in effective volitional action (Deci et al. 1999). It is manifest in behaviors such as play, exploration, and challenge seeking that people often do for external rewards.

Extrinsic motivation is motivation governed by reinforcement contingencies. Traditionally, educators consider intrinsic motivation to be more desirable and to result in better learning outcomes than extrinsic motivation (Deci et al., 1999).

Human capital corresponds to any stock of knowledge or characteristics the worker has (either innate or acquired) that contributes to his or her “productivity”

Metaphor The use of a word a word or phrase to refer to something that it isn't

ABSTRACT

Background: One of the contributing factor to the shortage of health professionals especially in Pharmacy, is the small number of people opting to enter the profession and it was seen that numerous factors and motivations influence the choice of a university course by young high school graduates.

Objective: To assess undergraduate pharmacy students' motivation to study pharmacy, attitudes about the profession and future career professional choices in universities of Uganda.

Methodology: The study was a cross-sectional descriptive study design and the study population included pharmacy students from all the three Universities in Uganda. A sample size of 278 participants was used. These were assessed using pre-validated questionnaires with several close ended and open ended questions and data collected from them was entered into SPSS, analyzed, and presented in form of tables, graphs and pie charts.

Results: A greater number of the undergraduate students were aged between 23 - 25 years, 104(38.8%) and were mostly Fourth Year students 107(38.5%), 46.4 % (129) of the students were from KIU, 26.6% (74) were from Makerere University and 27%(75) were from Mbarara University. Male students were the majority 206(74.5%) and by religion Catholics were the majority 67(27.4%). Personal related reasons ranked low on motivation to study Pharmacy as only one reason out of the eleven factors listed (9.1%) was a crucial motivating factor and that was, *"Influence by a Pharmacist I know as a role model"* 119 (44.2%). This showed studying MUST vs KIU, age 20-22 and 26-28 vs age above 28 was statistically significantly related to taking pharmacy as a first choice.

Conclusion: In conclusion this study considers motivation as being either task or ego-oriented and considers extrinsic motivation to be more desirable and to result in better learning outcomes than intrinsic motivation. The study also reveals good attitude towards pharmacy and shows that the theory of rational choice states was applicable among KIU students since many took pharmacy hoping for certain outcomes such as employment and starting their own business. Also fits High Flyers and Life Style' Work-Life Balance Theory that is students are committed to pharmacy because their attitude towards one's profession". Furthermore, the study reveals a significant relationship between (MUST and KIU students), and age (20-22 years and 26-28 years) and those above 28 years).

CHAPTER ONE

1.1 Introduction

Worldwide several studies have investigated the influence of motivational factors on the choice of pharmacy as a major academic program of study (Silverthorne et al., 2003). Results of earlier studies have shown popularity of pharmacy among certain ethnic groups of students (Simpson, 2001; Danielle et al., 2006). For those that did not choose pharmacy as their first choice of study, most had chosen medicine as their preferred choice. This trend appears consistent globally (Legesse et al., 2014) and it lends credence to the notion that the medical profession continues to enjoy widespread popularity and respect among the public. However, attitude towards pharmacy as a profession, even among those who did not choose pharmacy as their first choice, remains positive (Legesse et al., 2014).

One of the contributing factor to the shortage of health professionals especially in Pharmacy, is the small number of people opting to enter the profession is perhaps the likely reason for a lack of skilled health professional especially in the allied health professions in Africa.(James et al., 2017). Weak healthcare systems and the shortage of a skilled healthcare workforce are among the factors responsible for poor health outcomes seen in developing countries despite the significant advances in medicine and public health. (Hongoro, 2004). Numerous factors and motivations influence the choice of a university course by young high school graduates. These include, among others, interest in chemistry, biology and mathematics, expectation of a highly paid profession, availability of various job opportunities, University and College reputation and influence of their promotional activities, and also influenc412e of parents, relatives and friends (Wilson et al, 2006).

There is currently an international shortage of pharmacists (International Pharmaceutical Federation, 2006). In the United Kingdom (UK) the majority of healthcare professionals are employed in the public sector by the National Health Service (NHS), yet the majority of pharmacists (70%) are employed by the private sector in community pharmacy (James et al., 2017). Deeper understanding of the various factors that influence an applicant's choice of pharmacy as a career path need to be elucidated. A review of the available literature suggests that the proportion of students who selected pharmacy as their first choice of study ranged from 39% to 51.1% in Africa; and 71.5% to 77.4% in advanced countries like the United Kingdom and the

United States (Anderson, et al 2008). On the other hand, a study in the United States indicated that community pharmacy was the preferred choice of most students immediately after graduation. Work environment was considered a key factor for their choice.

A study conducted in Australia cited extrinsic factors such as future need to be part of healthcare delivery system as the most important determinants for choosing to study pharmacy (Davey, 2006). Peer and family influence have also been noted as a reason for pursuing pharmacy as a career path. (Anderson, et al 2008). In addition, another study investigated the influences as extrinsic (e.g. high school grades and career opportunities) and intrinsic (e.g. likeness of science) motivations and demonstrated that in Australia, intrinsic factors score higher than extrinsic factors (Roller, 2004). Studies in the United States and Britain have identified race and sex as factors influencing the choice of pharmacy as a major. Asian Americans for instance, were more likely to choose pharmacy as their major than Caucasians, blacks and Hispanics (Wilson et al., 2010). Also, Caucasians cited career opportunities and entry level positions as their primary influencers. Concerning sex, females students identified selflessness as a key motivator (Keshisian et al., 2010).

A recent pharmacy workforce report highlighted a lack of pharmacy professionals in Africa. (James et al., 2017). One study conducted in Ethiopia reported an attitudinal score of 3.6971 on a scale of 1–5 (Beedemariam et al., 2014). Also, in Nigeria, South Africa and Ethiopia (James et al., 2017). Hospital pharmacy was the most preferred area of practice among pharmacy students. In the Nigerian study, for instance, job flexibility for women and remuneration for males were the key influencers (Beedemariam et al., 2014). In the South African study, giving back to the community was cited as the most important reason for their choice (Modipa et al., 2008) Intern pharmacists shared similar career preferences in Sierra Leone. With the progressive development in pharmaceutical sciences and change of pharmacy education and also pharmaceutical care delivery which focus on patient rather than drugs, a need for competent pharmacists with good communication skills became a necessity (Aita et al., 2004). In addition the extended role of pharmacists would require recruitment of students capable of bearing such important responsibilities towards patients and also make a true difference in their communities(Sharif & Sharif, 2014).

In Uganda previously there was only one University offering an undergraduate course (Makerere University) which started the program in 1989, then in 2002 Mbarara University opened the

Programme, which a year later was joined by Kampala International University (KIU). But previously the enrollment was very low in that at the start Makerere would enroll only 10 students but the current Finalist class (Class of 2018) has 35 students. Same story was with KIU, the year of 2015 graduated only 11 students but the current 2018 finalist classes have over 75 students in total showing a tremendous increase over the years.

Few published studies have assessed the motivations, attitudes and career intentions of pharmacy students in Africa. To my knowledge, no such study has been done in Uganda. This study therefore aims to assess the motivations that influence students to choose pharmacy as a career and attitudes towards it (Pharmacy) in Uganda.

1.2 Problem Statement

Preparing the health workforce to work towards attainment of its health objectives represents one of the most important challenges and opportunities for health systems. More to this maintaining a reasonable balance in terms of numbers, diversity and competencies of the health workforce requires a thorough understanding of the driving forces and challenges that shape health and education systems as well as labor markets (World health organization, 2016).

In Uganda as according to the PSU website dated on 28/05/2018 there are 776 registered Pharmacists for the entire population of 33 million Ugandans (UBOS, 2017). There are evident gaps in pharmaceutical management particularly at the lower health units. Many key posts in pharmaceutical management remained vacant; and this has affected the ordering, procurement and distribution of Essential Medicines and Health Supplies (Report, 2009). The chronic shortage of pharmaceutical human resources means that unavoidably certain pharmaceutical services such as medicines ordering, dispensing and storage may sometimes have to be undertaken by non-pharmaceutical health staff like nurses and clinicians. This is expected to continue for the foreseeable future until sufficient trained pharmacists and pharmacy technicians are in place to take over these functions (Ministry of Health, 2012).

Furthermore, there has been an increasing number of undergraduate students enrolling for the Pharmacy course in Uganda despite there being only 3 Universities in the country offering the Bachelors of Pharmacy course. To fill the gaps in the pharmaceutical management assessing

undergraduate pharmacy students' motivation to study pharmacy, attitudes about the profession and future career professional choices in universities of Uganda becomes a prominent goal.

1.3 General Objective

To assess undergraduate pharmacy students' motivation to study pharmacy, attitudes about the profession and future career professional choices in universities of Uganda.

1.4 Specific Objectives

- To assess undergraduate pharmacy students' motivation to study pharmacy in universities of Uganda.
- To determine the future career professional choices and attitude about the profession of undergraduate pharmacy students in universities of Uganda.
- To evaluate the effect of socio-demographic factors on student's perceptions and influences to choose pharmacy as a profession.

1.5 Research questions

- What motivates students to study pharmacy in universities of Uganda?
- What are the future career professional choices of undergraduate pharmacy students in universities of Uganda?
- What is the attitude about the profession of undergraduate pharmacy students' in universities of Uganda?
- How do the socio-demographic factors affect students' perceptions and influence them to choose Pharmacy?

1.6 Justification of the Study

The study may inform the Ministry of Health, health planners, health providers, medical training institutions and other health related non-governmental organization about the potential probable workforce (human resource) in the Pharmacy profession and help government to plan on how to accommodate these upcoming professionals in the big gap of the Pharmacy sector that is not yet well fielded in the Uganda health care trend.

The study will also contribute to the literature and it will also be of interest and utility to health care professionals concerned with the promotion of career pathway programs not only for the Pharmacy profession but other professions

CHAPTER TWO

Literature review

2.1 Students' motivation to study pharmacy

Motivation refers to “the attribute that moves us to do or not to do something” (Gredler et al, 2004). Motivation is also a psychological concept that refers to a person’s willingness to put forth effort in order to achieve educational goals. Active, independent, self-directed learning requires motivation (Atkinson, 2013). Motivation involves a constellation of beliefs, perceptions, values, interests, and actions that are all closely related (Gottfried, 1990). A small number of studies have measured the motivational drivers which influence the choice of pharmacy as a profession at different stages in the preregistration phases (Booth et al, 2014).

Everything students do is underlined by some sort of motivation. This includes students and their motivation to learn. Motivation is essential to learning since it is the driving force for students to complete tasks that build knowledge. There are many factors that can potentially influence motivation. However, motivational considerations can be summed up as being either task or ego-oriented (Nguyen, 2008). It was found internal motivation was positively related to both overall academic commitment and academic satisfaction. Additionally, it was shown that external motivation is negatively related to academic satisfaction, but positively related to commitment. Finally, results indicate that neither internal nor external motivations are significantly related to academic performance (King, 2013).

Intrinsic motivation is animated by personal enjoyment, interest, or pleasure, whereas extrinsic motivation is governed by reinforcement contingencies. Motivation involves a constellation of closely related beliefs, perceptions, values, interests, and actions. Traditionally, educators consider intrinsic motivation to be more desirable and to result in better learning outcomes than extrinsic motivation. Research suggests that motivation can be manipulated through certain instructional practices (Lai, 2011).

In United Kingdom, Students registered a high desire to study pharmacy; 73% of year one and 71% of year four placed it first priority at the time of application. Of those for whom it was not first choice, medicine was the preferred option. The two most important factors in choice were

reputation of the school of pharmacy and reputation of the university (Jesson, 2009). At The University of Montana, pharmacy students looked to be driven by relatively high levels of external motivations (e.g., motivated by money or prestige), especially when compared to other health profession students. Furthermore, results showed that motivation is related to the educational outcome variables, although not in all cases and not always in the predicted direction (King, 2013).

In the University of South Australia, pharmacy results indicated that future job prospects and a desire to make a contribution to healthcare were uppermost in participant's minds and the relative costs of the undergraduate and Graduate Entry programs were, not unexpectedly, major factors which influenced the choice of study pathway (Davey, 2006).

2.2 The future career professional choices of undergraduate pharmacy students

There are a range of uses of the concept "choice" An act – of choosing or selecting, the opportunity or power of choosing, an alternative action or possibility, a supply from which to select (Asomani-amuah, 2012). Of the many psychological theories used in career studies, I will focus on two well-known theories - rational choice theory and human capital theory. However, I propose that rational choice is bound by social circumstances, conditions and events. Considering two other theories, work-lifestyle balance (theory) and preference theory which may tell the understanding of people actually in the labour market, but which may form dimensions of the bounded nature of rational choice. This leads to an exploration of the notions of career and this will give consideration of what the research design will be like.

Rational Choice Theory

The term rational is widely used in relation to career choice. Rational can be defined as using reason or logic in thinking out a problem or endowed with the capacity to reason – hence 'man is a rational being'.

In relation to careers, the theory of rational choice states that when faced with several courses of action, people usually do what they believe will have the best overall outcome for themselves. Rational choice theory is the theory most commonly used in studying career choices and motivation, particularly in those choices made at age 16 (Monteiro, 2003).

These definitions of choice suggest a purposive act, an act based in traditional economic thought as a rational act. The rational choice theory makes assumptions about the decision maker, that they are rational, motivated by self-interest and calculating. The decision is oriented towards choosing the option with the highest utility; that the choice is made on perfect information and that the chooser understands the likely consequences of the decision.

Rational choice theories of education view student's educational decision as a sequence of binary choices between options that entail long-term utility and options that reduce short-term risk of failure. One of the best articulated models of educational choice asserts that choice between alternative options is affected by students' utility considerations, their expectations regarding the odds of success or failure in alternative educational options, and their motivation to avoid downward social mobility (Gabay-Egozi, 2010). Educational choice was found to be affected by subjective utility and failure expectations, but not by class maintenance motivations. Results suggested that educational systems that allow multiple rather than alternative choices may enhance the attainment of working-class youth because they enable them to opt for long term utility while providing a safety-net in the form of additional safer subjects (Gabay-Egozi, 2010).

Human Capital Theory

One dimension of rational choice is Becker's human capital theory, based on economic. Principles and applied amongst other social phenomena to education (Blackwell, 2000; Anderson, 2000). When asking why do people pursue further education? He concluded that variations in education patterns between social groups vary with the rewards that can be obtained. Human capital theory assumes a process of rational choice, based upon rational man theory, to acquire resources.

"Human capital refers to the resources, qualities (including personality traits) skills and knowledge that are either available to or acquired by an individual to maximize their own employability "(Kasperson, 2001).

However, rational choice theory and human capital theory when applied to career making decisions by an undergraduate at a school of pharmacy may fail to recognize the complex, interactional, intellectual and situational processes that are also involved. Thus others theories to support these include;

Bounded Rationality

In real life undergraduate career choices are bounded by many other actors and influences hence the notion of bounded rationality (Simon, 2011). Bounded rationality allows us to take into account the complexities of the undergraduate world, recognizing context, culture and the labour market as key influences. Simon acknowledges three similarities to rational choice theory:

- Both theories distinguish the individual as the basic actor in society;
- Both view self-interest as the main motivating force behind choices; and
- Both involve a conscious choice.

And six departures from rational choice theory:

- The actor has limited computational abilities;
- They have uncertain and limited information (imperfect knowledge);
- They search for alternative consequences and other information selectively;
- It stresses the cognitive component of the actor in producing behaviour goals and

Conceptions oriented to the world;

- Process not outcome is emphasized; and
- It uses the concept of satisfying as opposed to optimisation.

Bounded rationality recognises the uncertainty of the environments in which the individual operates, meaning that the individual depends on habits, routines, and institutions to provide regularity to their environment. When thinking of school leavers most occupational decisions are made in a 'dependent' style. The influence of friends and family take precedence so the school leaver can effectively allow others to make the choice.

Preference Theory

Hakim's preference theory offers an explanation for the position of women in the labour market.

She argues that the main determinant of women's heterogeneous employment patterns and work histories is their 'preferences' for family work and paid employment (Mcrae, 2003). She argues that careers are not centrally important for the greater majority of women. There are substantial

theoretical and empirical criticisms of Hakim's theory which we do not intend to pursue here. Nevertheless, it could be useful in explaining why some females are increasingly joining the pharmacy profession, where a mixture of balancing employment and family responsibility is possible. So, although rational choice theory is based on rational man, it is possible that the rational choices that women make are 'bounded' by their social and family preferences and the constraints which they bring.

'High Flyers and Life Style' Work-Life Balance Theory

The definition of a career is 'a profession or occupation chosen as one's life's work'. So we need to explore to what extent undergraduates consider they are taking on a career. Most published pharmacy studies use the concept of "pharmacy" as a career (Booth et al., 2014) and 'post entry career paths' (Cockerill, 2015).

Without definition. However, 'career commitment' is defined as "one's attitude towards one's profession or vocation" (Cline et al 2009). In these two examples, the concept of career is used as a metaphor: career path as a metaphor for journey and "career commitment" as a metaphor for career as a role (Inkson, 2004). Inkson describes "careers as abstractions as constructs open to construction and interpretation from many different sources". Career metaphors have been described as "an epistemological ragbag"

This suggests that we need further investigation as to the nature of pharmacy careers. So, the pharmacy career is associated with a profession and maybe even a vocation in life. Rascati refines career commitment further by distinguishing between commitment to the entire field or role, from a commitment to the job or one's organization (Rascati, 1989). Pharmacy is not usually associated with being 'just a job' or just employment, although employers use the words 'manpower' and workforce when describing their employees. Popular notions of a career include the idea of a lifetime association with a chosen profession; the potential for graded career progression upwards into management and of safe well rewarded secure employment. The notion of what constitutes a career may be changing. There is new research evidence by the charity Common Purpose, which claims that talented young people want more out of life than their predecessors (Freen, 2004). They want more than their career offers.

The centrality of a career in life and as a 'label' may be declining (Bunting 2004).

CHAPTER THREE

RESEARCH METHODOLOGY

3.2 Study design

The study was a cross-sectional descriptive study design. The interview questions were the main tool for data collection.

3.3 Study population

The study population included sample students from all the 3 Universities in Uganda.

3.4 Criteria

3.4.1 Inclusion criteria

All Students from Universities that offer pharmacy (that is Kampala international university, Mbarara University, and Makerere University) were included in the study

3.4.2 Exclusion

All non-pharmacy students and pharmacy students who are not offering a Bachelor's degree were excluded from the study.

3.4 Sample size estimation

Kampala International university western campus currently has a population of 520 students, Makerere University has a population of about 274 students and Mbarara University of science and technology has a population of 250 students. Thus this study used a study population of about 1044 students. Therefore, using the sample size determination table formulated by Krejcie and Morgan (1970), a sample size of 278 students was used in this study as shown in the table below.

Populasi (N)	Sampel (n)	Populasi (N)	Sampel (n)	Populasi (N)	Sampel (n)
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

3.5 Data collection methods

The data was collected using pre-validated questionnaires with several close ended and open ended questions. A questionnaire was used to collect both qualitative and quantitative data. Questionnaires were given to those who know English and can read and write.

A total of 320 questionnaires were printed

3.6 Data Analysis

Data collected (Such as demographic factors, motivational factors and future career aspirations) was entered into SPSS (Statistical Package for social Sciences) Version-25, analyzed using SPSS and Microsoft Excel 2016, and presented in the form of tables, graphs and pie charts.

3.8 Ethical Consideration

Ethical clearance was sought from KIU ethics and research committee. Introductory letters sought were then taken to the offices of the 3 universities and obtained permission to conduct the research on pharmacy students of Mbarara university of science and technology, Makerere university and Kampala international university Western Campus. Verbal consent was obtained from each respondent after explaining the purpose and importance of the study prior to commencement of interviews and sampling. Participation in the study was on voluntary basis.

I informed the participants the purpose of the study and what use will be made of the data. Verbal informed consent was obtained and no reward was offered to the participants.

3.12 Study limitation

- Limited time since the researcher had to attend lectures as well as carrying out the study.
- Limited funds since the researcher was travelling several times to carry out research and much was involved in printing and other necessities of research.
- Getting information from students was a challenge since some doubted the reasons of collecting data, and also most students were not always around the Premises of their faculties.

CHAPTER FOUR

DATA PRESENTATION

4.1 Introduction

A total of 312 questionnaires were distributed over the study period of 4 months and only 297 copies were returned (95.1% response rate), 278 copies were considered as per the sample size determination table formulated by Krejcie & Morgan (1970) basing on those that were fully answered.

4.2 Demographic Findings

A greater number of the undergraduate students were aged between 23 - 25 years, 104(38.8%) and were mostly Fourth Year students 107(38.5%), 46.4 % (129) of the students were from KIU, 26.6% (74) were from Makerere University and 27%(75) were from Mbarara University. Male students were the majority 206(74.5%) and by religion Catholics were the majority 67(27.4%).

Table 1: Socio demographic Findings

VARIABLES	Frequency n (%)
SEX	
Male	20 (74.5)
Female	70 (25.5)
Missing	4
AGE	
20 - 22	88 (32.8)
23 – 25	104 (38.8)
26 – 28	41 (15.3)
Above 28	35 (13.1)
Missing	10
Religion	
Moslem	27 (10)
Born again	49 (18.1)
Catholic	67 (24.7)
Seventh Day Adventist	20 (7.4)
Orthodox	3 (1.1)
Protestant (Anglican)	64 (23.6)
Pagan	9 (3.3)
ATS	18 (6.6)
Other	14 (5.2)
Missing	7
University of training	
MUST	75 (27)
MUK	74 (26.6)
KIU	129 (46.4)
Year of Study	
1 st	62 (22.3)
2 nd	40 (14.4)
3 rd	69 (24.8)
4 th	107 (38.5)

4.2 Undergraduate pharmacy students' motivation to study pharmacy in universities

4.2.1 Ways in which undergraduates said they were influenced to study pharmacy

From the table below, Personal related reasons ranked low on motivation to study Pharmacy as only one reason out of the eleven factors listed (9.1%) was a crucial motivating factor and that was, "Influence by a Pharmacist I know as a role model" 119 (44.2%). While majority of other factors had a high percentage of participants saying that they weren't crucial as seen in the table

Table 2: Ways in which undergraduates have said they were influenced to study pharmacy

VARIABLE	Frequency n(%)
A teacher in Secondary School	
Crucial	33 (13)
Moderate	65 (25.6)
Not crucial	156 (61.4)
Missing	24
A career guidance that was set up at Secondary School	
Crucial	68 (25.7)
Moderate	59 (22.3)
Not Crucial	138 (52.1)
Missing	13
My friends influenced me	
Crucial	40 (15)
Moderate	73 (27.4)
Not Crucial	153 (57.5)
Missing	12
My Parent(s) encouraged me	
Crucial	67 (25.9)
Moderate	25.7 (25.7)
Not Crucial	133 (49.7)

I was influenced by a pharmacist I know as a role model	
Crucial	119 (44.2)
Moderate	38 (14.1)
Not Crucial	112 (41.6)
Missing	9
A university magazine	
Crucial	30 (11.5)
Moderate	47 (17.9)
Not Crucial	185 (70.6)
Missing	16
a visit to the university	
Crucial	22 (8.3)
Moderate	35 (13.3)
Not Crucial	207 (78.4)
Missing	14
I applied for medicine as 1st choice but was given pharmacy	
Crucial	20 (7.6)
Moderate	27 (10.2)
Not Crucial	217 (82.2)
Missing	14
Radio/Tv Programme	
Crucial	6 (2.3)
Moderate	23 (8.8)
Not Crucial	231 (88.8)
Missing	18
I was influenced by Pharmacy work experience	
Crucial	68 (25.7)
Moderate	39 (14.7)
Not Crucial	158 (59.6)
Missing	13

I wanted to upgrade from Diploma to a Bachelors

Crucial	35 (13.5)
Moderate	14 (5.4)
Not Crucial	211 (81.2)
Missing	18

4.2.2 Influences on the decision to choose Pharmacy as a career choice

Influences on the decision to choose Pharmacy as a career choice ranked highly as 11 out of the 12 listed factors (91.7%) were the crucial motivating factors for the participants. (68.2%) liked science because they were good at science in school, 46.8% wanted a job where they can be socially useful, 68.4% wanted to do a science based course, 46.4% wanted to own their own business, 66.8% wanted a job with good career opportunities, 55.4% wanted the opportunity for self-employment, 45.4% were attracted by the financial rewards, 60.6% thought Pharmacy would be intellectually satisfying, 39.5% wanted a job where they can deal with patients, 50.4% wanted a career with flexible working hours, 65.8% wanted a profession where you can always get a job.

Table 3: Influences on the decision to choose Pharmacy as a career choice

I liked science because/was good at science in school	
Crucial	180 (68.2)
Moderate	60 (22.7)
Not Crucial	24 (9.1)
Missing	14
I wanted a job where I am socially useful 125	
Crucial	125 (46.8)
Moderate	75 (28.1)
Not Crucial	65 (24.3)
Missing	11

I wanted to do a science based course	
Crucial	184 (68.4)
Moderate	51 (19)
Not Crucial	34 (12.6)
Missing	9
I wanted to own my own business	
Crucial	123 (46.4)
Moderate	70 (26.4)
Not Crucial	72 (27.2)
Missing	13
I wanted a job with good career opportunities	
Crucial	181 (66.8)
Moderate	60 (22.1)
Not Crucial	30 (11.1)
Missing	7
I wanted the opportunity for self-employment	
Crucial	148 (55.4)
Moderate	73 (27.3)
Not Crucial	46 (17.2)
Missing	11
I wanted the opportunity for part time work	
Crucial	90 (33.8)
Moderate	74 (27.8)
Not Crucial	102 (38.3)
Missing	12
I was attracted by the financial rewards	
Crucial	118 (45.4)
Moderate	69 (26.5)
Not Crucial	73 (28.1)
Missing	18

I thought Pharmacy would be intellectually satisfying	
Crucial	163 (60.6)
Moderate	50 (18.6)
Not Crucial	56 (20.8)
Missing	9
I wanted a job where I can deal with patients	
Crucial	105 (39.4)
Moderate	91 (34.2)
Not Crucial	70 (26.4)
Missing	13
I wanted flexible working hours	
Crucial	133 (50.4)
Moderate	63 (23.9)
Not Crucial	68 (25.8)
Missing	14
I wanted a profession where you can always get a job	
Crucial	179 (65.8)
Moderate	40 (14.7)
Not Crucial	53 (19.5)
Missing	6

4.2.3 Choosing pharmacy as a 1st choice

79 % of the students chose Pharmacy as their first choice when applying for a course at university prior to admission, while 21% had not opted for pharmacy. Majority of those that did not choose pharmacy as their 1st choice had opted for Medicine, 73.4% followed by Dentistry 18.7%

Table 4: Choosing pharmacy as a 1st choice

Those that Pharmacy was their 1st choice	frequency (%) (n = 278)
Yes	214 (79.2)
No	64 (20.7)
Those who said "NO", the other courses that they considered	frequency (%) (n = 64)
Medicine	47 (73.4)
Dentistry	12 (18.7)
Health related course	3 (4.6)
Other	6 (3.3)

4.3 The future career professional choices and attitude about the profession of undergraduate pharmacy students in universities

4.3.1 Attitude and commitment of students towards the profession of pharmacy

To be able to calculate the 95% CIs of the responses presented here, the four-point scale was reduced to two categories: Either strongly agrees/tends to agree (Very strong) or tends to disagree/strongly disagree (Not very strong)

From the table below, most of the students (264) had a very strong desire to study Pharmacy when they had just been admitted to Pharmacy school, (95% CI=0.93-0.97) and their desire to be Pharmacists was stronger 273, (95% CI =0.97-0.98)

The majority 212, (95% CI 0.94-0.98) have stated that they were strongly committed to the value and ideas of pharmacy profession and 268, (95% CI = 0.94-0.98) stated that they were proud to inform others that they were studying pharmacy. 261, (95% CI=0.92-0.97) of the respondents absolutely wanted Pharmacy as the career for their life, only 16; (95% CI = 0.03-0.08) regret that they entered Pharmacy school and also 18.5% of the students would change their B. Pharm course for another degree in case given chance to pick a different occupation which paid the same amount of salary.

Table 5: Attitude and commitment of students towards the profession of pharmacy

Parameter	Frequency n (%)	Confidence Interval
How strong was your desire to study Pharm when admitted		
Very strong	264 (95.5)	0.93-0.97
Not Very Strong	13 (14.5)	
How strong is your desire to be a Pharmacist		
Not Very Strong	273 (98.5)	0.97 – 0.98
Strongly disagree	4 (1.5)	
I am proud to tell others that I am studying Pharmacy		
Strongly agree	268 (96.8)	0.94 – 0.98
Strongly disagree	9 (3.2)	
I am strongly committed to the values and ideas of pharm profession		

Strongly agree	268 (98.4)	0.94 – 0.98
Strongly disagree	9 (1.6)	
Being a pharm is an important part of who I want to be		
Strongly agree	265 (96.7)	0.93 – 0.98
Strongly disagree	9 (3.3)	
If I could pick a different occupation with same salary, I would change the degree		
Strongly agree	51 (18.5)	0.13 – 0.22
Strongly disagree	554 (81.5)	
I absolutely want a career in Pharmacy		
Strongly agree	261 (95.96)	0.92 – 0.97
Strongly disagree	13 (4.04)	
If I could do it all over again I would choose to study the same profession		
Strongly agree	218 (82.3)	0.74 – 0.83
Strongly disagree	47 (17.7)	
I regret that I entered Pharmacy school		
Strongly agree	16 (5.9)	0.03 – 0.08
Strongly disagree	255 (94.1)	
I intend to undertake a post-graduate degree after completing Pharmacy		
Strongly agree	255 (94.1)	0.87 – 0.95
Strongly disagree	253 (10.6)	

4.3.2 Sectors where students wish to work after graduation

The leading career choice of students for employment was in the field of Hospital Pharmacy, 54 (19.9%) followed by regulatory body, 47 (17.3%), and then Industrial pharmacy, 35 (12.9%) Well as, 32 (11.8%) would wish to complete Internship from Community Pharmacies. Interestingly, 26 (9.6%) Wanted to complete internship from outside Uganda and also, 17 (6.3%) are not yet sure of where to go while, 18 (6.6%) will just go wherever they can get jobs

Table 6: table illustrating Sectors where students wish to work after graduation

Field	frequency n(%)
Community Pharmacy	32 (11.8)
Retail Pharmacy	8 (3)
Hospital Pharmacy	54 (12.9)
Academia	6 (2.2)
Regulatory Bodies	47 (17.3)
Research	24 (8.9)
Consultancy	4 (1.5)
Wherever I get a Job	18 (6.6)
Work beyond borders of Uganda	26 (9.6)
Not yet sure	17 (6.3)
Industrial Pharmacy	35 (12.9)

4.3.3 Salary expectation

Majority of the students, 184 (69.7%) would wish to receive a salary of above 3Million (Above \$ 850) per month While 10 (3.8%) would settle for the basic salary of 1.5Million a value for covering one Pharmacy well as over 2.3% would cover for less than the basic scale.

None of the students that didn't have Pharmacy as their 1st choice Chose a salary of less than 1.5Million

None of the Fourth year students chose a salary of less than 1.5Million While among of the students that chose a Salary of less than 1.5 Million, all were first year students, 4 (100%).

Of the participants that chose a salary of less than 3Million, 26 the majority were still 1st year students, 12 (46%) and among those none was from Makerere University!

Table 7: table showing Salary expectation of pharmacy students

Level of Salary	frequency (%) (n = 278)
1M	6 (2.3)
1.5M	10 (3.8)
2M	5 (1.9)
2.5M	7 (2.7)
3M	52 (19.7)
Above 3M	184 (69.7)

4.3.4 Plans for future working life

From the table below, among all the suggestions on the questionnaire during the survey as regard to Plans for future working life, more than half of the students, 161 (61.5%) Intended to buy their own businesses, 84 (32.1%) would wish to work full time then part time in case they have families and 102 (39.4%) would wish to work from abroad.

Table 8: Table illustrating pharmacy students' plans for future working life

Plans for future working life	frequency (%) (n = 278)
Work full time, then part time if I have a family	84 (32.1)
I intend to buy my own business	161 (61.5)
Work abroad	102 (39.4)
Full time career until typical retirement age	37 (14.5)
Intend to work as a Locum	29 (11.4)
Academia	58 (22.6)
No clear intention yet	27 (10.5)

4.3.5 Expected working hours

Majority of the students want to work for 30-38 hours a week, 115 (43.4%) with least number of students supporting the idea of working for more than 38 hours a week, 68 (25.7%).

Table 9. Table illustrating expected working hours.

How many hours a week students would wish to work	frequency n (%)
Less than 30	82 (30.9%)
30 – 38	115 (43.4%)
More than 38	68 (25.7%)

4.3.6 Comparison of Pharmacy to other health care professions

From the bar graph below, many (52.9%) thought that medicine is better than pharmacy and the least, 0.5% thought that social worker is of higher status to pharmacy and the most inferior is Nursing as it was suggested by 82.6% of the respondents

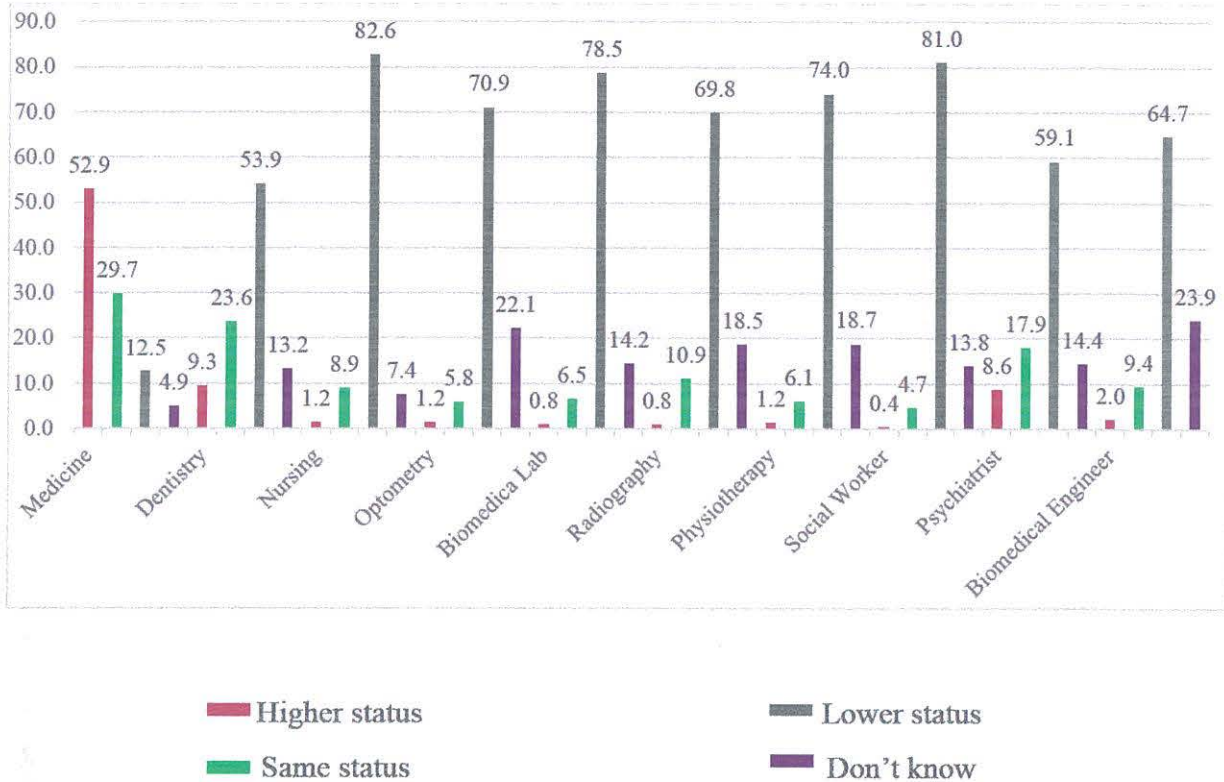


Figure 1. A bar graph showing the comparison of pharmacy to other healthcare professions by students

4.3.7. Students' future career choices.

4.3.7.1 Knowledge in year 1 Semester 1 in sectors to work from

Majority of the students, 42.5% had no definite idea of which field to work in when they were in their 1st Semester of study after admission to Pharmacy school.

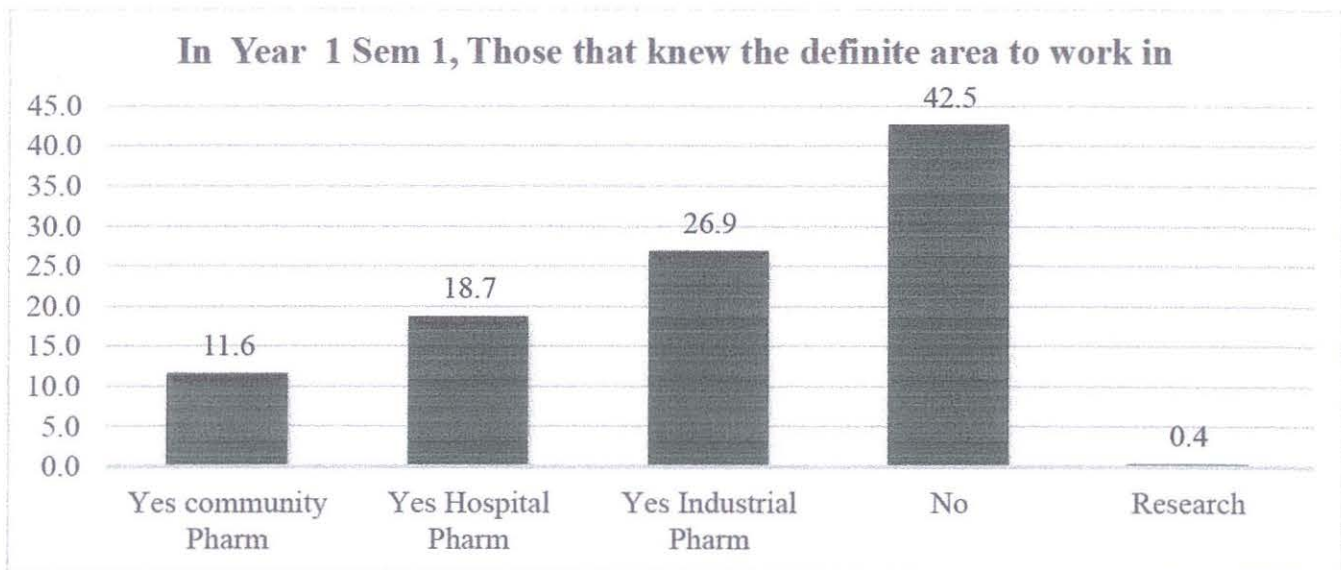


Figure 2 A graph showing students' knowledge while is Year 1 Sem 1 on sectors to work from

4.3.7.2 Change of idea over the course of the study

From the pie chart below, 38% of the students had changed the idea of where to work in future while the majority, 46% preferred to stay with the initial idea of working where they had definite idea in year 1. However, 5% no longer wished to work in the pharmacy profession

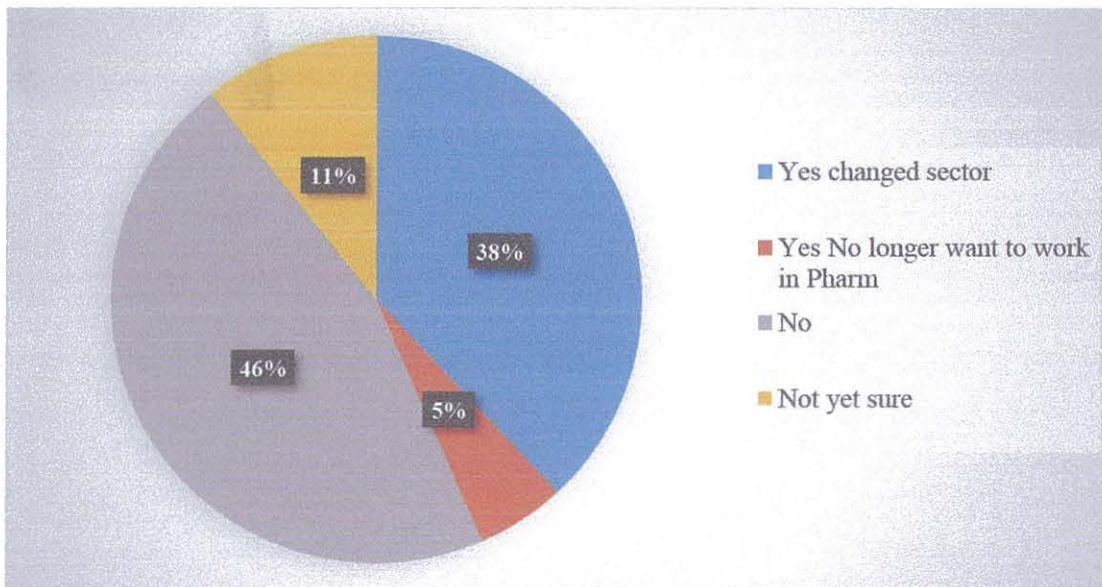


Figure 3 A pie chart showing students whose idea has changed over the course of the study.

4.3.7.3 Wish of changing the course or dropping out of the B. Pharm course

From the pie chart below, 82.1% of the students had never wished of dropping or changing the B. Pharm course over the course of the study, while 17.9% have ever wished to change to another course.

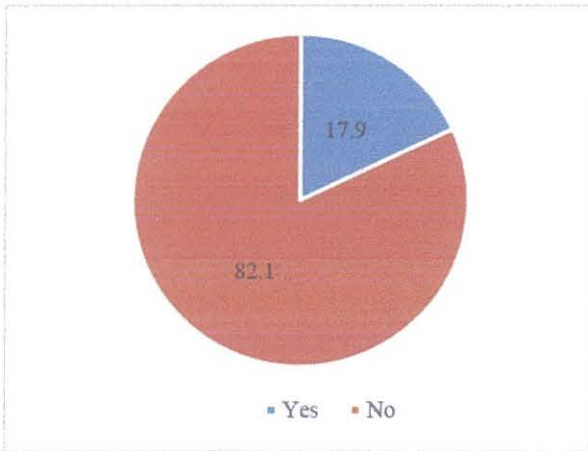


Figure 4 A pie chart showing students that have ever wished to change the course

4.3.7.4 Reasons for changing course by pharmacy students

From the pie chart below, academic difficulties, harsh university academic policies and other reasons tallied at 20%, while majority (22%) had personal reasons, well as the least (4%) were due to financial hardships

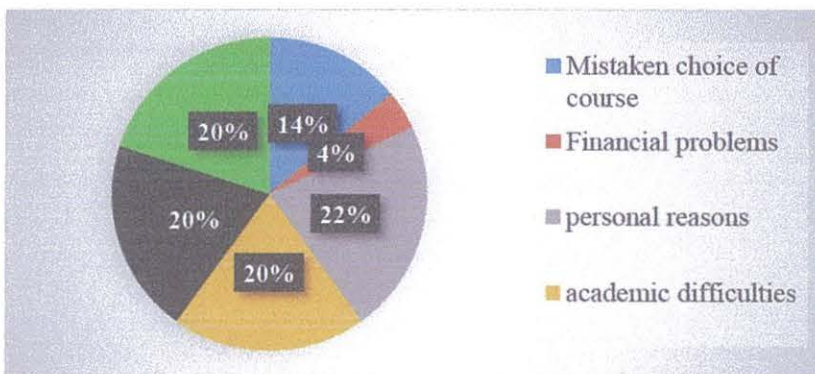


Figure 5 A pie chart illustrating reasons as to why students wished to change their B. Pharm course
n=48

4.3.7.5 Factors that have influenced students' future career choice from their experience during the degree course

From the bar graph below, majority of the students, 66.3% have been greatly influenced mainly by the course content followed by Industrial training, 51.3% as influences from within their experience during the course of study of the degree and the least was, 29.8% other lectures of pharmacy.

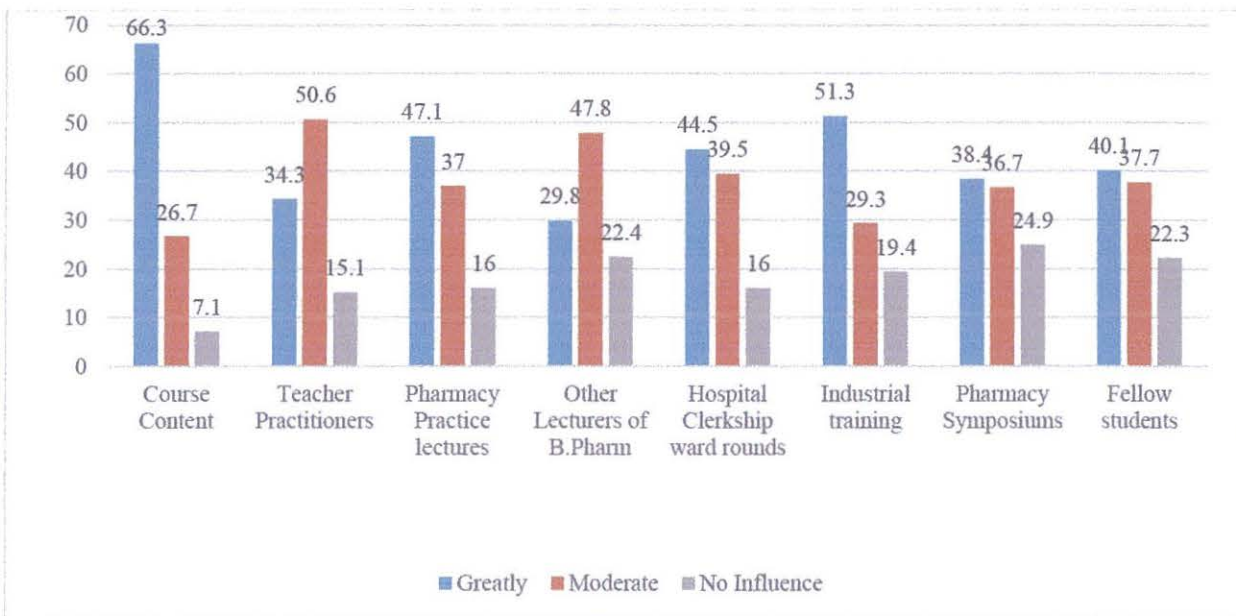


Figure 6 A bar graph showing how factors from within the course of the study have influenced students future career choices.

4.3.7.6 Extent to which factors from outside the degree course influenced student's future career choices.

From the graph below, majority (44.6%) of the students were influenced by generally talking to practicing pharmacists while both Company recruitment material and government loan scheme debt tallied at 10% as the least.

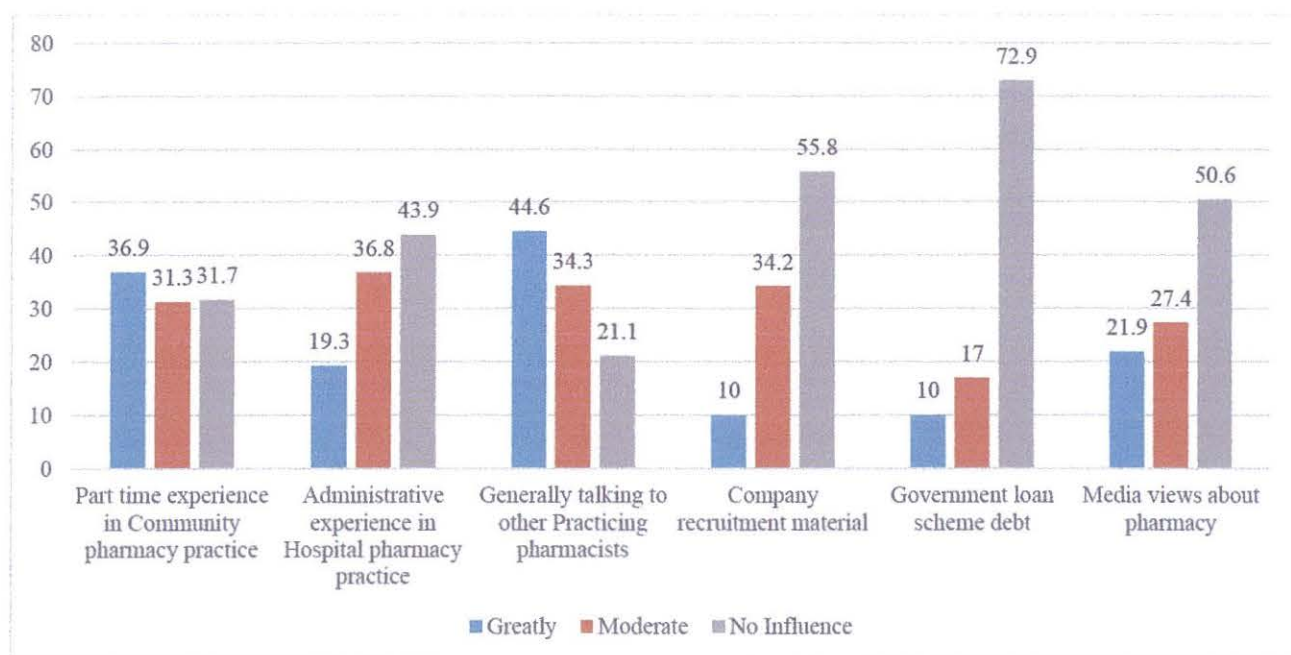


Figure 7 A bar graph illustrating how factors from outside degree the course have influenced students future career choices.

4.4 Effect of social demographic factors on student's perceptions and influences to choose pharmacy as a profession

From the table below, studying from MUST vs KIU, age 20-22 and 26-28 vs age above 28 was statistically significantly related to taking pharmacy as a first choice. That is pharmacy students at MUST were 57.7% less likely to take pharmacy as their first choice compared to those ones of KIU (OR = 0.423, CI= 0.198 - 0.904).

Pharmacy students of age 20-22 WERE 87.8% times less likely to take pharmacy as their first choice as compared to students aged above years (OR = 0.122, CI = 0.0155 – 0.995). Even those aged 26-28 were 97.1% less likely to choose pharmacy as their first choice (OR = 0.029, CI = 0.003 – 0.253).

Table 10: table showing effect of social demographic factors on student's perceptions and influences to choose pharmacy as a profession

pharmacy was my first choice	Variable	p-value	95% Confidence Interval		
			Odds ratio	Lower Bound	Upper Bound
Yes N=214	University				
	MUST	.026	.423	.198	.904
	MUK	.935	.967	.429	2.177
	KIU	.	.	.	.
	Year of study				
	First year	.123	.500	.207	1.207
	Second year	.496	.691	.239	1.999
	Third year	.073	.470	.206	1.073
	Fourth year	.	.	.	.
	Sex				
	Male	.494	1.300	.612	2.760
	Female	.	.	.	.
	Age				
	20-22	.050	.122	.015	.995
	23-25	.089	.161	.020	1.324
	26-28	.001	.029	.003	.253
Above 28	.	.	.	.

CHAPTER FIVE

Discussion of results, conclusion and recommendations

5.1 Discussion of results

According to this study, personal related reasons ranked low on motivation to study Pharmacy. This contradicts with Atkinson (2013) who defines motivation as a psychological concept that refers to a person's willingness to put forth effort in order to achieve educational goals, but in this study, there was no great connection between motivation to "person's willingness". This finding concurs with Nguyen (2008) who considers motivation as being either task or ego-oriented. Furthermore, this study shows (91.7%) of the students to have made a decision to choose Pharmacy as a career choice such as job availability, liking science subjects, financial rewards among others. Thus making motivation more of extrinsic than intrinsic motivation. This disagrees with Lai (2011) where traditionally, educators consider intrinsic motivation to be more desirable and to result in better learning outcomes than extrinsic motivation. But agrees with King (2013) in a study at The University of Montana where pharmacy students looked to be driven by relatively high levels of external motivations (e.g., motivated by money or prestige).

This study also reveals that "choosing pharmacy as the first choice" was a high rate (79%) with a majority of those who never chose pharmacy as the first choice choosing medicine. This concurs with Jesson (2009), where it was shown that 73% of year one and 71% of year four placed it first priority at the time of application and those who did not choose it first choice, medicine was the preferred option.

In this study, most of the students had a very strong desire to study Pharmacy when they had just been admitted to Pharmacy school and their desire to be Pharmacists was stronger. More too that many stated that they were strongly committed to the value and ideas of pharmacy profession and stated that they were also proud to inform others that they were studying pharmacy. Thus this study theoretically fits bounded rationality theory as documented by Simon (2011), since the theory allows us to take into account the complexities of the undergraduate world, recognizing context, culture and the labor market as key influences. It also fits the High Flyers and Life Style' Work-Life Balance Theory since under this theory (Cline et al 2009) suggests that 'career commitment'

is defined as “one’s attitude towards one’s profession or vocation”. Thus this strong commitment illustrated by this study reflects good attitude towards pharmacy as a profession.

According to Monteiro (2003), the theory of rational choice states that when faced with several courses of action, people usually do what they believe will have the best overall outcome for themselves. Therefore, since in this study majority of the students (69.7%) wished to receive a salary of above 3Million (Above \$ 850) per month. It shows pharmacy would make them get their expected salary thus making it fit in the theory of rational choice. Also students plan for future working life like 61.5% intending to buy their own businesses, 32.1% wishing to work full time then part time in case they have families, 39.4% wishing to work from abroad and many of the students want to work for 30-38 hours a week makes this study stratify the theory of rational choice.

This study reveals that pharmacy students at MUST were 57.7% less likely to take pharmacy as their first choice compared to those ones of KIU (OR = 0.423, CI= 0.198 - 0.904). Pharmacy students of age 20-22 WERE 87.8% times less likely to take pharmacy as their first choice as compared to students aged above years (OR = 0.122, CI = 0.0155 – 0.995). Even those aged 26-28 were 97.1% less likely to choose pharmacy as their first choice (OR = 0.029, CI = 0.003 – 0.253).

5.2 Conclusion

In conclusion this study considers motivation as being either task or ego-oriented and considers extrinsic motivation to be more desirable and to result in better learning outcomes than intrinsic motivation. The study also reveals good attitude towards pharmacy and shows that the theory of rational choice states was applicable among KIU students since many took pharmacy hoping for certain outcomes such as employment and starting their own business. Also fits High Flyers and Life Style’ Work-Life Balance Theory that is students are committed to pharmacy because their attitude towards one’s profession”. Furthermore, the study reveals a significant relationship between (MUST and KIU students), and age (20-22 years and 26-28 years) and those above 28 years).

5.3 Recommendations

Therefore, the research recommends the following;

- There is need to make pharmacy liked at a personnel level that is promoting intrinsic motivation through educational seminars at secondary level of education.
- There is need to encourage pharmacy among students of age 20-22 years and 26-28 years.
- Regulatory bodies such as PSU, NDA and MOH are encouraged to fund to inter university study seminars so as to produce work oriented pharmacists because extrinsic factors were ranked higher than intrinsic factors.

APPENDIX: I Questionnaire
PHARMACY UNDERGRADUATE STUDENTS' MOTIVATION, ATTITUDES AND
CAREER CHOICES:

A SURVEY ON PHARMACY STUDENTS

HOW TO COMPLETE THIS QUESTIONNAIRE

This questionnaire has been designed for self-completion by a final year student.

This is an opportunity for you to participate. I value your opinions and welcome your contribution. However, whether you participate or not will have no effect upon either your pharmacy degree or pre-registration year.

- ✓ Read each question carefully. Most of the questions can be answered by putting a tick in a box next to the answer you want to give.
- ✓ Sometimes you are asked to write your answer in the space under the question, please write clearly.
- ✓ It will take you no longer than 15 minutes to complete.
- ✓ I will treat your answers with the strictest confidence.

CONSENT NOTE

Greetings! My name is **MUGABO EDDY**, a final year student of KIU-WC from School of Pharmacy pursuing a bachelor's of Pharmacy. Am conducting a study to assess undergraduate pharmacy students' motivation to study pharmacy, attitudes about the profession and future career professional choices in universities of Uganda.

I have read the information sheet for the participants for this study and have had details of the study explained to me. My questions have been answered to my satisfaction, and I understand that am free to withdraw from the study at any time or to decline to answer any particular question of

this study. I agree to provide information to the researcher under the conditions of confidentiality set out on the information sheet. I agree to participate in this study under the conditions set out in the information sheet.

Participant's signature..... Date.....

SECTION 1: MOTIVATIONS AND INFLUENCES

In this section, I have listed ways in which undergraduates have said they were influenced to study pharmacy. Read through each list before you begin to write your answers. If there is anything I skipped, please note it at the end

Qn1. Here are some personal related reasons why people choose to study pharmacy. For each option below, indicate how important each one was for you (scale 1-3, where 1 is important and 3 is not important).

	Reason	1 Crucial	2 Moderate	3 Not Crucial
A	A teacher in Secondary School	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B	A career guidance that was set up at Secondary School			
C	My friends influenced me			
D	My parent(s) encouraged me to choose pharmacy			
E	I was influenced by a pharmacist I know, as a role model			
F	A university prospectus			
G	A visit to a university			
H	I applied for medicine as 1 st choice but was given Pharmacy			

I	I changed to another University because I wanted to study Pharmacy			
J	Radio or TV Programme			
K	I was influenced by Pharmacy work experience			
L	I wanted to upgrade from a Diploma to a Bachelors			
M	Other Personal Reasons	Please Specify.....		

Qn2. The following reasons have been given by people as influences on their decision to choose to study pharmacy as a career choice. How strong was each reason for you personally (scale 1-3, where 1 is a strong reason and 3 is not a strong reason)?

	Reason	1 Crucial	2 Moderate	3 Not Crucial
A	I liked science / was good at science at school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B	I wanted a job where I am socially useful			
C	I wanted to do a science based Course			
D	I wanted to own my own business			
E	I wanted a job with good career Opportunities			

F	I wanted the opportunity for self-employment			
G	I wanted the opportunity for part time work			
H	I was attracted by the financial Rewards			
I	I thought pharmacy would be intellectually satisfying			
J	I wanted a job where I can deal with patients			
K	I wanted flexible working hours			
L	I wanted a profession where you can always get a job			
M	Other Reasons	Please Specify.....		

CHOICE OF SCHOOL OF PHARMACY

Qn 3. When you were making your choice about what to study at university, how committed were you to pharmacy?

Pharmacy was my first choice: Yes No

Qn 4. If you have answered "No" to Question 3, which other courses did you consider?

(Tick one box only.)

A	Medicine	
---	----------	--

B	Dentistry	
C	Nursing	
D	Wanted to work in any health related course	
E	Law	
F	Other science course (Please specify)	

Qn 5. How strong would you say your desire to **study pharmacy** was when you had been admitted to pharmacy school? **Tick one box only.**

Very strong Fairly strong Not very strong Not strong at all

Qn 6. How strong is your desire to be a pharmacist esp. when you are about to finish pharmacy school? **Tick one box only.**

Very strong Fairly strong Not very strong Not strong at all

SECTION 2: CARRIER ATTITUDE

Qn 7. This question contains statements about your commitment to pharmacy as a career.

Tick the **ONE** box which show to what extent you agree or disagree with the following statements.

a) I am proud to tell others that I am studying pharmacy

Strongly agree Tend to agree Tend to disagree Strongly disagree

b) I am strongly committed to the values and ideals of the pharmacy profession

Strongly agree Tend to agree Tend to disagree Strongly disagree

c) Being a pharmacist is an important part of who I want to be

Strongly agree Tend to agree Tend to disagree Strongly disagree

d) If I could pick a different occupation which paid the same amount, I would probably change degree.

Strongly agree Tend to agree Tend to disagree Strongly disagree

e) I absolutely want a career in pharmacy

Strongly agree Tend to agree Tend to disagree Strongly disagree

f) If I could do it all over again, I would choose to study for the same profession.

Strongly agree Tend to agree Tend to disagree Strongly disagree

g) I regret that I entered pharmacy school.

Strongly agree Tend to agree Tend to disagree Strongly disagree

h) I intend to undertake a post graduate degree after completing pharmacy.

Strongly agree Tend to agree Tend to disagree Strongly disagree

SECTION 3: FUTURE CAREER AMBITION

Qn 8. Thinking ahead, upon graduation, in which field of practice would you wish to work.

A	Community Pharmacy	
B	Retail Pharmacy	
C	Hospital pharmacy	
D	Academia	
E	Regulatory body (PSU or NDA or Ministry of Health)	
F	Research	
G	Consultancy	
H	Wherever I get a job	
I	Working beyond the borders of Uganda	
J	Not yet sure	
K	Industrial Pharmacy	
L	Other: Please specify;	

Qn 9. After you qualify, what level of salary do you expect to earn?

Tick one box only.

a	500,000/=	
b	800,000/=	
c	1,000,000/=	
d	1,500,000/=	
e	2,000,000/=	
f	2,500,000/=	
g	3,000,000/=	
h	Above 3M	

Qn 10. Which of the following statements best describe your plans for your future working life? Tick all the boxes that are true for you.

A	Work full time, then part time if I have a family	
B	I intend to buy my own business	
c	Work abroad	
d	Full time career until typical retirement age	
e	Intend to work as a Locum	
f	Academia	
g	No clear intention yet	
h	Other Please specify:	

Locum (A professional person who temporarily fulfills the duties of another)

Qn 11. How many hours a week do you want to work?

Tick one box only.

a	Less than 30	
b	30 – 38	
c	More than 38	

Q 12. During the 1st Semester of your B. Pharm degree, did you have a definite idea of which sector of the profession you wanted to work in after your pre-registration year?

Tick one box only

a	Yes, community pharmacy	
b	Yes, hospital pharmacy	
c	Yes, industrial pharmacy	
d	No	
e	Other (not as a pharmacist)	

	Please specify:	
--	-----------------------	--

Qn 13. Over the course of your degree, has this idea changed?

(Tick one box only)

a	Yes, changed sector	
b	Yes, no longer want to work in pharmacy	
c	No	

Qn 14. Have you ever considered changing courses or dropping out of your Pharmacy course during your degree?

(Tick one box only)

a	Yes	
b	No	
If your answer is NO.		
Go to Qn. 16		

If Yes proceed to QN. 15

Qn 15. If yes, why was this?

A	Mistaken choice of course	
B	Financial problems	
C	Personal reasons	
D	Academic difficulties	
E	Harsh University academic Policies	
F	Other Please specify:	

Qn 16. To what extent have the following factors from your experience on your degree course influenced your future career choice

	Factor	Greatly	Moderately	No influence
A	Course content			
B	Teacher Practitioners			
C	Pharmacy Practice lectures			
D	Other lecturers of B.Pharm			
E	Hospital Clerkship ward rounds			
F	Industrial training			
G	Pharmacy Symposiums			
H	Fellow students			
I	Other (Please specify):			

Qn 17. To what extent have the following factors from outside your degree course influenced your future career choice?

For each factor, **Tick one box** to show the level to which you were influenced

	Factor	Greatly	Moderately	No influence
A	Part time experience in Community pharmacy practice			
B	Administrative experience in Hospital pharmacy practice			
C	Generally talking to other Practicing pharmacists			
D	Company recruitment material			
E	Government loan scheme debt			

f	Media views about pharmacy			
g	Other (please specify)			
			

Qn 18. To what extent have the following factors from within the profession of pharmacy influenced your future career choice?

For each factor, Tick one box to show the level to which you were influenced

a	Factor	Greatly	Moderately	No influence
b	Letters page of the Pharmaceutical Journal			
c	Jobs and recruitment section of the Pharmaceutical sector			
d	Pharmacy news in other Journals			
e	The salary paid			
f	Ease of getting a job			
g	Limited working time			
h	Limited job competition			
i	Other (Please specify);			
			

Qn 19. What is important to you when thinking about which sector to work in as a Pharmacist?

For each factor, Tick one box to show the level to which you were influenced

	Factor	Greatly	Moderately	No influence
a	Good opportunities because of a shortage of pharmacists			
b	Opportunities to interact with other pharmacists on a daily basis			

C	Not working under pressure			
D	Not working for long hours			
E	Having a secure job			

Qn 20. This explores the status of Pharmacy compared to other health care professions. How do U think the general public sees the status of pharmacy when compared to ...?

	Profession	Higher status than Pharmacy	Same status as Pharmacy	Lower status than Pharmacy	Don't know
a	Medicine				
b	Dentistry				
c	Nursing				
d	Optometry				
e	Biomedical Lab Technologist				
f	Radiography				
g	Physiotherapy				
h	Social Worker				
i	Psychiatrist				
j	Biomedical engineer				

SECTION 4

Lastly about you (participant)

Qn 21. Sex Male Female

Qn 22. How old are U?

20 - 22

- 23 – 25
- 26 – 28
- Above 28

Qn 23. What's your religion?

- Moslem
- Born again
- Catholic
- Seventh day Adventist
- Orthodox
- Anglican
- Pagan
- ATS
- Other

Qn 24. What University are you training from?

- Mbarara University of Science and Technology
- Makerere University
- Kampala International University WC

Qn. 25 Which year are you in?

1st

2nd

3rd

4th

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