

# What Influences Students Choice for Health Professions Education at Makerere University?

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**Background:** Motivation to pursue health professions education may stem from external incentives such as wealth, fame, and popularity. For others it is for internal reasons like the desire to serve society. In this study, we aimed to identify what influences students' choice for an undergraduate health professions program at Makerere University College of Health Sciences (MakCHS).

**Methods:** A cross-sectional qualitative study was conducted among first-year undergraduate students pursuing bachelor degrees in medicine and surgery (MBChB), nursing (BNur), pharmacy (BPharm), medical radiology (BMR), and dental surgery (BDS). A self-administered questionnaire with open-ended questions was distributed to the students during a tutorial session in the second week of the first semester (academic year 2010/2011). Completed questionnaires were entered into a Microsoft Access database. Median (Interquartile range-IQR) and frequencies of respondents were used to describe the study sample. Content analysis with emergent coding was used to analyze the qualitative data.

**Results:** Overall, 145 students (response rate = 72%, N = 201) with a median age of 20 (IQR: 19–20) years responded to the study. The majority of the participants were male (75.2%, n = 109), and were pursuing MBChB (65.5%, n = 91). Two themes identified showed that students appeared to be motivated by internal motivation and external motivation factors. Personal desire, and a calling to serve, were the significant internal motivating factors, while nature of the education system and the need to upgrade were prominent external motivating factor.

**Conclusion:** Multiple factors that are both extrinsic and intrinsic influence the choice for medical education among health professions student at this African institution.

**Keywords:** health profession education, motivation, medical education, medical students, Uganda

## Introduction

Motivation drives behaviour and effort towards success and correlates with academic performance.<sup>1</sup> It has been cited as a malleable factor, having a strong impact on education outcomes and career choices.<sup>2</sup> Student motivation for joining any career path can stem from internal or external factors or a combination of both.<sup>3</sup> Some students are intrinsically motivated or derive motivation from interest in the course, thus joining the health profession for pure pleasure and desire. This motivation is self-determined and requires no reinforcements or rewards to be maintained.<sup>4</sup> On the other hand, some career path motivation is extrinsic.

Intrinsic & extrinsic influences have been cited as the major motivators for joining the medical profession.<sup>5</sup> Some students join a profession for rewards or

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some external outcome such as wealth, fame, popularity, as well as self-image among other factors and tangible rewards; others join for internal satisfaction.<sup>4</sup> Students who are only extrinsically motivated show less interest, value, and effort while they may also attribute their academic failures to their teachers and others.<sup>4</sup> Motivation can be an independent or dependent variable in medical education while the learning environment including study behavior, academic performance, dependently play an important role in enhancing motivation for medical study.<sup>1</sup>

Four major dimensions underlying the interests and motivation for a career in medicine have been identified: helping others, being respected, being indispensable, and being a scientist,<sup>6</sup> however this is not always the case. In Uganda, students are admitted to health professions programs on merit just like other medical schools worldwide. Admission to medical school requires the candidate to have attained the pre-requisite minimum score on the Advanced level (A-level) national examinations leading to the award of the Uganda Advanced Certificate of Education or UACE, administered by the Uganda National Examinations Board (UNEB). Other students end up in a health professional program due to the expectations of the education system in Uganda that sometimes makes students follow the choice of the majority purely based on their scores and irrespective of their career path preference. A minimum of two principal passes in relevant subjects attained in one sitting is required for admission as long as a student scores above a certain minimum cut-off set by the respective universities. Moderate to excellent scores in biology, chemistry and either physics or mathematics are requirements for entry into Ugandan medical schools; without pre-entry interviews. Not much is known about motivation of health profession students in Uganda (and indeed in Africa), yet reasons for choosing health profession may influence/underpin later professional conduct. This particular study presents a unique opportunity of exploring various views of health profession students enrolled for different courses unlike previous studies that have mainly focused on students enrolled to become medical doctors only.

The data we present here came from a wider study exploring matriculating health professions students' initial perceptions and experiences of professionalism. In this study, we aimed to explore what contributed to students' choice for being on a health profession program of study.

## Methods

### Study Design

This was a cross-sectional qualitative study.

### Study Setting

The study was conducted at Makerere University College of Health Sciences (MakCHS), a constituent of Makerere University. MakCHS is located at Mulago Hill, 5km North of Kampala city center, Uganda's largest capital. MakCHS comprises four schools (school of medicine, school of public health, school of health sciences and school of biomedical sciences), which offer both undergraduate and postgraduate programs. Undergraduate programs range from 3 to 5 years.

### Study Population

All first-year undergraduate students admitted for undergraduate health profession programs in the academic year 2010/2011 at MakCHS formed the study population. The programs included: bachelor of medicine and surgery (MBChB), bachelor of nursing (BNur), bachelor of pharmacy (BPharm), bachelor of medical radiology (BMR), and bachelor dental surgery (BDS). A total of 201 students were registered entrants on these programs in the 2010/2011 academic year.

The demographic variables comprised age, sex and academic program. Motivation was assessed using an open-ended question; why did you decide to join the program of study that you are taking? This among others was the question of interest in the qualitative questionnaires that was used to gather information.

### Data Collection

The questionnaire was self-administered by the students. Data were collected during the second week of the first semester of the academic year 2010/2011 before extended exposure to the curriculum and to the MakCHS environment. The purpose and procedures of the study were explained to the students during a joint session before data collection. Questionnaires were distributed to students through their tutorial group leaders on the data collection day. A tutorial is a problem-based learning session used as part of training at MakCHS where students are presented with clinical or biomedical scenarios to discuss. Additionally, tutors for the respective student groups received a letter that explained the purpose and procedures of the study. Tutors were requested to explain the study to

students at the end of the tutorial and to ask students to voluntarily complete the questionnaires without any detriment to their studies should they not fill in the questionnaires. The students then filled in the questionnaires at the end of a study session. Completed questionnaires were then collected by the student tutorial group leader who in turn returned them to the Education Support Office at MakCHS.

## Data Analysis

A database was developed in Microsoft Access into which complete data was entered. Quantitative data was presented as median (Interquartile range-IQR) and frequencies.

The study team (NN, RB & MG) used content analysis with emergent coding to analyze the data. This was done together through analysis of the responses to the open-ended questions line by line. Once census was reached, the codes were further discussed to generate emerging themes.

## Ethical Considerations

The study was approved by the MakCHS School of Medicine Research and Ethics Committee and the Uganda National Council of Science and Technology. All participants provided informed consent before being enrolled into the study for participation and the publication of anonymized responses.

## Results

### Characteristics of the Respondents

A total of 145 (response rate: 72.1%) first-year students completed and returned the questionnaires. The median age of the participants was 20 years (interquartile range: 19 to 20). The majority were males (75.2%, n = 109) and were pursuing MBChB, the largest program at MakCHS. A summary of the demographic details of the year 1 participants at MakCHS is shown in Table 1.

### Reasons for Joining a Health Professional Undergraduate Program

Two themes were identified from their responses: internal motivation and external factors.

#### Internal Motivating Factors

- (a) Personal desire: Prominent among the internal motivational factors was the personal desire for the health profession. Key words used to describe

**Table 1** Demographic Characteristics of Year 1 Health Professions Education Students at Makerere University

Demographics (N=145)	Frequency	%
<b>Sex</b>		
Male	109	75.2
Female	36	24.8
<b>Academic program (n=139)</b>		
Bachelor of medicine and surgery.	91	65.5
Bachelor of dental surgery.	6	4.3
Bachelor of science in nursing	13	9.4
Bachelor of pharmacy	22	15.8
Bachelor of medical radiography	7	5.0

this personal desire were “dream” and “passion” as the following typical quotations illustrate:

First and foremost, it was always my dream to become a doctor or health professional, therefore it was a dream come true. (MBChB student).

I have always had a passion for medicine from childhood. (BNur student).

It had always been my dream to become a doctor and after getting the admission, I never looked back. (MBChB student).

As illustrated in the quotations above, for some students the personal desire or dream was for the health profession in and of itself, while for others it was for the science and the possibility of a career in research, as shown below:

It was the most appropriate for me having been very interested in the biological sciences. (BPharm student).

[I joined the program] To help with the treatment of people in [by] research[ing] for new drugs. (BPharm student).

- (a) A vocation to serve or help others: A large number of students believed that serving in the health profession was a calling for instance, one student said he/she could better serve the community through the health profession. The quotations below illustrate other aspects of the calling to serve:

[Pursuing a health profession program gives me] A feeling of Godly calling to service. (MBChB student).

I joined the program [me] because in my home village medical services are still poor with limited staff and

equipment so I thought it would be important to join this program [me] and give back to the community. (BNur student).

I decided to join it because of the desire to improve on the health system in the country and to provide care and promote health in the country. (MBChB student).

### External Motivating Factors

On the other hand, some students joined a health professional program as a result of external factors such as direct dictation by parents and other sponsors. Students who score very highly in their UACE and meet the cut-offs for government sponsorship are admitted and offered a full government bursary for the entire course, while some are admitted on private sponsorship.

- (a) In addition, some students said that they joined only because they were given the course.

I decided to join the program of study that I am taking because I was requested by my parents to do so. (MBChB student).

The program of study that am taking was offered to me on Government sponsorship, so I had no option but to accept. (BMR student).

The respect from the public, the professionalism that is exercised in the field. (MBChB student).

It is where I was admitted. (BNur student).

- (a) Need to upgrade: About 10% of the matriculating undergraduate students already have a diploma in a health professional field such as nursing. Some of these students said they were motivated to do a health professional program because they wanted to upgrade from the diploma to a degree. The following quote is typical of these students:

I have already been a nurse at diploma level, so I want to develop my career in [the] nursing field. (BNur Student).

- (a) Need for better paying jobs: Another internal motivating factor was the need for money and personal benefits:

Because it seemed primarily as the only program of study that would guarantee me a job and consequently remuneration as immediate as after graduation. (MBChB student).

For a better pay or remuneration thereafter, so that I can ably support myself and family financially. (BDS student).

## Discussion

This study is the first to provide insights into choice for medical education in Uganda among health professions students. The setting presents a uniqueness for studying medical education with limited resource both for human and infrastructure. In addition, there is usually uncertainty of employment even after completion of studies despite the hardships the students endure. Intrinsic and extrinsic forces motivate students to join medical professions learning and persist in the training based on the self-determination theory.<sup>3,4</sup> The theory presents a good argument for motivation postulating that people are able to grow and change when their need for competence, connection and autonomy are fulfilled. In this study, we were focusing on choice for medical profession education in order to determine what makes these students decide to become health professionals. The hope is that for whatever reasons they make this choice it should be able to sustain them in training and also make them good practitioners even after they graduate. Studies in medical education have found evidence to favor the notion that intrinsic and extrinsic factors motivate scholars in joining medical school either independently or in combination.<sup>5,7,8</sup> Some studies have also found intrinsic factors such as interest toward medical study, the scientific content of the health professions and altruistic motives to drive students towards medical school.<sup>1,3</sup> Just like in other studies, extrinsic goals like income, parental pressure, and prestige have also been seen to motivate students to join medical school.<sup>8</sup>

Our study reveals a blend of both intrinsic and extrinsic factors as shown in the results. It is noteworthy that students have long-term dreams about the profession long before they are admitted to their respective programs. Some students think in a realistic way of our economic context in which unemployment is high and remuneration in some fields is poor. Motivation for a career in medicine such as helping others, being respected, being indispensable, and being a scientist, have also been identified as motivators for joining medical school, however these factors vary per country depending on the level of income.<sup>6,8</sup>

Some of our students felt the medical profession was a “calling”. This fits in with scientific evidence about the perception of having a “calling” about one’s profession.<sup>9-</sup>

<sup>11</sup> Most definitions of the term “calling” describe an approach to work that provides a sense of meaning and purpose for individuals and also serves society or a higher power. Our students’ use of the term “calling” appears to fit in with the above interpretation and is in agreement with how other college students use it.<sup>10,11</sup> Having a sense of calling is important in the long term, especially if the student who feels called also develops the personal desire/passion for their profession. This personal desire leads to intense feelings of self-exploration and might be beneficial because they correspond with identity achievement and promote confidence and engagement.<sup>9,12</sup>

Some of the students felt they had no choice but to join medical school since they had been admitted on government bursaries. For such students, the drive and intrinsic motivation is lacking and can impede performance and interest in the medical profession. Those who have a prior qualification have a better feel of what the profession involves. They may also have been exposed to the concepts of professionalism; this can be leveraged. However, they may have practiced in an environment where unprofessional conduct is condoned or tolerated, and they may bring with them already-entrenched negative perceptions and values.<sup>1,13,14</sup>

Achievement, recognition, and responsibility, where also key factors identified by the students as reasons for joining health professions. This supports Herzberg’s study, who posited that individuals who are motivated to join a profession by a need for achievement, recognition and responsibility were more likely to be satisfied with the profession and also stay in the profession much longer.<sup>15</sup> This perception is key for students who are joining medical professions because it predicts better academic and on job performance in later years.<sup>16</sup> Further, this motivation increases the likelihood of students seeking employment even in rural areas upon graduation,<sup>17–19</sup> something that is lacking in our country, where rural health centers are understaffed.

This study was not without limitations. We desired to collect views from all students in the various disciplines enrolled but had a 72.1% response rate. In surveys, a rate greater than 50% is considered adequate. We therefore believe the views collected are generalizable to the student group. In addition, majority of those who responded were from the MBChB program and as this may have skewed the findings. However, the figure was proportionate to the numbers of students enrolling to Makerere University.

The method of using qualitative questionnaire may not have allowed for room to further expand on the topics as would happen in a key informant interview or focus group discussion. The use of this kind of questionnaires stems from an ethnological research tradition, it generates a unique material potentially valuable for a wide range of scholarly disciplines.<sup>20</sup> We, however, had many respondents and hence were able to capture multiple views.

We also note that as a limitation our methodology was not more detailed as is the usual for most qualitative studies; however, we wanted to collect as many views of this mixed group of individuals pursuing multiple courses in the field of health professions education.

## Conclusion

Multiple factors that are both extrinsic and intrinsic influence the choice for medical education among health professions student at this African institution.

## Acknowledgment

The authors acknowledge Ronald Olum and Solomon Aleper, both students at the College of Health Sciences at Makerere University for their support during the preparation of the manuscript.

## Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

## Funding

The study did not receive any specific funding from an individual or organization and was solely funded by the authors.

## Disclosure

The authors declare no conflicts of interest in this work.

## References

1. Kusurkar RA, Ten Cate TJ, van Asperen M, Croiset G. Motivation as an independent and a dependent variable in medical education: a review of the literature. *Med Teach*. 2011;33(5):e242–e262. doi:10.3109/0142159X.2011.558539

2. Arana R, Castañeda-Sound C, Blanchard S, Aguilar TE. Indicators of persistence for Hispanic undergraduate achievement: toward an ecological model. *J Hispanic High Educ.* 2011;10(3):237–251. doi:10.1177/1538192711405058
3. Vansteenkiste M, Lens W, Deci EL. Intrinsic versus extrinsic goal contents in self-determination theory: another look at the quality of academic motivation. *Educ Psychol.* 2006;41(1):19–31. doi:10.1207/s15326985ep4101\_4
4. Ryan RM, Deci EL. Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *Am Psychol.* 2000;55(1):68–78. doi:10.1037/0003-066X.55.1.68
5. McHarg J, Mattick K, Knight LV. Why people apply to medical school: implications for widening participation activities. *Med Educ.* 2007;41(8):815–821. doi:10.1111/j.1365-2923.2007.02798.x
6. McManus I, Livingston G, Katona C. The attractions of medicine: the generic motivations of medical school applicants in relation to demography, personality and achievement. *BMC Med Educ.* 2006;6(1):11. doi:10.1186/1472-6920-6-11
7. Hulsman RL, van der Ende JSJ, Oort FJ, Michels RPJ, Casteelen G, Griffioen FMM. Effectiveness of selection in medical school admissions: evaluation of the outcomes among freshmen. *Med Educ.* 2007;41(4):369–377. doi:10.1111/j.1365-2929.2007.02708.x
8. Goel S, Angeli F, Dhirar N, Singla N, Ruwaard D. What motivates medical students to select medical studies: a systematic literature review. *BMC Med Educ.* 2018;18(1):16. doi:10.1186/s12909-018-1123-4
9. Borges NJ, Manuel RS, Duffy RD. Speciality interests and career calling to medicine among first-year medical students. *Perspect Med Educ.* 2013;2(1):14–17. doi:10.1007/s40037-012-0037-9
10. Duffy RD, Manuel RS, Borges NJ, Bott EM. Calling, vocational development, and well being: a longitudinal study of medical students. *J Vocat Behav.* 2011;79(2):361–366. doi:10.1016/j.jvb.2011.03.023
11. Hunter I, Dik BJ, Banning JH. College students' perceptions of calling in work and life: a qualitative analysis. *J Vocat Behav.* 2010;76(2):178–186. doi:10.1016/j.jvb.2009.10.008
12. Goodin JB, Duffy RD, Borges NJ, Ulman CA, D'Brot VM, Manuel RS. Medical students with low self-efficacy bolstered by calling to medical speciality. *Perspect Med Educ.* 2014;3(2):89–100. doi:10.1007/s40037-014-0110-7
13. Aelterman N, Vansteenkiste M, Van Keer H, Haerens L. Changing teachers' beliefs regarding autonomy support and structure: the role of experienced psychological need satisfaction in teacher training. *Psychol Sport Exerc.* 2016;23:64–72. doi:10.1016/j.psychsport.2015.10.007
14. Kusrkar RA, Croiset G. Autonomy support for autonomous motivation in medical education. *Med Educ Online.* 2015;20(1):27951. doi:10.3402/meo.v20.27951
15. Herzberg F, Mausner B, Snyderman BB. *The Motivation to Work.* 3rd ed. New Brunswick, NJ: Transaction Publishers; 1959.
16. Visser CLF, Ket JCF, Croiset G, Kusrkar RA. Perceptions of residents, medical and nursing students about Interprofessional education: a systematic review of the quantitative and qualitative literature. *BMC Med Educ.* 2017;17(1):77. doi:10.1186/s12909-017-0909-0
17. Huntington I, Shrestha S, Reich NG, Hagopian A. Career intentions of medical students in the setting of Nepal's rapidly expanding private medical education system. *Health Policy Plan.* 2012;27(5):417–428. doi:10.1093/heapol/czr052
18. Dolea C. *Increasing access to health workers in remote and rural areas through improved retention.* World Health Organization; 2009:2–4.
19. Srinivasan CS, Zanello G, Shankar B. Rural-urban disparities in child nutrition in Bangladesh and Nepal. *BMC Public Health.* 2013;13(1):581. doi:10.1186/1471-2458-13-581
20. Eckerdall JR, Hagström C. Qualitative questionnaires as a method for information studies research. Proceedings of the Ninth International Conference on Conceptions of Library and Information Science, Uppsala, Sweden, June 27–29, 2016. IR Information Research vol. 22 no. 1; March, 2017.

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