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Research Article

A Study to Evaluate the Efficacy of an Educational Intervention Programme on Knowledge Regarding IAP (Indian Academy of Pediatrics) Growth Monitoring Guidelines for Children from Birth to 18 Years Among Nursing Students at Selected Institutions in Hubballi

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Abstract

Background: Children are the most valuable assets of any society, embodying the future of humanity. Their well-being is not just a concern for families but a fundamental responsibility of society as a whole. From the moment of birth, a child embarks on a remarkable journey of growth and transformation, influenced by genetic, environmental, and social factors. The United Nations Convention on the Rights of the Child (UNCRC) asserts that every child has the inherent right to survival, development, and protection. These rights are not only moral imperatives but also critical to fostering resilient individuals who can contribute meaningfully to society, one of those to share the condition best is by concentrating on growth and development parameters used in investigating a child's growth rate, weight and height. So, assessment of weight and height plays an important role in follow up of the growth and nutritional status and early detection of its abnormalities for early intervention before permanent changes occur.

Materials and Methods: A pre-experimental study was conducted among 50 students of 3rd year B.Sc. Nursing students of KLES' Institute of Nursing Sciences in Hubballi. The samples were selected by non-probability; purposive sampling technique. The data was collected by structured knowledge questionnaire. Data analysis was done using descriptive and inferential statistics.

Results: The overall results of the study revealed that, among the 50 students, the majority (29; 58%) had average knowledge in the pre-test, while 11 (22%) had good knowledge and 10 (20%) had poor knowledge. Following an educational intervention programme, all 50 students (100%) demonstrated good knowledge in the post-test regarding the Indian Academy of Pediatrics (IAP) growth monitoring guidelines for children from birth to 18 years.

Conclusion: The study concluded that an educational intervention programme was effective for B.Sc. Nursing students to increase and update their knowledge regarding IAP (Indian Academy of Pediatrics) growth monitoring guidelines for children from birth to 18 years.

Keywords: Efficacy, Educational Intervention Programme, Knowledge, Indian Academy of Pediatrics, Growth Monitoring.

Introduction

"The little feet won't be little forever."

-Ashlee Edens

Children are the most valuable assets of any society, embodying the future of humanity. Their well-being is not just a concern for families but a fundamental responsibility of society as a whole.[1] Childhood is the most precious and formative phase of human life, a time brimming with innocence, curiosity and boundless potential.[1]From the moment of birth, a child embarks on a remarkable journey of growth and transformation, influenced by genetic, environmental, and social factors. The United Nations Convention on the Rights of the Child (UNCRC) asserts that every child has the inherent right to survival, development, and protection. These rights are not only moral imperatives but also critical to fostering resilient individuals who can contribute meaningfully to society.[3]

Birth to adolescence is a period of rapid growth and change. It is during this time that the foundation for a child's future health, learning and overall well-being is laid. As the United Nations Convention on the Rights of the Child (UNCRC) asserts, "Every child has the right to life, survival, and development," highlighting the global commitment to ensuring children thrive in a safe, nurturing environment. These early stages are critical, as they set the trajectory for the physical, emotional, and cognitive capacities that will define the child's future.[3]

Childhood is a journey of transformation, a period marked by immense growth and development that sets the foundation for an individual's lifelong health and well-being. From birth to adolescence, children undergo rapid physical, cognitive, and emotional changes, each stage playing a crucial role in their future potential.[5]

One of the key elements in ensuring children's healthy development is effective growth monitoring. Regular assessments of growth parameters, such as height, weight, and head circumference, provide essential insights into a child's physical progress and health status.[4] From infancy through adolescence, the Indian Academy of Pediatrics (IAP) provides guidelines for tracking growth from birth to 18 years, offering standardized growth charts and assessment tools to ensure that children's growth patterns are within normal ranges. Tracking growth patterns is crucial to detecting deviations in normal development and ensuring the child's well-being.[6]

Objectives of the Study

1) To assess the level of knowledge regarding IAP growth monitoring guidelines for children from birth to 18 years among nursing students.
2) To evaluate the efficacy of an educational intervention programme regarding IAP growth monitoring guidelines for children from birth to 18 years among nursing students as measured by gain in post test scores.
3) To find out an association between pre-test knowledge scores of nursing students with selected socio-demographic variables.

Review of Literature

1) Reviews related to effectiveness of growth monitoring.

2) Reviews related to effectiveness of IAP growth monitoring guidelines from birth to 18 years.

3) Reviews related to effectiveness an educational intervention programme.

Materials and Methods

Research Approach: Evaluative approach was considered appropriate for the present study.

Study Design: The research design used for the present study was pre-experimental one group pre-test post-test research design.

Research Setting: Setting refers to the area or physical location where the study was being conducted. The present study was conducted at selected KLES' Institute of Nursing Sciences in Hubballi.

Population: Population refers to the aggregation of all units in which a researcher is interested. In other words, population is a set of entities to which results of research can be generated.[2] In the present study, the study population is B.Sc. Nursing students.

Target Population: It refers to the population that the researcher wishes to study and make generalizations. In this current research study, the target population compromises of 3rd year B.Sc. Nursing students in Hubballi.

Sample: A subset of population selected to participate in a research study was known as samples.[3] In the present study, the sample consists of 3rd year B.Sc. Nursing students of KLES' Institute of Nursing Sciences, Hubballi.

Sample Size: Sample size refers to the number of participants or observations included in the study, who represents the population.[4] The sample size selected for the present study includes 50, 3rd year B.Sc. Nursing students of KLES' Institute of Nursing Sciences, Hubballi.

Sampling Technique: Sampling technique is referred as the process of selecting representative segment of the population under the study.[5] The researcher in the present study selected samples through non – probability; purposive sampling technique.

Graphical Presentation of Socio-Demographic Variables

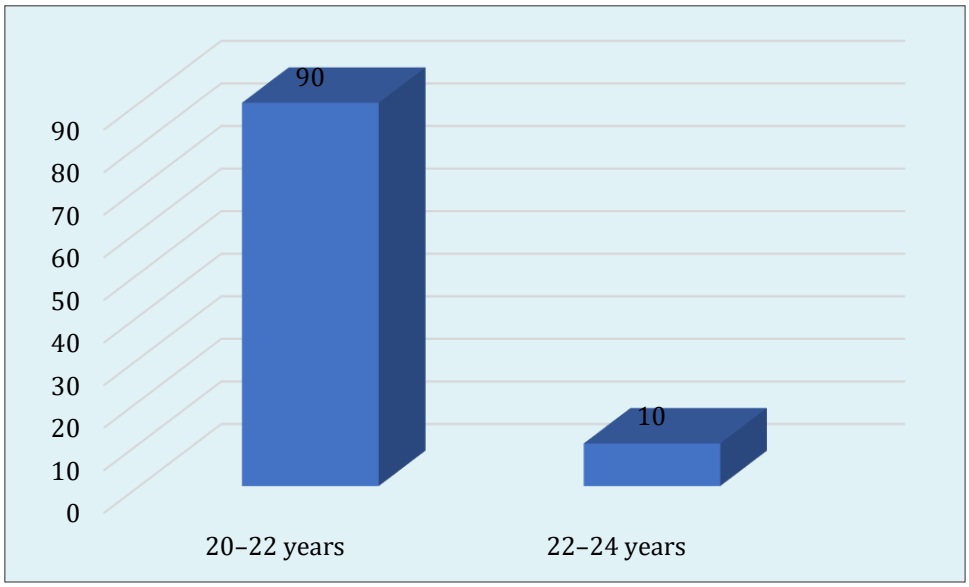

Figure 1. Percentage distribution of subjects according to their age group.

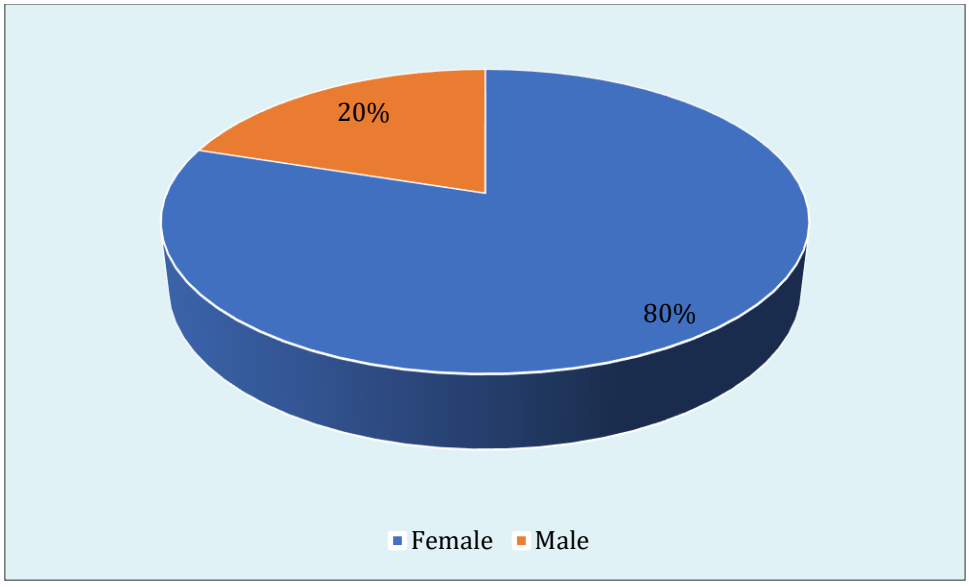

Figure 2. Percentage distribution of subjects according to their gender.

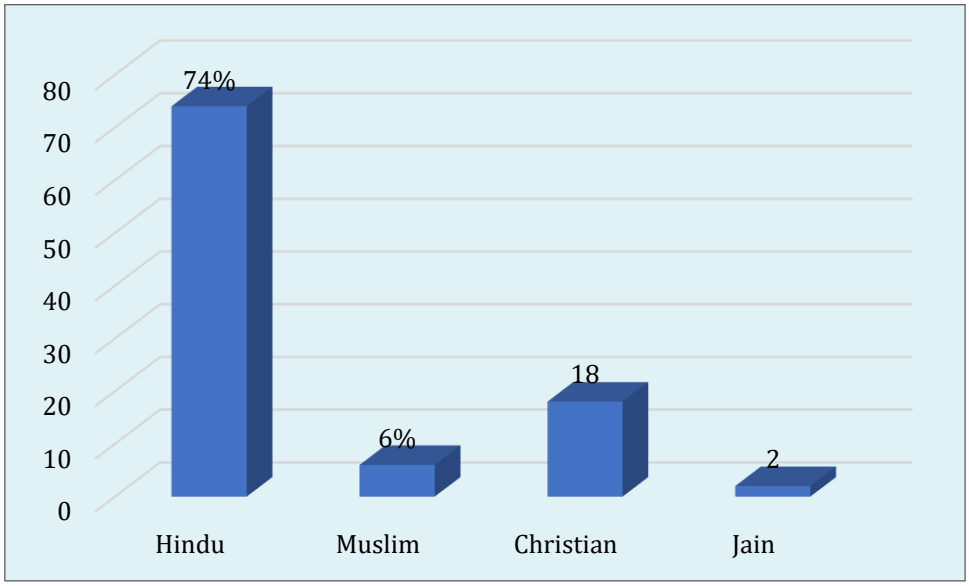

Figure 3. Percentage distribution of subjects according to their religion.

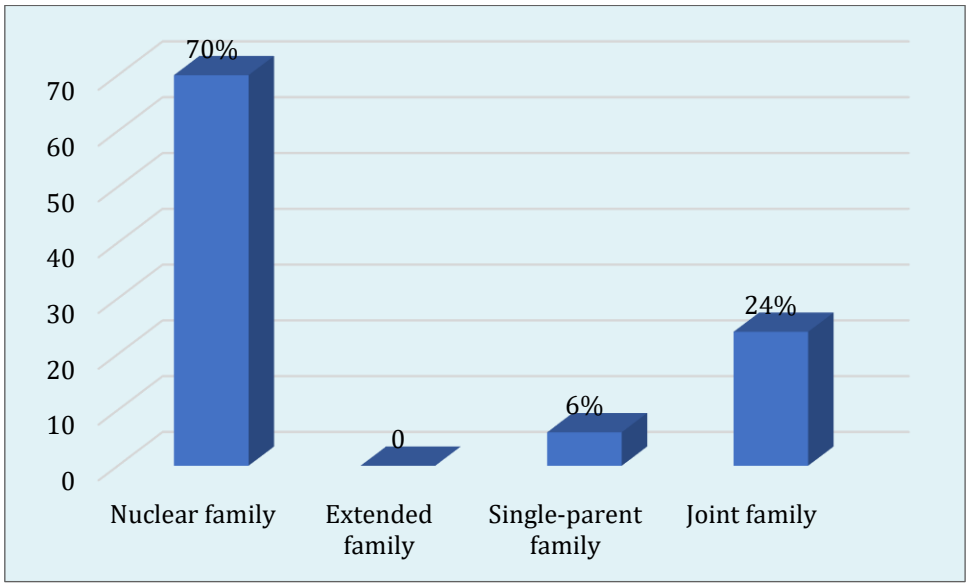

Figure 4. Percentage distribution of subjects according to their type of the family.

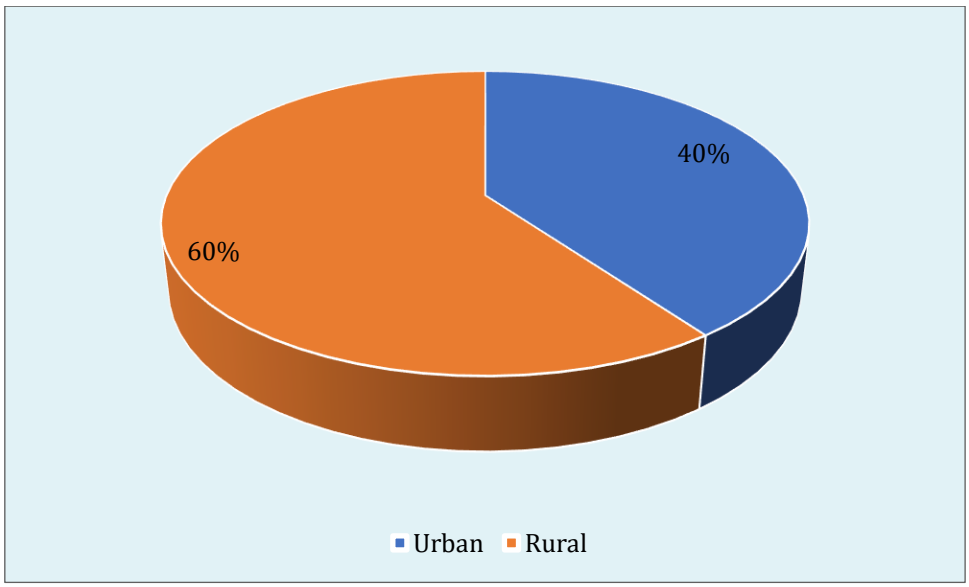

Figure 5. Percentage distribution of subjects according to their habitat.

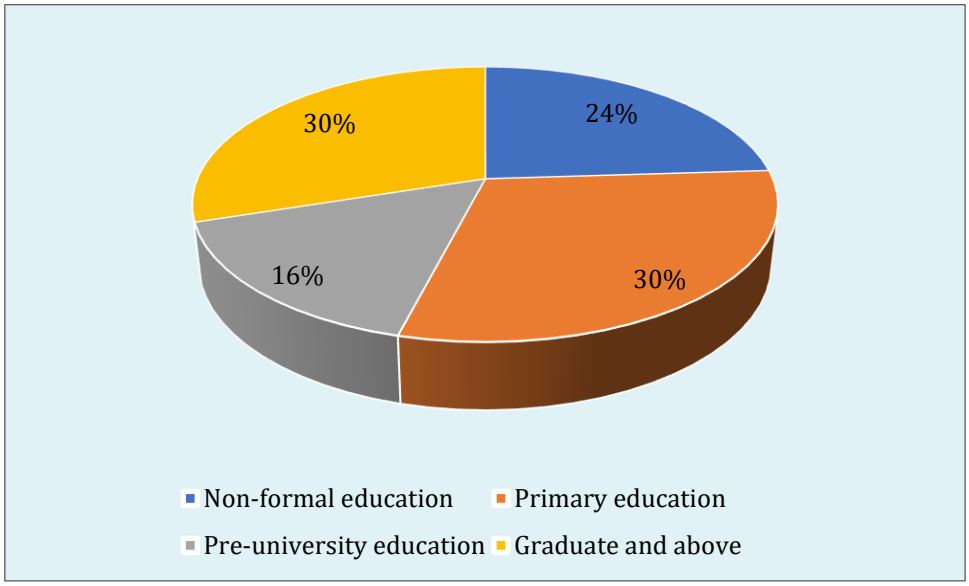

Figure 6. Percentage distribution of subjects according to their mother's education level.

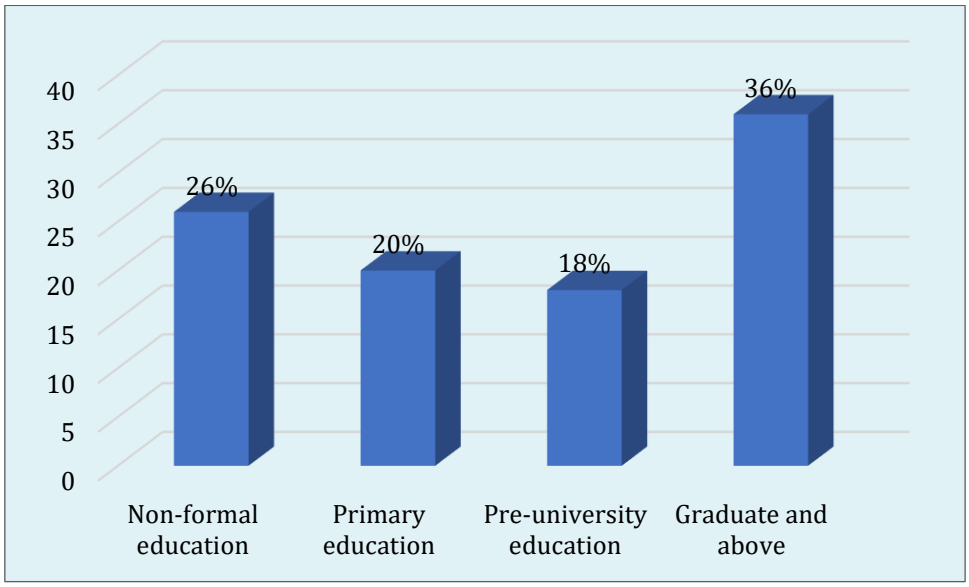

Figure 7. Percentage distribution of subjects according to their father's education level.

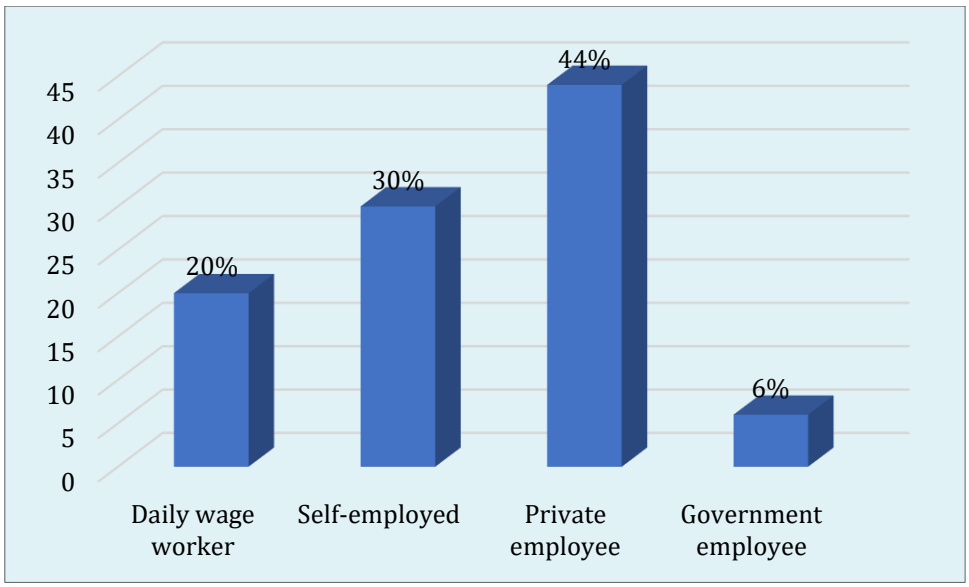

Figure 8. Percentage distribution of subjects according to their mother's occupation.

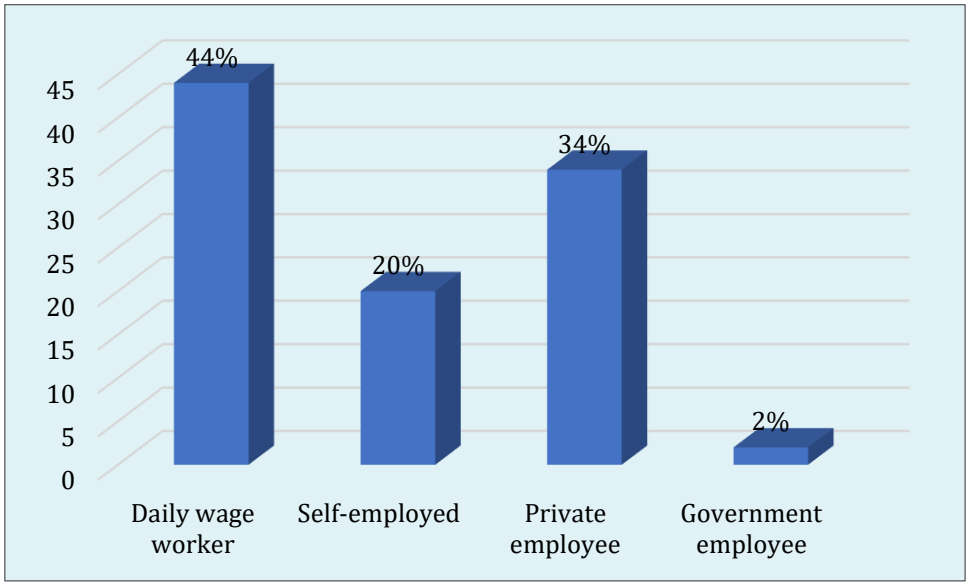

Figure 9. Percentage distribution of subjects according to their father's occupation.

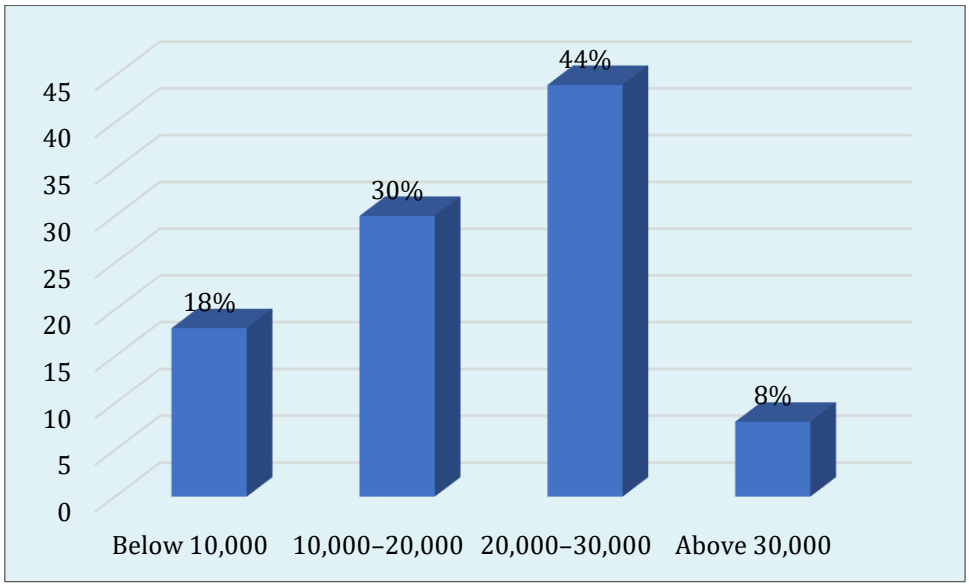

Figure 10. Percentage distribution of subjects according to their monthly income in rupees of parents.

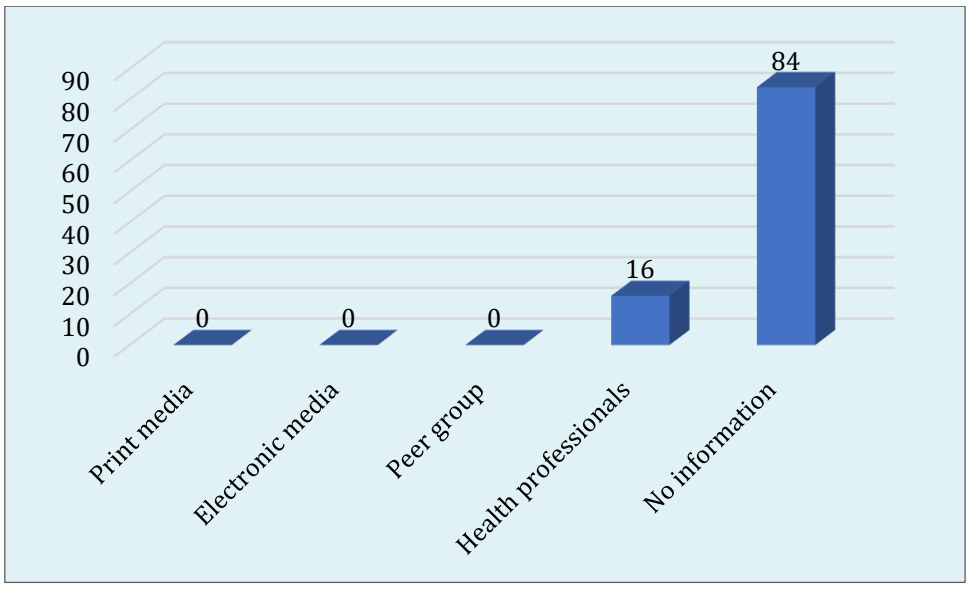

Figure 11. Percentage distribution of subjects based on source of information.

Section-II: Analysis and Interpretation of Knowledge Scores of Subjects Regarding IAP Growth Monitoring Guidelines for Children from Birth to 18 Years

Table 1. Mean, median, mode, standard deviation and range of knowledge scores of subjects regarding IAP growth monitoring guidelines for children from birth to 18 years (n = 50).

Area of analysis	Mean	Median	Mode	Standard deviation	Range
Pre-test	19.8	19.5	18	10.34	38
Post-test	42.0	42.0	48	5.32	20
Difference	22.0	22.5	30	5.02	18

Table 2. Frequency and percentage distribution of knowledge scores of subjects regarding IAP (Indian Academy of Pediatrics) growth monitoring guidelines for children from birth to 18 years (n = 50).

Level of knowledge	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Good (24 and above)	11	22%	50	100%
Average (19-24)	29	58%	00	00%
Poor (19 and below)	10	20%	00	00%

Table 3. Frequency and percentage distribution of knowledge scores subjects according to area of knowledge (n = 50).

S/N	Area of knowledge	Total score	Pre-test		Post-test		Gain in knowledge (%)
			Score obtained (f)	Percentage (%)	Score obtained (f)	Percentage (%)	
1	Items on knowledge regarding anatomy and physiology of growth and development.	650	280	43.07	583	89.69	46.62
2	Items on knowledge regarding general aspect of growth and development.	900	356	39.55	758	84.22	44.67
3	Items on knowledge regarding IAP (Indian Academy of Pediatrics) growth monitoring guidelines for children from birth to 18 years.	600	225	37.5	485	80.83	42.83
4	Items on knowledge regarding role of nurse in IAP growth monitoring guidelines.	350	129	36.85	274	78.28	42.28

Table 4. Pre-test, post-test percentage of knowledge scores of subjects regarding IAP growth monitoring guidelines for children from birth to 18 years among nursing students (n = 50).

Items	Total score	Mean % of knowledge scores of subjects		
		Pre-test	Post-test	Gain in knowledge
Structured knowledge questionnaire	2500	39.6	84	44.4

Section-III: Testing Hypotheses

H_1: The mean post-test knowledge scores of nursing students who have been exposed to educational interventional programme will be significantly higher than the mean pre-test knowledge scores at 0.05 level of significance.

Table 5. Mean difference ($\bar{d}$), standard error of difference and paired 't' values of knowledge scores of subjects regarding IAP growth monitoring guidelines for children from birth to 18 years (n = 50).

Mean difference ($\bar{d}$)	Standard error of difference ($S\bar{d}$ E)	Paired 't' values	
		Calculated	Tabulated
22.91	1.79	12.78*	2.014

Discussion

The present study has been undertaken with the aim to evaluate the effectiveness of educational intervention programme on knowledge regarding regarding IAP growth monitoring guidelines for children from birth to 18 years among B.Sc. Nursing students in selected Nursing Colleges, Hubballi. The overall results of the study revealed that, in the pre-test, the majority of the subjects (29, 58%) had average knowledge, followed by 11 (22%) subjects with good knowledge and 10 (20%) subjects with poor knowledge. Following the educational intervention programme, the post-test results showed that all 50 (100%) subjects had good knowledge. These findings were supported through a study conducted by Shirish[7], who observed that in pre-test, majority of subject 22 (70%) had moderate knowledge and 6 (30%) had good knowledge whereas in post -test majority of the subjects 26 (86.7%) had good knowledge and 4 (13.33%) had average knowledge.

The calculated paired 't' (t_{cal} = 12.78*) was greater than the tabulated value (t_{tab}= 2.014). Hence, H_1 was accepted. This indicates that the gain in knowledge score was statistically significant at 0.05 level of significance. This proved that, the educational intervention programme was effective in improving the knowledge of subjects. These findings were supported by Shirish[7] who observed that 't' value calculated (t_{cal} = 16.18*) was greater than the tabulated value (t_{tab}= 2.045). This indicates that the gain in knowledge score was statistically significant at 0.05 level of significance. Therefore, the educational intervention programme was effective in improving the knowledge regarding of IAP growth monitoring guidelines for children from birth to 18 years among 3rd year B.Sc. Nursing students. The calculated chi-square test revealed a statistically significant association with only one variable, namely the age of the participants. No statistically significant association was found with the remaining variables; hence, H_2 was accepted. These findings were supported by Shirish R., who also observed a statistically significant association with only one variable, namely the age of the participants, whereas no significant association was found with the remaining variables among nursing students regarding IAP Growth Monitoring Guidelines for Children from Birth to 18 Years.

Declarations

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Author Contributions: DSK: Contributed to the conception and design of the study, data collection, data analysis, interpretation of the results, and manuscript preparation; SK: Supervised the study and reviewed the manuscript; SPB: Contributed to guidance, manuscript review, and editing.

Conflict of Interest: The authors declare that they have no conflict of interest.

Consent to Publish: The authors consent to the publication of this manuscript in International Journal of Recent Innovations in Academic Research.

Data Availability Statement: The data used and analyzed during the current study are available from the corresponding author upon reasonable request.

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Institutional Review Board Statement: Ethical clearance was obtained from the Institutional Ethics Committee of KLES' Institute of Nursing Sciences, Hubballi.

Informed Consent Statement: Written informed consent was obtained from all participants prior to data collection.

Research Content: The research content of this manuscript is original and has not been published elsewhere.

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