



EFFECTIVENESS OF ELECTIVE MODULE ON DEVELOPMENTAL PSYCHOLOGY AMONG NURSING STUDENTS

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Abstract: The study evaluates the effectiveness of an elective module on developmental psychology among nursing students in a selected nursing college, W.B. 110 students were selected by total enumeration sampling technique, where one-group pre-test post-test design was adopted. Data was collected using a ten itemed structured knowledge questionnaire. The findings revealed a statistically significant improvement in knowledge scores post-intervention (Mean Post-test: (8.14 ± 1.16) Mean pre-test: (7.14 ± 1.32) $t=2.74$, $p<0.05$)—the majority of students upgraded from moderate to good knowledge level. The study resonates importance of educational interventions in nursing.

Index Terms– Developmental psychology, elective module, nursing education, knowledge level, effectiveness

INTRODUCTION

Understanding human development is essential in nursing practice, as it provides the basis for assessing the needs of individuals at every stage of life. Developmental psychology explores the biological, emotional, cognitive, and social changes that occur throughout a person's life span, offering a critical perspective on how these domains influence behavior, health, and well-being. Nurses must integrate this knowledge into their patient care to address age-specific needs effectively.

With the expansion of nursing curricula, elective modules have become an integral strategy for enabling students to explore particular areas of interest beyond the core syllabus. Elective modules provide in-depth exposure to subjects that may have practical relevance in clinical settings. However, the success of such modules largely depends on their content quality and the extent to which they translate into measurable learning outcomes.

Nursing students often encounter patients across various age groups—from neonates to geriatrics. Their ability to comprehend developmental milestones and psychosocial challenges at each stage greatly impacts the quality of care they deliver. In this context, developmental psychology emerges as a vital area of instruction. However, traditional pedagogical approaches may not sufficiently engage learners or assess their knowledge gains effectively.

Numerous studies have pointed out the positive impact of structured educational interventions in improving student knowledge in nursing education [1][2]. This study aims to evaluate the impact of an elective module on developmental psychology, assessing its role in enhancing nursing students' cognitive understanding of the subject.

NEED OF THE STUDY

The importance of integrating developmental psychology into nursing education stems from the growing complexity of patient needs across the lifespan. Nurses are expected to recognize and respond to developmental, emotional, and psychological factors that influence health outcomes. However, studies indicate that many students lack foundational knowledge in this area, potentially affecting their clinical decision-making skills and patient interactions [1,4].

Bransford et al. emphasized that effective learning environments should foster conceptual understanding, provide context-based applications, and incorporate active engagement, particularly in adult education [3]. In nursing education, structured modules like elective programs offer a flexible and focused format to deepen understanding in specialized areas. Kaur and Singh noted that elective courses have shown significant improvement in student knowledge and engagement when the subject matter is presented with applied relevance and interactive content [5].

The World Health Organization (WHO) has repeatedly emphasized the role of psychosocial factors in promoting holistic health and highlighted the need for capacity building in psychological domains among health workers. Addressing these gaps through targeted learning interventions such as elective modules could bridge the divide between theoretical knowledge and practical competence [6].

Moreover, Erikson's psychosocial theory is widely regarded as a cornerstone in understanding patient behavior at various life stages, but its clinical utility depends on accurate comprehension by caregivers. A sound understanding of developmental psychology equips nurses with insights into patient responses, treatment compliance, and the psychosocial context of illness [2]. Thus, the current study becomes imperative in evaluating whether an elective module can significantly improve the knowledge level of nursing students, enabling them to perform their roles more effectively in diverse clinical settings.

STATEMENT OF PROBLEM

Effectiveness of Elective Module on Developmental Psychology among Nursing Students in a Selected Nursing College, West Bengal

OBJECTIVES

1. To assess the knowledge regarding developmental psychology among nursing students before administering the elective module.
2. To assess the knowledge regarding developmental psychology after administering the elective module.
3. To determine the effectiveness of the elective module.
4. To find out the association between the pretest knowledge score with selected demographic variables.

OPERATIONAL DEFINITION

Effectiveness: Refers to the extent to which the elective module improves students' knowledge scores from pre-test to post-test.

Elective Module: A specially designed teaching intervention focused on developmental psychology.

Knowledge: The cognitive understanding of developmental psychology concepts as measured by a structured multiple-choice questionnaire.

Nursing Students: BSc Nursing students in the 5th and 6th semester who enrolled in the selected college during the study period.

CONCEPTUAL FRAMEWORK

The study uses input-throughput-output model.

Input-Throughput-Output Model

This framework illustrates the logical flow of the research study:

Input: Refers to the **existing baseline knowledge** that nursing students possess regarding developmental psychology. It also includes participant demographics and prior exposure to psychological content.

Throughput (Process): This stage encompasses the **elective module intervention**. It includes structured lessons, interactive teaching strategies, learning materials, and activities designed to enhance the student's knowledge of developmental psychology.

Output: The final stage is the **measured outcome**, which is the **post-test knowledge score** of students after undergoing the elective module as tested by inferential statistics.

This model helps visualize how the structured teaching intervention transforms the students' input state (knowledge level) into an improved output.

RESEARCH METHODOLOGY

Research Approach: The study follows a quantitative evaluative approach, focusing on numerical measurement of knowledge gain.

Research Design: A one group pre-test post-test design is used, pre-experimental design, allowing comparison of students' knowledge before and after the intervention without a control group.

Setting: The research is conducted in a selected nursing college, West Bengal, ensuring a focused and contextualized educational environment.

Population: Targeted at BSc Nursing students, who are the ideal audience for developmental psychology content.

Sample Size: All 110 students enrolled in the elective module participated, giving the study full representativeness of that cohort. The sample size was calculated based on expected effect size, standard deviation, confidence level of 95%, and power of 80%. Based on a pilot study (mean difference of 6.3, SD = 1.8), the minimum sample required was 106. With an anticipated 5% dropout, the final sample size was 110.

Sampling Technique: Total enumeration sampling was adopted, involving every eligible participant without exclusion.

Inclusion Criteria:

BSc Nursing students of the 5th and 6th Semester enrolled in the selected nursing college.

Students who opted for the elective module on developmental psychology.

Exclusion Criteria:

Students absent during either the pre-test or post-test.

Tool: A 10-item structured questionnaire with multiple-choice questions was designed to objectively assess students' knowledge. (6 items for knowledge, 3 items for understanding, and 1 item for application) Each correct answer was scored as 1; incorrect answers were scored as 0. The maximum score was 10 for each section.

Data Collection Procedure: Involves a pre-test, followed by the elective module, and then a post-test to evaluate knowledge gain.

Data Analysis: Statistical techniques like descriptive statistics and paired t-tests were used to analyze and interpret the data.

RESULTS AND DISCUSSION

Findings related to demographic characteristics of participants

Table 1 Frequency and percentage distribution of the Student Nurses according to their demographic characteristics.

n=110

Demographic characteristic	Frequency (f)	Percentage (%)
Age in years		
a) 19-22	93	84.55%
b) 23-26	17	15.45%
Gender		
a) Female	110	100.00%
Religion		
a) Hindu	78	70.91%
b) Christian	12	10.91%
c) Muslim	20	18.18%
Previous knowledge of developmental psychology		
a) Mass media	1	0.92%
b) Journals/Newsletters	13	11.81%
c) Conferences/Seminars/Other educational programs	10	9.09%
d) No previous experience	86	78.18%

The findings related to the demographic characteristics of participants, as depicted in Table 1, revealed that most of the (84.55%) participants were aged between 19 to 22 years and all the student nurses were female. Among them, the largest group (70.91%) of nursing students were Hindu.

The data also indicated that a significant proportion (78.18%) of nurses had no prior knowledge of developmental psychology.

Findings related to Level of knowledge regarding recent innovations and advances in Nursing

Table 2 Frequency and percentage distribution of pre-test and post-test knowledge score according to level of knowledge regarding Developmental Psychology among Student Nurses

n=110

Distribution of Score	Level of Knowledge	Pre-test		Post-test	
		Frequency	Percentage (%)	Frequency	Percentage (%)
9-10	Excellent	43	39.09	7	6.36
7-8	Very Good	57	51.82	80	72.73
5-6	Good	9	8.18	18	16.36
3-4	Fair	1	0.91	4	3.64
0-2	Poor	0	0.00	1	0.91

The Maximum possible score is 10

The minimum possible score is 0

The findings presented in Table 2, which depict the distribution of scores related to the level of knowledge regarding developmental psychology revealed that the majority (40.91%) of nursing students scored good knowledge in the post-test.

Table 3 Distribution of pre-test and post-test knowledge score, t value regarding effectiveness of module on Developmental Psychology among Nursing Students

H₀₁: There is no relationship between the administration of the Elective Module on Developmental Psychology with a knowledge score at 0.05 level of significance

n=110

	Mean ± SD	Median	MD	t value	p-value
Pre-test	7.14 ± 1.32	7			
Post-test	8.14 ± 1.16	8	1	2.74	0.007

The maximum possible score is 10

The minimum possible score is 0

The data presented in Table 3 shows that the post-test knowledge score (8.14 ± 1.16) is higher than the pre-test knowledge (7.14 ± 1.32) score, and it is also statistically significant (t=2.74, p<0.05) which explains that it is a true difference and not by chance. Therefore the research hypothesis (H₁) is accepted and the Null hypothesis (H₀₁) is rejected.

Findings related to the association between pre-test knowledge score regarding developmental psychology with selected demographic variables

H₀₂: There is no significant association between pre-test knowledge score regarding developmental psychology with selected demographic variables at 0.05 level of significance.

Table 4 Chi-square test showing the association between pre-test knowledge scores regarding Developmental Psychology among Nursing Students with selected demographic variables

n=110

Demographic Variables	Knowledge Score		χ^2
	≤Median	>Median	
Age			0.18
≤ 20 years	28	17	
> 20 years	43	22	
Sources of previous knowledge			1.15
Present	11	13	
Absent	50	36	

χ^2 df(1)=3.84, p<0.05

The data presented in Table 5 shows the Chi-square association between the level of knowledge and selected demographic variables. It revealed that the level of knowledge regarding Developmental Psychology is not significantly (p<0.05) related to age and sources of receiving knowledge. Therefore null hypothesis (H₀) is accepted.

DISCUSSION

The findings of this study corroborate with previous literature highlighting the importance of educational interventions in enhancing nursing students' knowledge. A similar study by Sharma et al. showed improvement in knowledge scores following a planned teaching program on developmental psychology among undergraduate students [1]. Bransford et al. emphasized the importance of experience-based and structured learning environments in fostering cognitive development among adult learners [3]. Furthermore, the theoretical underpinnings of Erik Erikson's psychosocial development model, which is a key component of developmental psychology education, have been found to enrich students' understanding of patient behavior and psychosocial health [2]. The sharp increase in good knowledge level post-intervention confirms the module's effectiveness.

CONCLUSION

The elective module on developmental psychology significantly enhanced the knowledge of nursing students. Incorporating such modules can be a beneficial pedagogical strategy to reinforce essential psychological concepts in nursing education.

LIMITATIONS

The study was limited to one institution and did not include a control group. Long-term retention of knowledge was not assessed.

RECOMMENDATIONS

1. Similar studies should be conducted in multiple settings to enhance generalizability.
2. Follow-up assessments can help evaluate knowledge retention.

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