Research Journal of Medical Sciences 10 (6): 659-663, 2016
ISSN: 1815-9346

Review of Dissertations Submitted by Medicine and Dentistry Students of Zahedan University of Medical Sciences in 2003-2007

[1]Mohammad Ali Tabasi, [1]Reza Hakimi, [1]Gholam Reza Samad Zadeh and [2]Zohre Sorinezami
[1]Department of Library and Medical Information Sciences,
Faculty of Paramedics, Zahedan University Medical Sciences, Zahedan, Iran
[2]Department of Library and Information Sciences,
Central Library of Zahedan, University Medical Sciences, Zahedan, Iran

Abstract: In addition to training competent human resources to meet health needs of the society, one of the most important goals of medical universities is to train researcher and scholar. In this process, students as researchers learn how to communicate fluently with others through writing and present what they have produced. This study reviewed the dissertations submitted by medicine and dentistry students of ZUMS in 2003-2007 and their compliance to available guidelines qualitatively and quantitatively. This descriptive-analytical study evaluated 584 internship, residency and dentistry dissertations submitted in 2003-2007. Data collected by checklists and information forms were encoded, computerized and analyzed based on objectives of the study. This study reviewed 584 dissertations from different degrees including internship (56.2%), residency (19%) and dentistry (24.8%). Out of these dissertations, 88% of internship, >76% of residency and 12% of dentistry dissertations lacked evaluation form. Supervisors of dissertations were professors of basic sciences (23%) and professors of clinical sciences (78%). About two thirds of dissertations used descriptive or descriptive-analytic methods. Descriptive studies were lower in residency than internship and dentistry. Most of the reviewed dissertations lacked evaluation form and their references did not comply with Vancouver style; it is recommended to control this in future dissertations.

Key words: Evaluation, dissertation, student, Zahedan University of Medical Sciences, lacked

INTRODUCTION

In addition to training competent human resources to meet health needs of the society, one of the most important goals of medical universities is to train researcher and scholar. For this purpose, dissertations of internship, residency and fellowship students are considered as valuable sources of research (Khalili and Falah, 2004). In this process, students as researchers learn how to communicate fluently with others through writing and present what they have produced (Sobhani *et al*., 1998). Through writing, students will be able to focus on a subject and ask themselves whether others will confirm validity of their publications, whether their questions are worth noting. This leads to a chain of growth and enhancement of scientific character of the student (Sobhani *et al*., 1998).

Dissertation well represents mental abilities, experimental and clinical skills and personal abilities of the student to research on a given subject, collect data, discuss the report and eventually conclude the research. Thus, a good dissertation can be a starting point in advancement of research in universities (Davami *et al*., 2001). In Iran, internship dissertation is equivalent to six courses under the guidance of supervisor and advisor professors (Kolahi *et al*., 2003; Asefzadeh and Kalantari, 1998). The students often choose the subject of their dissertations. Given that majority of these students are young and have the potential to carry out research activities, it is essential to foster their talents and develop their potential skills. To develop research skills, it is helpful to encourage students to write a research dissertation (Sobhani *et al*., 1998).

Therefore, it is very important to present dissertations accurately based on developed standards of universities. Different studies have addressed dissertations of students in different fields, particularly medical sciences; most of these studies evaluated the writing style of dissertations (Rezaeian *et al*., 2015). In a study conducted by Davami *et al*. (2001), the University of Arak, it was concluded that most dissertations submitted by the University of Arak in 1994-2000 used

Corresponding Author: Gholam Reza Samad Zadeh, Department of Library and Medical Information Sciences, Faculty of Paramedics, Zahedan University Medical Sciences, Zahedan, Iran

cross-sectional and descriptive methods. Writing style of these dissertations was good (40%), average (40%) and poor (8%). Most of the dissertations were related to the Department of Internal Medicine. Sobhani *et al.* (1998), the Gilan University, showed that only 15% of the studied dissertations complied with the writing styles; most of the mistakes were related to the references and discussion. In another study by Ghanaie *et al.* (1998), findings showed that only 27% of dissertations had followed Vancouver style correctly. Rezaeian *et al.* (2015) showed a growing trend of quality in dissertations submitted in Rafsanjan University during the studied period; the dissertations which had advisors were better than others. Kolahi *et al.* (2003) showed that the score of dissertations submitted in medical universities during 1998-1999 increased considerably compared to 1991-1992; however, it was not enough. Over the past twenty years, dissertations submitted in Zahedan University of Medical Sciences (ZUMS) have not been reviewed qualitatively and quantitatively; therefore, this study seems essential to evaluate dissertations submitted in ZUMS during 2003-2007, quantitatively and qualitatively. The results of this study can be helpful in improving future dissertations.

MATERIALS AND METHODS

This study reviewed 584 dissertations submitted in 2003-2007 in internship, general dentistry, residency and fellowship which were available in ZUMS central library, through a descriptive-analytic and cross-sectional methodology. For this purpose, a list of dissertations submitted in the considered period was derived from database of ZUMS central library. Then, dissertations were reviewed by the authors based on information forms and checklists designed for the objectives of this study. Information related to publications and presentations at seminars and congresses was derived from database of the ZUMS Research Department. Information related to the date of approval and defense was derived from database of the Research Department. Data collected by checklists and information forms were encoded, computerized and analyzed based on objectives of the study.

RESULTS

Out of 584 reviewed dissertations, 55.7% were written by male students and 44.3% were written by female students. The dissertations were related to internship (56.2%), residency (19%) and dentistry (24.8%) degrees. According to the guideline provided by the relevant departments, dissertations should contain an evaluation form including information of supervisors and advisors, date of approval and qualitative and quantitative score of the dissertation. Out of the reviewed dissertations, 88% internship, >76% residency and 12% dentistry dissertations lacked evaluation form (Table 1).

The results showed only 2.8% of the dissertations were supervised by instructors who were also faculty members in the Department of Dentistry exclusively; 4.5% of cases (only residency) were supervised by professors who were also faculty members and about 14% of dissertations were supervised by associate professors. As shown in Table 2, supervisors of dissertations were professors of basic sciences (22%) and professors of clinical sciences (78%) (Table 2).

Most of the residency dissertations were related to internal medicine (16.2%), followed by radiology (13.5%) and ophthalmology (13.5%), gynecology and pediatrics. Most of the internship dissertations were related to psychology and psychiatry (20.4%). Most of the dissertations in basic sciences were related to anatomical sciences (6.1%), pathology (5.8%) and physiology (4.6%). Table 3 shows that about two-thirds of the dissertations used descriptive or descriptive-analytical methodologies; the number of descriptive studies was lower in residency than internship and dentistry. Highest number of clinical trial was related to residency. The results showed a relationship between methodology and degree of students.

Duration of internship dissertations was significantly lower that residency and dentistry dissertations; however,

Table 1: Distribution of ZUMS dissertations submitted in 2003-2007 in terms of evaluation form

	Status			
	Yes		No	
Variables	No.	%	No.	%
Evaluation form				
Internship	39	11.9	289	88.1
Residency	26	23.4	85	76.6
Dentistry	128	88.3	17	11.7

Table 2: Distribution of ZUMS dissertations submitted in 2003-2007 in terms of supervisor

	Degree					
	Internship		Residency		Dentistry	
Supervisor	No.	%	No.	%	No.	%
Academic rank						
Instructor	0	0	0	0	4	2.8
Assistant professor	304	92.7	99	89.2	140	96.6
Associate professor	24	7.3	7	6.3	1	0.7
Professor	0	0	5	4.5	0	0
Department						
Clinical	265	80.8	109	98.2	144	99.3
Basic	63	19.2	2	1.8	1	0.7

Table 3: Distribution of ZUMS dissertations submitted in 2003-2007 in terms of methodology

	Degree					
	Internship		Residency		Dentistry	
Methodology	No.	%	No.	%	No.	%
Case report	0	0	0	0	2	1.4
Descriptive	127	38.7	19	17.1	47	32.4
Descriptive-analytical	101	30.8	19	17.1	51	35.2
Case-control	26	7.9	14	12.6	4	2.8
Cohort	4	1.2	0	0	0	0
Experimental	26	7.9	8	7.2	30	20.7
Clinical trial	42	12.8	49	44.1	9	6.2
Other	2	0.6	2	1.8	2	1.4

Table 4: Distribution of ZUMS dissertations submitted in 2003-2007 in terms of duration

	Duration (month)		
Degree	Mean	SD	Test result (ANOVA)
Internship	6.9	4.5	p = 0.000
Residency	15.7	6.6	
Dentistry	14.6	6.5	

Table 5: Distribution of ZUMS dissertations submitted in 2003-2007 in terms of quantitative score

	Score		
Degree	Mean	SD	Test result (ANOVA)
Internship	18.9	0.42	p = 0.000
Residency	19	0.3	
Dentistry	19.3	0.77	

Tukey's test showed no difference between duration of residency and dentistry dissertations (Table 4).

Comparison of quantitative score of dissertations showed significant difference between different degrees; based on Tukey's test, this difference was significant between internship and dentistry and between residency and dentistry (Table 5).

During the studied period, 60 articles were extracted from the dissertations and published in national and international journals. Out of 50 articles published in Persian journals, 35 of them were related to general medicine (Table 6).

Moreover, 153 articles were extracted and presented in national and international seminars and congresses. These articles were most related to medicine rather than dentistry (Table 7).

Other findings showed that 7% of the dissertations were related to review of patient records. The studied population was not specified in 2.5% of the cases. In 86% of cases, a sample of the population was studied. In 38% of cases, the sample size was determined using correct statistical methods; in 33% of cases, it was not specified how the sample size was determined. In 25% of the cases, samples were selected in a certain time period. The samples were selected by simple random sampling (13%), multistage sampling (6%), quota sampling (2%), convenient sampling (33.6%) and census (25%). The studied variables were specified only in 37% of cases. Measurement model was specified in about 44% of cases. In >90% of cases, findings were consistent to the objectives. In 98% of cases, basic data was fully explained. Findings were presented by tables (45%), diagrams (2.5%), tables and diagrams (50%) and micrographs (<2%). The presented tables were correct in 83.5% and incorrect in 12% of the cases. The diagrams were depicted incorrectly in one thirds of the cases. No statistical test was used in 10% and no statistical test was required in 26% of the cases.

Table 6: Distribution of ZUMS dissertations submitted in 2003-2007 in terms of degree and published article

Degree	Persian article	English article
General medicine		
Basic	17	3
Clinical	18	5
Residency	13	2
Dentistry	2	--
Total	50	10

Table 7: Distribution of ZUMS dissertations submitted in 2003-2007 in terms of degree and presented articles

	National seminar		International seminar	
Degree	No.	%	No.	%
Internship	50	15.25	7	2.2
Residency	67	60.4	11	9.9
Dentistry	18	12.4	-	-
Total	135	88.9	18	11.1

The overall conclusion did not exist in 40% and results were not compared to previous studies in 12% of the dissertations. In 80% of the dissertations, references were cited within the text. In 26% of cases, references did not comply with the Vancouver style; only about 15% of them complied with the Vancouver style and the rest of dissertations complied with the Vancouver style by 50%.

DISCUSSION

During 2003-2007, 584 dissertations were defended in ZUMS, which is significantly higher than other universities, such as Gilan University (180 cases in 5 years), Arak University (266 cases in 7 years) and Yazd University (237 cases in 10 years) (1,3). The largest number of dissertations was related to descriptive studies (33%) which is lower than Arak University and descriptive-analytic studies (29.3%) which is higher than Arak University (Davami *et al*., 2001). In Gilan University, most of the dissertation was related to cases of diseases and 17% of dissertations were related to translations. This comparison shows that quality of ZUMS dissertations is significantly better than above universities, because even one case of translation was not observed in ZUMS. This finding is consistent with the results obtained in Arak University.

Out of dentistry dissertations, about 3% were non-research study (case report and other) and >97% were research study (descriptive, descriptive-analytic, case-control, experimental and clinical trials) while 17% of the dissertation submitted in Qazvin University of Medical Sciences were non-research studies which indicate better quality of ZUMS dissertations (Khalili and Falah, 2004).

Most of the dissertations were related to psychology and psychiatry, gynecology, pediatrics, anesthesiology, internal medicine, infectious diseases and surgery. Some of the departments (such as psychology and psychiatry) were exclusively responsible for the dissertations in general medicine and some other departments were exclusive responsible for the dissertations in residency, which seems logical due to the fact that some departments did not have residency.

Most of the clinical trials were related to internal medicine, gynecology and surgery while all dissertations in psychology and psychiatry were descriptive or descriptive-analytic studies. Notably, the number of supervisors selected from department of basic sciences (>20%) was lower than the number of faculty members of basic sciences. This contribution should be increased, since quality of the dissertations supervised by faculty members of basic sciences (particularly in general medicine) was better (except for clinical trials). Comparison of these results with Arak University (~7% was related to basic sciences) indicates that ZUMS departments of basic sciences are more involved in submission of dissertations (Davami *et al*., 2001). In the department of dentistry, most of the dissertations were related to endodontics, oral and dental diseases and pediatric dentistry.

Totally, 73% of dissertations had an advisor professor. In more than two-thirds of cases, advisors were professors of basic sciences including nutrition, psychology and psychiatry and statistics. Quality of the dissertations with advisors was higher than other dissertations. This is consistent with the results obtained for Rafsanjan University (Rezaeian *et al*., 2005). Therefore, it seems that efforts in this regard could help to improve quality of dissertations. In the department of dentistry, most of the advisors were professors of statistics and nutrition.

In all cases reviewed, 16% of dissertations were costly; in this regard, no significant difference was observed over different years. The highest number of costly dissertations was related to residency and the lowest number of costly dissertations was related to dentistry which seems natural due to the type of studies. The highest score given to the defended dissertations (>19.8) was related to dentistry which has also been rising during the studied period. The lowest score was given to residency dissertations. This indicates that dissertations are strictly judged in medical sciences.

A significant difference was observed in quantitative score given to the defended dissertations between different degrees; the score given to the dentistry dissertations was significantly higher than the score given to internship and residency dissertations ($p<0.05$). The mean score given to current dentistry dissertations was lower than Qazvin University (Khalili and Falah, 2004).

A significant difference was observed in duration of dissertations submitted in different degrees; duration of internship dissertations was significantly lower than residency and dentistry dissertations ($p<0.05$) which is not unexpected due to the type of methodology used. Comparison of current results with Qazvin University (Khalili and Falah, 2004) reveals that duration of dentistry dissertations is longer in ZUMS.

CONCLUSION

According to the results obtained in this study, it is recommended to reform the evaluation form and use a similar form for both departments of medicine and dentistry. The evaluation form should contain information such as date of approval, date of defense, duration of study, information of supervisors, advisors and judges. It is recommended to control compliance of standards such as font size, spacing and layout before the defense.

A significant number of English abstracts did not match the Persian abstracts. Therefore, supervisors are recommended to pay more attention to this problem. References should comply with the Vancouver style. It is also recommended to specify the score given to the dissertations considering the degree, type of study, submission or publication of an article derived from the dissertation in the guideline.

ACKNOWLEDGEMENTS

The current study was sponsored by the ZUMS Research Department. Researchers appreciate supports of this department. Moreover, researchers appreciate cooperation of librarians of the central library as well as employees of the Research Development.

REFERENCES

Asefzadeh, S. and Z. Kalantari, 1998. Evaluation of the dissertation of graduates from Qazvin university of medical sciences. J. Guilan Univ. Med. Sci., 7: 16-22.

Davami, M.H., L. Moiini and M. Rafiei, 2001. Evaluation of principles consideration in the dissertations of medical students submitted at Arak university of medical sciences from 1373 (1994) to 1379 (2000). Arak Med. Univ. J., 4: 23-31.

Ghanaie, M., A. Shafaghi and M. Faridi, 1998. A five year study on dissertations of medical students in Guilan university of medical sciences from 1369 to 1373. Persian. J Guilan Univ. Med. Sci., 7: 9-15.

Khalili, M. and R. Falah, 2004. Evaluation of dentistry graduate theses in Qazvin University of Medical Sciences. J. Qazvin Univ. Med. Sci., 8: 10-18.

Kolahi, A.A., A.R. Farsar, N.M. Moolavi, S. Kolahi and A.H. Malek, 2003. Comparison of dissertations quality of medical students in the academic years of 1991-92 and 1998-99: A study on 14 medical schools in Iran. Hakim Res. J., 6: 11-17.

Rezaeian, M., Z. Salem, S. Dehghan and A.R. Saya, 2015. Critical appraisal of the submitted theses by medical students of Rafsanjan Medical School during 1993-2003. Strides Dev. Med. Educ., 2: 72-79.

Sobhani, A., M. Pooramezan and N.S.A. Zaker, 1998. Examination of observed principles in scientific writing of research dissertations of medical students. J. Guilan Univ. Med. Sci., 7: 1-8.