

# Effectiveness of Nurse-led Educational Intervention in Preparing Youth Corps Members as Change Agents for Skin Cancer Prevention in People with Albinism

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## Abstract

People with albinism face a significantly higher risk of developing skin cancer due to their genetic condition. This study evaluated the effectiveness of a nurse-led educational intervention in improving skin cancer prevention knowledge among youth corps members in Ogbomoso, Nigeria. A quantitative, one-group pre-post-test design was employed. The study included 111 youth corps members selected through purposive sampling. Data was collected using a structured questionnaire before and after a nurse-led educational intervention. The intervention consisted of comprehensive modules covering skin cancer prevention, photo-aging signs, and sociocultural aspects of albinism. Data analysis utilized descriptive and inferential statistics. Pre-intervention results showed that 83.8% of participants had poor knowledge of skin cancer prevention, while 16.2% demonstrated good knowledge. Post-intervention, those with poor knowledge decreased to 68.5%, while good knowledge increased to 31.5%. Recognition of regular healthcare visits as a preventive measure improved from 16.2% to 20.7%. Understanding of the ABCDE mnemonic for melanoma diagnosis increased from 11.7% to 21.6%. Significant differences were found between pre and post-intervention knowledge ( $p=0.0001$ ) and understanding of albinism-related social challenges ( $p=0.004$ ). The nurse-led intervention effectively improved youth corps members' knowledge of skin cancer prevention in albinism, though knowledge gaps persist. Continuous, comprehensive educational initiatives are recommended to enhance understanding and support for people with albinism.

**Keywords:** Albinism, Health Education, Nurse-led Intervention, Skin Cancer Prevention, Youth Corps Members.

## Introduction

Albinism is a genetic condition characterized by the absence of melanin pigmentation, affecting individuals across all racial backgrounds and ethnic groups [1]. In Nigeria, an estimated six million people live with albinism, with 40% being children [2]. The condition significantly increases vulnerability to

skin cancer, with affected individuals having a 1,000-fold higher risk compared to the general population [3].

Despite this elevated risk, there persists a significant knowledge gap among the general population, including youth corps members, regarding necessary preventive measures and early detection strategies for skin cancer in individuals with albinism [4]. This lack of

awareness not only impedes the implementation of effective preventive measures but also contributes to the perpetuation of stigma and discrimination [5].

The National Youth Service Corps (NYSC) program in Nigeria provides a strategic platform for health education initiatives, as corps members often serve as influential agents of change in their communities [6]. This study aimed to evaluate the effectiveness of a nurse-led intervention in improving knowledge of skin cancer prevention among youth corps members in Ogbomoso, focusing on both medical and sociocultural aspects of albinism.

## Methods

### Study Design

A quantitative, one-group pre-post-test design was employed. The study was conducted between August and September 2024 in Ogbomoso, Oyo State, Nigeria.

### Participants and Setting

The study included 111 youth corps members aged 21-29 years serving in the Ogbomoso North local government area. Participants were selected through purposive sampling due to restrictions on regular corps member gatherings during the study period.

### Intervention

A one-day workshop delivered comprehensive education through three modules:

1. Skin structure and functions
2. Albinism types and characteristics
3. Skin cancer prevention strategies and sociocultural aspects of albinism

### Data Collection

A structured questionnaire assessed participants' knowledge in four domains, namely: Skin cancer, prevention knowledge, Prevention modalities, Photo-aging signs awareness, and Understanding of sociocultural challenges.

### Ethical Considerations

The study received approval from the Oyo State Health Research Ethics Committee (NHREC/OYOSHRIEC/10/11/22). Informed consent was obtained from all participants.

### Data Analysis

Data was analyzed using descriptive statistics and paired t-tests to compare pre and post-intervention outcomes. Statistical significance was set at  $p < 0.05$ .

## Results

### Demographic Characteristics

Out of the 111 participants, 69 (62.2%) were female, and 42 (37.8%) were male. The mean age was  $26 \pm 2.14$  years, with 72.1% aged 25-29 years (Table 1).

**Table 1.** Socio-Demographic Data of Participants (N=111)

Socio-demographic	Frequency	Per cent
<b>Sex</b>		
Male	42	37.8
Female	69	62.2
<b>Age range (years)</b>		
21 – 24	31	27.9
25 – 29	80	72.1

Religion		
Christianity	62	55.9
Islam	48	43.2
Traditional	1	0.9

Age: Minimum = 21, Maximum = 29, Mean = 26±2.14 Standard deviation

### Knowledge Assessment

The pre-intervention assessment showed that 83.8% had poor knowledge of skin cancer prevention, and 16.2% demonstrated good

knowledge. However, the post-intervention results revealed that Poor knowledge decreased to 68.5%, and Good knowledge increased to 31.5% (Figure 1).

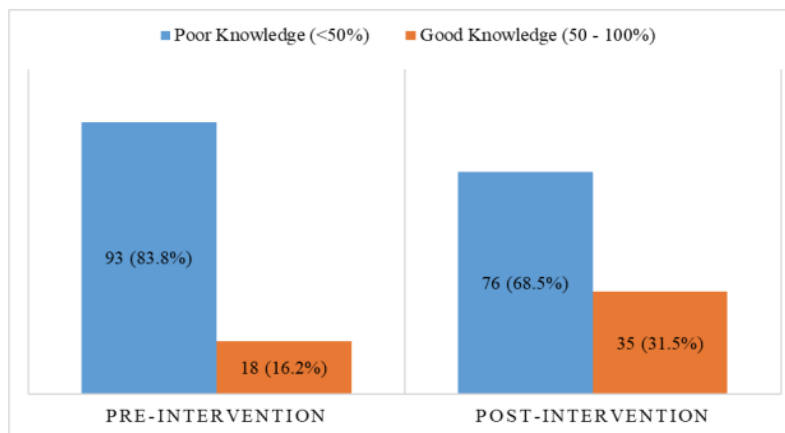


Figure 1. Level of Knowledge about Skin Cancer Prevention in People with Albinism

### Statistical Analysis

Table 2 shows that significant improvements were observed in overall knowledge (p=0.0001) and Understanding of sociocultural challenges

(p=0.004). However, the modality of skin cancer prevention showed no significant difference (p=0.142).

Table 2. Significant Difference between Pre and Post-Intervention Knowledge of Skin Cancer Prevention, Modality of Skin Cancer Prevention, and the Plight of People with Albinism (N =111)

Items	Paired Samples	N	Mean	MD	SD	CI	T	df	pv	Remark
Knowledge	Pre-intervention	111	12.77	2.901	4.862	4.06 - 1.74	4.952	110	0.0001	S
	Post-intervention	111	15.67		4.747					
Modality	Pre-intervention	111	0.63	0.144	0.713	0.34 - 0.05	1.481	110	0.142	NS
	Post-intervention	111	0.77		0.783					
Plight	Pre-intervention	111	1.6	0.432	1.13	0.72 - 0.14	2.956	110	0.004	S
	Post-intervention	111	2.04		1.061					

CI = Confidence Interval, t = t-value, df = Degree of Freedom, pv = Level of Significance, S = Significant, NS = Not Significant

### Discussion

This study demonstrates the effectiveness of nurse-led interventions in improving knowledge

about skin cancer prevention among youth corps members. The significant improvement in overall knowledge aligns with previous findings

showing the positive impact of structured educational programs in healthcare [7, 8].

However, the persistence of knowledge gaps (68.5% still showing poor knowledge post-intervention) suggests the need for more comprehensive, sustained educational initiatives. This finding echoes similar studies highlighting the importance of continuous reinforcement in health education programs [4, 9].

The improvement in understanding sociocultural challenges ( $p=0.004$ ) is particularly noteworthy, as it addresses both medical and social aspects of albinism care. This holistic approach is crucial for developing effective support systems for people with albinism [10].

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## Conclusion

The nurse-led intervention effectively improved youth corps members' knowledge of skin cancer prevention in albinism, though significant knowledge gaps remain. Future interventions should consider longer-term, multi-session approaches to enhance knowledge retention and practical application. Integration of such programs into the regular NYSC curriculum could provide a sustainable platform for continuous education and awareness.

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## Conflict of Interest

The authors declare no conflicts of interest.

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