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**Effectiveness of ‘Holistic Humanized Nursing Care Strategy’ on Physiological Parameter (fatigue) of Adolescents Living With HIV**

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**Abstract**

According to UNICEF there are 220,000 adolescents infected by HIV/AIDS in India. In which around 70,000 adolescents are below the age of 15 and 21,000 adolescents are being infected through mother-child transmission every year. “A quasi experimental study to evaluate the effectiveness of ‘Holistic Humanized Nursing Care strategy’ on physiological parameter of adolescents living with HIV in selected settings”. Quantitative research approach was adopted, quasi experimental research which includes control group and manipulation with no randomization. The settings of the study were Integrated Child Welfare Organization (ICWO), Thiruvallur. The sample consist of 40 adolescents in experimental and control group who were diagnosed to have HIV and met inclusion criteria and chosen by non probability purposive sampling technique. The tool used was a demographic variables and HIV related Fatigue scale(HRFS) for assessing physiological parameter ( Fatigue).The calculated paired t value of  $t = 4.91$  was found to be statistically significant at  $p < 0.001$  level. It clearly indicates that after the administration of Holistic Humanized Nursing Care strategies there was significant increase in the physiological parameter (Fatigue) in the experimental group. The calculated paired t value of  $t = 0.64$  was not found to be statistically significant and this clearly indicates that there was no significant increase in the level of physiological parameter (Fatigue) in the control group. The calculated value of Z was = 3.34 between experimental and control group was found to be statistically significant at  $p < 0.001$  level. This clearly indicates that the Holistic Humanized Nursing care strategies to the adolescents with HIV was found to be effective to increase the physiological parameter(Fatigue) among adolescents with HIV in the experimental group than the adolescents in the control group.

**Keywords:** Research article, adolescent, HIV, holistic humanized care, fatigue

## **INTRODUCTION**

HIV is the abbreviation used for the Human Immunodeficiency Virus. HIV attacks the body's immune system. An estimated 2.5 million adolescents around the world are living with HIV/AIDs, according to the Joint United Nations Program on HIV/AIDS (JNAIDS),2010. Report on the Global AIDS Epidemic approximately 282,000 adults, adolescents, and children are currently living with human immunodeficiency virus (HIV) infection or acquired immunodeficiency syndrome (AIDS) in the United States. The current HIV/AIDS programmes are reaching only 15% of young people and 17% of high-risk groups . Adolescents affected by HIV need medical treatment, counselling, support from extended families, and other non-institutional care, and help with medical care for parents. Providing HIV patients with an emotionally stable, happy and supportive environment goes a long way in keeping them healthy.

HHNCS is the combination of nursing interventions which fulfil the physio and psychological needs of adolescents living with HIV for the duration of 6 months with reinforcement of the same intervention by the investigator to the group once in 15 days for 6 months, which consist of multifaceted teaching package on positive living of adolescents, structured group counselling for self esteem, aerobic exercises and follow up and reinforcement of counselling and exercise. This HHNCS helps to improve quality of life and fatigue, decreased body mass index, subcutaneous fat, and abdominal girth and improve the psychological status of adolescents with HIV.

The aerobic or oxidative system provides energy (adenosine triphosphate [ATP]) to working muscles during physical activity through the oxidation of glucose, fatty acids, and amino acids in the mitochondria. Beneficial effects of aerobic exercise training may include decreased body mass index, subcutaneous fat, and abdominal girth and reports of improved quality of life. These physiological adaptations to aerobic exercise training may improve fatigue, decrease functional limitations, and reduce physical disability resulting from HIV infection. It appears that performing constant or interval aerobic exercise for at least 20 minutes, at least 3 times per week for 4 weeks, may lead to improved cardiopulmonary fitness and improved psychological status, with an accompanying maintenance of immunological function.

## **OBJECTIVES**

1. To assess the pre test level of physiological parameter (Fatigue)among adolescents living with HIV in experimental and control group
2. To evaluate the effectiveness of Holistic Humanized Nursing Care strategies on selected physiological parameter (Fatigue) among adolescents living with HIV.

## **ASSUMPTION**

The Holistic Humanized Nursing Care strategies may have effect on physiological parameter (fatigue) among adolescents with HIV

**METHODOLOGY**

Quantitative research approach was adopted in this study. The research design selected for the study was quasi experimental research design which includes control group and manipulation with no randomization. The setting of the study was ICWO, Thiruvallur. The sample consisted of 40 adolescents who were diagnosed to have HIV stage I by the screening and physician and met the inclusion criteria were chosen for the study by Non probability purposive sampling technique.

**Tools of the study-** It consists of two sections

**Section A** Semi structured questionnaire to assess the background variable which consisted of items related to age, gender, and educational level of adolescents. Number of siblings, parents education, parents occupation, health status of siblings and parents, CD4 level, duration of diagnosis and treatment. The investigator has collected the response by interview method.

**Section B** HRFS for assessing fatigue among adolescents living with HIV used to assess the level of fatigue. This instrument consisted of 25 items and had three domains like fatigue intensity, Responsiveness of fatigue to the circumstances, Fatigue related to impairment of functioning. In which 25 questionnaire were positively scored (1-2-3-4) the score of 1 was given for not at all; 2 was given for a little; 3 was given for quiet a bit; 4 was given for very much fatigue. The r value for the tool was 0.82.

**RESULTS AND FINDINGS**

**Table 1.1 Assessment of pre test and post test level of physiological parameter (fatigue) among adolescents with HIV within and between experimental and control group**

Parameters	Group				Mean Difference	Mann-Whitney U-test
	Experimental(n=20)		Control(n=20)			
	Mean	SD	Mean	SD		
<b>Fatigue</b>						
Pre test	72.25	12.44	70.95	5.64	1.30	t=0.64 p=0.52 (NS)
Pos test	55.85	5.08	68.05	5.83	12.20	<b>t=4.91 p=0.001*** ( S)</b>

\*\*\*p<0.001, S – Significant, N.S – Not Significant

The table 1.1 shows that the pre test mean score of physiological parameter (fatigue) in the experimental group was 72.25 ± 12.44 and the post test mean score of fatigue was 55.85 ± 5.08. The table also depicts that the pre test mean score of fatigue in the control group was 70.95 ± 5.64 and the post interventional mean score of physiological parameter (fatigue) was 68.05 ± 5.83. The calculated paired t value of t = 4.91 was found to be statistically significant at p<0.001 level. This clearly indicates that after the administration of HHNCS there was significant increase in the level of physiological parameter (fatigue) among adolescents living

with HIV in the experimental group. The calculated paired t value of  $t = 0.64$  was not found to be statistically significant and this clearly indicates that there was no significant increase in the level of physiological parameter (fatigue) among adolescents with HIV in the control group who had undergone normal hospital routine.

**TABLE-1.2 Comparison of pre and post interventional level of physiological parameters (Fatigue) among adolescents living with HIV N=40**

Fatigue Domains	Group				Mean Difference	Mann-Whitney
	Experimental(n=20)		Control(n=20)			
	Mean	SD	Mean	SD		
<b>Pre test</b>						
Fatigue Intensity	21.1	4.47	22.05	4.87	1.05	Z=0.56 p=0.57(NS)
Fatigue is brought on by	11.45	2.78	11.85	1.98	-0.4	Z=0.16 p=0.86(NS)
Fatigue is alleviated by	6.95	1.64	4.9	2.27	0.05	Z=0.37 p=0.70(NS)
Fatigue is worse in the	5.2	1.28	5.05	1.05	0.15	Z=0.46 p=0.64(NS)
Impairment of activities of daily living	6.3	1.42	5.8	1.47	0.5	Z=0.94 P=0.32(NS)
Impairment of socialization	9.2	1.77	9.45	2.21	-0.25	Z=0.12 p=0.89(NS)
Impairment of mental functioning	12.05	3.27	11.85	2.76	0.2	Z=0.11 p=0.91(NS)
<b>Overall</b>	72.25	12.5	70.95	5.64	1.3	Z=0.63 p=0.53(NS)
<b>Post test</b>						
Fatigue Intensity	16.85	4.88	21.5	5.34	4.65	Z=2.63 p=0.01**(S)
Fatigue is brought on by	9.25	2.24	11.45	2.11	2.2	Z=3.41 p=0.02*(NS)
Fatigue is alleviated by	4.75	1.07	4.55	2.31	-0.2	Z=0.38 p=0.12(NS)
Fatigue is worse in the	3.5	0.83	4.8	1.36	1.3	Z=3.44 p=0.01**(S)
Impairment of activities of daily living	3.65	1.31	5.4	2.06	1.75	Z=2.93 p=0.01**(S)

Impairment of socialization	8.1	2.13	9	2.9	0.9	Z=1.39 p=0.16(NS)
Impairment of mental functioning	7.95	2.74	11.35	3.67	3.4	Z=3.18 p=0.01**(S)
<b>Overall</b>	54.05	5.08	68.05	5.84	12.2	Z=4.91 p=0.01**(S)

Table 1.2 shows that in pre test all domains such as fatigue intensity, fatigue brought on by, fatigue is alleviated by, fatigue is worse in, impairment in activities of daily living, impairment of socialization, impairment of mental functioning the mean difference between experimental and control group is small and it is not statistically significant difference.

In post test all domains such as fatigue intensity, fatigue brought on by, fatigue is alleviated by, fatigue is worse in, impairment in activities of daily living, impairment of socialization, impairment of mental functioning the mean difference between experimental and control group is large and it is statistically significant.

**Table 2 -Effectiveness of HHNCS on physiological parameter (Fatigue) among adolescent living with HIV. N=40**

Parameters	Group	Pretest		Posttest		Mean Difference	Wilcox on signed rank test
		Mean	SD	Mean	SD		
Fatigue	Experimental	72.25	12.45	55.85	5.08	-16.4	Z=3.34 p=0.001*** (S)
	Control	70.95	5.64	68.05	5.84	-2.90	Z=1.86 p=0.07(NS)

The table 2 shows that in experimental group the mean difference between the pre and post test was -16.4. The calculated Z value of Z = 3.34 was statistically significant at p<0.001 level. This clearly indicates that after the administration of HHNCS there was significant increase in the level of physiological parameter (Fatigue) among adolescents with HIV. The calculated Z value of Z = 1.86 was not statistically significant at p<0.07 level. This clearly indicates that there was no significant increase in the level of physiological parameter (Fatigue) among adolescents with HIV in the control group who had undergone normal NGOs routine measures. This clearly indicates that the HHNCS administered to the adolescents with HIV was found to be increase the physiological parameter (Fatigue) among adolescents with HIV in the experimental group than in the adolescents in the control group.

## **CONCLUSION**

The study concluded that HHNCS showed significant changes in the physiological parameter. There is notable increase in the physiological parameter (Fatigue) and the control group results shows there is no changes in physiological parameter. HHNCS which is non invasive harmless will be utilized to increase the Physiological parameter among adolescents with HIV.

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