

Knowledge, Attitude and Practice of Nigerian Preclinical Students to Histology Practical

Emue, E. Bernard², Danladi S. Amaza¹, Sani H. Garba¹, Aniah, J. A.², Abue A. D.²
&
Edache, J. I.²

¹(Department of Human Anatomy, College of Medical Sciences, University of Maiduguri, Borno State, Nigeria)

²(Department of Anatomical Sciences, College of Health Sciences, University of Abuja, FCT, Nigeria)

Abstract : Knowledge attitude and practice (KAP) studies have been widely used and valued around the world for at least forty years in public health, water supply and sanitation, family planning, education and other programs. This study was conducted to determine previous knowledge about histology practical, emotional instabilities and unwanted practices at histology practicals. A cohort survey using interviewer-administered structured questionnaires was conducted among 217 preclinical students of Universities of Abuja and Maiduguri between from June 2009-October, 2010. The results showed that many were confused, jittered and feel that the practical was uninteresting on seeing microscopes and magnifying lens for the first time. Many of them affirmed that microscope was difficult to adjust before use; can be damaged; tissues are tiny to be visualized and identified; tissue slide can break; practical processes are tedious and time consuming; using microscope and magnifying hand lens can affect the eye. The preclinical students also admit that practical materials were not properly handled, and they make noise/gossip at practicals. We concluded that there were gross deficiencies in KAP of these students. A formal course on KAP before first histology practicals incorporated in medical curriculum and caution of students for wrong practices is advised. KAP study of histology practicals may differ from location to location and needs further evaluation.

Keywords - Knowledge, Attitude, Practice, Preclinical Students, Histology Practical, Nigerian

I. Introduction

Knowledge attitude and Practice (KAP) studies are very much like a standard social survey, although they are much more focused and limited in scope. KAP studies are a setting that determines what one knows about specific issues, what is felt about it, and the behavior exhibited [1].

According to [2], certain topics/concepts within the fields of gross anatomy, histology and embryology are believed by the teachers of anatomy to pose difficulty for students.

Histology gives detail understanding of the study of cell structure and microanalysis which provides corner stone upon which the field of microbiology, cell biology, molecular biology, genetics, pathology and pharmacology are solidified [3,4,5].

Medical education has been considered among other disciplines as stressful and demanding adult profession. These activities are not without deleterious emotional and physical effect on medical students [6,7,8].

[9] opined that health care ethics is not routinely taught to the medical professionals, and there are reports that even the word "ethics" has been completely ignored during the undergraduate medical curriculum.

Experience over years has revealed that most students get scared and developed phobia on seeing a microscope and tissue slide at practicals. A lot of arguments and controversies among anatomists have been generated over time on the proper time, means and methods of communication about first histology practicals to these students.

Therefore, this survey was conducted to determine KAP of preclinical Nigerian students in relation to histology practicals.

II. MATERIALS AND METHODS

This study spans between June 2009 -October, 2011 among two hundred and seventeen (217) of 200 and 300 levels students [including Bachelor of Science Anatomy (B.Sc.); Bachelor of Medicine and Surgery (MBBS) and Bachelor of Dental Surgery (BDS) of Universities of Abuja and Maiduguri, Nigeria.

For the purpose of this survey, the entire studied cohort is referred to as medical students (MS). These students had histology practical as a compulsory course in human anatomy. This was a cohort survey with structured questionnaires administered through random sampling technique.

The objective of the study was explained to each of the MS and assurance was given that the information to be collected would be used for research purpose only. Also, the MS were requested to avoid peer group filling of the questionnaires as it will create biasness.

Both male and female students had equal distribution of the questionnaires. The data obtained were subjected to simple percentage analysis.

III. RESULTS

From the 220 questionnaires distributed to the respondents, 217 (99%) were analysed while 3 (1%) were rejected due to wrong filling. The results are represented in the table below:

Table 1: Use of microscope and magnifying hand lens, formal course/orientation/lecture before practical, staff assistance at first practicals and alternative to use of histology practicals

N0/% N= 217				
Responses	Use of microscope and magnifying hand lens	Formal course/ Orientation/lecture before practical	Staff assistance at first practicals	Alternative to use of histology practical
Yes	217(100)	72 (33)	28 (13)	12(6)
No	NIL	145 (67)	189 (87)	205(94)

N0/% = Number/percentage.

Table 1 show that 100% of the medical students used microscope and magnifying hand lens to study histology practicals. 67% of the students had no orientation before practicals while 33% had. Furthermore, 87% of the students did not receive staff assistance at first practical but 13% received. 94 % of the student reported that there was no alternative to the use of histology practicals but 6 % agreed.

Table 2: Reactions to histology practical for the first time

N0/% N=217					
Response	Confuse	Nervous /Jittering	Afraid	Feel un-interesting	Feel normal
Yes	121(56)	110(51)	15(14)	116(54)	92(42)
No	96(44)	107(49)	202 (86)	101(46)	125(58)

N0/% = Number/percentage

Table 2 indicates that 56% of the students were confused but 44% were not on seeing microscope slide for the first time. 51% of the students were jittery or nervous while 49% did not. Again, 86% of the respondents were afraid while 14% were not. 54% of the studied sample revealed that they feel uninteresting but 46% were interested. 58% felt normal while 42% were not.

Table 3: Impressions about histology practical for the first time

N0/% N=217						
Response	Microscope is difficult to adjust before use	Microscope can be damaged	Tissues are tiny to visualize and identify	Tissue slide can break	Histology practical processes are tedious and time consuming	Microscope can affect the eye
Yes	212(98)	201(93)	199(92)	214(99)	203 (94)	127(58)
No	5(2)	16(7)	18(8)	3(1)	14(6)	90 (42)

N0/% = Number/percentage

Table 3 reveals the impression of MS about histology practical for the first time. 98% of the students agreed that microscope was difficult to adjust before use but (2%) disagreed. 92% of the students believes that tissues are tiny to visualize and identify but (8%) did not. Furthermore, 99% of students agree that tissue can break while 1% disagreed. (94%) of the respondents believes that histology practicals processes are tedious and time consuming but (2%) did not. 58% of the students believe that using microscope and magnifying lens can affect the eye while 42% did not.

Table 4: Practices at histology practicals

N0/% N=217							
Response	Proper handling of practical materials	Playing/ Dancing in the laboratory	Noise making/ Gossiping at practicals	Eating/ Chewing gums at practicals	Stealing of materials in laboratory	Unacceptable public Sexual behavior	Fighting
Yes	102 (47)	3 (1)	114 (53)	198 (91)	5 (2)	Nil	Nil
NO	115 (53)	214 (99)	103 (47)	19 (9)	212(98)	217 (100)	217 (100)

No/% = Number/percentage

Table 4 result shows that 53% of the students reported that they did not properly handle practical materials but 47% did. 99% of the students did not play/ dance in the laboratory while 1% did. 53% of the respondents make noise/gossip at practicals but 47% did not. 91% of studied populations eat/chew gums at practicals while 9% did not. 98% of the respondents reported that students did not steal materials in the laboratory but 2% agreed. 100% of the students were not involved in unacceptable public sexual behavior and fighting at practicals.

IV. DISCUSSION

In our medical colleges many MS used histology practical as part of a compulsory course in medical curriculum. The results from this survey have demonstrated that MS lack orientation before exposure to histology practical; exhibit some emotional and unwanted attitudes.

As shown in table 1, the students mostly used microscope and magnifying lens to study histology practicals; but many medical schools did not provide formal course/orientation before first practical. These orientations if provided would have explained to the MS challenges of using these instruments. Many revealed that there was no staff assistance at first practical. This possibly explains why many MS are ignorant about the course especially on first day. The MS reaffirm that there was no alternative to the use of histology practical; this explain why anatomy is widely regarded as the bedrock of medicine.

The MS reaction's to histology practical was demonstrated in table 2. Most of them were confused, jittered or nervous and feel that it was uninteresting while few were afraid and feel normal at first sight of practical [5, 10]. It is common in most centers that these feelings amongst others cause students failure in the subject. Thus, these negative reactions can be minimized in our colleges through early guidance and counseling is instituted.

Table 3 showed the impression of MS about histology practical. Most MS indicated that microscope was difficult to adjust before use; it can be damaged; tissues are tiny to be visualized and identify; tissue slide can break; practical processes are tedious and time consuming but few believed that using microscope and magnifying lens can affect the eye. Students need to be informed earlier that anatomy is a visual science, and it is associated with a lot of stress to undertake. It has been known from experience over years that these wrong assumptions have made most students to lost interest in the subject which correlated with similar study by [6, 11]. Therefore, proper instructions would prevent and correct some of these impressions about the subject.

Furthermore, table 4 revealed the practices at histology practical. Most students eat / chew gums and make noise/gossip in the laboratory. However, most of them did not properly handle histological practical materials and play/dance at practical. These attitudes are common among the lazy students. Medical students are expected to exhibit practices that conform to the norms of the medical schools. To reduce some these practices, some basic ethical principles and teachings should be provided to all MS before entry into laboratory [9] and defaulters should be cautioned.

V. CONCLUSION

We conclude that there were gross deficiencies in KAP of these students. As a measure to correct some of these shortcomings, it is recommended that a formal course of KAP histology practical should be incorporated in medical curriculum and made compulsory for all first year preclinical students before practical; Wrong practices should attract punishments and staff assistance at practicals should be stressed. KAP study of histology practicals may differ from center to center and needs further evaluation.

Acknowledgements

The author wish to appreciate all the second and third year preclinical students of 2009 to 2010 academic sessions of Universities of Abuja and Maiduguri for sparing time and willingly completed the questionnaires as scheduled.

REFERENCES

- [1]. Karlyn, E., Rachel, W (2008), Knowledge, Attitudes and Practice (KAP) Survey- Summary Report for the Duluth Lakeside Stormwater Reduction Project (LSRP). Saint Paul: Water Resources Center, University of Minnesota.
- [2]. Kramer, B., Soley, J.T (2002), Medical Students Perception of Problem Topic in Anatomy. *East African Journal*, 79 (8).
- [3]. Prasad, J. (2002), Human Anatomy Advances so Far and Beyond, an Inaugural Lecture. University of Maiduguri, Nigeria. 7-10.
- [4]. John, D., Alan, S., David, R.T (1990), *Theory and Practice of Histological Techniques*. 3rd ed. Edinburgh, London. 11-20.
- [5]. Lewis, J.K., Valerie, M.K., Harper, C (1995), *Principles of Cell and Molecular Biology*. 2nd ed. USA. P117-128.
- [6]. Ziad, M.B., Tagreed, A.H., Marwan, F., Abu, H (2006), Attitudes and Reactions of Jordan Medical Students to the Dissecting Room. *Sur. Radiol. Anat*, 28:416-421.
- [7]. Gaurav, A., Mandeep, G.S (2010), Reactions of First Year Indian Medical Students to the Dissection Hall Experience. *NJIRM*; 1(4). ISSN: 0975-9840. Javadnia, F., Hashemitabar, M., Kalantarmahdavian, S.R., Khajehmougahi, N (2006), How to Decrease the Emotional Impact of Cadaver Dissection in Medical Students, *Pak. J. Med. Sci*, 22(2):200-203.
- [8]. Hariharan, S., Jonnalagadda, R., Gora, J (2007), Knowledge, Attitudes and Practices of Healthcare Personnel towards Care-Ethics: A Perspective from the Caribbean. *The Internet Journal of Law, Healthcare and Ethics*, 5 (1).
- [9]. Mitchell, B.S., Mccrorie, P., Sedgwick, P. (2004), Student Attitudes towards Anatomy Teaching and Learning in a Multi Professional Context. *Med. Edu*. 38:737-48.
- [10]. Izunya, A.M., Oaikhena, G.A., Nwaopara, A.O (2010), Attitudes to Cadaver Dissection in a Nigerian Medical School, *Asian Journal of Medical Sciences*, 2(3): 89-94. ISSN: 2040-8773.