

Effects of webinar based teaching program on therapists' attitude and satisfaction of LBP patients

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Abstract

Webinar is an online process of gathering and presenting the information with large viewers around the world. We observed that there is lack of research on webinar in medical field. The aim of this study was to find the effect of webinar based teaching learning program on the attitude of physiotherapists, quality of treatment and satisfaction of patients with chronic low back pain. This is an experimental design. In phase-1, (n = 92) physiotherapists were selected and their attitude was measured before and after attending the 3 day webinar on theoretical and practical approaches of low back pain. In phase 2, according to the selection criteria, (n = 30) the subjects with low back pain were recruited. They were divided into two groups (webinar training group and non-training group) and they were treated by trained and non-trained physiotherapists for four weeks. The health-related quality of life and satisfaction of the patients were measured before and after the treatment. Phase-1 analysis shows significant difference between the pre and post values ($p \leq 0.05$) in physiotherapy attitude. In phase-2, 4 weeks after treatment, substantial improvement was shown in quality of life and satisfaction of the patients ($p \leq 0.05$). Greater evidence of improvement in quality of life and satisfaction of patients was noted in webinar training group than non-training group. There were wide beneficial effects of webinar based training on behavioral attributes in participant's attitude and it reflects positive effects on quality of life and satisfaction of the patients with chronic low back pain.

Keywords: Webinar, Teaching learning program, Physiotherapy attitude, Quality of life, Patient satisfaction, Low back pain

INTRODUCTION

Webinar is an online process of gathering and presenting the real-time information with large viewers around the world, also it is known as an online distant teaching learning (TL) method. ^[1] The unique identity of this TL method is presenter participant interaction, it means the ability to interact, and send and get the real time information instantly. It has a positive attitude towards learning process and brings the participants together and provides mutual learning. ^[2] This method of webinar TL has been widely used in different specialties such as medical, pharmacy, engineering, business, arts, science and education. Medical webinar is the application and usage of medical courses, seminars, workshops and conferences in the medical and paramedical field. ^[3, 4] Nowadays, there is a substantial increase in the number of medical and paramedical webinars in the field of education. Hence, it is necessary to measure the feedback of the participants and its effect on the participants' attitude and patients' satisfaction.

In the present situation, webinar plays a major role in performance of the participants. Measuring participants' attitude after webinar plays a vital role in measuring the quality of webinar. Assessing the participants' online

feedback form is one of the methods to measure the quality of webinar. ^[5, 6] The participants' online feedback form includes the data and items which describe the quality of webinar and different feedback forms have already been introduced in the education system. ^[7]

Webinar-based TL program provides the great opportunity for the practicing physiotherapists to interact with the pioneers in the field of physiotherapy and provide good quality updated treatment to the patients. ^[8] De Muth

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It is stated that webinar-based programs connect the world at the same time who has the same set of attitudes, belief and ideology. Therefore, it is necessary to know the role and effect of webinar-based TL program in medical field. This study seeks to find whether the webinar-based TL program will change the attitude of physiotherapists, and quality of life and satisfaction of patients.

We observed that there is the lack of research in the field of TL program in medical field. Hence, the aim of this study was to find the effect of Webinar-based teaching learning program on attitude of physiotherapists, and quality of treatment and satisfaction of patients with chronic low back pain.

METHODS

Study Design

The study was an experimental study and the participants were observed before and after attending the webinar. Ninety two (N = 92) subjects were observed. The study was approved by the Departmental scientific ethical committee and was conducted according to the ethical guidelines.

Participants

Phase: 1

In order to take part in the study, the participants had to agree to participate in the study and sign the informed consent approved by the ethical committee. Inclusion criteria for selection of the subjects were as follows: clinical therapists with bachelor's degree, and both sexes with different years of experience.

Phase: 2

The patients in the age group of 18 – 25 years, chronic (≥ 3 months) LBP and 4 to 8 pain intensity in visual analogue scale were included. The participants with severe musculoskeletal and other systemic problems were excluded from the study.

Procedures

In phase I, the selected physiotherapists were undergone 3 days webinar program on special approaches with regard to chronic low back pain. The therapists filled the physiotherapy attitude form before and after the program. The webinar was conducted for three days including all the theoretical and practical approaches of low back pain. Every day, the program started at 09:00 am and ended at 06:00 pm with the break between 01:00 to 02:00 pm. The formal credit points of 6 hours were given for each participant for everyday for three days. The webinar was conducted by experts in the field of low back pain and effective discussion was done between the resource person and the participants. The attitude of the physiotherapists was measured before and after webinar and the scores were analyzed.

In Phase 2, according to the selection criteria, the patients with low back pain (n = 30) were recruited. The pre training scores such as quality of life and patient satisfaction have been measured from all the subjects before participating in the training program. Then they were treated by trained physiotherapists for four weeks and the behavioral attitudes such as the patients' quality of life and satisfaction were measured. Health related quality of life (HRQOL) and patient satisfaction questionnaires were used. We excluded twelve patients with excruciating pain (≥ 8 in VAS scale), five patients with other musculoskeletal injuries and eleven who were not willing to participate in the study (Figure-1).

Dependent Variables

Physiotherapy attitude form

This form focused on the clinical therapists' knowledge on the theory and practical skills on low back pain. Before training based on webinar, all the participants were evaluated with the physiotherapy attitude form. The items in the questionnaire were related to the contents of the webinar such as (knowledge of anatomy, evaluation procedures and treatment). Each domain is scored in 0 - 100 scale and higher scores denote better attitude. After three days of webinar training on low back pain, the participants were asked to fill the Appendix-1 again to compare the pre and post training effects.^[9]

Health Related quality of life (HRQOL) Questionnaire:

Health-related quality of life (HRQOL) is the physical, mental and social health status of each patient perceived over a period of time. Each domain is scored in 0 - 100 scale and higher scores denote better quality of life. Health Related quality of life (HRQOL) Questionnaire is a reliable and valid questionnaire to measure the quality of life in musculoskeletal pain conditions.^[10]

Patient satisfaction questionnaire:

Patient satisfaction questionnaire measures the overall satisfaction of the patients through asking to answer some items in the questionnaire. The items in the questionnaire measure the improvement, decision making, intervention and approach; which fulfil patients' expectations. Each domain is scored in 0 - 100 scale and higher scores denote better satisfaction. Patient satisfaction questionnaire is a reliable and valid questionnaire to measure the satisfaction of patients in low back pain conditions.^[11]

Blinding

Due to the design and settings of the study, it is not possible to blind the treating therapists involved in the study. The subjects and the therapists who were assessing the outcomes at baseline for 4 weeks were blinded. Hence, the treating and assessing therapists were different persons and the assessing therapists remain blinded to the subjects' treatment group assignment at all times.

Statistical analysis

The results are presented as mean and standard deviation and paired t-test and independent t test were performed to determine significant differences within groups and between groups. The statistical significance level was set at $P < 0.05$ and SPSS software (version 20.0) SPSS Inc, Chicago, Illinois, USA was used for all statistical analyses.

RESULTS

Participants

In phase 1, totally 128 physiotherapists were registered for the webinar and as per the selection criteria 92 were included for the study. All the 92 participants have completed the whole 3 days webinar program with the study compliance of 100%. 48 participants were in the age group of 21 to 30, 32 were in the age group of 31 to 40 and 12 were in the age group of 41 to 50. It shows that age group 21 to 30 was more interested in attending the program.

Moreover, males ($n=64$) were registered more than females ($n=28$). Participants with clinical experience of 1 year to 10 years were registered more and it was also observed that more participants were working in private sector than government sector which is shown in Table 1. The attitude of the physiotherapists was measured with physiotherapy attitude form before and after 3 days of webinar and the scores was analyzed. The analysis shows significant difference between the values ($p \leq 0.05$) which is shown in Table 2 and Figure 2.

In Phase 2, totally 58 low back pain subjects were registered for the study and 28 patients were excluded from the study as per the study selection criteria. The remaining 30 patients were assigned into two groups such as training group ($n=15$) and non-training group ($n=15$) which is shown in figure 2.

The basic demographic characters such as age, height, weight and duration of injury were shown in Table 3. The statistical analysis shows there is no significant difference ($p > 0.05$) between the two groups.

HRQOL

The health-related qualities of life for the patients were measured before and after 4 weeks of treatment. The pre-analysis of score between the groups shows no significant difference ($p > 0.05$). However, 4 weeks after the analysis, significant improvement was achieved in the scores ($p \leq 0.05$). Greater evidence of improvement in quality of life was noted in the training group than non-training group (Table 4 and Figure 3).

Patient satisfaction

Changes in patients' satisfaction between pre and post-training are shown in Table 4. The pre training score noted no difference between the groups ($p \geq 0.05$). The training group showed significant improvements from pre to post ($p \leq 0.05$). Greater evidence of improvement in patient

satisfaction was noted in training group than non-training group (Table 4 and Figure 4).

DISCUSSION

Feedback reports from the webinar training program were positive which indicates the quality of program and its presentation. The participants who registered for the webinar were completed the program which was a success to obtain the first objective of this study. The completion of this program was due to the usage of evidence-based materials and lectures delivered by the pioneers in this field. Overall, the participants' attitude towards the course was improved at the end of the program which was due to its course content, presentation and depth. Only clinical physiotherapists were included in this study which enhances the attitude of therapists due to their day to day application over patients. The inhibition in participating in such program is limited access and lack of reimburse from the respective hospital or clinic.

In contrast, the reason behind attending such webinars is for gaining credit points to renew their license in the concerned associations and societies. Another reason for attending webinars makes the attendant more confident, updated and independent in treating such cases. Also the webinar program provides program in online form which saves the time and cost of the participants. Hence, the participants may register for such types of training program.

Another objective of improvement in quality of life and patient satisfaction after such program is due to confident in treating such special cases. Experiences obtained in such program remove the doubts regarding the condition and provide positive outcome. It is also observed that around 85% of participants were interested in future webinars.^[12]

The greater strength of this study is its real-time measurements of behavioral attributes in chronic non-specific low back pain subjects. Still, few limitations have been observed. First, the sample size was small, and therefore a generalization of the results becomes contradictory. Next, we have not analyzed the association between the behavioral and clinical effects of webinar training.

CONCLUSION

There are wide beneficial effects of webinar based training on behavioral attributes in participants' attitude and it reflects positive effects on subjects with low back pain. In conclusion, the present study forwards that training through webinar is more effective method than traditional training program.

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Table 1: Demographic characteristics of the physiotherapists

No	Variable	Category	No	Mean & SD
1	Age (y)	21 – 30	48	25.9 ± 2.8
		31 – 40	32	34.2 ± 1.8
		41 – 50	12	42.6 ± 1.5
2	Gender	Male	64	-
		Female	28	-
3	Clinical experience (y)	1 – 10	56	4.6 ± 1.5
		11 – 20	25	13.3 ± 1.3
		20 – 30	11	23.6 ± 2.3
4	Sector	Govt	12	-
		Private	80	-

Table 2: Pre and post scores of the attitude form for physiotherapists

No	Variable	Pre	Post	p-value
1	Physiotherapy Attitude score	18.36 ± 3.6	78.45 ± 2.8	<0.001**

** Significant

Table 3: Demographic characteristics of the patients

No	Variable	Training Group	Non training Group	p-value
1	Age (y)	32.3 ± 2.4	31.8 ± 2.5	0.558*
2	Height (m)	1.61 ± 0.12	1.58 ± 0.14	0.533*
3	Weight (kg)	75.8 ± 1.8	74.6 ± 2.1	0.104*
4	Duration (m)	4.2 ± 0.6	3.8 ± 0.7	0.078*

* Non-significant

Table 4: Pre and post scores of HRQOL and patients satisfaction

No	Variable		Training Group	N training Group	p-value
1	HRQOL	Pre	28.56 ± 2.6	27.45 ± 3.5	0.332*
		Post	92.48 ± 1.4	42.81 ± 2.3	<0.001**
		p-value	<0.001**	<0.001**	
2	Patient Satisfaction	Pre	27.87 ± 2.5	28.62 ± 2.8	0.445*
		Post	88.28 ± 3.3	36.42 ± 2.2	<0.001**
		p-value	<0.001**	<0.001**	

* Non Significant, ** Significant

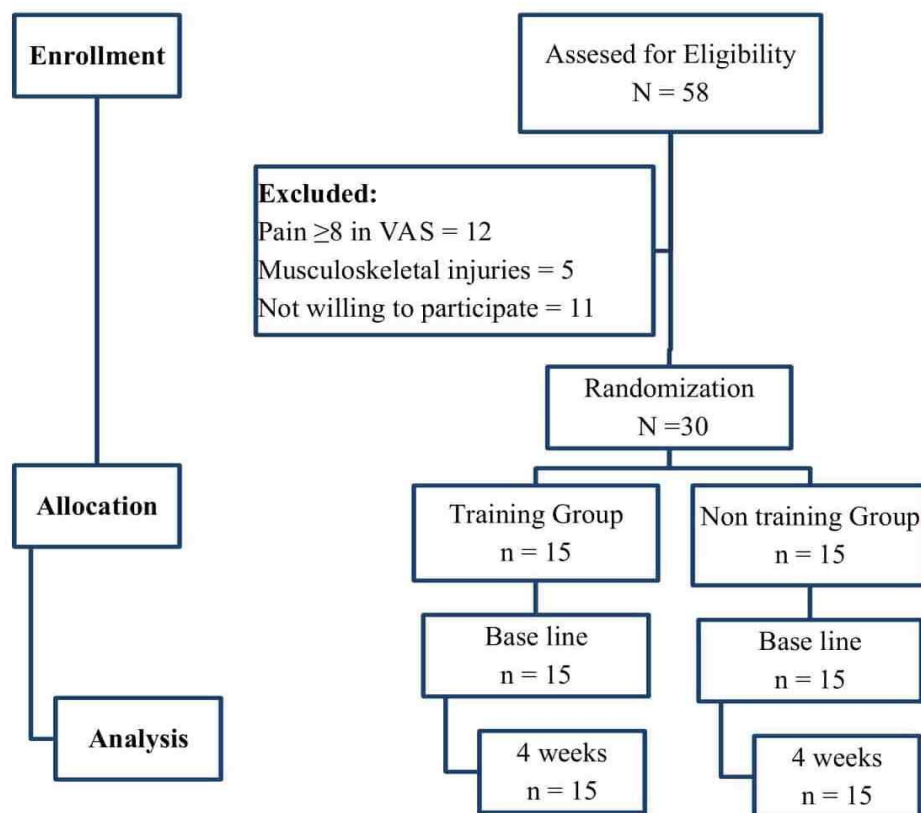


Figure 1: Flow chart showing the study details

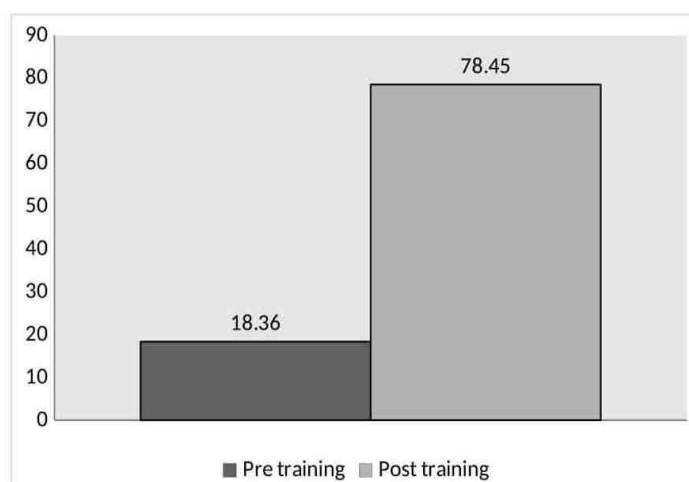


Figure 2: Pre and post scores of the attitude form for the physiotherapists

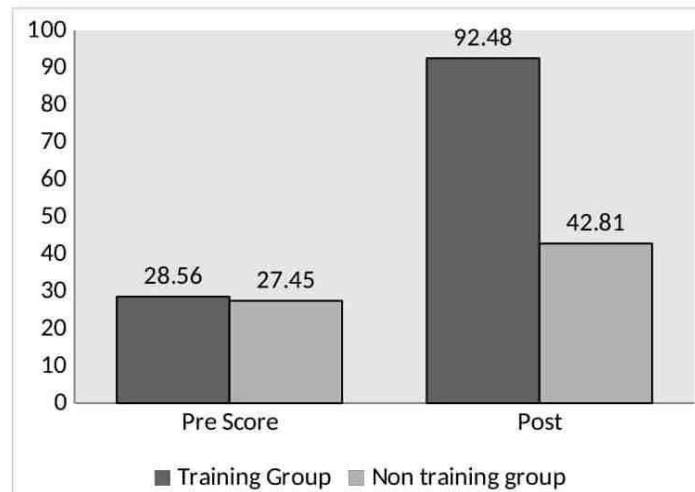


Figure 3: Pre and post scores of health-related qualities of life of the training and non-training groups

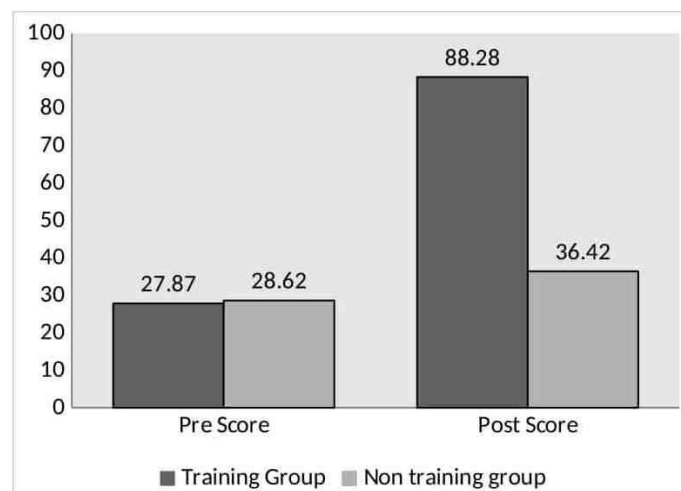


Figure 4: Pre and post scores of satisfactions of the training and non-training groups