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Original Research Paper

Nursing

EFFECTIVENESS OF LIFESTYLE MODIFICATION PROGRAMME ON LIFESTYLE PRACTICES RELATED TO SELECTED LIFESTYLE DISEASES AMONG SCHOOL GOING ADOLESCENTS IN ERNAKULAM DISTRICT, KERALA

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ABSTRACT Adolescence is a life stage with unique characteristics, translating the fast evolution and bio - psycho-social changes and these translations are typically expressed in their lifestyles. The impact of various unhealthy lifestyle practices are seen in the form of rapidly increasing rate of non communicable diseases. The present study was carried out to evaluate the effectiveness of lifestyle modification programme on lifestyle practices related to selected lifestyle diseases The study was conducted among 400 school going adolescents who were chosen by probability sampling techniques A practice check list was used to measure lifestyle practices of adolescents related. All the measurements were carried out once before the Lifestyle modification programme (LSMP) and twice after administering the LSMP.

Most of the baseline variables among school going adolescents were homogenously distributed in control and experimental group. With regard to the assessment of lifestyle practices, the present study revealed that 30.5% of adolescents in control group and 26.5% in experimental group had unhealthy lifestyle practices and 69.5% and 73.5% of sample in control and experimental group had healthy practices in pre test. It was found that LSMP was effective in changing the lifestyle practices of school going adolescents in experimental group ($t = 23.375$, $p < 0.01$).The present study also revealed that most of the baseline variables were associated with lifestyle practice of adolescents towards selected lifestyle diseases ($p < 0.05$).

KEYWORDS : Lifestyle modification programme, Lifestyle practices, Lifestyle diseases.

INTRODUCTION

The health of a nation largely depends on the health of its people especially its youth and a balanced lifestyle plays a vital role in maintaining good health. Lifestyles are learnt from childhood and adolescence is a crucial period in which they imbibe various healthy and unhealthy lifestyle practices. Adolescents form two-thirds of our population. This is a unique group with special needs. Today's adolescents are the adults of tomorrow. This is the period when children mostly influenced by various lifestyle practices. It is a period of transition between childhood and adulthood- a time of rapid physical, cognitive, social and emotional wellbeing. India has the largest population of adolescents in the world. According to 2011 census report, India has 243 million adolescents.

NEED FOR THE STUDY

Adolescence is a life stage with unique characteristics, translating the fast evolution and bio - psycho-social changes and these translations are typically expressed in their lifestyles. The impact of various unhealthy lifestyle practices are seen in the form of rapidly increasing rate of non communicable diseases. But now, too many people are dying relatively young from non communicable diseases like heart diseases, diabetes and cancer. The main contributing factor for this epidemiological transition is change in our lifestyle towards the unhealthy continuum. eg, tobacco use, excessive alcohol consumption, unhealthy dietary habits and physical inactivity.

The prevalence of "epidemic of non communicable disease (NCD)" is on rise in developed and developing countries. An estimated 63% of 57 million deaths that occurred globally in 2008, were due to NCDs comprising cardiovascular diseases (48%), cancer (21%), chronic respiratory disease (12%) and diabetes mellitus (4%). Every year, an estimated 14 million people die prematurely in developing countries from preventable heart diseases, stroke, diabetes, cancer and asthma. It is estimated that by the year 2020, over 70% of the global burden of diseases will be caused by the lifestyle associated non communicable diseases.

A cross sectional study was conducted among 6579 individuals of age 30-74 yrs to estimate the prevalence of various behavioural risk factors for chronic diseases. Subjects were selected randomly by stratified multistage cluster sampling covering Kerala state. The two major risk factors observed among males were smoking and alcoholism. About two fifths (40%) of them were current smokers as well as current users of alcohol (41%). The median age at which initiation was 21 year for both smoking habits and for alcohol habits. Nearly a quarter of the target population were inactive (23% males and 22% females) based on work and leisure time activities. Obesity was found more among females (33%) than males(17%). So, it is the need of the time, to take early preventive remedies to protect our nation from the clutches of NCDs.

Statement of the problem

A study to evaluate the effectiveness of Lifestyle modification programme on life style practice related to selected lifestyle diseases among school going adolescents in Ernakulam district, Kerala.

OBJECTIVES

1. To assess and evaluate the lifestyle practices of school going adolescents on selected life style diseases before and after life style modification programme (LSMP).
2. To determine the association of lifestyle practices of school going adolescents with selected demographic variables.

HYPOTHESES

H_1: The life style practice score will be significantly higher in experimental group than control group after the lifestyle modification programme as measured by a practice checklist at 0.05 level of significance.

H_2: There will be a significant association of lifestyle practices of school going adolescents with selected demographic variables at 0.05 level of significance.

Research Methodology

Research approach and Design

A Quantitative approach – True experimental research

design was used in the present study.

E R OP_1 X OP_2 OP_3

C R OP_1 OP_2 OP_3

E: Experimental group **C:** Control group

R: Randomisation **OP:** Assessment of lifestyle practice of adolescents

X: Lifestyle modification programme **1:** Pretest **2:** First post test **3:** Second post test

Variables

Independent variable : Life style modification programme.

Dependent variable - lifestyle practices regarding selected life style diseases

The socio demographic variables in this study are:-

Age, sex, class, religion, diet, educational status of the father, educational status of the mother, occupation of the father, occupation of the mother, presence of life style diseases in the family, life style practices in the family and previous exposure to awareness programme on life style diseases.

Setting of the study : The present study was conducted at the selected high schools of Ernakulam district, Kerala.

Population and Sample

All school going adolescents studying in 8th and 9th standard classes in Ernakulam district.

Sample size - 400. Among 400 students, 200 students were in the experimental group (1 government school and 1 private school) and 200 students were in the control group (1government school and 1 private school).

Sampling technique

The educational districts and schools were selected by multistage random sampling and students from 8th and 9th classes were selected by simple random sampling.

Data collection instruments and data collection process

- Socio demographic proforma & Practice checklist

The practice scores were arbitrarily classified as:

- Healthy practice < 12 (> 60%)
- Unhealthy practice > 12 (< 60%)

A pretest to assess the lifestyle practices of adolescents were done. LSMP was given in two sessions related to selected lifestyle diseases and a hand book on LSMP was distributed to every participants. Post test was done on 7th day and 90th day after the LSMP.

Ethical consideration

- Formal permission to conduct the study was obtained from Directorate of public instruction (DPI), Thiruvanan tap uram.
- Ethical clearance was obtained from Ethical committee of Govt. Medical college, Thrissur and Institutional ethical committee of St. Joseph's College of Nursing, Dharmagiri, Kothamangalam.
- Permission was obtained from Management and Parent Teacher Association (PTA) of the concerned school.

RESULTS

Sample Characteristics

The majority of the adolescents (52.5%, 44%) were of 14 year old in both control and experimental group respectively.. Most of the adolescents (61.5%) in control group were males compared to 49.5% in experimental group.

Majority of the adolescents in both groups (93.5% and 93%) were non vegetarians. With regard to educational status of fathers, most of the adolescents' fathers in control (40.5%) and experimental (49.5%) group had high school education. 40% of mothers of adolescents in control group and 49.5% in experimental group also has high school education

Diabetes mellitus was noticeable in 27% of families of adolescents in control group and 21% reported that there is history of high cholesterol in their family. In experimental group, 32.5% of the adolescents had diabetes mellitus in their family and 18.5% had heart diseases in their family. The study revealed that the lifestyle practices present in the families of control group were smoking (27.4%), fast food (11%), alcoholism (10.5%) and chewing tobacco (8%). The lifestyle practices present in the families of experimental group were smoking (34.5%), chewing tobacco (26%), alcoholism (22%) and fast food (17%).

Assessment of lifestyle practices among adolescents

With regard to the assessment of lifestyle practices, the present study revealed that 30.5% of adolescents in control group and 26.5% in experimental group had unhealthy lifestyle practices and 69.5% and 73.5% of sample in control and experimental group had healthy practices in pre test.

Table 1: Assessment of specific lifestyle practices among adolescents

Sl no	Items	Control Group (n=200)		Experimental Group (n=200)	
		f	%	F	%
1.	Takes 3 meals a day				
	Yes	193	96.5	195	97.5
	No	7	3.5	5	2.5
2.	Drinks 1-2 litres of water/ day				
	Yes	140	70	128	64
	No	60	30	72	36
3.	Skip breakfast				
	Yes	85	42.5	87	43.5
	No	115	57.5	113	56.5
4.	Spend 1-2 hours in internet				
	Yes	71	35.5	58	29
	No	129	64.5	142	71
5.	Do regular exercise				
	Yes	116	58	144	72
	No	84	42	56	28
6.	Use tobacco				
	Yes	9	4.5	22	11
	No	191	95.5	178	89
7.	Habit of smoking				
	Yes	5	2.5	14	7
	No	195	97.5	186	93
8.	Takes alcohol				
	Yes	10	5	5	2.5
	No	190	95	195	97.5
9.	Take fast food				
	Yes	85	42.5	96	48
	No	115	57.5	104	52

Table 2: Effectiveness of LSMP on lifestyle practices of school going adolescents among control and experimental group

Practice	Control Group		Experimental Group		t value	p value
	Mean	SE	Mean	SE		
Pre test	13.02	0.214	12.77	2.4 05	0.914	0.361
Post test I	13.02	0.214	18.47	1.295	23.375**	< 0.001
Post test II	12.07	0.209	17.84	1.519	24.531**	< 0.001

** p< 0.01

It was found that LSMP was effective in changing the lifestyle practices of school going adolescents in experimental group ($t = 23.375$, $p < 0.01$).

Table 3: Summary of repeated measure ANOVA of practice score among experimental and control group

n=400

Source of variation	Sum of Squares	df	Mean square	F	p value
Between period	1729.602	2	864.801	966.244**	<0.001
Between group	4007.707	1	4007.707	240.711 **	<0.001
Period x Group	2292.635	2	1146.317	1280.784**	<0.001

**p< 0.01

The main effects between the period of measurement ($F = 966.244$, $p < 0.01$), between group ($F = 240.711$, $p < 0.01$) and period into group interaction ($F = 1280.784$, $p < 0.01$) indicate that there exist a significant difference in practice scores of adolescents between different measurement period and also significant difference between group and period into group interaction at 0.01 level.

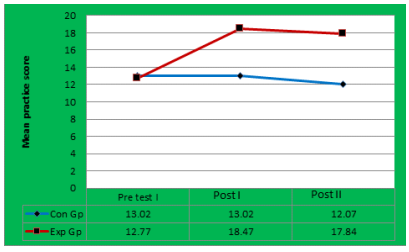

Figure 1: Comparison of practice score between control and experimental group

Table 4 : Association of level of lifestyle practice of school going adolescents with socio demographic variables

n=400

Variable	df	χ^2	p value
Age	1	56.460*	0.011
Gender	1	10.778*	0.001
Class	1	14.518**	<0.001
Religion	2	8.305*	0.016
Dietary habit	1	0.560	0.454
Educational status of father	3	1.843	0.606
Educational status of mother	3	8.535*	0.036
Previous exposure to LSMP	1	0.262	0.609

* p< 0.05, ** p < 0.01

It was found that there was a significant association between lifestyle practice of adolescents with demographic variables such as age, gender, class, religion and educational status of mothers of adolescents.

CONCLUSION

The present study has contributed to the body of knowledge on lifestyle modification for adolescents with an aim to prevent the occurrence of non communicable diseases in future. The study utilized a systematically organized teaching programme on specific lifestyle practices which is to be followed by the adolescents inorder to prevent selected lifestyle diseases such as Cardiovascular diseases, Cancer and Diabetes mellitus. The present study explored the life style practice of adolescents related to selected lifestyle diseases among school going adolescents. The present study shed light to various areas where our present young population is at risk in developing lifestyle diseases. Global health status and Indian health scenario gives warning for adopting immediate preventive strategies for the increasing burden of lifestyle diseases. LSMP is one among the interventional strategies to halt the occurrence of such diseases in the near future.

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