



## Impact of Video-Assisted Teaching on Stress Management Knowledge among Healthcare Professionals: A Quasi-Experimental Approach

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### Abstract

**Introduction:** Occupational stress is a significant issue for healthcare workers, impacting both their emotional and physical well-being. Stress reduction techniques are crucial for managing this stress effectively.

**Aim and Objective:** This study aimed to assess the effectiveness of a Video-Assisted Teaching Programme in improving healthcare workers' knowledge about stress reduction techniques.

**Material and Methods:** A quasi-experimental study was done on 60 healthcare workers from hospitals in Kangra district, Himachal Pradesh by using purposive sampling and a self-structured questionnaire was made to assess the knowledge of health care workers. Prior to the beginning of the study, they were explained the purpose and nature of study. Information on demographic variables which includes age, type of family, educational status, occupational status, socioeconomic status and previous knowledge. Descriptive and inferential statistics, including paired t-test and chi-square tests, were applied. The post-test scores showed a significant improvement, with 95% of participants achieving adequate knowledge after the intervention compared to 50.3% before. The mean pre-test score was 50.3%, which increased to 74.7% post-test ( $t = 29.196$ ,  $p < 0.05$ ).

**Conclusion:** The study concluded that the video assisted teaching programme is significantly effective in enhancing the knowledge of health care workers regarding stress reduction techniques. Early awareness can prevent health care workers from suffering from various physical and mental strain.

**Keywords:** Stress; Stress Reduction Techniques; Health Care Workers

### Introduction

Stress is a feeling of emotional or physical tension. It can come from any event or thought that makes you feel frustrated, angry, or nervous. Stress is our body's reaction to a challenge or demand [1]. Stress can be defined as any type of change that causes physical, emotional, or psychological strain. Stress is our body's response to anything that requires attention or action. Stress is a normal part of life that can either help us learn and grow or can cause us significant problems [2]. Healthcare workers are an especially vulnerable group, with stressful environments and work pressure often leading to burnout. Occupational stress in a wide range of workers, including nurses, physicians, technicians, therapists, and other personnel in various disciplines [3], and common themes have emerged in the literature. Long hours, overwork, shift work,

inadequate staffing, emotional demands, administrative burdens, and physical workplace hazards are all believed to be contributors, and it has been suggested that stress and burnout have been associated with decreased job satisfaction, poor job performance, and negative patient outcomes. Many healthcare workers place the well-being of others before self. On the surface, this dedication to patients may seem admirable. However, it can ultimately be harmful if it delays or prevents workers from getting the help that they need for their own health and well-being [4].

Stress can be managed by seeking support from loved ones, regular exercise, meditation, or other relaxation techniques, structured timeouts, and learning new coping strategies to create pre-

dictability in our lives. Relaxation techniques that can help you evoke the relaxation response and reduce stress. Breath Focus, in this powerful technique, you take long, slow, deep breaths. As you breathe, you gently disengage your mind from distracting thoughts and sensations. Guided Imaginary, in this technique, you conjure up soothing scenes, places, or experiences in your mind to help you relax and focus. You can find free apps and online recordings of calming scenes.<sup>5</sup> Progressive muscle relaxation is a deep relaxation technique that has been effectively used to control stress and anxiety, relieve insomnia, and reduce symptoms of certain types of chronic pain [6]. MBSR, or Mindfulness-Based Stress Reduction, is an eight-week mindfulness training program. MBSR is supported by a wide body of research showing that it is effective at addressing chronic pain, anxiety, depression, and general stress reduction [7]. One more technique used for stress management i.e. ABCDE approach it includes Adversity or Activating Event, Beliefs, Consequences, Disputing and Effects [8]. Healthcare workers can suffer from occupational stress as a result of lack of skills, organisational factors, and low social support at work. This may lead to distress, burnout and psychosomatic problems, and deterioration in quality of life and service provision. Randomised controlled trials (RCTs) of interventions aimed at preventing psychological stress in healthcare workers, and the prevalence of stress is 45% (95% CI 24.3–67.5%) among the Hospital staff caring for the patients [9]. Healthcare professionals are exposed to several job stressors that can adversely affect both their mental and physical health, decrease their efficiency at work, for a successful intervention, the causes and management of stress in any healthcare unit or among healthcare professionals must be diligently documented. The aim of this study is to explore issues on specific occupational stressors related to job performance, the role of healthcare in stress management and the effects of job resources on job demands, and also to create awareness for health care professional on how to manage stress [10]. Determine sources of role stress among doctors in Indira Gandhi Medical College and Hospital, a Government Medical Hospital located in Shimla (India) and to examine the stress levels among Male and Female doctors working in the hospital. A typical day of a doctor in this hospital starts with attending patients in the OPD or performing surgery in the operation theatre, then visiting the wards, taking lectures, guidance to doctoral students and research, attending emergency cases and working for long hours. Work-related stress has been implicated as a major contributing factor to growing job dissatisfaction among doctors. It has been found that job stress impacts not only on doctor's health but also their abilities to cope with job demands. This will seriously impair

the provision of quality care and efficacy of the health service delivery [11]. Giri Mani Lok., *et al.* [12], conducted a Cross-Sectional Web-based Survey on Perceived Stress, stigma, and social support among Nepali health care workers during COVID-19 pandemic. The study illustrated that nearly half (44.2%) of the respondents perceived poor social support. Similarly, almost 3% of the HCWs experienced high perceived stress, whereas 87.6% perceived moderate stress, and 35% of the HCWs felt stigmatized. The study findings revealed that proper psychological interventions like training, meditation and lifestyle modification are needed to promote the mental well-being of the healthcare workers. Another researcher Ali Akbari., *et al.* [13], conducted RCT study to look at how patients feel about themselves after practising progressive muscle relaxation. A statistically significant difference ( $P = 0.012$ ) was found between the control group's self-esteem ( $26.96 \pm 8.33$ ) and the experimental group's self-esteem ( $29.98 \pm 7.02$ ) 4 weeks following the intervention. There was a significant difference between the control group's self-efficacy mean score ( $38.04 \pm 5.46$ ) and the experimental group's self-efficacy mean score ( $46.40 \pm 5.04$ ) immediately after the intervention ( $P < .001$ ), and again 4 weeks later. The research study concluded that progressive muscle relaxation can be used as an additional therapy to help MS patients feel better about themselves and more confident in their abilities. Whereas Latha Prema., *et al.* [14] conducted Non-Experimental Research Study to Assess the Knowledge of Stress Management Techniques among Paediatric Nurses in Selected Hospital at Nagercoil. The tool was self-structured knowledge questionnaire. The Level of knowledge among Age related was more than 30 years were 24(80%), and less than 30 years were 6(20%); there is difference in Gender and Marital Status. Attended stress management course during the working period also found very less 7(23.3%). The study depicted that majority of the nurses have insufficient knowledge in stress management techniques.

### Aims of Study

The present study was to assess the pre- test knowledge score regarding stress reduction techniques among health care workers, assess the post- test knowledge score regarding stress reduction techniques among health care workers and to evaluate the effectiveness of Video Assisted Teaching Programme on stress reduction technique.

### Material and Methods

For the present study Fortis Hospital Kangra was selected. The rationale for selecting this setting for the study was researcher's

familiarity, geographical proximity and availability of subjects. The target population of the study was all health care workers who worked in Fortis Hospital District Kangra. 60 subjects were selected by using non- randomized purposive sampling technique. Participants in this study are selected because they have the characteristics that a researcher need in her study sample. Scoring interpretations was classified into 3 levels based on the score as follows. The maximum score was ‘30’ and minimum score was ‘0’. Each correct response carried ‘one’ score.

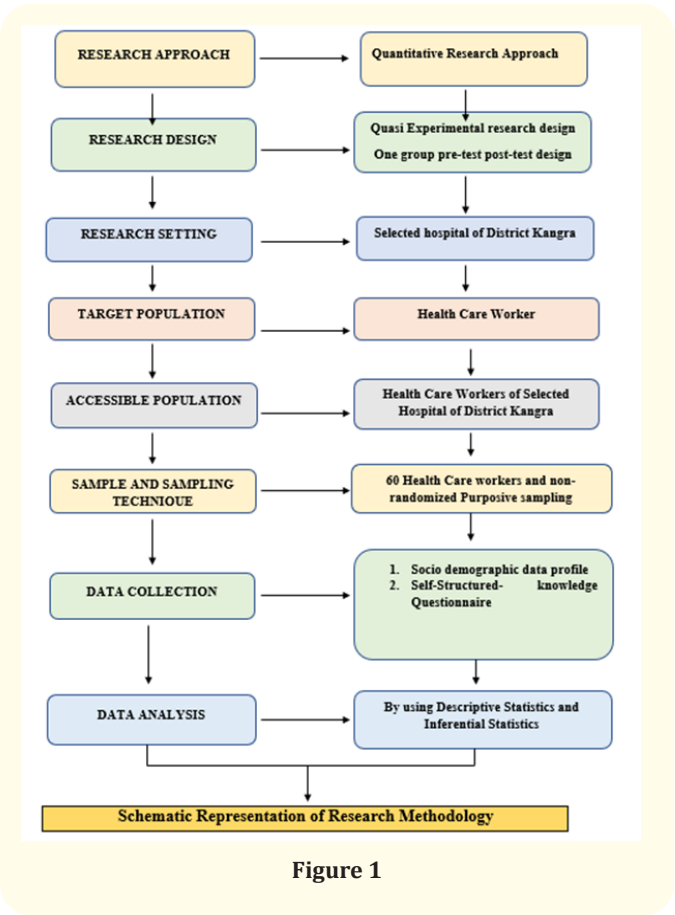


Figure 1

Ethical consideration

Approval was taken from the ethical and research committee and a written informed consent was taken from the individual subject. Confidentiality of the information will be maintained.

Data analysis is defined as the process of organizing and synthesizing the data so as to answer research questions and test hypothesis.

Results

Table 1 frequency and percentage distribution of health care workers according to demographic variables.

Table 1: Frequency and percentage distribution of health care workers according to demographic variables (N = 60).

| S. No. | Variables             | Opts                         | Frequency | Percentage |
|--------|-----------------------|------------------------------|-----------|------------|
| 1.     | Age                   | a) 25-27 yrs                 | 26        | 43.3%      |
|        |                       | b) 28-30 yrs                 | 23        | 38.3%      |
|        |                       | c) 31-33 yrs                 | 10        | 16.7%      |
|        |                       | d) 34-36 yrs                 | 1         | 1.7%       |
| 2.     | Type of Family        | Nuclear                      | 33        | 55.0%      |
|        |                       | Joint                        | 27        | 45.0%      |
| 3.     | Educational Status    | GNM                          | 9         | 15.0%      |
|        |                       | B.sc Nursing                 | 23        | 38.3%      |
|        |                       | Post Basic B.sc Nursing      | 14        | 23.3%      |
|        |                       | MBBS                         | 4         | 6.7%       |
|        |                       | Others                       | 10        | 16.7%      |
| 4.     | Occupational status   | Doctor                       | 4         | 6.7%       |
|        |                       | Nurse                        | 44        | 73.3%      |
|        |                       | Others                       | 12        | 20.0%      |
| 5.     | Socio-economic status | Rs 80,000 – 1,20,000 / month | 4         | 6.7%       |
|        |                       | Rs 40,000 –60,000 / month    | 14        | 23.3%      |
|        |                       | Rs 20,000 – 30,000 / month   | 42        | 70.0%      |
| 6.     | Previous Knowledge    | Yes                          | 41        | 68.3%      |
|        |                       | No                           | 19        | 31.7%      |

According to age, majority of the health care worker 26 (43.3%) belongs to the age group 25-27 years, 23 (38.3%) belongs to the 28-30 age group, 10 (16.7%) belongs to the 31-33 age group and only 1 (1.7%) belong to the age group 34-36 years. In accordance to Previous knowledge regarding stress reduction techniques, majority of health care workers 41 (68.3%) having the knowledge, and 19 (31.7%) health care workers doesn't have the knowledge regarding stress reduction techniques.

Frequency, Percentage distribution and mean of health care workers knowledge level.

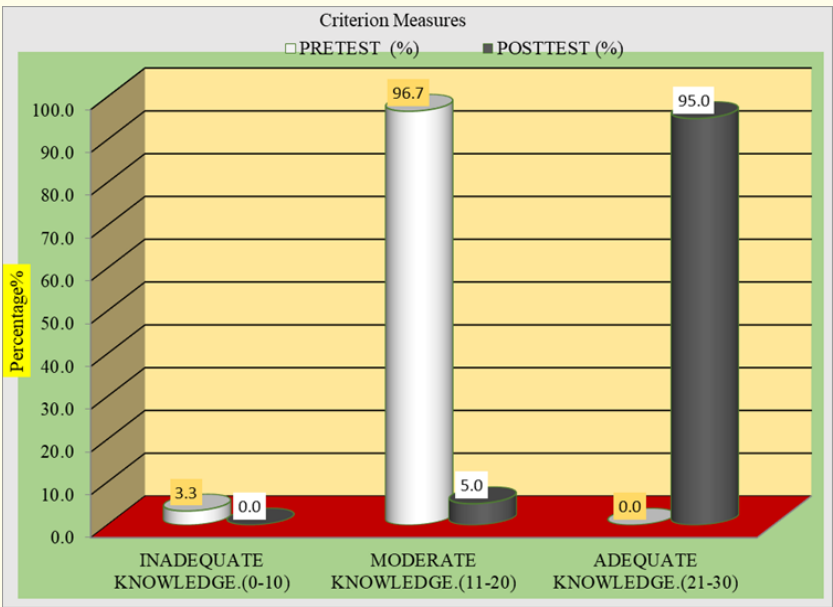


Figure 2: Pre & Post test knowledge score

Figure 2 representing comparison of percentage distribution of previous knowledge and the knowledge after giving the intervention. Previous knowledge of health care workers shown (3.3%) which means they had inadequate knowledge, whereas (96.7%) had moderate knowledge and none of the healthcare workers had adequate knowledge. In the post-test none of the health care workers had inadequate knowledge, (5.0%) had moderate knowledge and (95.0%) had moderate knowledge.

Enhancement of knowledge score on stress reduction techniques.

This section deals about the knowledge aspects of pre and post-test knowledge mean of health care workers regarding stress reduction techniques.

Enhancement of knowledge 24.44% was seen in the aspect of stress reduction techniques within the pre-test and post-test of 50.28% and 74.72% respectively. Its evidence that the video assisted teaching programme is effective on improving the knowledge of health care workers regarding stress reduction techniques.

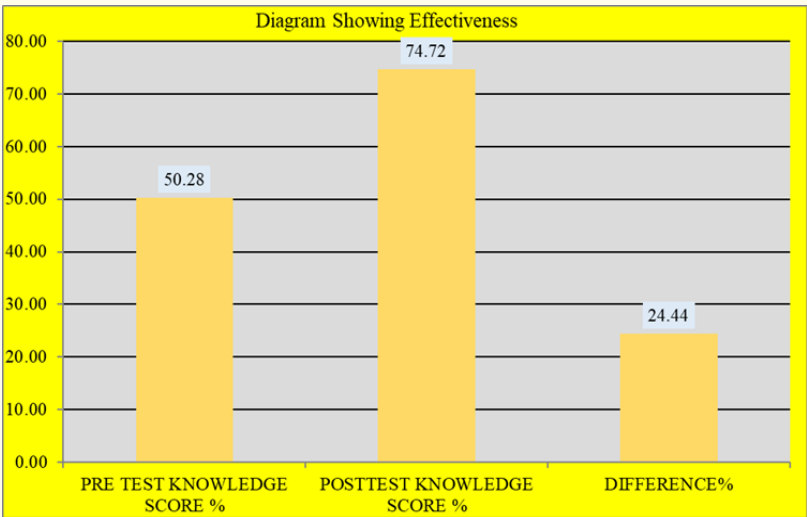


Figure 3: Effectiveness of video assisted teaching.

Figure 3 showing Association between pre-test knowledge score with their selected demographic variables. This section deals with the findings related to the association between pre-test knowledge score and selected demographic variables. The chi-square test was used to determine the association between the score levels and selected demographic variables.

## Discussion

Stress is a feeling of emotional or physical tension. It can come from any event or thought that makes you feel frustrated, angry or nervous. Stress is our body's reaction to a challenge or demand. Stress can be managed by seeking support from loved ones, regular exercise, meditation, or other relaxation techniques, structured timeouts, and learning new coping strategies to create predictability in our lives. Relaxation techniques that can help you evoke the relaxation response and reduce stress. Numerous similar studies have been conducted nationally and internationally on the stress reduction techniques. The results of present study revealed that in pre-test only 2 subjects had (3.3%) inadequate knowledge, whereas 58 subjects had (96.7%) moderate knowledge and none of the subjects had adequate knowledge. These findings were supported by Holley Avey, results showed that 10% health care providers have inadequate knowledge, 90% health care providers have moderate knowledge, and none of the subjects had adequate knowledge. After that when subjects were exposed to intervention i.e. video assisted teaching programme the study results revealed that none of the subject had inadequate Knowledge, but 3 subjects had (5%) moderate knowledge and 57 subjects had (95%) adequate Knowledge. These findings were supported by M. Sussane, Post-test knowledge score revealed that majority of the nurses had 83.33% adequate knowledge 7% had moderate and none of the nurses regarding effectiveness of stress management techniques. Comparison of pre-test and post-test level of knowledge representing effectiveness. In this pre- test knowledge score was 50.28%, and post- test knowledge score was 74.72% and difference is 24.44%. These findings were supported by M. Sushma, Study results shown that pre- test knowledge score was 60% and post- test knowledge score was 73.33%. whereas the satisfactory mean score of post-test was 20.8645%.

Investigator improved the mental awareness of health care workers about the stress reduction techniques to some extent by using video assisted teaching programme. Mindfulness meditation which emphasizes on self-awareness and present-moment focus, appears to be an effective tool in mitigating stress. Health-

care workers often experience high emotional demands whereas mindfulness techniques enable them to regulate their responses to stressors, leading to reduced burnout and emotional exhaustion. Investigator discussed the benefits of Progressive Muscle Relaxation which helps to reduce physical tension and especially useful for healthcare workers who experience physical strain in addition to mental stress. Progressive Muscle Relaxation offers a straightforward easy-to-learn technique that targets physical manifestations of stress. Early awareness can prevent health care workers from suffering from various physical and mental strain. Video content distributed among the health care workers regarding the execution of proper techniques, steps and they were asked to show the same at their clinical settings to their colleagues so they can enhance their knowledge about stress reduction techniques.

In the recommendations, it was specified that it is important to act on organizational level like:

- A lot of attention must be paid on communication, providing accurate updates in order to lower stress levels as much as possible.
- All measures that guarantee the health care professional's safety and enhance their well-being must be put into place.
- Interventions need to be tailor-made and safe telehealth services must be provided.
- Another resources, such as relaxation recordings and digital packaging (lots of free or low-cost software applications who simply allowed a simple communication to more dedicated technical solution for medical device to monitor the progress) should be made available.

Findings also suggest that these techniques might be particularly suitable in workplace more generally, beyond health care settings because it teaches foundational skills that are applicable to people across the distribution of wellbeing.

The limitation of study was that less sample size and could be conducted on different population. Further due to time constraint, couldn't study the factors responsible for stress and less awareness regarding stress reduction techniques.

## Conclusion

Effective stress management is crucial for healthcare professionals due to the high-pressure nature of their work. It directly impacts their well-being, job performance and the quality of patient

care they provide. Managing stress doesn't mean to avoid stressful situations or to suppress, it's about how you identify helpful thinking patterns and do reflective self-talks. If you have to be at work, be mindful of the little moments you can take for yourself, so that you can keep going. Small steps can help to manage your overall stress level and your mental health like (deep breath, guided imagery, mindfulness techniques), so that you can continue to provide for others. On assessment it was concluded that there is significant difference between the pre and post-test knowledge scores of health care workers. These findings suggests that video assisted teaching programme was effective in enhancing the knowledge of stress reduction techniques among healthcare workers.

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### Conflict of Interest

None.

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