Original Article

International Journal of Pediatric Nursing
Volume 9 Number 3, September – December 2023
DOI: http://dx.doi.org/10.21088/ijpen.2454.9126.9323.2

Effectiveness of an Educational Programme on Curriculum Development and Design for Health Professional Educators

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How to cite this article:
Assuma Beevi T.M, Naseem M./Effectiveness of an Educational Programme on Curriculum Development and Design for Health Professional Educators/Int J Pediatr Nurs. 2023;9(3):105–109.

Abstract

Health professional educators (HPE) and clinical faculty are facing different educational challenges in balancing their work profile of teaching, research and clinical duties with improper planning of curriculum. So a need assessment was conducted to find out the knowledge and skill of health science educators in a health science academy to empower them with an educational programme on curriculum development, design and mapping of core elements in a health professional education programme.

Main Objective: To identify the effect of planned educational programme on curriculum development and design for health professional educators.

Introduction: A curriculum is defined as a sophisticated blend of educational strategies, course content, learning outcomes, educational experiences, assessment, the educational environment, and the individual students' learning style personal timetable and programme of work 1.

Methodology: Pre-test post-test design was used with a teaching programme on curriculum design, development and mapping using convenient sampling with 18 faculty of HPEs. Comparison of Mean Pre-test and post-test score obtained by subjects shows significant difference with a p value of 0.0001 (P value <0.0001)

Study was conducted among faculty of a health science academy with convenient sampling. A total of 25 samples were taken who were working as faculty with a teaching experience of 3-10 years.

Results: Results were analysed using google itself.

Keywords: Health professional education; Health professional educators; Curriculum development; Curriculum planning; Curriculum design and models.

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Received on: 11.07.2023

Accepted on: 30.08.2023

INTRODUCTION

A curriculum is defined as a sophisticated blend of educational strategies, course content, learning outcomes, educational experiences, assessment, the educational environment, and the individual students' learning style personal time table and programme of work.[1] Curriculum

mapping help organize the curricular contents and can help both educators and learners identify key elements and their relationship between them. Learners identify the what, when, where, how, and why of their learning and educators see their role within the entire curriculum.[1]

Health professional educators and clinical faculty are facing different educational challenges in balancing their work profile of teaching, research and clinical duties with improper planning of curriculum. They fail to plan and map the curriculum related to lack of knowledge on curriculum development. This is compounded by the increase in number of students, need of implementing evidence based practice and outcome based education.[2] Shift of the paradigm on clinical teaching from teaching hospitals to simulations, standardized patients and laboratory also make faculty the delivery of content cumbersome. The public expect to be served by an accountable health care professional, where their education should suitable to deliver cost effective quality health service.

Since health professions educators are not adequately prepared for different educational strategies and various aspects of curriculum development and design. Education as a scientific process and various methodologies used in education are not included in the syllabus or curriculum of these professionals. They are mainly prepared for service to society and not as educators. Many of them are learning education and teaching learning process through continuing education. They usually follow a medical model where the subject matter is arranged in a way that is not based on educational principles. So the graduates are familiar with core knowledge on their specialization to provide committed service to society as ethical human being. But when it comes to health professional education, programme delivery, they have to educate graduate based on educational principles and develop a programme that meets the educational and societal needs of the community where they are providing their services. So it is imperative that all health professional educators should have basic knowledge of curriculum development design, teaching and evaluation strategies. Now in many institutions, continuous training in educational technology and curriculum planning is given for many health professional educators. So a need assessment was conducted to find out the knowledge and skill of health science educators in a health science academy and develop and implement a programme on curriculum development, design and mapping of core elements in a health professional education programme. Present study is intended to identify the knowledge and skill of the health professional educators in preparing a suitable, culturally sensitive curriculum for HPE in various streams of health science education.

MAIN OBJECTIVE

Identify the effect of planned educational programme on curriculum development and design for health professional educators.

Subsidiary Objectives

- Identify the knowledge of health professional educators on curriculum development for health professionals education.
- Identify the effectiveness of an educational programme on curriculum development, design and mapping of core elements in a curriculum.

METHODOLOGY

Study was conducted among faculty of a health science academy with convenient sampling. A total of 25 samples were taken who were working as faculty with a teaching experience of 3-10 years. The faculty who had undergone education as subject have been excluded. Pre-test post-test design was used with a teaching programme on curriculum design, development and mapping. Informed consent was taken from all participants and obtained ethical clearance from Institutional ethics committee.

Tool

Questionnaire was prepared by the investigator with 30 multiple choice questions based on the subject. The questionnaire was mainly prepared as A type MCQs. The content and construct validity of the questionnaire was done with 3 experts in educational technology and five items were deleted as three of them unanimously opined that they are bit confusing. The final 25 questions were retained with content and the construct validity was 1.

The questionnaire was piloted with 5 HPEs and found to be suitable for administration to measure the knowledge and skill of HPEs on curriculum development and design.

Researcher prepared and validated pre-test was administered to 25 faculty of an Allied Health Sciences. Pre-test was taken by all 25 educators. But the post-test taken by only 18 educators. So analysis of only eighteen candidates were done.

Out of the 25 questions 5 questions were based general awareness on curriculum, 5 questions were on outcome based curriculum development, 5 were on mapping on core elements integration with vertical and horizontal strands, 5 were on teaching learning principles, 5 were on learner centred and outcome based curriculum and 5 were reflection and curriculum assessment.

After administering the pre-test via google forms the teaching module was given to the educators with the help of power point presentation. A total of four hour session with lecture cum discussion with the help of power point was given to the participants. After the class the same questionnaire was administered to them via google forms after seven days.

Results were analysed using google itself. The results are tabulated below.

Demographic variables

Table 1: Frequency percentage distribution of Socio demographic characteristics ***n=18***

Socio-demographic Variables	Frequency (Percentage)
Gender	
Male	01 (06)
Female	17 (94)
Professional Qualification	
Graduate	02 (11)
Post-graduate	15 (83)
Doctorate	01 (06)
Designation	
Clinical Instructor	01 (06)
Senior Lecturer	09 (50)
Assistant Professor	05 (27)
Associate Professor	02 (11)
Professor	01 (06)
Professional Experience (in years)	10 (56)
0-3	05 (27)
4-8	02 (11)
9-12	01 (06)
More than 12	

Mean ±SD age of subjects was 31.95±4.65 Years

Table 2: Frequency and percentage distribution of pre-test and post-test responses from subjects

n=18

Sl. no.	Question	Pre-test responses		Post-test responses	
		Correct	Wrong	Correct	Wrong
	General awareness on curriculum				
1	The word curriculum is derived from the Latin word:	18 (100)	0	18 (100)	0
2	Curriculum is all the learning experience planned and directed by the school to attain its educational goals	01 (06)	17 (94)	03 (17)	15 (83)
3	A plan of action that can be employed to structure a subject or a course area from a theory to practice is called a	0	18 (100)	07 (38)	11 (61)
4	A multi process of creating and improving a course taught at an educational institute is	07 (39)	11 (61)	16 (89)	02 (11)
5	The organization of the curriculum component into a whole is called	11 (61)	07 (39)	17 (94	01 (06)
	Mapping of Core Elements and Integration with Vertical and horizontal strands				
6	What are the models of Curriculum development?	14 (78)	04 (22)	18 (100)	0
7	What is SPICES model	06 (33)	12 (67)	11 (61)	07 (39)
8	Co-relation of the subject in previous class is called:	13 (72)	05 (28)	18 (100)	0
9	One of the important steps of process model of curriculum development is need assessment. What is the purpose of this?	04 (22)	14 (78)	15 (83)	03 (17)
10	Why is it important to have horizontal and vertical integration in a health science curriculum?	0	18 (100)	15 (83)	03 (17)
	Teaching learning principles				
11	Behavioral objectives are meant for	07 (38)	11 (61)	15 (83)	03 (17)
12	A complete series of learning units is called	09 (50)	09 (50)	02 (11)	16 (89)

Table cont....

13	A dynamic and interactive process of teaching learning is	06 (33)	12 (67)	11 (61)	07 (39)
14	According to Lattuca and Stark concept of curriculum is also called as	13 (72)	05 (28)	17 (94)	01 (06)
15	The context of curriculum is based on	16 (89)	02 (11)	18 (100)	0
	Learner Centered and Outcome based Curriculum				
16	The first part of the contextual filter of curriculum development is	07 (38)	11 (61)	01 (06)	17 (94)
17	The contextual filter that influences curriculum decisions are	14 (78)	04 (22)	15 (83)	03 (17)
18	Decision about aims, goals, objectives and selection of major areas of curriculum, choosing learning experience and evaluation procedures are reached after input:	04 (22)	14 (78)	09 (50)	09 (50)
19	Each institution has their own social, historical, economic and political context this means that curriculum decision should be based on	12 (67)	06 (33)	14 (78)	04 (22)
20	A broad or general statement reflecting the ultimate ends towards which the total educational programme is directed is called	06 (33)	12 (67)	12 (67)	06 (33)
	Reflection and Curriculum Assessment				
21	Decision about aims, goals, objectives and selection of major areas of curriculum, choosing learning experience and evaluation procedures are reached after input:	07 (38)	11 (61)	06 (33)	12 (67)
22	Which of the following trait is not concerned with measurement:	12 (67)	06 (33)	17 (94)	01 (06)
23	Curriculum evaluation determines	13 (72)	05 (28)	17 (94)	01 (06)
24	A type of evaluation that is perfumed in the begging of any program is called	14 (78)	04 (22)	15 (83)	03 (17)
25	The worth of a student / person attaches to a particular object or phenomenon is:	02 (11)	16 (89)	18 (100)	0

Table 3: Comparison of Mean Pre-test and post test score obtained by subjects

n=18

Category	Mean	SD	t value	df	p Value
Pre test	11.89	3.41	6.8034	17	<0.0001
Post test	17.89	1.64			

P value < 0.0001

The comparison of pre-test post test score is significant and shows that if the health care professions educators are trained well they will impart the teaching learning process scientifically and will provide learner centred, outcome based education.

The key to a really effective, integrated curriculum is to get educators to exchange information about what is being taught and to coordinate this so that it reflects the overall goal. This can be achieved through curriculum mapping, which has become an essential tool for the implementation and development of a curriculum. Faced with curricula which are becoming more centralized and less departmentally based, and with curricula including both core and optional elements, the faculty may find that the curriculum map is the glue which holds the curriculum together.[3]

DISCUSSION

Presently, there are various models available for planning curriculum like SPICES model and PRISM model.[4,5] So health professional educators to be prepared to use models that suitable for developing health care professional curriculum to fulfil societal needs with cent percent commitment and respect for adult learners. So it is imperative that the health care professional educators should have thorough knowledge on the curriculum development, design and mapping of the curriculum and must be trained adequately for curriculum development and educational strategies.

CONCLUSION

This study supports the importance of health care professional educators to be trained in curriculum development, design, and educational assessment so that the learners will be ethically competent professionals with societal commitment in a scientific manner. The faculty will identify that all teaching activities, whether big or small can represent a curriculum and will use educational strategies based on various frame work like SPICES and PRISM developed by Harden and Bligh.[4-5]

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