

Utilising Field Assignments in Survey Methodology Course at Ziauddin Medical University, Karachi

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Abstract

Objective: To describe the teaching-learning strategy employed in the module of Survey Methodology for undergraduate medical students at Ziauddin Medical University.

Setting: Medical students of Ziauddin Medical University, Clifton, Karachi.

Methods: The objectives of the Survey Methodology course were developed so that a student would be able to design and conduct a small survey independently. For this purpose the students were required to participate in a census survey of a squatter settlement. The questionnaire for the survey was developed with the students, which included the demographic information of the households. It was discussed and pretested with the medical students. The students edited and entered the data on computer using Epi-Info. They were trained in sampling methods, data collection, data editing and entry through lectures and small group sessions. At the end of the course, students filled the course evaluation form.

Results: Out of 117 students who responded, 63% found the course to be useful. Small group sessions were regarded as the most helpful teaching strategy by 91% of the students. Majority (74%) of the students recommended that field visits should be a part of teaching strategy.

Conclusion: The Survey Methodology course reinforces the importance and practical application of research methods. The students appreciate the course especially the small group sessions and the field visits (JPMA 52: 120, 2002).

Introduction

Ziauddin Medical University (ZMU) is a Community Oriented Medical Institution with Problem Based Learning approach. The graduate from ZMU is expected to have the skills to participate in population-based research activities related to health services and primary care.

Research should be a part of training in every teaching institution, whether it is undergraduate or postgraduate, as this enhances intellectual development^{1,2}.

The course on Survey Methodology is part of the process of imparting knowledge and skills applicable for inculcating research skills in students³. It is useful in planning for investigations of groups and populations, such as surveys, epidemiological studies or other evaluative research⁴. Mostly these activities consist of selecting a sample, collecting data through questionnaire and analysing it. Some graduates would be involved in surveys of the population or in patient groups, which include cross-sectional and longitudinal studies using questionnaires and structured interviews for data collection⁵. Lutz states that "Surveys are fun". Ideally a survey is more than just fun, it aims at

achieving a worthwhile contribution to the community's well being. Surveys are essential to gather information about the community's health problems to design, implement, monitor and evaluate health intervention³.

there were 43 descriptive or review articles and of the remaining 60 articles, 42 (70%) were cross-sectional surveys⁶. The Survey Methodology course focuses on cross-sectional surveys, so the medical graduate would be able to understand the requirement for cross-sectional studies.

A review of 12 issues of Journal of Pakistan Medical Association (JPMA) was done to identify types of studies published in this journal. Out of 103 articles during the year, this paper describes the teaching-learning strategy employed in the undergraduate Survey Methodology module at ZMU that integrates community-based activity with classroom sessions.

Methods

Survey Methodology is a 35-hour course conducted during the first year of medical education with Descriptive Biostatistics and Epidemiology courses. The objectives of the Survey Methodology course are given in Table 1, along with the course hours in Table 2.

Table 1. Objectives of the Survey Methodology Course.
By the end of the course the student should be able to:

Explain the reasons for conducting a survey
Describe the types of sampling methods
Determine the sample size required for a given population
Explain the methods of handling non-responses
Identify the different methods available for data collection
Design a questionnaire for conducting a survey
Conduct interviews of a given population for a survey
Create a data entry form on computer utilising Epi-Info program
Perform data editing and data entry
Discuss the ethical issues in survey research

Table 2. Hours allocation of the survey methodology course.

Strategy	No.	Hours	Assessment	Weightage in final evaluation (%)
Lectures	9	9	Written Test	40
Tutorials	2	6		
Field visits	2	6		
			Continuous Assessment	30
Epi Info sessions	3	9	Individual Assignments	30
Self Study for Assignments	5	5		
Total	21	35		100

These courses are conducted as modules in between the Basic Health Sciences modules. The teaching-learning strategy includes lectures, tutorials, individual assignments and field visits. The assignments are designed in a way that each student submits a hypothetical research question, research objectives, questionnaire, type of sampling method and mode of data collection. The topic can be any problem, not necessarily related to health.

The field visits are part of a census survey in a katchi abadi (squatter settlement) adjacent to the University. The area houses have been numbered and mapped by the community co-ordinator with the help of local volunteers. A questionnaire for the demographic profile of the community is designed with the students. The questionnaire is discussed and pre-tested in the class, followed by necessary correction in the data-collecting instrument. During the field visit, the students fill out the questionnaire through personal interviews with the head of the household or the spouse. The students edit and code their questionnaires in small group sessions with the assistance of a facilitator. They also learn to design record files on Epi-Info version 6 program⁷ and enter the data they have collected.

The evaluation of the students for the module is based on their assignments (30%), performance in field visits (20%), data entry (10%) and the end of the module written test (40%). A questionnaire was distributed among the students of 1st year and 2nd year to evaluate the responses of the students feedback on the survey methodology module.

Results

Out of 130 students in 1st and 2nd year of ZMU, 117 (90%) evaluated the Survey Methodology course. Of these 74 (63%) found the Survey methodology course useful. The students were asked about their opinion regarding the teaching and evaluation strategies (Table 3).

Table 3. Students' opinion of strategies to help in understanding the objectives of the course.

Strategy	Helpful (n=117)	
	n	%
Lectures	93	79
Small group sessions	107	91
Assignments	56	48
Field Surveys	81	69
Epi-Info	52	44
Module exam	71	61

Table 3. Students' opinion of strategies to help in understanding the objectives of the course.

Small group sessions were regarded as the most helpful (91%) followed by lectures (79%) and field surveys (69%).

Less than half of the students, who responded, found the assignments and Epi-Info sessions to be useful.

The lecture/small group session topic that the students assessed as most interesting were related to questionnaire designing (68%), followed by research design (55%); only half the students regarded data collection methods (49%) and sampling methods (47%) to be interesting (Table 4).

Table 4. Lecture/small group session topics of interest according to students' opinion.

Topic	Students' Opinion (n=117)					
	Interesting		Neutral		Not interesting	
	n	%	n	%	n	%
Questionnaire Designing	79	68	31	26	7	6
Research Design	64	55	46	39	7	6
Data Collection Methods	57	49	35	30	25	21
Sampling Methods	55	47	39	33	23	20

Discussion

The purpose of the survey methodology module was to provide hands on training to the students for designing and using data collection instruments. The contents of the course were based on requirements for understanding and carrying out simple research. The tasks assigned during visits to the community were designed to supplement classroom learning. Experiences from other institutions also show students preference for experiential learning⁸⁻¹¹. Importance of including quantitative methods courses such as biostatistics and epidemiology in the medical curriculum has also been well recognized^{12,13}. In this context the students' feedback is encouraging since more than two thirds of the respondents found the course interesting. It is not surprising to observe that the strategy of small group sessions and data collecting exercise in the field was highly appreciated, since acquisition of skills is best learnt by hands-on experiential learning. Feedback from the students showed that there is need to improve the strategy for data entry sessions using Epi-Info.

This kind of course design is helpful in motivating students for research work. We recommend that field visits / surveys should be a part of teaching-learning strategy for other courses as well. The practical application of classroom learning helps the students in better acquisition and retention of knowledge¹⁴.

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