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Original Research Article

Feedback of postgraduate students about research methodology workshop

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ABSTRACT

Background: The feedback from PG students will address the issues in organization of the workshop if any, which may be helpful for the continual improvement. The objectives of the study were to analyze the feedback of postgraduate students about every session of workshop; to analyze the feedback of postgraduate students about overall program of workshop; to assess the change in the knowledge of the participants with the help of pretest and posttest scores.
Methods: The present cross sectional study was carried out in the month of August 2018. The three days research methodology workshop was conducted at Shri Vasantrao Naik Government Medical College, Yavatmal during 7th to 9th August 2018 for the 44 postgraduate students. The pretest questionnaire, posttest questionnaire, daily feedback form and program evaluation form were given to each participant. The analysis of pretest and posttest was done by paired t test with statistical software Epi Info Version 7.
Results: Total 44 postgraduate students gave feedback on each day. The maximum score (1108) was given by participants to experimental study design and lowest score (942) was given to third group activity based on literature search. For the question about the scope for betterment in the workshop, we had developed three themes based on the responses of participants by using content analysis. Paired 't' test showed significant difference between pre and post-test ($p<0.001$).
Conclusions: The students gave constructive feedback on improvement of the sessions on literature search and Mendeley.

Keywords: Feedback, Research methodology, Postgraduate students, Organization of workshop

INTRODUCTION

When research is conducted purely for educational purposes, such as with a medical student project, the main purpose is not to generate new knowledge but instead to provide practical training in research that will equip the individual to conduct sound primary research at later stage.[1] The aim of research methodology workshops (RMW) is to familiarize the students and medical professionals with basic, clinical and translational research as it applies to the care of the patient.[2]

The dissertation submission to Maharashtra University of Health sciences (MUHS), Nashik is mandatory to each postgraduate (PG) student of all subjects who is pursing MD/MS/superspecialty courses as a partial fulfillment. Therefore each PG student is conducting research for dissertation. A workshop in research methodology has

been designed by MUHS, Nashik to sensitize the PG students about research and inculcate the research skills. This will also refresh the concepts of research of PG teachers and will be helpful to guide the PG students during dissertation.

The feedback from PG students is necessary to make changes in the organization of such workshops regarding the contents of RMW, pattern of teaching in terms of theory/practical/demonstration. This will also address the issues in organization of the workshop if any, which may be helpful for the continual improvement.

After an exhaustive search in print journal and databases, very few studies were found so this study was planned with following objectives:

Objectives

- To analyze the feedback of postgraduate students about every session of workshop
- To analyze the feedback of postgraduate students about overall program of workshop
- To assess the change in the knowledge of the participants with the help of pretest and posttest scores.

METHODS

The present cross sectional study was carried out in the month of August 2018. The three days research methodology workshop was conducted at Shri Vasantrao Naik Government Medical College, Yavatmal during 7th to 9th August 2018 for the first year postgraduate students and faculties. The registered participants were 44 postgraduate students, two teachers from the same college and one private practitioner. We analyzed the feedback of 44 postgraduate students only and remaining participants were excluded from the analysis.

The sessions of research methodology workshop was conducted as per the guidelines of Maharashtra University of Health sciences(MUHS) of Nashik.[3] The workshop included 17 theory lectures along with 05 group activities. The program schedule of the same workshop was approved by Institute of Medical Education Technology and Teachers Training of MUHS, Nashik. We had received the predesigned pretest-posttest questionnaire, daily feedback and program evaluation forms from MUHS Nashik.

The program schedule of the workshop was informed to the participants in advance by a circular from the organizing secretary. Before staring the workshop, the pretest questionnaire was given to the students along with necessary information for the solving the pretest. They were also informed to about non-disclosure of identity. The pretest consisted of 30 multiple choice questions (MCQ) and allotted time was twenty minutes. The correct answer of every question of was awarded the one mark. The same procedure was followed for the posttest which was conducted at the end of workshop i.e. on the third day. Same questionnaire was used for posttest also.

The daily feedback form was given to each participant at the end of every day of workshop which consisted of feedback of each session while program evaluation form was given at the end of workshop. The students were asked to give the feedback honestly and without any hesitation.

The daily feedback was supposed to be given in the form of scores for e.g. 4-excellent, 3-good, 2-fair and 1-poor. They had to provide the feedback based on seven criteria like objectives clearly defined or not, speaker's subject knowledge, speaker's presentation, relevance, effective use of teaching aids, interaction with the participants and lesson as a whole was effective. The minimum and maximum score for each session was 7 and 28 respectively. The program evaluation forms consisted of some MCQ type and some open ended questions regarding evaluation of the program. The open ended questions were summarized as per the participants' view by using content analysis. The analysis of pretest and posttest was done by paired t test with statistical software Epi Info Vesrion 7. The p value was considered significant, if it was less than 0.05.

RESULTS

Total 44 postgraduate students gave feedback on each day. The maximum score (1108) was given by participants to experimental study design and lowest score (942) was given to third group activity based on literature search (Table 1).

Only 13 participants had given feedback about amazing sessions of the first day. Out of 13, most of the postgraduate students, 7 (15.91%) had reported the amazing sessions of first day were group activity based on all study designs, followed by 2 (4.55%) experimental study session, 1 (2.27%) sampling methods and 1 (2.27%) case control and cohort study. But one postgraduate student reported nothing amazed him on first day of the workshop (Table 2).

Only 10 participants had filled the information about amazing session of the second day. Out of 10 participants, most of the students i.e. 4 (9.09%) reported that the session on Mendeley amazed them, followed by 2 (4.55%) each on writing research protocol and inferential statistics, while 1 (2.27%) each was amazed by evaluation of diagnostic test session and all group activities of second day (Table 3).

On third day also only 10 participants gave feedback on amazing sessions. Four (9.09%) were amazed by session on ethical issued in medical research followed by 3 (6.82%) by computer assistance in excel and Epi Info and 1 (2.27%) was amazed by breakfast of that day.

Table 1: Total score, mean, median and standard deviation (SD) for each session of workshop (n=44).

Sr.No.	Title of session	Total score	Mean	Median	SD
1	Introduction to Research Methodology	1019	23.2	24	3.8
2	Descriptive studies	1048	23.8	25	3.7
3	Case control and cohort studies	1061	24.1	24.5	3.9
4	Experimental studies	1108	25.2	25.5	2.6
5	Group Activity based on study design	1010	23.0	24	5.4
6	Sampling methods and sample size	1002	22.8	22	4.1
7	Group Activity based on sample size	981	22.3	24.5	7.4
8	Types of data and data presentation	972	22.1	22.5	5.3
9	Writing research protocol	1064	24.2	25	3.3
10	Evaluation of a diagnostic test	1038	23.6	25	4.3
11	Literature search	1037	23.6	24.5	4.2
12	Mendeley	1016	23.1	23.5	4.5
13	Group activity based on literature search	942	21.4	25	8.5
14	Inferential statistics	1003	22.8	23	5.2
15	Group activity based on inferential statistics	1023	23.3	24.5	6.3
16	Questionnaire designing	1046	23.8	25.5	5.3
17	Critical evaluation of journal article	1005	22.8	24	5.9
18	Group activity based on critical evaluation of Journal article	1042	23.7	25	5.7
19	Computer assistance in data analysis using excel and Epi info	1080	24.5	25	4.2
20	Ethical issues in medical research	1058	24.0	25.5	4.6
21	Qualitative research methods	1070	24.3	25	4.1
22	Dissertation writing	1060	24.1	26	4.7

(Highest score=1108 and lowest score=942).

Table 2: Distribution of amazing sessions of workshop of day-1.

Sr.No.	Title of session	Numbers (%)
1	Group activity related to study designs	7 (15.91)
2	Experimental study	2 (4.55)
3	Sampling methods	1 (2.27)
4	Case control study and cohort study	1 (2.27)
5	Nothing	1 (2.27)
6	Tea break	1 (2.27)
7	No response	31 (70.45)
Total		44 (100)

Table 3: Distribution of amazing sessions of workshop of day-2.

Sr.No.	Title of session	Numbers (%)
1	Mendeley	4 (9.09)
2	Writing research protocol	2 (4.55)
3	Inferential statistics	2 (4.55)
4	Evaluation of diagnostic test	1 (2.27)
5	Day-2 group activities	1 (2.27)
6	No response	34 (77.27)
Total		44 (100)

For the question about the scope for betterment in the workshop, we had developed three themes based on the responses of participants (Day-1=13 participants, Day-2=10 participants, Day-3=10 participants) by using content analysis.

- There was scope in betterment in hands on training on literature search and Mendeley as wifi/internet facility was not available in the hall.
- There could have been good quality of AV aids and uninterrupted electricity supply.

- The duration of group activities should be increased as it were interesting and all could not participate in it due to time constraints.

One of the students said that *if he would have been the organizer of the workshop, he would have requested all the heads of the department to relieve the postgraduate students from all duties so that they could have been more alert during session*. But he was satisfied with the pattern of the workshop.

One of the students suggested that *every student should finalize his/her topic before attending the workshop so that it will be more helpful*.

Table 4: Distribution of amazing sessions of workshop of day-3.

Sr.No.	Title of session	Numbers (%)
1	Ethical issues in medical research	4 (9.09)
2	Computer assistance in Excel and Epi info	3 (6.82)
3	Questionnaire designing	1 (2.27)
4	All sessions of day-3	1 (2.27)
5	Breakfast	1 (2.27)
6	No response	34 (77.27)
Total		44 (100)

Table 5: Comparison of the mean pretest and posttest scores of the participants of the workshop.

Sr. No.	Test	Mean	SD	't_{43}' value	'p'	Significance
1.	Pretest	7.31	3.86	8.46	<0.001	Significant
2.	Posttest	13.75	4.77			

The mean pretest and post test score was 7.31 and 13.75 with SD of 3.86 and 4.77 respectively. Paired 't' test showed significant difference between pre and post test ($p<0.001$) (Table 5).

DISCUSSION

The present study was planned to study the feedback from PG students about RMW. Though students (n=44) had given highest score for the session on experimental study design but the amazing session of first day was group activity based to study designs, followed by session on Mendeley and ethical issues in medical research. This disparity might be due to response by very few students to the open ended questions.

As per the feedback from the students there was still a scope for improvement in sessions like literature search and Mendeley. They were interested in hands on training in literature search and Mendeley. We couldn't give justice to these topics due to time constraints and non-availability of wifi facility.

About organizational issues like better audio-visual arrangements, generator backup and provision of more chocolates, we the authors of this research article discussed this issue. As per our view, the audio-visual aids were up to the mark. The whole campus was having uninterrupted electricity supply through express feeder, the generator was not necessary.

For the betterment of group activity of all days, every student was supposed to participate in the group activity but it was not possible. The suggestion of finalizing the topic by the every student before attending the RMW was really appreciable and practical so it was conveyed to the head of the institute to think and act on.

The present study showed significant difference between pretest and posttest revealing positive change in the knowledge of students due to this workshop. Alfakih reported improvement in the scores of the participants of the training programme who acquired the research skills for preparing a research proposal (t_6=-2.69, p=0.03).[4] Bidve et al also reported significant improvement in the posttest scores of teaching staff and postgraduate students ($p<0.001$).[2] Kumar et al in their study in their study found significant difference in pretest an posttest scores.[5] Abdulghani et al observed 17.67% ($p\leq0.005$) increase in the scores of basic knowledge and cognitive skills amongst 116 faculty members through pre and post MCQs test.[6] Pre-and-post tests scores on workshops sub-topics also significantly improved for the manuscripts ($p\leq0.031$) and proposal writing ($P\leq0.834$). Similar results were observed by Prabhu et al.[7] Shrivastava et al reported that the mean pretest and post-test scores at 95% confidence interval were 07.62 (SD±3.220) and 09.66 (SD±2.477) respectively.[8] The differences were found to be significant using paired sample T test ($p<0.003$).

Strength of study

We studied the feedback of the students on each session in research methodology workshop.

Limitation

Very few students responded to the open ended questions in the questionnaire on daily feedback and programme evaluation.

CONCLUSION

The students gave constructive feedback on improvement of the sessions on literature search and Mendeley. They also expected improvement in the organizational issues. They were really benefited by this workshop.

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