

## DESIRE AND APTITUDE FOR VETERINARY EDUCATION AMONG VETERINARY STUDENTS IN SUDAN

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**Abstract:** This study was conducted to find out whether students who enrolled in veterinary education in Sudan have a desire in this type of education or not. Additionally the study is intended to remind experts in higher education in Sudan as well as veterinary educators to the seriousness of the negligence of desire, aptitude and humane attitude towards animals when admitting students to veterinary education. A survey instrument was used to assess whether undergraduates students of faculties of veterinary medicine of four universities in Sudan; namely Khartoum University, Sudan University of Science and technology, Bahri University and Butana University; have desire in veterinary education or not. The questionnaire is composed of two sections: Section I: focused on personal and general data of the study sample. Section II: contains the statements of the desire scale. The students were asked to rate 8 scenario statements according to the Likert five scale which included five levels: strongly agree, agree, neutral, do not agree, and strongly disagree. This questionnaire was distributed to a total number of 525 students and the number of recovered correctly filled questionnaires was 394 (75% recovery rate). The questionnaires' stability was tested according to the methods of Cronbach's alpha and the stabilities of all statements were above 86% (0.86). The consensuses of all the surveyed students on the statements were calculated according to the methods of Tastle et al. The results of this study confirmed without doubt that the Sudanese veterinary students have a weak desire in veterinary education and the females have a significantly ( $p < 0.05$ ) weaker desire compared to male. In conclusion veterinary students expressed weak desire and aptitude towards the discipline they took as shown by the weak consensus on the desirability statements. Therefore it is recommended that when admitting students to veterinary education the desire, aptitude and the humane attitude towards animals must be taken as additional prerequisites.

**Keywords:** Aptitude, desire, humane attitude, veterinary education.

### 1. Introduction

The problem of veterinary profession in Sudan stems from the entrance requirements and selection system of the university. Although the students choose certain colleges when applying to the universities, students are selected for veterinary medicine based solely on the percentage they achieved in high school certificate (HSC) exams with no prerequisites of interest or aptitude. Desire in any profession is a good motive for the student to complete the college he attends. A person with desire to be a veterinarian in future can make his dreams reality. Certainly if one has above average intelligence, supportive and financially secure environment without desire he cannot achieve his goals (Allen, 1999). Many college students begin their college careers with only the vaguest notion of why they have done so (Tinto, 1987). The educators' conundrum for decades is what motivates students to stay in or drop out of college. Tinto (1996) reports that over half (57%) of all dropouts from four-year institutions leave before the start of their second year and that 40% of all students in America who start at a four year college fail to earn a degree. These studies confirmed without any doubt that the desire in any program is very important for future success in college and profession.

A number of recent studies have suggested that experiences of interactions with animals, especially during childhood, are associated with the development of long-term animal-related preferences and attitudes later in life (Ascione, 1993; Bjerke et al. 2001, Serpell, 2004). Children who like animals in their childhood will

develop more humane attitudes towards animals when become adult (Miura et al. 2002; Paul and Serpell, 1993). Studies have shown that a majority of prospective veterinarians are drawn to the profession by a pre-existing interest in, and affection for, animals (Heath et al. 1996). A survey on first- and fourth year veterinary students found that 96% had previously owned dogs and/or cats a much higher rate of ownership compared to general population (Shurtleff et al. 1983). The affection of animals and positive interactions with companion animals in childhood and adolescence paved the road for many students to choose veterinary medicine as a career. These findings state clearly that the desire in veterinary profession stems from childhood with the positive interactions with animals.

Therefore, the main objective of the current study was to assess whether students who undertook veterinary education in Sudan have desire in such education or not. Furthermore the study is intended to remind experts in higher education in Sudan as well as veterinary educators to the seriousness of the negligence of desire, aptitude and humane attitude towards animals when admitting students to veterinary education.

## 2. Methodology

A survey instrument (questionnaire) was used to assess whether undergraduates' students of faculties of veterinary medicine of four universities in Sudan; namely Khartoum University, Sudan University, Bahri University and Butana University have desire in veterinary education or not. The questionnaire is composed of two sections: Section I: focused on personal and general data of the study sample. Section II: contains the statements of the desire scale. The students were asked to rate 8 scenario statements (Table 1) according to the Likert five scale (Likert 1932) which includes five levels: strongly agree (SA), agree (A), neutral (N), do not agree, (DA) and strongly disagree (SD). This questionnaire was distributed to a total number of 525 students and the number of recovered correctly filled questionnaires is 394 (75% recovery rate). The questionnaires' stability was tested according to the methods of Cronbach's alpha and the stabilities of all statements (Table 1) were above 86% (0.86). The consensuses of all the surveyed subjects on the statements were calculated according to the method of Tastle et al. (2005 a, b and 2007). Levels of significance among group were determined with Chi  $\times 2$ . Probabilities of  $p < 0.05$  were considered statistically significant.

**Table (1) Scenario statements and data reliability (Cronbach's  $\alpha$ )**

Scenario statements	Cronbach's $\alpha$
1. I have desire in veterinary medicine	0.87
2. Influenced by a friend studied veterinary medicine	0.86
3. Influenced by a veterinarian in the family	0.86
4. I applied according to parents desire	0.86
5. The faculty has an attractive program	0.86
6. I like to get a university degree only	0.87
7. I like to get a degree that qualify me to work only	0.87
8. I applied according to my high school exam percentage	0.87

## 3. Demographic characteristics of the surveyed students

Table (2) shows the detailed traits of students surveyed. The number of veterinary students who participated in this study was 394. The number of students surveyed from faculty of veterinary medicine, University of Khartoum was 158 (40.1%); those from faculty of veterinary medicine, University of Sudan were 65(16.5%); those from the faculty of Veterinary Medicine University of Bahri were 98(24.9%) and those from faculty of veterinary medicine university of Butana were 73 (18.5%). The number of male students' survey in all faculties was 186 (47.2%) and that of female students was 208 (52.8%). Students whose age at time of admission is in the age group of 16-17 years were 50 (12.9%), those of 18-19 years of age were 227 (58.5%) and those of 20 years and above were 111 (28.6%). Those surveyed from the 1<sup>st</sup> level were 90 (22.8%), 2<sup>nd</sup> level 58 (14.7%), 3<sup>rd</sup> level, 92 (23.4%), 4<sup>th</sup> level 66 (16.8%) and those of the 5<sup>th</sup> level were 88 (22.3%).

**Table (2). Demographic characteristics of the surveyed students.**

	Faculty of veterinary medicine attended				
	Khartoum	Sudan	Bahri	Butana	Total
1. Students' number	158 (40.1%)	65 (16.5%)	98 (24.9%)	73 (18.5%)	394 (100%)
2. Gender					
Male	045 (24.2%)	28 (15.1%)	40 (21.5%)	73 (39.2%)	186 (47.2%)
Female	113 (54.3%)	37 (17.8%)	58 (27.9%)	00(0.00%)	2008 (52.8%)
2. Age groups					
16-17	22 (44.0%)	11 (22.0%)	11 (22.0%)	06 (12.0%)	050 (12.9%)
18-19	103 (45.4%)	44 (19.4%)	54 (23.8%)	26 (11.5%)	227 (58.5%)
20-and above	27 (24.3%)	10 (9.0%)	33 (29.7%)	41 (36.9%)	111 (28.6%)
3. Levels					
1st	30 (33.3%)	16 (17.8%)	35 (38.9%)	09 (10.0%)	90 (22.8%)
2 nd	17 (29.3%)	13 (22.4%)	13 (22.4%)	15 (25.9%)	58 (14.7%)
3 rd	39 (42.4%)	11 (12.0%)	12 (13.0%)	30 (32.6%)	92 (23.4%)
4 th	20 (30.3%)	09 (13.6%)	20 (30.3%)	17 (25.8%)	66 (16.8%)
5 th	52(59.1%)	09 (13.6%)	18 (20.5%)	02 (2.30%)	88 (22.3%)

#### 4. Results

##### 4. 1. Have desire in veterinary medicine

The overall consensus (CONS) of the veterinary undergraduate students of the aforementioned faculties on desire in veterinary education is 0.353 with strength consensus (sCONS) of about 60%. As in table (3) the overall number of students who strongly agree to this statement is 123 (31.2%), those who agree 81 (20.6%), neutrals 54 (6.9%), those who disagreed are 62 (15.7%) and those who strongly disagree are 74 (18.8%). Furthermore the disire significantly ( $p<0.05$ ) varies with gender (Fig. 1). The desire among males is heihger than females.

**Table (3). Tally of attitude of the surveyed students towards veterinary medicine (I have desire in veterinary medicine)**

Linker's Attributes	SA	A	N	D	SD	Total	CONS	sCONS
Faculty of Veterinary Medicine University of Khartoum	31	43	29	25	30	158	0.428	58%
Faculty of Veterinary Medicine University of Sudan	17	11	7	13	17	65	0.325	52%
Faculty of Veterinary Medicine Bahri university	34	13	12	17	22	98	0.294	58%
Faculty of Veterinary Medicine Butana university	41	14	6	7	5	73	0.493	79%
Overall	123	81	54	62	74	394	0.353	60%

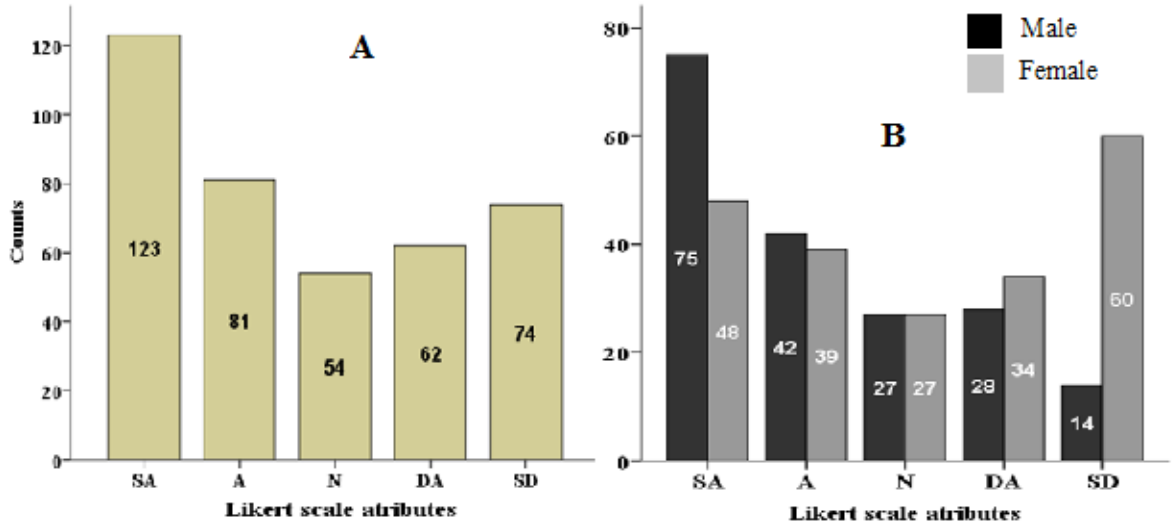


Fig. (1) Tally distribution for students' desire for veterinary medicine. A: overall desire, B: effect of gender on desire.

#### 4. 2. Influenced by a friend who studied veterinary medicine

A significantly high ( $p < 0.001$ ) number of the students surveyed disagreed to this statement. As in fig. (2) the overall number of students who strongly agree to this statement is 56 (14.4%), those who agree 53 (13.6%), neutral 27 (6.9%) and those who disagreed 74 (19%) and those who strongly disagree are 180 (46.2%). Consequently the overall CONS and sCONS are low (0.359; 36%; respectively).

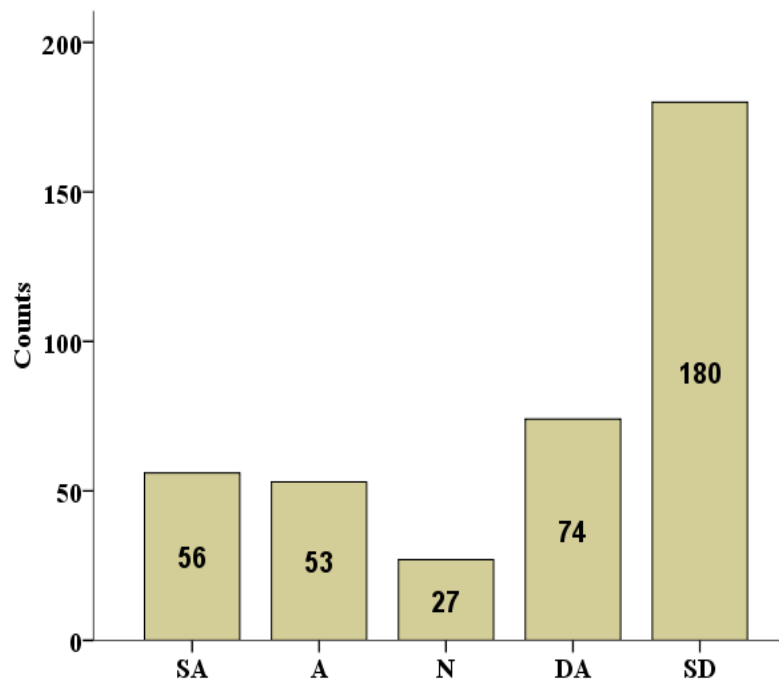


Fig. (2) Frequency distribution of students' answers for the statement "Influence by a friend who studied veterinary medicine".

**4. 3. Influenced by a veterinarian in the family**

A crucially high ( $p < 0.001$ ) number of the students surveyed disagreed to this statement. Fig. 3 shows that the overall number of students who strongly agree to this statement is 74 (18.9%), those who agree 44 (11.3%), neutral 35 (8.9%), who disagreed 70 (17.9%) and those who strongly disagree are 168 (43%). Consequently the overall CONS and sCONS are low (0.3148; 39%; respectively).

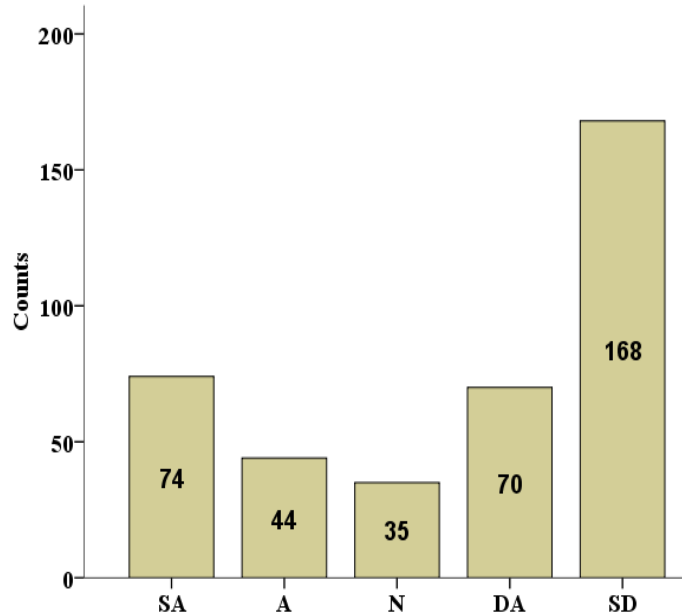


Fig. (3) Frequency distribution of students' answers for the statement "Influence by a veterinarian in the family".

**4. 4. I applied according to parents' desire**

A significantly high ( $p < 0.001$ ) number of the students surveyed disagreed to this statement. As in fig. 4 the overall number of students who strongly agree to this statement is 82 (21%), those who agree 44 (11%), neutral 40 (10%), who disagreed 65 (17%) and those who strongly disagree are 158 (41%). Thus the overall CONS and sCONS on this statement are low (0.298 ;41%; respectively).

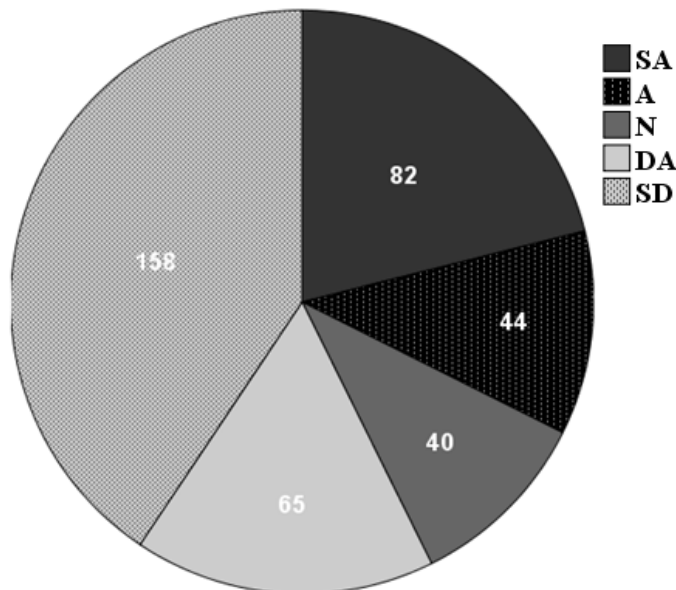


Fig. (4) Frequency distribution of students' answers for the statement "I applied according to parents' desire".

**4. 5. The faculty has an attractive program**

As in table (4) and fig. 5 about 17% (n=66) of the surveyed students who answered this statement strongly agreed to this statement, 15% (n=60) agreed, 18% (n=70) neutral, 16% (n=62) disagreed and those who strongly disagreed with this statement were 34% (n=134). The overall sCNS is low (44% ) and it is a negative consensus.

**Table 4) Opinion of students on faculties programs**

Faculties	SA	A	N	D	SD	Total
Khartoum	19 (12%)	28 (18%)	33 (21%)	31(20%)	45 (29%)	156
Sudan	13 (20%)	11 (17%)	7 (11%)	9 (14%)	25 (38%)	65
B ahri	26 (27%)	11(11%)	21(21%)	5 (5%)	35 (36%)	98
B utana	8 (11%)	10 (14%)	9 (12%)	17 (23%)	29 (40%)	73
<b>Total</b>	<b>66 (17%)</b>	<b>60 (15%)</b>	<b>70(18%)</b>	<b>62 (16%)</b>	<b>134(34%)</b>	<b>392</b>

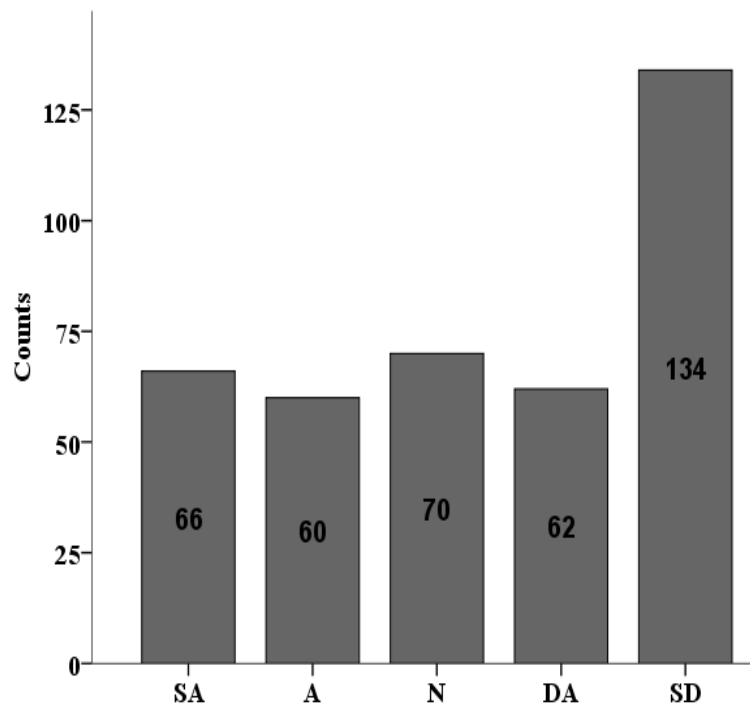


Fig. (5) Distribution of students' answers for the statement "The faculty has an attractive program".

**4. 6. I like to get a university degree only**

As in table 5 and fig. 6 about 22 7.9% (n=31) of the surveyed students who answered this statement strongly agreed to this statement, 6.4% (n=25) agreed, 11.3% (n=44) neutral, 15.6% (n=61) disagreed and those who strongly disagreed with this statement were 58.7% (n=229). The same table shows the distribution in each faculty. The overall sCONS is low (24% ) and it is a negative consensus.

**Table (5) Tally of attitude of the surveyed students (I like to get a university degree only)**

Faculty	SA	A	N	DA	SD	Total
Khartoum	10 (6.5%)	11 (7.1%)	12 (7.8%)	25 (16.2%)	96 (62.3%)	154(100.0%)
Sudan	5 (7.7%)	3 (4.6%)	8 (12.3%)	10 (15.4%)	39 (60.0%)	65 (100.0%)
Bahari	8 (8.2%)	5 (5.1%)	14 (14.3%)	12(12.2%)	59 (60.2%)	98 (100.0%)
Butana	8 (11.0%)	6 (8.2%)	10 (13.7%)	14 (19.2%)	35 (47.9%)	73 (100.0%)
<b>Total</b>	<b>31 (7.9%)</b>	<b>25 (6.4%)</b>	<b>44 (11.3%)</b>	<b>61 (15.6%)</b>	<b>229 (58.7%)</b>	<b>390 (100.0%)</b>

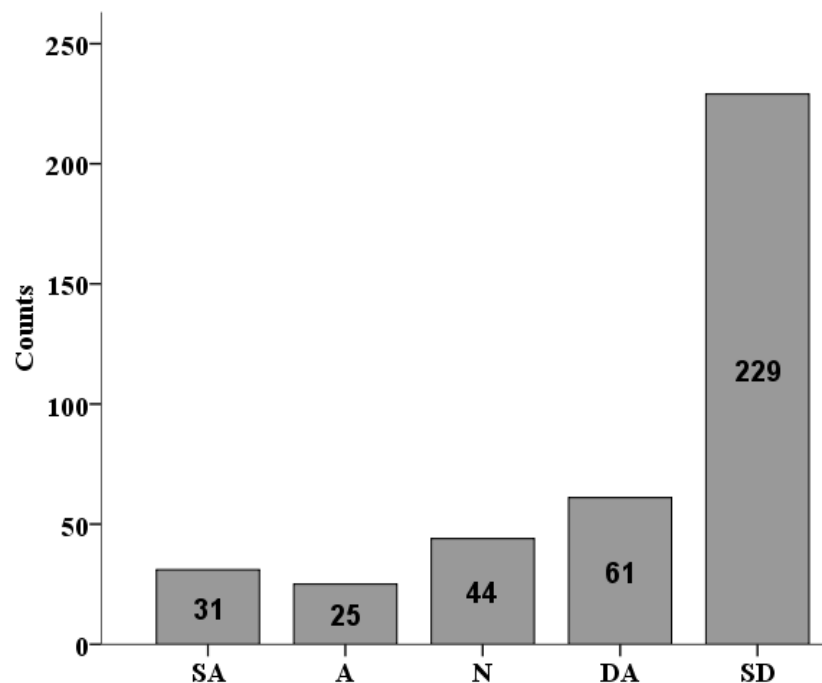


Fig. (6) Frequency distribution of students' answers for the statement "I like to get a university degree only"

#### **4.7. I like to get a degree that qualify me to work only**

Of the surveyed students who answered this statement those who strongly agreed to this statement 55 (14.1%), agreed 31 (7.9%); neutrals 40 (10.2%), disagreed 73 (18.7%) and those who strongly disagreed with this statement were 192 (49.1%). The same table shows the distribution in each faculty. The overall sCONS is low (32% ) and it is a negative consensus (Table 6 & fig. 7).

Table (6) Tally of the students surveyed for the statement “I like to get a degree that qualifies me to work only”

Faculty	SA	A	N	D	SD	Total
Khartoum	18 (11.6%)	15 (9.7%)	18 (11.6%)	28 (18.1%)	76 (49.0%)	155 (100.0%)
Sudan	12 (18.5%)	3 (4.6%)	6 (9.2%)	19 (29.2%)	25 (38.5%)	65 (100.0%)
Bahari	14 (14.3%)	6 (6.1%)	12 (12.2%)	16 (16.3%)	50 (51.0%)	98 (100.0%)
Butana	11 (15.1%)	7 (9.6%)	4 (5.5%)	10 (13.7%)	41 (56.2%)	73 (100.0%)
<b>Total</b>	<b>55 (14.1%)</b>	<b>31 (7.9%)</b>	<b>40 (10.2%)</b>	<b>73 (18.7%)</b>	<b>192 (49.1%)</b>	<b>391 (100.0%)</b>

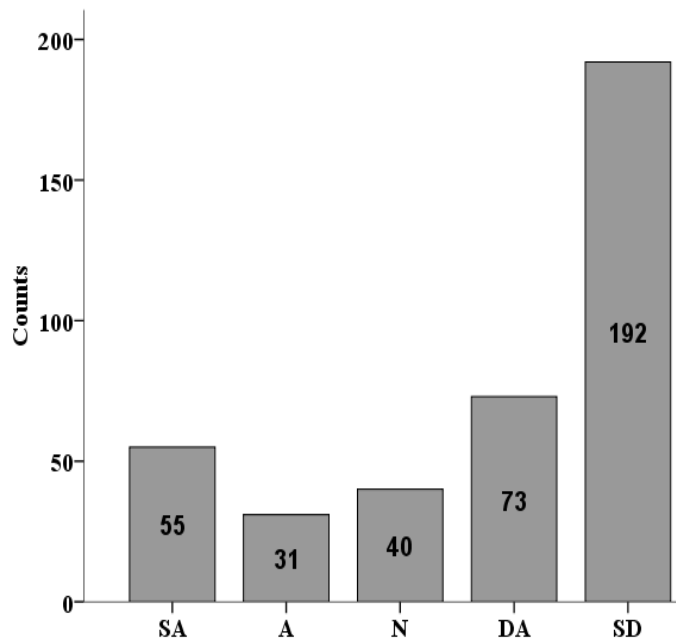


Fig. (7) Frequency distribution of students' answers for the statement “I like to get a degree that qualifies me to work only”.

#### 4. 8. I applied according to my high school exam percentage

As in table (7) and fig 8 about 40% of the surveyed students (n=156) strongly agreed to this statement; 19.7% (n=77) agreed; 9.7% neutrals (n=38); 7.4% disagreed (n=29) and 23.1% strongly disagreed (n=90). The overall sCNS is high (64% ) and it is a positive consensus.



**Table (7). Distribution of students' answers for the statement "I applied according to my high school exam percentage"**

Faculties	SA	A	N	D	SD	Total
Khartoum	62 (40.3%)	38 (24.7%)	15 (9.7%)	7 (4.5%)	32 (20.8%)	154 (100.0%)
Sudan	28 (43.1%)	14 (21.5%)	8 (12.3%)	8 (12.3%)	7 (10.8%)	65 (100.0%)
Bahri	46 (46.9%)	15 (15.3%)	7 (7.1%)	9 (9.2%)	21 (21.4%)	98 (100.0%)
Butana	20 (27.4%)	10 (13.7%)	8 (11.0%)	5 (6.8%)	30 (41.1%)	73 (100.0%)
<b>Total</b>	<b>156 (40.0%)</b>	<b>77 (19.7%)</b>	<b>38(9.7%)</b>	<b>29 (7.4%)</b>	<b>90 (23.1%)</b>	<b>390 (100.0%)</b>

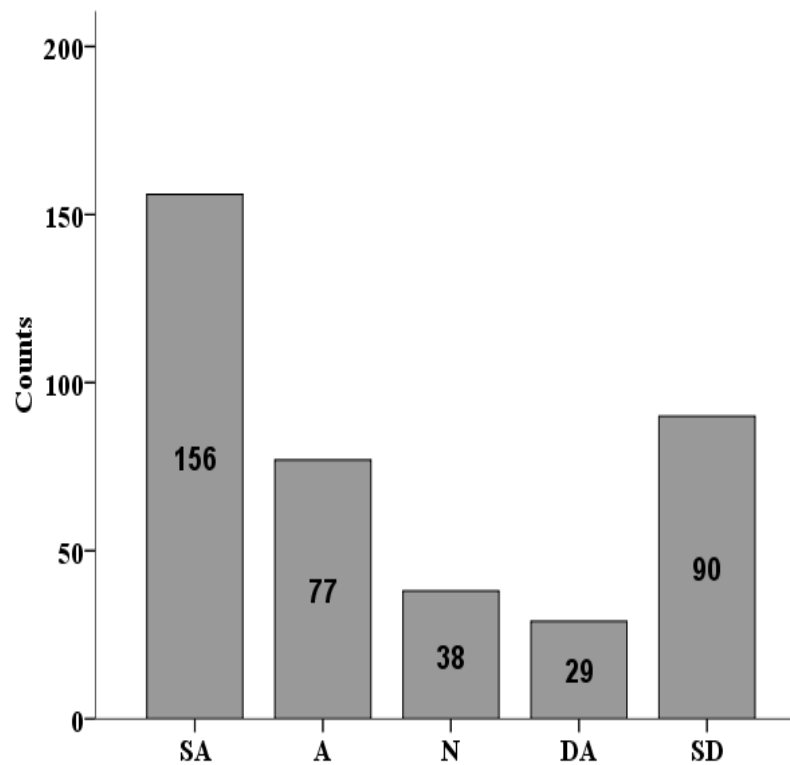


Fig. (8) Frequency distribution of students' answers for the statement "I applied according to my HSC%".

## 5. Discussion

This study demonstrated clearly that the veterinary students took their discipline without desire and the majority of them enrolled in veterinary education according to their HSC exam percentages. Furthermore, the desire among males is higher than females. Desire in any profession is a good motive for the student to complete the college he attends and no one disagrees on its importance. Any person with unruly desire to be a veterinarian in future he will certainly achieve his dream. It is well known that an above average intelligence person with supportive and financially secure environment if he lacks desideratum he cannot realize his goals (Allen, 1999). Worldwide there are many students who joined a certain college with only the vaguest notion of why they have chosen this career (Tinto, 1987). What motivates students to stay in or leave the college that accepted them is perplexing issue to many educators for decades. More than 50% of the students in American in four years institutions leave the school before their second year and 40% fail to get a degree (Tinto, 1996). These studies confirmed without any doubt that the desire in any program is very important for future success

in college and in profession. The students who undertake the veterinary education in Sudan usually they lack the desire in this type of education. They often choose this type of education when they have fewer opportunities to take medical education. The lack of desire in veterinary profession casts a dark shadow on the future and the quality of those who graduate from these colleges and consequently affects the reputation of the job. A number of recent studies have suggested that experiences of interactions with animals, especially during childhood, are associated with the development of long-term animal-related preferences and attitudes later in life (Ascione, 1993; Bjerke et al. 2001, Serpell, 2005). Children who love animals in their childhood grow up and they have more humane attitudes towards animals when they become adults (Miura et al. 2002; Paul and Serpell, 1993). Studies have shown that a majority of prospective veterinarians are drawn to the profession by a pre-existing interest in, and affection for animals (Heath et al. 1996). A survey on first- and fourth year veterinary students found that 96% had previously owned dogs and/or cats a much higher rate of ownership compared to general population (Shurtleff et al. 1983). The affection of animals and positive interactions with companion animals in childhood and adolescence paved the road for many students to choose veterinary medicine as a career. These findings state clearly that the desire in veterinary profession stems from childhood with the positive interactions with animals. The problem of veterinary profession in Sudan stems from the entrance requirements and admission policies adopted. Although in Sudan the students choose certain colleges when applying to universities, students are recruited for veterinary medicine based solely on the percentage they achieved in HSC with no prerequisites of interest, aptitude, known humane attitude towards animals and affection. Many students enrolled in veterinary education are influenced by many factors such as parents' desire, failure to take medical education and consequently they choose the veterinary education according to the HSC percent they achieved. Recently the female population in veterinary education is rising. This situation foretells a poor future veterinary profession because according to the findings of this study the majority of students usually take the veterinary education without desire particularly the females who currently outnumber the males.

In conclusion Sudanese students who enroll in veterinary education lack the desire in veterinary education and often they choose veterinary education when the options they are interested in are not available and/or the HSC percent they achieved does not qualify them to enter the colleges of their choice. Therefore it is recommended that when admitting students to veterinary education the desire, aptitude and the humane attitude towards animals, must be taken as influential variables in addition to the admission requirements. Furthermore parents must be educated to leave their children to choose the specialization they wish to study.

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