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EFFECTIVENESS OF SELF-INSTRUCTIONAL MODULE ON KNOWLEDGE REGARDING LOW BACK PAIN AMONG INFORMATION TECHNOLOGY PROFESSIONALS IN SELECTED SOFTWARE COMPANIES AT MADURAI AND TENKASI DISTRICT

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ABSTRACT

Background: With the increasing dependence on computers for work, education and recreation, computer-related health disorders are becoming more prevalent. Among these, low back pain (LBP) is a common musculoskeletal condition that affects a large segment of the population at some stage in life. Information Technology (IT) professionals are particularly vulnerable due to repetitive tasks, prolonged static postures and extended hours of sitting. If left unaddressed, LBP can result in significant health issues, impacting productivity and even leading to disability or career discontinuation. Importantly, LBP is more easily prevented than cured, especially through proper ergonomic practices, physical activity and health education. This study aimed to assess the effectiveness of a Self-Instructional Module (SIM) on improving knowledge regarding low back pain among IT professionals in Madurai and Tenkasi district.

KEYWORDS

Low back pain, Knowledge, Information Technology professionals, Self-Instructional Module, Occupational health, Ergonomics and Preventive education.

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INTRODUCTION

Objectives

To assess the pre-test knowledge regarding low back pain among IT professionals.

To assess the post-test knowledge regarding low back pain among IT professionals.

To evaluate the effectiveness of the Self-Instructional Module by comparing pre- and post-test knowledge scores.

To identify the association between pre-test knowledge scores and selected demographic variables.

Hypotheses

H₁: There will be a significant difference between pre-test and post-test knowledge scores regarding low back pain.

H₂: There will be a significant association between pre-test knowledge scores and selected demographic variables.

METHODS

This study adopted an evaluative research approach with a one-group pre-test post-test design. The conceptual framework was based on Imogene King's Goal Attainment Theory. A total of 60 IT professionals were selected using purposive sampling. A structured questionnaire was used, comprising:

Part I: Demographic variables

Part II: 28 questions to assess knowledge on low back pain.

A Self-Instructional Module was developed and administered. Data were analyzed using descriptive and inferential statistics.

Table No.1: Demographic characteristics of IT Professionals (N = 60)

S.No	Variable	Category	Frequency (n)	Percentage (%)
1	Age	22–26 years	26	43.3
		27–30 years	20	33.3
		Above 30 years	14	23.3
2	Gender	Male	32	53.3
		Female	28	46.7
3	Educational Qualification	B.Tech	37	61.7
		M.Tech/Other PG	23	38.3
4	Monthly Income (Rs.)	<15,000	18	30.0
		15,001–30,000	33	55.0
		>30,000	9	15.0
5	Computer Usage Hours/day	>9 hours	60	100.0
6	Work Experience	0–3 years	40	66.7
		>3 years	20	33.3

Table No.2: Comparison of Pre-test and Post-test Knowledge Scores (N = 60)

S.No	Test Type	Mean Score	Standard Deviation	t-value	p-value
1	Pre-test	12.82	±2.41	-	-
2	Post-test	20.87	±2.63	17.66	<0.001 **

Table No.3: Association between pre-test knowledge scores and selected demographic Variables (Chi-square Test)

S.No	Demographic Variable	χ^2 value	df	p-value	Significance
1	Age	3.21	2	>0.05	Not Significant
2	Gender	1.14	1	>0.05	Not Significant
3	Educational Qualification	2.96	1	>0.05	Not Significant
4	Monthly Income	4.07	2	>0.05	Not Significant
5	Work Experience	2.85	1	>0.05	Not Significant

INTERPRETATION AND CONCLUSION

Low back pain is highly prevalent among IT professionals due to occupational risk factors such as prolonged sitting and static posture. The study findings confirm that a structured Self-Instructional Module significantly improved the knowledge of participants regarding the causes, prevention, and management of LBP. No significant relationship was found between knowledge and demographic characteristics, indicating the general need for awareness across the IT workforce. Implementing similar educational strategies can aid in reducing the incidence of LBP and promoting occupational health.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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