Effect of Educational Awareness Program on Prevention of Refractive Errors among College Students

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Abstract

Refractive errors are seen as a significant global public health issue that affects individuals everywhere. Refractive errors can cause a variety of problems, such as lost educational opportunities, financial hardships, low productivity, and reduced quality of life. The goal of the current study was to assess how well undergraduate students understood how to prevent refractive errors after participating in an educational awareness programme. 80 students were chosen for the study by a simple random sampling technique utilising a lottery system. The current study demonstrates that the mean post-test knowledge score (18.71) was higher than the mean pre-test knowledge score (12.98). At the 0.05 level of significance, the estimated t' value (19.34) was larger than the table value (1.67), demonstrating the effectiveness of the educational awareness programme in increasing undergraduate students' awareness of the avoidance of refractive errors. The study's conclusions demonstrated that educational interventions, such as teaching programmes, can be used to raise college students' knowledge and awareness levels.

Keywords: Educational Awareness Program, Refractive Errors, College Students

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Introduction

According to estimates, the second most prevalent cause of blindness in the world is uncorrected refractive problems. Preventive actions are necessary to deal with the disease's progression and potential sight-threatening consequences because of the increased prevalence rate [1]. Numerous research have recently concentrated on the global prevalence of refractive errors. It is commonly recognised that myopia is more common in Eastern Asian nations, whereas hyperopia is more common in European and American countries. Although racial and ethnic differences are the primary causes of variations in refractive error prevalence, differences in lifestyle, such as the quantity of near vision tasks, have significantly widened the range of variations worldwide [2]. Refractive errors are seen as a significant global public health issue that affects individuals everywhere. Myopia, hypermetropia, and astigmatism are the three categories into which these defects are divided. Additionally, research has shown that refractive problems are the most frequent cause of visits to an ophthalmologist or other eye care specialist. Refractive errors can cause a variety of problems, such as lost educational opportunities, financial difficulties, low productivity, and lowered quality of life [3].

At Jazan University, 447 medical students were randomly chosen for an observational analytical cross-sectional study. An autorefractor test was used to measure the spherical refraction (emmetropia, myopia, and hyperopia) and cylindrical refraction during an eye checkup (astigmatism). Using logistic regression models, myopia and hyperopia-related factors were assessed. REs were present in 48.8% of cases overall [4]. In the GMERS Medical College, Patan, 248 M.B.B.S. students participated in a cross-sectional study. Myopia was the most common refractive error (RE), which was present in 48.3% of medical students. Myopia was substantially correlated with a favourable family history, reading at night and a propensity for supine reading positions, late-night sleep, length of TV viewing, computer use, and mobile device use, as well as with fewer outside activities [5]. All of the students at the MKCG Medical College in Berhampur, Odisha, India were the subjects of a cross-sectional study. 47.4% of the 506 participants who underwent analysis wore glasses, while 2.2% wore contact lenses. Females made up 48.8% of spectacle wearers, 81.8% of contact lens wearers, and the remaining men. Myopia (54.5%) was the most prevalent refractive defect, followed by myopia and astigmatism combined (31.3%), hypermetropia (8.6%), and astigmatism (5.6%). Further research is necessary to determine the pattern of change in refractive errors and behavioural patterns given the high incidence of spectacle use [6].

A descriptive cross-sectional research was used to test for visual acuity and refractive error on the college campus. The current study had 420 undergraduate students in all, whose ages ranged from 18 to 30. At the time of the examination, about 25.0% of the participants were wearing glasses. This study revealed that 34.76% of the subjects had impaired visual acuity in their better eye. Of the total participants, 78 students (18.6%) reported having visual problems, and refractive errors were discovered in 83.3% of cases [7].

These evidences recommends that the prevalence of Refractive errors and its associated risks are high among college students and their awareness regarding prevention of refractive errors should be improved to prevent any adverse effects in future. Hence the investigator felt the need of conducting an Educational Awareness Program to create awareness on the prevention of Refractive Errors among college students.

Materials and methods

The current study's objective was to evaluate the impact of Educational Awareness Program on undergraduate students' understanding of the prevention of Refractive Errors. For the study, an experimental research design was used. The pre-experimental "one group pre-test, post-test design" was chosen to assess the impact of the Educational Awareness Program (teaching programme) on prevention of Refractive Errors.

O1:- Administration of self-administered questionnaire to the Undergraduate students on DAY 1.

X: - Administration of Educational Awareness Program on prevention of Refractive Errors to the Undergraduate students on DAY -1.

O2: - Administration of Self-administered questionnaire to the Undergraduate students on DAY-7 after administration of Educational Awareness Program

For the study, through simple random Sampling Technique, 80 students were selected by using lottery method from a few colleges in Visnagar, Gujarat.

Both the pre test and post test used a structured knowledge questionnaire. It has 25 multiple-choice questions and 10 demographic factors.

The Educational Awareness Program was a prepared teaching program.

Results and discussion

Figure 1: Percentage distribution of undergraduate students with knowledge in pre-test and post-test.

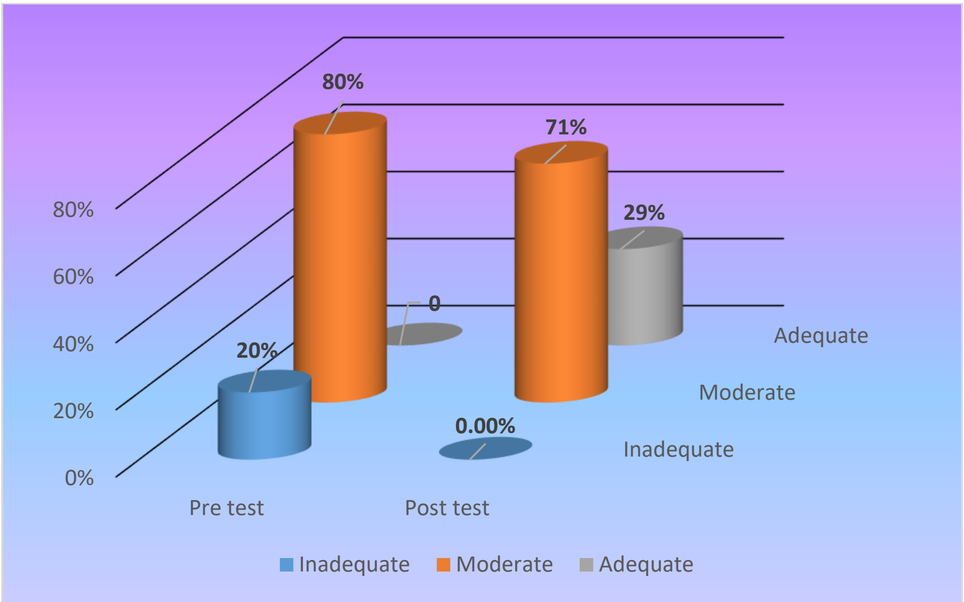

Figure 1 demonstrates that, prior to the administration of the teaching programme, the majority of students 64(80%) had moderately adequate knowledge, while 16(20%) had inadequate knowledge. However, after the programme, students' knowledge levels 51(71%) had moderately adequate knowledge, and 23(29%) had adequate knowledge.

Table 1: Effectiveness Educational Awareness Program on prevention of Refractive Errors among of undergraduate students.

Parameter	Mean	Standard deviation	Mean difference	't' value	Table 't' value	Level of Significance 0.05
Pre-test	12.98	3.119	5.73	19.34	1.67	S
Post-test	18.71	3.122				

The information in Table 1 demonstrates that the mean post-test knowledge score (18.71) was higher than the mean pre-test knowledge score (12.98). At the 0.05 level of significance, the estimated t' value (19.34) was larger than the table value (1.67), demonstrating the effectiveness of the educational awareness programme in increasing undergraduate students' awareness of the avoidance of refractive errors.

None of the demographic factors were found to significantly correlate with the samples' awareness of refractive error prevention.

The current study discovered that college students' knowledge and awareness can be improved by using a structured teaching programme similar to the Educational Awareness Program. A study was carried out in Bangalore to determine the impact of a video-assisted education programme on students' knowledge of refractive faults. Overall results by subject area showed that the Video Assisted Teaching Program was more successful than pre-test knowledge [8]. In Mysuru, Karnataka, a study was done to evaluate the impact of a structured teaching programme on students' understanding of refractive defects. The knowledge levels of the high school children were increased after the structured teaching programme [9].

Various research evidences are available for proving the effectiveness of teaching program in improving awareness among college students. This method can be utilized as an intervention for creating awareness and improving knowledge regarding any health related topics.

Conclusion and outlook

The current study's objective was to assess how well undergraduate students understood how to prevent refractive errors after participating in an educational awareness programme. The findings of the study proved that the educational interventions like teaching program can be used effectively to improve the knowledge and awareness of college students. The topic Prevention of Refractive Errors can be added to the curriculum of health related courses for creating awareness among college students. Studies can be conducted to identify the academic and emotional impacts of refractive errors among college students.

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