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## Factors influencing the selection of Bachelor of Veterinary Medicine as a preferred programme of study among the University of Zambia veterinary students, Zambia



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DOI 10.53974/unza.jabs.8.2.1314

### ABSTRACT

Career selection is a crucial and critical stage in one's life, and it demands consideration of many factors. In the past, making career choices was not difficult and dependent on family background, which could have led to job dissatisfaction. Making a career choice in veterinary medicine was more challenging because veterinary medicine was considered a masculine job and thus discriminated against women. However, veterinary medicine now offers multifaceted career prospects that cut across gender and race. This study was aimed at identifying factors that influenced enrolled veterinary students at the University of Zambia students in selecting the Bachelor of Veterinary Medicine (BVM) as the preferred programme of study, and to assess the challenges faced by the students. This cross-sectional study was conducted among veterinary students from 2nd to 6th (final) year regardless of age or gender. A total of 145 students were enrolled, and a semi-structured questionnaire was administered to each participant to collect demographic, socioeconomic, and environmental factors hypothesized to influence the Bachelor of Veterinary Medicine selection as the programme of choice. Data was summarised into proportions and presented in percentages. A total of 135 participants completed the questionnaire in full, with 51% of respondents being females. Several factors

were observed to have influenced career choice. However, the majority (46%; 62/135) of students indicated they were interested in the programme and loved working with animals. It was further noted that parents and friends were the main sources of information regarding the BVM programme. Too much workload was the major challenge the students indicated. The study findings indicate that the University of Zambia needs to devise ways to communicate to prospective students to ensure that they have complete and current information on programmes on offer to avoid misinformation, which is likely among peers and if coming from uniformed third parties. The findings also agree with the literature indicating work overload as one of the challenges veterinary students face in their pursuit of the degree.

**KEYWORDS:** *Bachelor of Veterinary Medicine, Students, Challenges, University of Zambia*

### INTRODUCTION

Choosing a career demands that one takes into consideration many factors that are at play. In the past, at the time of human civilization, choosing a career was not difficult as career choice was determined based on family background; for example, a cobbler's son became a cobbler and a feudal son a leader [1]. However, in the last five

decades, due to industrialization and diversification, people are free to make their own

career choices and pursue careers of their interest. This has been accelerated by the advancement of technology and the use of various digital platforms in the dissemination of information on job prospects and opportunities. This information is available to people of various age groups even before they enrol for higher education.

In the past  $\geq 4$  decades, Veterinary Medicine was considered to be a masculine job, and thus, it discriminated against women from being a part of it. In addition, there was limited information about the career itself, such that society perceived it to be a profession that deals with animals, particularly food animals. It was also a career that was only restricted to a certain race, particularly, “whites” with very few people of colour [2]. However, the veterinary profession offers multifaceted and ambitious careers that cut across gender and race and require highly flexible and resilient professionals [3]. However, even with this diversity, it is important that career selection be considered as a crucial step to ensure that people pursue courses or careers that interest them to prevent quitting along the way due to lack of knowledge at the beginning or lack of job satisfaction. It is known that job satisfaction normally leads to development of pride over it, self-awareness, and the development of good knowledge of the work that individuals are doing and becoming a master of it. Thus, it is expected that excellent work performance would be attained [4].

Many reasons and factors have been advanced to be responsible for students' selection of careers or programme of study. Some factors include individual skills, the environment in which a child is brought up (influence of parents), talents, and academic achievements [4-8]. In addition, salary attached to a job, personality, and influence from teachers and career counselors [9-11], as well as having some contact with animals either at their homes or in the community or being an acquaintance with a practicing veterinarian [2] have a significant influence in career choice by students. The School of Veterinary Medicine at the University of Zambia, which was established in 1983, initially had a very minimal number of students enrolling for the Bachelor of Veterinary Medicine (BVM). However, there

has recently been an increase in the number of students enrolling to pursue the BVM programme. The number of female students has also exponentially increased over time with some classes outnumbering the males, which was not previously the case. However, it is unclear what influences the choice to select the BVM programme. Therefore, this study aimed to assess the factors that influenced veterinary students' selection of the BVM programme as the preferred programme of choice at the University of Zambia.

## **MATERIALS AND METHODS**

### **Study design and site**

This cross-sectional survey was conducted among veterinary students enrolled at the School of Veterinary Medicine, University of Zambia. The survey targeted enrolled 2nd to 6th (final) year students regardless of age and gender. The BVM is a 6-year programme. Previously, students were first enrolled in the School of Natural and Applied Sciences, where they took basic sciences, after which they would compete using a point system for placement in various schools, including the Schools of Veterinary Medicine, Agricultural Sciences, and Engineering, to name a few. However, a policy change now requires students to enrol directly in the school. This study did not include the affected cohort (year one only) of students. The University of Zambia is a premier University in Zambia, established in 1966. It is located centrally in Lusaka, the capital city of Zambia, and it receives students from all parts of the country and region. It currently has 13 schools (located at two campuses, the Great East Road and Ridgeway campuses,) three directorates, and three institutes. The School of Veterinary Medicine is located at the Great East Road campus [12].

### **Sample size determination and sampling**

A sample size of 145 was determined as previously described [13]. A census was conducted, using class lists for each year of study as sampling frames. A semi-structured questionnaire was administered to each study participant to collect demographic, socioeconomic, and environmental factors that were hypothesized to have influenced their selection of BVM as the programme of choice. Only students enrolled in the BVM programme from the 2nd to 6th year of study were included in the study.

### **Data analysis**

The collected data was entered into an Excel

spreadsheet and analyzed using Microsoft Excel. Summaries were generated and presented as proportions and absolute numbers. Despite the generation of quantitative summaries, the participant responses were analysed qualitatively due to one response to the outcome variable, that is, being a veterinary student.

### Ethical considerations

The University of Zambia, School of Health Sciences Research Ethics Committee approved the study (Ref: 202301270002). Permission to conduct the study was also sought from the Dean of the School. Further, informed consent was obtained from all the participants included in the study. To ensure confidentiality, codes were used to identify the participants, and access to information was restricted to the Principal Investigator and supervisor.

## RESULTS

### Participants' demographic characteristics

A total of 135 participants from 2nd to the final of the study completed the questionnaires; 51% (69/135) of these were females. The average age for the respondents was 25 years, with an age range of 19 to 51 years. The majority fell within 23-27 years (table 1). Three respondents did not indicate their age. The distribution of the respondents according to year of study is indicated in Table 1.

Most students came from homes where parents had attained tertiary education (54.4%). A total of 32.9% had secondary education, while 7.4% and 1.9% had primary or no formal education. The study participants originated from all 10 provinces of Zambia, including Lusaka, which hosts the University, Southern, Western, Eastern, Northern, North-Western, Central, Luapula, Muchinga, and Copperbelt provinces. Almost half (46.7%) originated from within Lusaka province, which was followed by Southern province (20.7%) (figure 1). Luapula, North-Western, and Muchinga provinces accounted for the least number of participants (1.5% each).

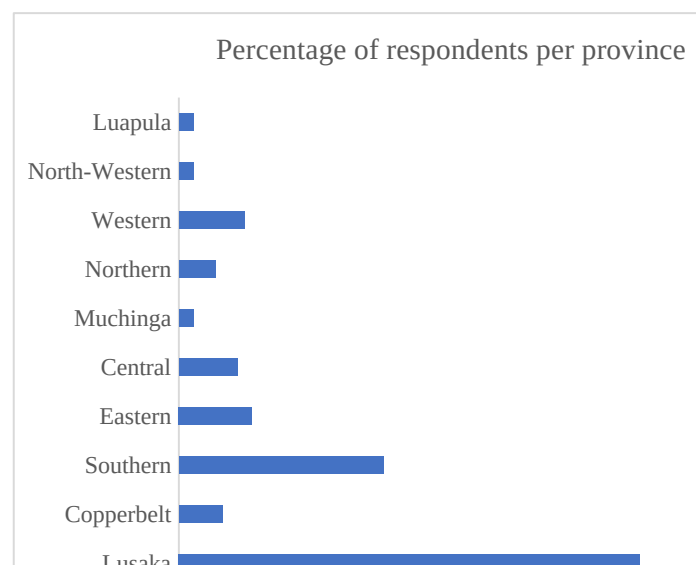


Figure 1: Distribution of respondents according to province of origin

### Sources of information for university programmes

Information about the various programmes offered at the University of Zambia can be obtained through various platforms. This study clearly shows that the participants heard about the Bachelor of Veterinary Medicine from diverse sources (table 2). Parents/guardians and friends constituted the highest source of information and influenced most of the participants' decisions to select BVM as the programme of choice. A combination of high school teachers and friends were also an important source as they accounted for a significant number of responses from the participants (table 2). When asked about who helped the participants with the final decision concerning the programme to pursue, more than 50% of them (combined) indicated parents (26.7%; 36/135) and themselves (42.2%; 57/135) as being responsible for the final decision to pursue the BVM programme. Figure 2 below indicates the various responses from the respondents concerning the final decision.

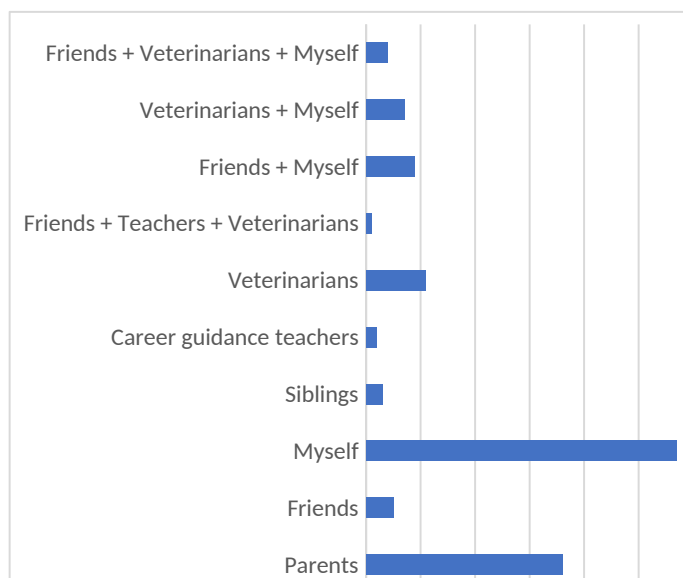


Figure 2: Responses against number of participants regarding groups of people that guided their decision to study veterinary medicine (n=135).

### Factors influencing the selection of BVM as a preferred programme of study

Attending either a government/public or private school was used to indicate social economic status. It was noted that more than 50% of the respondents attended government schools with only 32.6% attending private schools.

The participants provided many reasons for selecting the BVM as a programme of choice (Table 2). It was noted that the participants decided to enroll in the BVM at various stages of their education. The majority (48.1%) only decided to do so as freshmen in the University while enrolled in the School of Natural and Applied Sciences, while 32.6% and 5.1% made the decision while in high school and primary school, respectively. As some students (5.1%) enrolled for University education at mature entry level, they made the decision to enrol for the BVM programme because they were employees in the livestock sector and wanted formal education regarding livestock health (table 2). It was further observed that almost half (46%) of the students were genuinely interested in the programme while others selected it because they believed that it was a high paying job. A total of 58 participants (43.0%) indicated that they loved being around and/or working with animals. However, some participants indicated not

meeting the minimum requirements for their first choice of study as one of the reasons.

The participants were further asked if the BVM programme was their first choice of study. Less than half (24/57) of those who had individually made the decision to pursue the programme indicated that it was their first programme of choice while 57.9% (33/57) reported that the BVM was not their preferred programme of study despite finding themselves enrolled in it. It was interesting to note that the five students that selected the BVM programme as the preferred choice further indicated that they wished they could change it, compared to only three who did not select it as their first choice and wished to change. Further, one student who was influenced to select the programme by parents and a practising veterinarian wished to change the programme.

Working or living with animals or having an association with animals can influence an individual to desire to work with animals because of the bond that develops between them and animals, particularly pets. From this study, majority (79.3%) of students had interacted with animals before making the decision to enrol for the programme. However, the results indicated that all the students had interacted with animals either directly or indirectly. This was observed in the multiple responses that the students gave (figure 3).

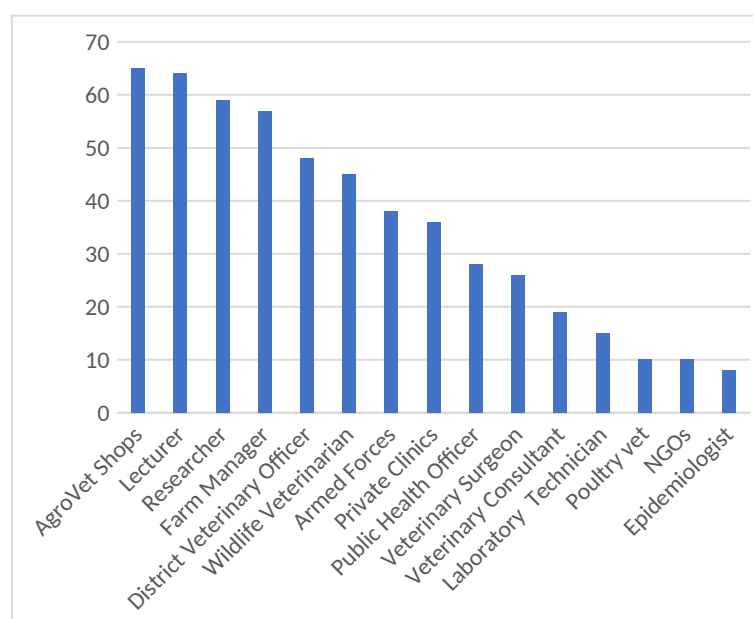


Figure 3: Participants interaction with animals before enrolling for the BVM programme

### Participant knowledge on potential employers or job prospects



It was noted that the students were aware about the employment opportunities available following graduation with the BVM. Figure 4 below indicates the employment prospects and prospective employers that the students were aware of. On top of the list was an academic position (lecturer) and working in an agro-veterinary shop.

### **Challenges faced by veterinary students after enrolment.**

The Bachelor of Veterinary Medicine programme is known to be 'heavy' or 'bulky' in terms of content and the study participants indicated this. From the multiple selection of the responses, the students indicated work overload as one of the major challenges they faced. Other challenges were a "full" timetable taking all the hours of the day (except lunch hour), less practical work, too many assessment components and challenges with finances to pay tuition fees (figure 5). The students also indicated that they had very minimal interaction with the corporate world. Interestingly, lack of employment was not on the list of challenges the participants indicated.

## **DISCUSSION**

Over the years, job diversity has given people an opportunity to freely make their own career choices and pursue careers of their interest. This has been accelerated by the advancement of technology and the use of various digital platforms in the dissemination of information on job prospects and opportunities. However, in the midst of all these opportunities, the correct career choice is very important to ensure job satisfaction. It has been shown that job satisfaction can lead to mastering of the job and excellent work performance [4]. Thus, career decisions must be made wisely, and students' interest is significant in determining career choice decisions [14]. Therefore, this study aimed to assess the factors that influenced veterinary students in selecting the BVM programme as the preferred programme of choice at the University of Zambia.

Over 50% of the respondents were female, indicating a shift in the career dynamics in veterinary medicine. The discipline was previously considered reserved for men because of its "masculine nature." The current scenario highlights the

fact that women can now freely select and pursue veterinary medicine without any discrimination or restrictions.

Parents' level of education has been reported to have an impact on the career decisions of children [15]. More than 50% of the respondents' parents had attained tertiary education; these are more likely to encourage or influence their children to choose careers of their choice and pursue their dreams, which they were not able to do themselves. They are also likely to influence their children because the parents believe they "have more experience" as they have seen successful and unsuccessful careers. In the current study, parents (and friends) were at the top of the list of sources of information for programmes offered at the university. Parents have previously been reported to have a significant influence on the career choices of their children [16, 17]. It would be expected that the respondents would have learnt about the programmes from probably their teachers (also known as career masters) or the University itself through advertisements, however, only five students indicated that they learnt about programmes from the University. This means that either the University of Zambia is not providing sufficient information, or the information is not reaching the target population. This challenge appears to be generally common, according to the American Veterinary Association, a student has to go through a lot to find out all the information they need [18]. This means that for students that are starting off as freshmen with limited access to information regarding the programme, they may find it difficult to navigate through the programme once enrolled.

It was interesting to note that despite some students selecting the BVM programme as their preferred programme of study, they wished they could change it. It is not clear why, however, some of the challenges the participants indicated such as work overload and too many assessments could be responsible for the change in decisions made. Academic strain has been identified as one of the most significant challenges of veterinary schools due to the intensity of the academic curriculum [19]. In addition, potential veterinary students lack career guidance while in high school as was observed in this study where teachers had very minimal contribution towards providing information regarding programmes on offer at the University (table 2).

The love for animals is believed to stimulate the desire to study veterinary medicine. A previous study by [20] reported that student's exposure to

animals influenced them to select veterinary medicine as a programme of study. Participants in the current study, were exposed to animals directly or indirectly, however, other reasons were also advanced that participants believed influenced their decisions to pursue the BVM programme. Not being able to meet the minimum requirements for their first choice of study was one of the reasons, however, more that 90% of these were happy with their second selection and did not wish to change. Exposure to programmes on offer while in their first year of study probably ignited interest in the programme highlighting the need for information about programmes on offer and probably the need for academic advisors to guide potential students when they are selecting programmes of interest [20].

This study also highlighted respondents' knowledge of available employment opportunities in the veterinary profession. It was interesting to note that most respondents indicated an academic position and working in an agrovets shop as the common positions for veterinarians. The University of Zambia is currently the only institution offering a BVM programme in Zambia. We therefore speculate that most of the students were not aware of the other job prospects for veterinarians. Career guidance and provision of information to potential and current students is important to assist them make informed decisions and navigate their career paths.

One of the most important challenges of veterinary school is intensity of the academic curriculum and the breadth of knowledge required. Students are expected to juggle lectures, laboratory sessions, clinic rotations and ambulatory clinics. In addition, transitioning from classroom learning to clinical rotations may take time for some students to get accustomed to, adding to their struggle to manage time and balance the demanding workload [17, 21]. It was therefore not surprising that the study participants (>86%) indicated work overload as the biggest challenge they were facing. Other factors were less practical work and less interaction with cooperate world among others. The veterinary programme is structured to provide practical experience at each level of study including farm experience

laboratory, clinical, ambulatory and abattoir/slaughterhouse experience and developing the ability to conduct research through a research project. This transitions them from classroom learning to real-world applications of the knowledge gained as well as enabling them to achieve the day-1-competences as required by the World Organization for Animal Health (WOAH).

## CONCLUSIONS

Making a career choice is a complex process that is influenced by many factors. Family, friends, personal interest, teachers, social media, and sources and availability of information on what is on offer at learning institutions were identified as some of the factors that played a role in the study participants' decisions to enrol for the BVM programme. Providing comprehensive information concerning programmes on offer and job prospects to potential and current students would position the University of Zambia as the preferred institution of learning for the BVM programme and would assist students make informed decisions regarding their career paths.

## ACKNOWLEDGEMENTS

We are grateful to the study participants for making this study possible.

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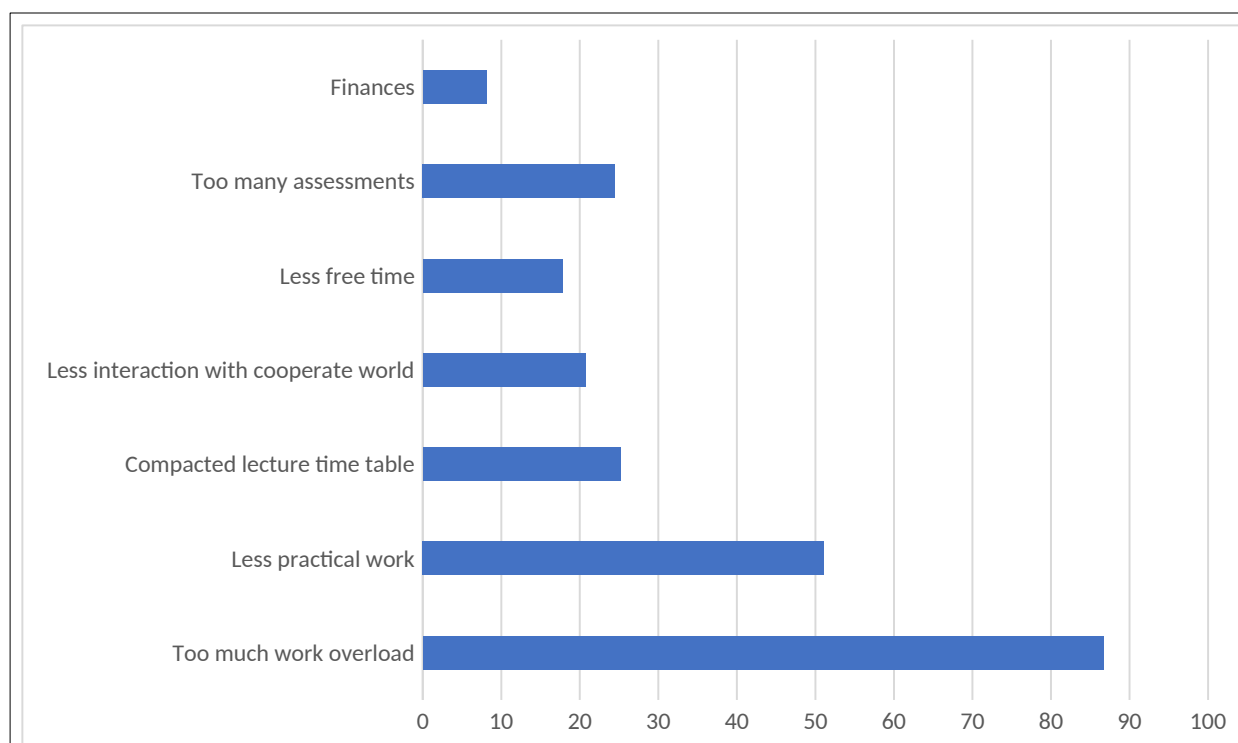
**APPENDICES****Appendix A.Figures****Appendix A.1**

Figure 4: Potential employers and employment opportunities available for veterinary graduates

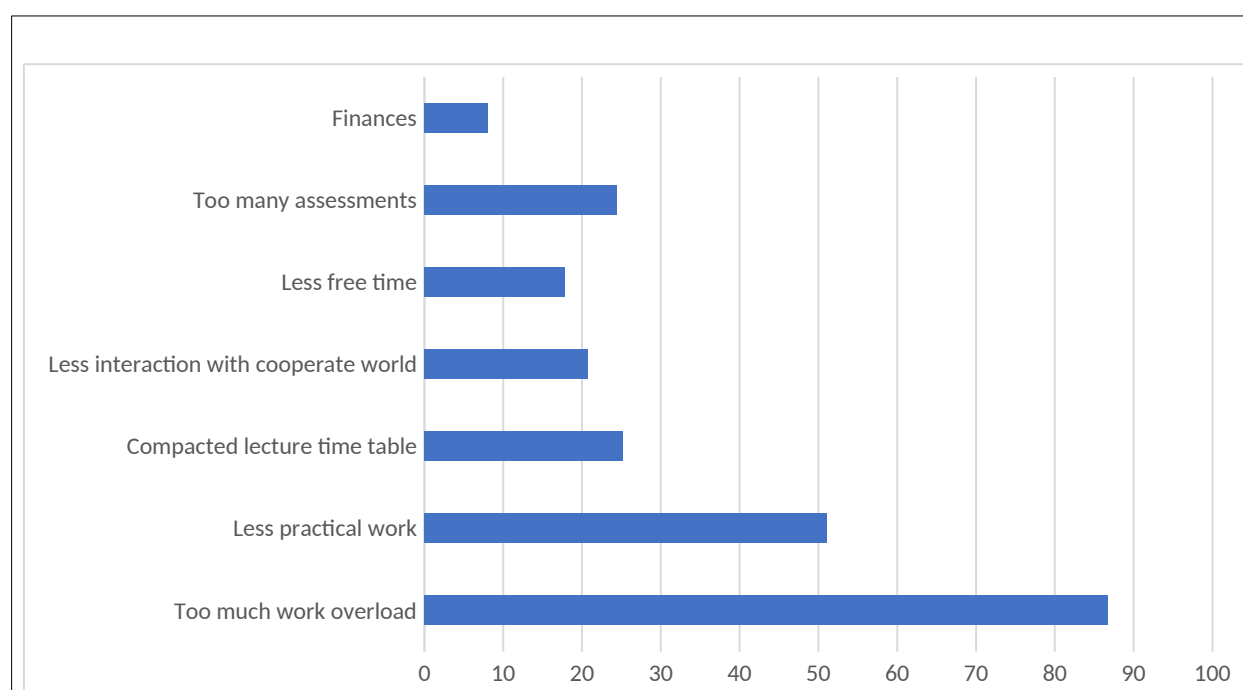
**Appendix A.2**

Figure 5: Challenges faced by students enrolled in the Bachelor of Veterinary Medicine at the University of Zambia



## Appendix B.Tables

### Appendix B.1

*Table 1: Table 1: Participant demographic characteristics (n=135)*

Parameter	No of respondents (%)
Sex	
Male	61 (45.2)
Female	69 (51.1)
Missing information	5 (3.7)
Age range (years)	
18-22	36 (26.7)
23-27	85 (63.0)
28-32	3 (2.2)
>32	8 (5.9)
Year of study	
2 <sup>nd</sup>	29 (21.5)
3 <sup>rd</sup>	16 (11.9)
4 <sup>th</sup>	21 (15.6)
5 <sup>th</sup>	35 (25.9)
Final	34 (25.2)

**Appendix B.2***Table 2: Sources of information for BVM programme and reasons for enrolling (n=135)*

<b>Parameter</b>	<b>Number of students (%)</b>
Source of information for the BVM before enrolling	
Parents/guardians	28 (20.7)
Friends	28 (20.7)
Social media	13 (9.6)
University lecturers	3 (2.2)
Teachers	11 (8.1)
Veterinarians	7 (5.2)
The University	5 (3.7)
Television	1 (0.7)
Social media & teachers	2 (1.5)
Friends & lecturers	3 (2.2)
Friends & social media & lecturers	1 (0.7)
Friends & social media	3 (2.2)
Parents and social media	3 (2.2)
Parents and teachers	6 (4.4)
Parents and friends	12 (8.9)
Parents, friends and teacher	1 (0.7)
No response	8 (5.9)
When enrolment into vet school was decided	
High school	44 (32.6)
Freshman	65 (48.1)
Sophomore	13 (9.6)
Work	7 (5.1)
Primary school	7 (5.1)
Gap year	4 (2.9)
Reasons for selecting BVM as your programme of study	
I am personally interested in the programme	62 (46.0)
I love being around and working with animals	58 (43.0)
It is a high paying job	24 (17.8)
I did not qualify for my course of interest	22 (16.3)
My parents advised me to	20 (14.8)