Correspondence

Use of services of spiritual healers among patients presenting to family physicians at a teaching hospital in Karachi Pakistan

I read with interest Dr. Waris Qidwai's article, "Use of Services of Spiritual healers among patients presenting to family physicians at a teaching hospital in Karachi Pakistan", published in "Pakistan Journal of Medical Sciences" Vol. 19, No.1, January-March 2003, pages 52-56. Unfortunately I found some mistakes, which I intend to bring to your knowledge.

Firstly, the sample size for the study has not been calculated correctly. There are two formulae of calculating the sample size if one is doing it manually.

1. $n_o = r^2 p q / d^2$

2. $n_o = (r^2 / d^2) / (p / q)$

n_o = First estimate of sample size (large population)

r^2 = Confidence Interval

p = Proportion of population with characteristic of interest

q = Proportion of population without the characteristic of interest (1-p or 100-p)

d^2 = Margin of error

If the population is not very large, as in Dr. Qidwai's study, then adjustment of initial sample size is made using the following formula.

$n = n_o / \{1 + (n_o - 1) / N\}$

n = adjusted sample size

n_o = initial sample size calculated by the above formula

N = total population to be sampled.

According to the author, he used Epi Info for calculation of sample size using 3600 as population, estimated prevalence of 50% and maximum error of 5%.

Using the first formula, the initial sample size comes to $(1.96)^2*50*50/(0.05*0.05) = 1536$
With second formula, the initial sample size comes to $[1.96^2/(0.05*0.05)] / (50/50) = 1536$
When this sample size is adjusted to a population of 3600, then

$$n = 1536 / \{1 + (1536 - 1) / 3600\} = 1077$$

The mistake made in calculating the size at Epi Info is that after giving the expected prevalence of 50%, the author has put the worst acceptable result as 45 or 55 percent i.e. 50% ± 5%. When instead of 50% we opt to accept a result of 45 or 55, our margin of error becomes 10% i.e. (55-50) / 50 * 100 = 10%. While calculating the sample size at Epi Info, we have to put in the worst acceptable result by ± margin of error calculated as percentage of prevalence. The 5% margin of error at 50% prevalence will be 50*5% = 2.5. So the worst acceptable results will be either 47.5 or 52.5 (50.0 ± 2.5). When we put this figure in formula given in Epi Info, we get a sample size of 1077.

Secondly, one is not clear about the population size. The author has stated that the study was conducted from February to June 2001 at the Family Centre of AKUH, where on the average 150 patients were seen daily by family physicians. If one assumes that this centre works five days a week, then the total number of working days comes around 100 during five months' study period. Let us say that there were 10 public holidays during this period. We are then left with 90 days. At a rate of 150 patients per days, the minimum number of patients seen during the study period will be 13,500. I wonder why the authors have

mentioned a population size of 3600 individuals?

*Population Survey or Descriptive Study
Using Random (Not Cluster) Sampling*

Population Size	:	3,600
Expected Frequency	:	50.00%
Worst Acceptable	:	47.50%

Confidence Level	Sample Size
80%	556
90%	832
95%	1,077
99%	1,528
99.9%	1,966
99.99%	2,258

Formula : Sample Size = n / (1 − (n / population))

$$n = Z*Z (P (1-P)) / (D*D)$$

Reference:

1. Kish & Leslie, Survey Sampling, John Wiley & Sons, NY, 1965

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Author's Response: The learned reader's concerns are valid. As regard the sample size estimation and the study population size, following explanations are submitted:

Since the estimated prevalence of the use of the services of spiritual healers is unknown, a 50% prevalence was assumed for the calculation purposes. Since this is the first study on this issue, we kept a wider margin of error from 45 to 55%, giving us the sample size of 347. Please note that we have reported the use of the services of spiritual healers in percentage that is, 11.6% of the respondents used the services of spiritual healers. Please also note that we have not subjected the data to any statistical tests. Regardless of the statistical significance of our study, we do believe it carries significance for medical practice. Our recommendation is to conduct further studies on this issue in the community and with a larger sample size (Keeping a narrow margin of error).

Since the study was conducted in a portion of the facility, we estimated the population size at 3600 during the period of the study. We hope our explanation clears the situation for our learned readers. In the end, I take this opportunity to congratulate you and your team of Reviewers for their valuable comments and for publishing a medical journal of international standard.

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Preserving patient's record in hospitals

Many years ago while I was working as Junior Registrar in the Obstetrics and Gynecology Department of Lady Reading Hospital, Peshawar, patients' records were then routinely sent to the Records office after their discharge from the hospital. There the records were haphazardly heaped up on dirty shelves or on the floor. Retrieving a patient's record for research or other purposes was a frustrating ordeal. We tried for a while to keep these records in our department but two large cupboards were filled to the brim within a year.

To facilitate retrieval of records for any purpose, we devised a single printed sheet that accommodated all the relevant information such as history, physical findings, investigations, medication and operative or delivery notes. Any column left vacant by the writer of the history can be spotted at once. It takes only

a short time to become familiar with the various columns both in their initial filling as well as subsequent data retrieval for research purposes.

Comments and suggestions of the users of this chart which is being published in this issue of "Pakistan Journal of Medical Sciences" will be gratefully acknowledged. Colleagues in other institutions are of course free to make suitable changes, addition or alterations to this chart to meet their requirements.

Details of medication, progress of labour, fetal heart record etc can be recorded on separate sheets. These sheets can be discarded after a summary of their contents is transferred to the printed sheet. This appears to be an economical cost effective way of preserving patients record in Hospitals.

The chart contains the following abbreviations: -

E   = Emergency admission
B   = Booked Case
G   = Gynecologic Case
OB   = Obstetric Case
R   = Regular admission through O.P.D.
Other = Non-Obstetric / Non-Gynecologic problem
MR   = Marital Relations, i.e. frequency of coitus

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