

**Conduct and Presentation of a Statistical Survey:
An effective way of increasing the popularity
of a 'Dry' subject**

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1. Introduction

Speaking of the teaching and learning of statistics at the undergraduate level, a moderate amount of training in small-scale data-handling seems to be an indispensable part of an introductory program in statistics. In the Pakistani system of statistical education, however, there is very little emphasis on the conduct of practical projects involving collection and analysis of real data. Realising the importance of such projects, the Department of Statistics at Kinnaird College for Women, Lahore initiated a series of small-scale statistical surveys back in 1985. Each of these surveys has consisted of (a) identification of a topic of interest, (b) formulation of a questionnaire, (c) collection of data from a sample of individuals / a population of interest, (d) a fairly detailed analysis of the collected data, and (e) presentation of the survey findings in front of teachers and students in the form of an educational and entertaining program. Combining information with other items of interest, such a program provides an effective forum for increasing the popularity of a discipline that is generally considered to be a tough and "dry" subject.

The following section of this paper throws light on various segments of the most recent one of these programs. The one which was held in the college hall on November 12, 1999, and in which a group of students belonging to the FA Second Year Statistics Class (grade 12, ages 17-18) presented salient features of a survey that had been carried out in order to explore the plus points as well as the problems experienced by the female nurses of Lahore (the author acting as compere/moderator for the program).

2. "Nurses' Day" at Kinnaird College

The Nurses' Survey Program was held in the Kinnaird College Hall on Friday, 12th November, 1999 from 10:30a.m. to 12:00 noon. The author welcomed the

audience and introduced the Leader of the Students' Project Committee; Umbreen Mubashar (Committee Leader) introduced the committee members (a total of eight students), and Fareemah Tariq & Wajeeha Javed (the two Deputy Leaders) introduced the survey that was to be presented during the next half an hour. The survey- report was presented by three of the committee members, Rabia Haroon, Fatima Zahra Hayat and Syeda Imama Ali, who had been selected for this job by virtue of their better delivery and communication skill. The three students addressed the audience one after the other, beginning with the objectives of the study and going on to the questionnaire, the procedure for data-collection, the analysis of the collected data, and overall results and conclusions. All the important aspects of the survey were highlighted with the help of slides / transparencies in order to facilitate communication and to promote interest.

The text of the report as presented by the three students is given below:

Rabia Haroon (Narrator # 1):

Ladies & Gentlemen,

In any region of the world, nursing can be regarded as one of the most important and vital professions. It was felt that it may be both interesting and useful to carry out a survey in order to explore the salient features of the professional experiences of female nurses in Pakistan. The specific objectives of the survey were to determine: (1) the plus-points as well as the problems encountered in this profession, (2) the nurses' opinion regarding the quality of the training imparted to them, and (3) the extent to which the nurses are satisfied with their professional lives. In order to achieve these objectives, a semi-structured questionnaire consisting of 22 questions was devised. The questions were as follows:

- Q1 Are you a charge/staff nurse or head nurse?
- Q 2. Your name?
- Q3. Which ward are you working in currently?
- Q4 Your religion?
- Q5. Your age?
- Q6. Your marital status?
- Q7. Your family's monthly income?
- Q8. Why did you adopt the nursing profession?
- Q9. Anyone else in your family in the nursing profession?
- Q10. What are the plus points of this profession?
- Q11. What problems have you encountered in this profession?
- Q12. What is the attitude of the male patients with you usually?
- Q13. What kinds of feelings do you experience when a patient passes away?
- Q14. What kinds of feelings do you experience when a patient recovers?

- Q15. What is your opinion about your uniform?
- Q16. What is the difference between the professional experiences of head nurses and charge nurses?
- Q17. What is your opinion regarding the quality of the training imparted to you?
- Q18. What are your suggestions for improvement of the training that is imparted?
- Q19. What are your suggestions to reduce the problems that are faced by you and other nurses?
- Q20. To what extent are you satisfied with your professional life?
- Q21. Assume for a moment that you are to start life all over again; which profession will you opt for?
- Q22. Anything else that you would like to say on your own?

Ladies and gentlemen, I now present the methodology that was adopted for data collection.

As in many other countries of the world, there are two kinds of hospitals in Pakistan: the government-run institutions, and the privately-run concerns. Because of its close proximity to Kinnaird College, Services Hospital, Lahore was selected to act as the source of our data. Due to the fact that Services is one of the largest government-run hospitals of the city, we were confident that the nurses working in this hospital could be regarded a good representative of the female nursing community of Lahore. The hospital contains 40 wards such as Medical Unit I, Paediatric Surgery, ENT Ward, Gynae Special, and so on. A team of statistics students of Kinnaird College administered the questionnaire that was presented just a few minutes ago upon the nurses of the Services Hospital, Lahore using the face-to-face interview method under the supervision and guidance of their teachers. The interviews were conducted on two different days i.e. 22nd March 1997 and 24th May 1997. Actually our initial objective was to collect the entire data on one particular day. As this turned out to be physically impossible in the available time on the first day, a deliberate gap of two months was created between the two days of interviewing so that spontaneous responses could be obtained from the nurses who would be interviewed on the second attempt.

During the period March-May 1997, the total number of Head Nurses employed at Services Hospital was 34 out of which we were able to interview 21, and the total number of Charge Nurses was approximately 440 out of which we were able to interview 94 persons. In this way our total sample size turned out to be 115, yielding a sampling fraction of nearly 25%. I now request Fatima to step forward

and to present the results of our survey.

Fatima Zahra Hayat (Narrator # 2):

Dear Guests and Fellow Students,

Ladies & Gentlemen, A close look at the questionnaire reveals that it can be divided into three distinct categories : (category 1) questions pertaining to the nurses' socio-economic background, and these are questions 1 to 9, (category 2): questions pertaining to the nurses' experiences, observations and opinions; these are questions 10 to 19 as well as question 22, and (category 3) questions put forth in order to ascertain the extent to which the nurses were satisfied with their professional lives, these are questions 20 and 21.

I begin with the first category of questions, those relating to the socio-economic background of the nurses.

First of all, Age:

The age distribution of the nurses is presented in this slide. The mean age of the Charge Nurses was 29.3 years whereas the mean age of the head nurses was 40.1 years. Hence it is evident that in our country seniority is highly correlated with age.

Second, Religion:

In our sample, 66% of the nurses were Muslims and 34% were Christians. No other religion was observed in the sample, and, ladies and gentlemen, it is interesting to note that in a country where more than 95% of population is Muslim, the Christian population seems to have a huge share in the nursing profession.

Thirdly, Family's Monthly Income:

Ladies & Gentlemen, we defined various socio-economic strata of the urban society as follows:

Family's monthly income upto Rs. 5000:Lower class

Rs. 5000 to 15000: Lower-middle class

Rs. 15000 to 25000:Middle class

Rs 25000 to 40,000:Upper-middle,

More than Rs. 40,000 : Upper class

As you can see, our data clearly indicates that a vast majority of the women in the nursing profession belongs to the lower-middle class.

Fourthly, we explored whether family members of the nurse also belong to the

nursing profession. It is interesting to note that as many as 42% of the Head Nurses and 59% of the Charge Nurses indicated that they were the only ones in their families who had taken up nursing as a profession. As far as reasons for joining nursing were concerned, it was very encouraging to find that as many as 89% of our respondents stated that they had joined this profession due to personal interest / liking / inspiration.

Dear Guests, I will now present some salient findings regarding the second category of questions, those relating to the nurses' experiences, observations and opinions.

First and foremost, the plus points of the nursing profession . It is very encouraging to note that as many as 47% of our respondents stated that one of the plus points of this profession was that they experienced a feeling of self-satisfaction by virtue of helping humanity.

Next, let's come to the problems encountered in the nursing profession . As you can see in the slide, 35 of our respondents indicated that they encountered rude attitude, non-cooperation and disturbance by male attendants and patients; 27 nurses stated that they had to experience tough duties, evening and night shifts, changing duties, neglecting their homes, hostel accommodation problems, and also less pay. Also, 23 of our respondents complained that the media coverage is unsatisfactory, that there is not much respect and that nursing is regarded as a social taboo! In spite of all these problems, it was encouraging to note that nearly one-third of all our respondents indicated that they had no mentionable problem.

Ladies & Gentlemen, in question 19 of our questionnaire, we asked the nurses to give suggestions in order to reduce the problems that they faced . As you can see in the slide, the nurses came up with a variety of suggestions, such as : transport facilities should be provided, residential facilities, improved timings, higher salary, and so on. Also it is very interesting to note that a number of our respondents said that patients and attendants should be taught to improve their attitude! Ladies & Gentlemen, you would be interested to note that one of our questions was intended to explore the nurses' opinion regarding the attitude of the male patients . It is a matter of concern to find that as many as 24% of our respondents did have complaints against the male patients' attitude.

Ladies & Gentlemen, I now request Syeda Imama Ali to come and present the rest of the findings.

Syeda Imama Ali (Narrator # 3):

Ladies and gentlemen, one very important question in our questionnaire was intended to ascertain the nurses' opinion regarding the quality of the training that had been imparted to them. Our data indicated that as many as 64% of our respondents were satisfied with their training. This should be a matter of some satisfaction for the trainers, although there definitely seems to be room for further improvement.

As far as suggestions to improve the quality of training were concerned, again you can see that our respondents came up with a multitude of suggestions. The need for higher education, specialization courses and refresher courses is evident from the slide.

Number five, we tried to determine the extent to which the nurses were satisfied with their professional life.. It was encouraging to note that 32% of our respondents stated that they were very satisfied, 59% said that they were quite satisfied, and a minority of only 9% indicated that they were not very satisfied with their professional lives.

The second-last question of our questionnaire was:

"Assume for a moment that you are to start life all over again; which profession will you opt for?" It was very encouraging to note that as many as 40% of our respondents stated that even if they were to start life all over again, they would opt for the nursing profession!

An additional point of interest is that a minority of only 6% of our respondents said that, if they were to start life all over again, they would prefer not to take up a job but to be housewives. This result is a clear indication of the professional inclination of our women who are in the nursing profession!

Last but not the least, dear guests, we invited the nurses to give any comments or suggestions. anything that they wanted like to say on their own. As you can see, 23% of our respondents expressed the opinion that nursing is a good profession, respectable, there is no taboo, and that more girls and women should join in.

Ladies and gentlemen, to wind up the whole discussion, I would like to present a gist of our findings. It appears that a typical nurse in Services Hospital Lahore is a Muslim woman belonging to the lower-middle class and having joined the nursing profession in view of her own personal interest/liking/inspiration. As far

as the pros and cons of the nursing profession are concerned, the feeling of self-satisfaction by virtue of serving humanity, and financial support have emerged as the two major plus points, whereas rude attitude and non-cooperation by the attendants and patients, and tough duties/night shifts, less facilities and salary and insufficient equipment and supplies seem to be the major problems encountered in this profession. It is a matter of some satisfaction that more than half of all the nurses are satisfied with the training imparted to them, although there certainly seems to be room for further improvement.

Ladies and gentlemen, it is indeed very encouraging to find that in our sample a huge majority of the nurses were satisfied with their work-lives and nearly 45% of them were sure that even if they were to start a new life they would join the nursing profession.

Thank you very much.

The author concluded the survey-report with the following remarks:

Ladies and gentlemen, I hope that you had enjoyed the presentation. You will be interested to know that along with collecting data from Services Hospital, Lahore, we administered the same questionnaire on the nurses belonging to a hospital located in Waterloo in the Iowa State of USA! Due to our constraints, we were able to obtain responses from 15 nurses only, and, as such, the results of the data analysis do not have a lot of statistical validity. Nevertheless, we would like to give you a gist of what we have learnt from that data, in a very concise form.

The first thing worthy of note is that whereas in Pakistan seniority seems to be highly correlated with age, this is not the case in America. The mean age of American Head Nurses was approximately the same as that of the Charge Nurses.

Secondly, the data seems to indicate that the salary structure of the American nurses is slightly better than that of their Pakistani counterparts. Religion: a sizeable majority of the American nurses seems to belong to the Catholic denomination of Christianity.

Reason for joining nursing?: similar to Lahore, a sizeable majority of the American nurses seems to have joined the profession due to their own personal interest/liking. Do the encounter problems in this profession? All 15 respondents mentioned one problem or the other.

To what extent are they satisfied with the training imparted to them? It was interesting to note that a sizeable majority did not seem to be absolutely satisfied with the training and a number of them presented suggestions for improvement. To what are these nurses satisfied with their professional lives?

Similar to their Pakistani counterparts, a vast majority of the American nurses seemed to be satisfied with their professions, and a considerable majority stated that even if they were to start life all over again, they would become a nurse or adopt any profession related to health.

The second segment of the program consisted of a very interesting poetry competition that had been launched by the Department of Statistics for the students of the college! Students had been invited to submit poems on the topics 'Nursing / Nursing Profession' and 'Florence Nightingale' in any of the three languages English, Urdu or Punjabi, and a total of twenty-four poems were received for the competition. Poems had been judged by two panels of judges (one for English and one for Urdu / Punjabi), and students whose poems had been regarded as the better / best ones were invited to recite them in front of the audience. An excerpt from the poem that won the First Prize is as follows:

A person who pushes back all her worries,
To give the refreshing smile,
A person who doesn't sing melodies
for her own child,
But welcomes someone's newborn
A person who gives new life to
The depressed, the doleful,
Is, in essence, a human,
Is, in essence, a nurse.

(by Amina Farooq Khan, B.A. First Year)

The poetry competition was followed by expert comments regarding the survey that had been presented earlier by Dr Munir Ahmad, President, Islamic Society Of Statistical Sciences (ISOSS). Dr Munir appreciated the efforts of the students, and apprised the audience about the usefulness of such projects.

The program ended with some remarks by Dr Mrs Mira Phailbus, Principal, Kinnaird College, words of appreciation by one of the senior nurses who had come to attend the program, and a colourful prize and certificate-distribution ceremony to appreciate the efforts of the students and other persons who had

contributed to make the program a success.

Concluding Remarks

The 'Nurses Day' at Kinnaird College was one of the numerous programs that have been organised by the Department of Statistics at Kinnaird College during the past fifteen years for the promotion of the subject in the country. Such an educational activity not only enhances the students' ability to understand and communicate basic statistical concepts, it serves to disseminate information on a topic of social interest. Combining information with entertainment, such a program provides an effective forum for promoting interest, and for attracting students toward a discipline that is generally considered to be a 'dull' and 'dry' subject!

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