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Effectiveness of Mass Health Education Programme on Iodine Deficiency among Women

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Abstract: *Iodine deficiency disorders (IDD) is leading cause of brain damage in the world. (Lyons GH et.al 2004).The investigator noticed rural women are lack of knowledge on iodine.In this present study, one group pretest and posttest design was adopted. Initially, the knowledge on Iodine deficiency among women was assessed and mass health education was provided afterseven days post test was conducted to find out the effectiveness of mass health education programme.*

Objectives: *To assess the existing knowledge on Iodine among women.To evaluate the effectiveness of programme of Iodine deficiency.To find out the association between demographic variables and the level of knowledge in post test among women.*

Methodology: *Research approach indicates the basic procedure for conducting research. Simple random sampling technique used for this study. An evaluative approach was adopted for the study to determine the effectiveness of mass health education on iodine deficiency among women. The questionnaire was prepared on iodine deficiency to test the knowledge among women. The sample was used for pretest and posttest. The knowledge was assessed by interview method. A separate mass health education programme was prepared to deliver teaching.*

Result: *Pretest mean value is 6.02 and the standard deviation is 3.97. Post test mean value is 12.54 and the SD is 0.6514 is paired 'T' test is 44.35 and the knowledge was significant at P<0.001evel.*

Keywords: *goiter, cretinism, mass health education, iodine deficiency, effectiveness*

I. Introduction

Iodine is essential trace element. The thyroid hormones thyroxin and triiodothyronconain iodine. Larger thyroid in the female had the function of beautifying the neck (Langer 1960).Endemic goiter, visible as great enlargement of the thyroid gland, is found in persons living where water and soil, and in turn locally grownfoods, contain little iodine.(Bryan J 2004)Iodine deficiency gives rise to goiter(so called) endemic goiter as well as cretinism, which results in developmental delays and other health problems. Endemic goiter and cretinism associated with iodine deficiency have been depicted in pertaining and status since earliest times development of central nervous system for normal intellectual functioning depends on an adequate supply of thyroid hormones which require iodine for biosynthesis. Endemic cretinism is the most severe manifestation of the lack of maternal and fetal thyroid hormone arising from severe dietary iodine deficiency hallmarks include mental retardation, pyramidal neurological signs in an upper limb distribution, extra pyramidal signs and a characteristic gait related to the neurogical disorders as well as joint laxity and deformity.(Semba RD 2001).Endemic goiter resulting from continuing postnatal thyroid hormone deficiency, Severe stunning of growth, skeletal retardation and sexual immaturity. The worldhealth organization recommends the following daily intake for optimal iodine nutrition.(Food& Nutrition Board 2001)

Adult -150micrograms per day
Pregnancy and lactation-200micro grams per day
Children 120micrograms per day
Infants 90micrograms per day

Objectives: To assess the existing knowledge on Iodine among women.To evaluate the effectiveness of programme of Iodine deficiency.To find out the association between demographic variables and the level of knowledge in post test among women.

Methodology: Research approach indicates the basic procedure for conducting research.Simple random sampling technique was used to select the sample for the study.There is a significant difference in the level of knowledge on iodine deficiency after mass health programme among women. The questionnaire was prepared on iodine deficiency to test the knowledge among women. The sample size is 30. The knowledge was assessed

by interview method. A separate mass health education programme was prepared to deliver teaching. The questionnaire and mass health education programme were verified and validated by dissertation committee.

II. Result

Pretest level of knowledge highest percentage 90% of women's was in adequate knowledge, 10% of women were moderately adequate knowledge and no one was adequate knowledge. Post test value high percentage 96% of women were adequate knowledge post test value high percentage 96% of women were adequate knowledge, 4% of women moderately adequate knowledge and none of them were in adequate knowledge. Pre test mean value is 6.02 and the standard deviation is 3.97. Post test mean value is 12.54 and the SD is 0.6514 is paired 'T' test is 44.35 and the knowledge was significant at P<0.001evel.

Table I: Distribution of demographic variables among women.

S.No.	Demographic variables	Frequency	Percentage
1)	Age in years		
	(a) Below 20	12	24
	(b) 21-25	8	16
	(c) 26-30	15	30
	(d) 31 and above	15	30
2)	Education		
	(a) Non literate	1	2
	(b) Primary school	29	58
	(c) Middle school	17	34
	(d) Higher secondary school and others	3	6
3)	Occupation		
	(a) House wife	41	82
	(b) Coolie	2	4
	(c) Self employed	-	-
	(d) Monthly wages	7	14
4)	Family income		
	(a) Below Rs 1000	8	16
	(b) Rs1001-2000	24	48
	(c) Rs2001-3000	3	6
	(d) Above Rs3001	15	30
5)	Food habits		
	(a) vegetarian	3	6
	(b) Non vegetarian	47	94
6)	Sources health information		
	(a) Family	8	16
	(b) Mass media	25	50
	(c) Heath professionals	17	34
	(d) Friends and neighbors	-	-
7)	Family History of goiter		
	(a) No one	50	100
	(b) The member	-	-
	(c) Two members	-	-
	(d) More than 3 members	-	-

Table 2: Distribution of level of knowledge on Iodine deficiency among women in pre and posttest.

S.No.	Knowledge on Iodine deficiecy	Levels of knowledge					
		Inadequate<<50%		Moderately Adequate 51-5%		Adequate>75%	
		No	%	No	%	No	%
1)	Pre test	45	90	5	10	-	-
2)	Post test	-	-	2	4	48	96

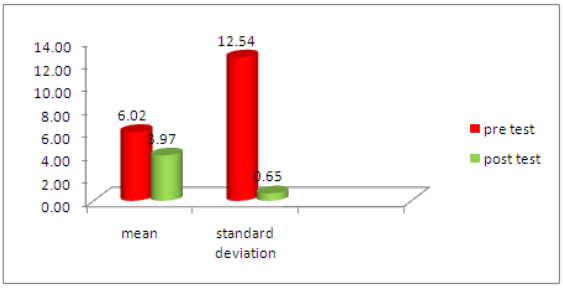

Figure 2: distribution of level of knowledge on iodine deficiency among women in pre and post test.

Table 2 shows in Pre test over all knowledge on Iodine deficiency 45(90%) had in adequate knowledge 5(10%) had moderately adequate knowledge and no one has adequate knowledge. In Post test over all knowledge on

Iodine deficiency 48(96%) had adequate knowledge, 2(4%) had moderately adequate knowledge andon one had inadequate knowledge.

Table 3: Mean and standard deviation of knowledge score on Iodine deficiency among women in pre and Posttest.

S. No.	Knowledge	mean	Standard deviation
1)	Pretest	6.02	3.97
2)	Post test	12.54	0.6514

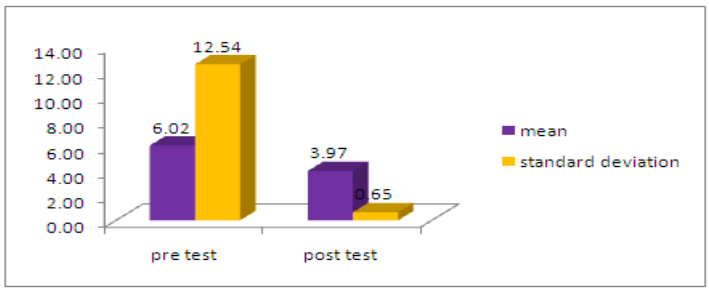

Figure 3 mean and standard deviation of knowledge score on Iodine deficiency among women in Pre and Posttest.

Table 3 shows In pretest, the overall knowledge on Iodine deficiency, the mean value was 6.02 with a standard deviation of 3.97.In post test, the overall knowledge on Iodine deficiency, the mean value was 12.54 with a standard deviation of 0.6514.

S.No.	Knowledge On Iodine Deficiency	Paired Difference		Paired `T`Test Value	P Value
		Mean	Standard deviation		
1)	Knowledge on Iodine deficiency	6.32	1.008	44.35(S)	P<0.001

Table 4 shows the effectiveness of mass health education programme by pre test and post test among women (Paired `t` test results).

Regarding the overall knowledge on Iodine deficiency among women, the mean value was 6.32 with a standard deviation of 1.008 and paired `t` test value 44.35 and the knowledge was significant at P<0.001 level.

Table 5 Association of demographic variables with post test level knowledge on Iodine deficiency among women.

S.No.	**Demographic variable**	**Inadequate<50%**		**Level of knowledge Moderately adequate51-75%**		**Adequate>76%**		**X2 value**
		No	**%**	**No**	**%**	**No**	**%**	
1.	Age in years							
	a.Below 20	-	-	-	-	12	24	X2=10.697
	b.21-25	-	-	2	4	6	12	Df=6
	c.26-30	-	-	-	-	15	30	NS
	d.31 and above	-	-	-	-	15	30	P<0.05
2.	Education							
	a.Nonlitrerate	-	-	1	2	-	-	X2=24.855
	b.primary school	-	-	1	2	28	56	Df=6
	c.Middle school							S
	d.Higher sec. school	-	-	-	-	17	34	p>0.05
	and others	-	-	-	-	3	6	
3.	Occupation							
	a.House wife	-	-	2	4	39	78	X2=0.457
	b.coolie	-	-	-	-	2	4	Df=6
	c.self employed	-	-	-	-	-	-	NS
	d.Monthly wages	-	-	-	-	7	14	P<0.05
4.	Family income							
	a.BelowRs 1000	-	-	-	-	8	16	X2=7.682
	b.Rs 1001-2000	-	-	1	2	23	46	Df=2
	c.Rs2001-3000			1	2	2	4	NS
	d.Above RS3001	-	-	-	-	15	30	P<0.05
5.	Food income							X2=4.5579
	a.vegetarian	-	-	-	-	3	6	Df=2
	b.nonvegetarian	-	-	2	4	45	90	NS
								P<0.05
6.	Sources of health information							

	a.Family b.Massmadia c.Heath professionals d.Friends and neighbors	- - - -	- - - -	- 2 - -	- 4 - -	8 23 17 -	16 46 34 -	X2=2.0829 Df=6 NS P<o.05
7.	Family History of goiter a.Noone b.The members c.Two members d.More than 3 members	- - - -	- - - -	2 -	4 -	48 -	96 -	X2=0 Df=6 NS P<0.05

III. Conclusion

The present study was assess the effectiveness of mass health education programme on iodine deficiency among women. The investigator analyses the data there was a significant P<0.05 level the knowledge improvement score mean value was 12.54 with standard deviation of 0.6514 were has in pre test the mean value was 6.02 with a standard deviation of 3.97. Overall knowledge score mean value was 6.32 with standard deviation of 1.008 and paired‘t’ test value 44.35 was significant at p<0.001 level.

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