

Nurse Directed Intervention on Knowledge and Health Promotion Behavior among Patient with Sickle Cell Anemia-A Pilot Study

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Abstract: Nurse Directed Intervention on Knowledge and Health Promotion Behavior of Patient with Sickle Cell Anemia. Aim and objective of my study to assess the knowledge of adolescent regarding sickle cell anemia among Observational group. To assess the knowledge of adolescent regarding sickle cell anemia among control group. To evaluate the effectiveness of nurse direct intervention on health promotion behavior among observational group, control group and find outcome. To compare demographic variable and the pretest score of observational group and control group. Interventional research (Quantitative) approach. Quasi Experimental research design. Parul sevashram Hospital. Vadodara. Population: Adolescents. Sample size 20. Simple Random sampling technique. Result: In this study the distribution of pre-test and post-test level of knowledge regarding sickle cell anemia among adolescence. In experimental group pre-test majority (50%) of respondents had poor & average knowledge while in post-test majority (100%) of respondents had average knowledge regarding sickle cell anemia. In control group pre-test majority 10 (100%) of respondents had poor knowledge and while in post-test 6(60%) or respondents had average knowledge and 4(40%) had poor knowledge regarding sickle cell anemia. The distribution of pre-test and post-test level of lifestyle behavioral changes regarding sickle cell anemia among adolescence. In experimental group pretest majority 5(50%) of respondents Neither agree nor disagree attitude and 4(40%) had agree attitude while in post-test majority 7(70%) had agree attitude and 3(30%) had strongly agree attitude regarding sickle cell anemia. In control group pre-test majority 50(50%) of respondents had neither agree nor disagree attitude and 3(30%) had agree attitude and 2(20%) had disagree attitude while in post-test majority 5(50%) of respondents had neither agree nor disagree attitude and 4(40%) had agree & 1(10%) disagree attitude towards regarding sickle cell anemia.

1. Introduction

An illness of the red blood cells (RBS) caused by heredity is known as sickle cell disease (SCD), also known as sickle cell anaemia. Because of their typical disc-like form, red blood cells may easily fit through even the tiniest blood vessels.^[1] But in this illness, the red blood cells develop an odd crescent form that looks like a sickle. Because of this, they become stiff and sticky and are more likely to become lodged in tiny blood vessels, preventing blood flow to various areas of the body.^[2] Tissue injury and pain may result from this. CD is a recessive autosomal disorder. The disorder requires two copies of the gene. You are considered to have sickle cell trait if you only have one copy of the gene.^[3]

The target population's involvement in genetic screening programs is essential to their effectiveness.^[4] Programs for screening the general population for sickle cell disease (SCD) and sickle cell trait (SCT) have not always been popular. Public screening programs were quickly developed by the National Sickle Cell Anemia Control Act, which was passed in 1972.^[5] However, the limited benefits of hasty planning that excluded members of the target African American population, poor control, a lack of education, and inappropriate testing procedures overshadowed much of the potential gains (Scott & Castro, 1979).^[6]

2. Material and Method

To assess the adolescence, a quasi-experimental research study was carried out. A control group and an observational group participated in the investigation. The study has a sample size of twenty. Utilizing an easy random sample technique based on inclusion and exclusion standards. The age group of adolescents was chosen.

Disoriented patients and research participants who declined to participate were removed from the study. To assess self-efficiency, data from sickle cell patients were gathered for this study. ^[7] Check lists and knowledge questionnaires were the study's instruments. At the Parul Seva-Shram Hospital, data were gathered from patients with sickle cell anemia in the paediatric ward and outpatient department. Inferential statistics and descriptive analysis were used to analyse the collected data. ^[8]

3. Result

SECTION-1

Table-1 frequency and percentage distribution of sociodemographic variable of Adolescent. n=20

SR.	Socio-Demographic characteristics		Control Group		Exp. Group	
			Frequency	Percent	Frequency	Percent
1.	AGE	10-12 Year	3	30.0	6	60.0
		12-14Year	7	70.0	4	40.0
2.	SEX	Girl	0	0	9	90
		Boy	10	100.0	1	10
3.	RELIGION	Hindu	9	90.0	10	100
		Muslim	1	10.0	0	0
		Christian	0	0	0	0
4.	TYPE OF FAMILY	Nuclear family	2	20.0	1	10.0
		Joint family	5	50.0	4	40.0
		Extended family	3	30.0	5	50.0
5.	MOTHER'S OCCUPATION	Unemployed	5	50.0	2	20.0
		Agriculture	4	40.0	5	50.0
		Labour	1	10.0	1	10.0
6.	FATHER'S OCCUPATION	Unemployed	0	0	2	20
		Agriculture	6	60.0	2	20.0
		Labour	3	30.0	5	50.0
		Skilled Worker	1	10.0	1	10.0
7.	ORDER OF CHILD	2	5	50.0	5	50.0
		3	4	40.0	4	40.0
		4	1	10.0	1	10.0
8.	FOOD PATTERN	Vegetarian	8	80.0	3	30.0
		Non-vegetarian	2	20.0	7	70.0
9.	SOURCE OF INFORMATION	Newspaper/magazine	0	0	1	10
		Radio/television	3	30.0	2	20
		Friends/ relatives	3	30.0	0	0
		Health professionals	4	40.0	7	70
10.	EDUCATION OF CHILD	Primary school	10	100.0	9	90.0
		Secondary school	0	0	1	1
11.	HISTORY OF ANEMIA	Yes	8	80.0	0	0
		No	2	20.0	10	100.0
12.	INCOME	Below 5000/month	4	40.0	2	20
		Unemployed	6	60.0	8	80

13.		Total	10	100.0		
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SECTION-2

Table-2 Frequency, and percentage distribution of knowledge score about sickle cell anemia among adolescent.
n=20

	C. Group				Exp. Group			
	Pre test		Post test		Pre test		Post test	
	F	%	F	%	F	%	F	%
Poor	10	100	4	40	5	50.0	0	0
Average	0	0	6	60	5	50.0	10	100
Good	0	0	0	0	0	0	0	0
Total	10	100.0						

Table-3 Mean and standard deviation on knowledge regarding sickle cell anemia.
n=20

Knowledge comparison		Mean	sd
Control group	Pre test	1.000	0.00
	Post test	1.60	0.516
Observational group	Pre test	1.50	0.527
	Post test	2.00	0.000

Table 3: Shows that the mean knowledge mean score is 1.00 in control group with a standard deviation of 0.00 in pretest. In the post test of control group mean knowledge score is 1.60 with 0.516 standard deviation. Likewise in observational group pretest score is 1.50 with 0.527 standard deviation and post-test mean knowledge score is 2 of adolescent in sickle cell anemia.

SECTION: 3

Table-4 Frequency and percentage distribution of pretest and posttest level of HBPS Scale on sickle cell anemia among adolescent. n=20

		C. Group				Exp. Group			
		Pre test		Post test		Pre test		Post test	
		F	%	F	%	F	%	F	%
HPBS Scoring	Strongly Disagree	0	0	0	0	0	0	0	0
	Disagree	2	20.0	0	0	1	10.0	0	0
	Neither agree nor disagree	5	50.0	3	30	5	50.0	0	0
	Agree	3	30.0	4	40	4	40.0	7	70
	Strongly Agree	0	0	5	50	0	0	3	30

	Total	10	100.0	10	100	10	100	10	100
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Table-5 Mean and standard deviation on Practice regarding sickle cell anemia. n=20

		Mean	sd
Control group	Pre test	3.10	0.738
	Post test	4.20	0.789
observational group	Pre test	3.30	0.675
	Post test	4.30	0.483

Table 5: Shows that the mean Practice mean score is 3.10 in control group with a standard deviation of 0.738 in pretest. In the post test of control group mean practice score is 4.20 with 0.789 standard deviation. Likewise in observational group pretest mean score is 3.30 with 0.675 standard deviation and post-test mean practice score is 4.30 with 0.483 standard deviation of adolescent in sickle cell anemia.

SECTION: -4

Association between pre-test knowledge Score regarding sickle cell anemia among adolescent with socio demographic variables in control group.

No statistics are computed because prescore is constant. All my participants are having poor knowledge score.

Table-6 Association between pre-test Knowledge regarding sickle cell anemia among adolescent with socio demographic variables in observational group. n=20

SR.N O	Socio-Demographic characteristics						
			POO R	AVERAG E	Chi Square	d f	p value
1.	AGE	10-12 Year	3	3	0.000a	1	1
		12-14Year	2	2			
2.	SEX	Girl	4	5	1.111a	1	0.292
		Boy	1	0			
3.	RELIGION	Hindu	5	5	-	-	-
		Muslim	0	0			
		Christian	0	0			
4.	TYPE OF FAMILY	Nuclear family	0	1	1.200a	2	0.549
		Joint family	2	2			
		Extended family	3	2			
5.	MOTHER'S OCCUPATION	Unemployed	0	2	5.200a	3	0.158
		Agriculture	2	0			
		Laborer	3	2			
6.	FATHER'S OCCUPATION	Unemployed	0	2	5.200a	3	0.158
		Agriculture	2	0			
		Laborer	3	2			
		Skilled Worker	0	1			
7.	ORDER OF CHILD	2	2	3	1.200a	2	0.549
		3	2	2			

		4	1	0			
8.	FOOD PATTERN	Vegetarian	2	1	0.476a	1	0.49
		Non-vegetarian	3	4			
9.	SOURCE OF INFORMATION	Newspaper/magazine	1	0	3.143a	2	0.208
		Radio/television	0	2			
		Friends/ relatives					
		Health professionals	4	3			
10.	EDUCATION OF CHILD	Primary school	4	5	1.111a	1	0.292
		Secondary school	1	0			
11.	HISTORY OF ANEMIA	Yes			-	-	-
		No	5	5			
12.	INCOME	Below 5000/month	1	1	0.000a	1	1
		Unemployed	4	4			
		Total					

* $p < 0.05$ indicates level of significant association.

The findings reveals that there was no significant association found between observation group knowledge score of adolescents about sickle cell anaemia with socio demographic variable

Table-7 Association between pre-test practice regarding sickle cell anemia among adolescent with selected socio demographic variables in control group n = 20

S R.	Socio-Demographic characteristics					Chi value	d f	P value
			Disagree	Neither Disagree Nor Disagree	Agree			
1.	AGE	10-12 Year	0	1	2	3.016a	2	0.221
		12-14Year	2	4	1			
2.	SEX	Girl	0	0	0			
		Boy	2	5	3			
3.	RELIGION	Hindu	2	4	3	1.111a	2	0.574
		Muslim	0	1	0			
		Christian	0	0	0			
4.	TYPE OF FAMILY	Nuclear family	1	1	0	3.878a	4	0.423
		Joint family	1	3	1			
		Extended family	0	1	2			
5.	MOTHER'S OCCUPATION	Unemployed	1	2	2	5.600a	4	0.231
		Agriculture	0	3	1			
		Laborer	1	0	0			

6.	FATHER'S OCCUPATION	Unemployed	0	0	0	8.167a	4	0.08 6
		Agriculture	1	2	3			
		Laborer	0	3	0			
		Skilled Worker	1	0	0			
7.	ORDER OF CHILD	2	2	1	2	4.400a	4	0.35 5
		3	0	3	1			
		4	0	1	0			
8.	FOOD PATTERN	Vegetarian	2	4	2	0.833a	2	0.65 9
		Non-vegetarian	0	1	1			
9.	SOURCE OF INFORMATION	Newspaper/ma gazine	0	0	0	1.306a	4	0.86 0
		Radio/televisio n	0	2	1			
		Friends/ relatives	1	1	1			
		Health professionals	1	2	1			
10.	EDUCATION OF CHILD	Primary school	2	5	3			
		Secondary school	0	0	0			
11.	HISTORY OF ANEMIA	Yes	2	4	2	0.833a	2	0.65 9
		No	0	1	1			
12.	INCOME	Below 5000/month	0	3	1	2.222a	2	0.32 9
		Unemployed	2	2	2			
13.		Total						

* $p < 0.05$ indicates level of significant association.

The findings reveals that there was no significant association found between control group practice score of adolescents about sickle cell anaemia with socio demographic variable.

Table-8 Association between pre-test practices regarding sickle cell anemia among adolescent with selected socio demographic variables in observational group. n = 20

SR.	Socio-Demographic characteristics					Chi value	df	P value
			Disagree	Neither Disagree Nor Disagree	Agree			
1.	AGE	10-12 Year	1	3	2	0.833a	2	0.659
		12-14Year	0	2	2			
2.	SEX	Girl	1	4	4	1.111a	2	0.574
		Boy	0	1	0			

3.	RELIGION	Hindu	1	5	4	-	-	-
		Muslim	0	0	0			
		Christian	0	0	0			
4.	TYPE OF FAMILY	Nuclear family	1	0	0	11.225a	4	0.29
		Joint family	0	3	1			
		Extended family	0	2	3			
5.	MOTHER'S OCCUPATION	Unemployed	1	1	0	8.600a	6	0.197
		Agriculture	0	2	0			
		Laborer	0	2	4			
6.	FATHER'S OCCUPATION	Unemployed	1	1	0	8.600a	6	0.197
		Agriculture	0	2	0			
		Laborer	0	2	3			
		Skilled Worker	0	0	1			
7.	ORDER OF CHILD	2	1	2	2	2.100a	4	0.717
		3	0	2	2			
		4	0	1	0			
8.	FOOD PATTERN	Vegetarian	1	1	3	2.619a	2	0.270
		Non-vegetarian	0	4	3			
9.	SOURCE OF INFORMATION	Newspaper/magazine	0	1	0	4.429a	4	0.351
		Radio/television	0	0	2			
		Friends/relatives	0	0	0			
		Health professionals	1	4	2			
10.	EDUCATION OF CHILD	Primary school	1	5	3	1.667a	2	0.435
		Secondary school	0	0	1			
11.	HISTORY OF ANEMIA	Yes	0	0	0	-		
		No	1	5	4			
12.	INCOME	Below 5000/month	0	1	1	0.33a	2	0.855
		Unemployed	1	4	3			
13.		Total						

* $p < 0.05$ indicates level of significant association.

The findings reveals that there was no significant association found between observation group practice score of adolescents about sickle cell anaemia with socio demographic variable.

4. Conclusion

Findings revealed that nurse directed intervention was effective in improving the knowledge and life style-behavioral changes regarding sickle cell anemia in excremental group as compare to control group, In this study the distribution of pre-test and post-test level of knowledge regarding sickle cell anemia among adolescence. In experimental group pre-test majority (50%) of respondents had poor & average knowledge while in post-test majority (100%) of respondents had average knowledge regarding sickle cell anemia.

In control group pre-test majority 10 (100%) of respondents had poor knowledge and while in post-test 6(60%) or respondents had average knowledge and 4(40%) had poor knowledge regarding sickle cell anemia.

The distribution of pre-test and post-test level of lifestyle behavioral changes regarding sickle cell anemia among adolescence. In experimental group pretest majority 5(50%) of respondents neither agree nor disagree attitude and 4(40%) had agree attitude while in post-test majority 7(70%) had agree attitude and 3(30%) had strongly agree attitude regarding sickle cell anemia.

In control group pre-test majority 50(50%) of respondents had neither agree nor disagree attitude and 3(30%) had agree attitude and 2(20%) had disagree attitude while in post-test majority 5(50%) of respondents had neither agree nor disagree attitude and 4(40%) had agree & 1(10%) disagree attitude towards regarding sickle cell anemia.

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