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A study to evaluate the effectiveness of aloe neemtherapy regarding acne and quality of life among early adolescents in selected schools at Mysuru

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Abstract

Aim: The study is to assess the effectiveness of Aloeneem therapy regarding acne and quality of life among early adolescence in selected school at Mysuru.

Methods: The research design adopted was quasi-experimental design. Sixty adolescence from two schools had been selected, among which 30 adolescence from BGS Public School in experimental group and 30 adolescence from Sree Nataraja Public School in control group, by using Modified Global Acne Grading Scale and Modified Cardiff Quality Index scale containing 5 questionnaires used, 1 month of Aloeneem intervention given after the pre -test done. A post test was conducted after the Aloeneem therapy using the same scale. Data was analyzed by using paired and unpaired test to find the effectiveness and chi square test was used to find the association with demographic variables.

Results: The findings of the study revealed that the Aloeneem therapy regarding acne and quality of life among early adolescence was effective, mean pre-test and post- test scoring by Modified Global Acne Grading System and Modified Cardiff Quality Index. Hence research hypothesis accepted. The association between pre-test acne grading and selected demographic variables are significant with age, class studying and acne affects negatively in experimental group. And the acne affect negatively in control group. The association between pre-test Quality of life and selected demographic variables are significant with age, class studying, previous exposure to acne, acne affects negatively in experimental group. And the class studying in control group.

Interpretation and Conclusion: It was evident from the study in early adolescence with acne had acne grading score more and low quality of life and the aloeneem therapy was highly effectiveness in reducing acne grading score and improving quality of life among early adolescence.

Keywords: Aloeneem therapy, acne, quality of life, early adolescence, modified global acne grading scale, modified cardiff quality index

Introduction

Child health nursing concerned with the health of infants, children and adolescents and there opportunities to achieve the full potential as adult. Health problem of children and adolescence are very wildly among the nation of factors like their age, sex, puberty change and their life style and habits

Acne vulgaris is one of the most common skin diseases, usually beginning in adolescence and often resolving spontaneously once adulthood is reached. Therefore, large-scale epidemiological studies on acne vulgaris have to be focused mainly on adolescents

Herbs for acne are used that both clear the skin and heal the scars. Neem leaf extract and *aloevera* gel have been used for centuries in the treatment of skin diseases. More than 99% of ingredients in this therapeutic formula are comprised to certified organic Neem leaves extracts and *aloevera* gel to treat acne, eruption and marks left by acne.

Need for the study

Acne vulgaris (Acne) is the most common skin disorder characterized by non- inflammatory comedones or inflammatory papules, pustules and nodules. Although acne does not pose serious threat to general health, it is one of the most socially distressing conditions especially for adolescents. The acne inflammation is triggered by pus forming bacteria recognized as *Propionibacterium acnes* and *Staphylococcus epidermis*. Acne therapy includes prolonged use of comedolytic agents, antibiotics and anti-inflammatory agents that are known to cause many side effects.

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Moreover, the widespread and long-term use of antibiotics over the years has unfortunately led to emergence of resistant strains. To avoid side effects, traditional or herbal formulations are preferred. Herbs are safe, efficacious and multifunctional. Medicinal plant extracts are known to have enormous therapeutic potential. Plant-based preparations with little or no side effects are cyclically returning to complement dermatological therapy. They serve as safer choice or in some cases is the only effective treatment.

Objectives of the Study

- To assess the pre-test level of acne score and quality of life among early adolescence in experimental group and control group.
- To determine the effectiveness of aloe-neem therapy regarding acne and quality of life in experimental group.
- To evaluate the post-test level of acne score and quality of life among early adolescence in control group.

- To compare the post-test level of acne score and quality of life among early adolescence in experimental and control group.
- To find out the association between pre-test level of acne score and quality of life among early adolescence in experimental group.
- To find out the association between pre-test level of acne score and quality of life among early adolescence in control group.

Assumptions

- The researcher assumes that
 - Early adolescence may have some knowledge about acne and aloe-neem therapy.
 - Aloe Neem therapy may enhance the awareness of *aloevera* and Neem for acne for early adolescence.
- Aloe Neem therapy may enhance the quality of life among early adolescence.

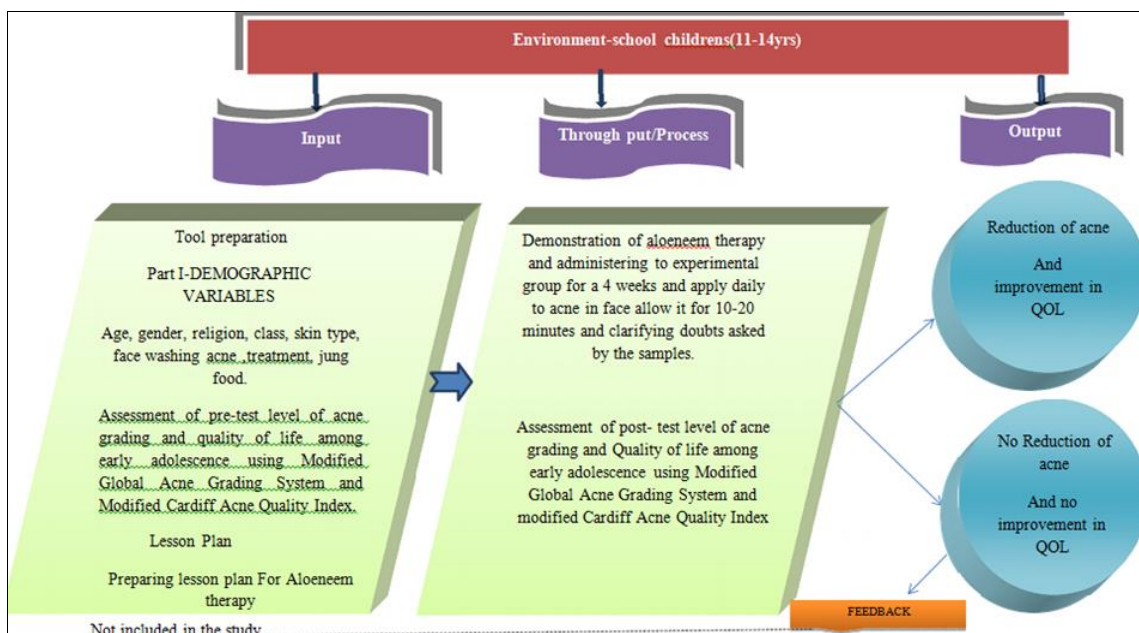


Fig 1: Conceptual frame work based on modified general system theory by Ludwig von bertalanffy (1968)

Research design

The study design for this study is quasi - experimental design, pre-test post-test, control group. The researcher has two groups experimental and control group, with pre-test and post-test design.

Table 1: Schematic representation of research design

	Pre-test	Intervention	Post-test
Experimental E	O1	X	O3
Control C	O2	-	O4

Variables

1. Independent variable: Aloeneem therapy
2. Dependent variable: Acne and quality of life measured by acne global grading scale and Cardiff quality index
3. Extraneous variable: Age, Gender, skin type, religion etc.

Settings:

The study was conducted in Sri Nataraja Public School and BGS public School, at Mysuru.

Target population

Adolescence belongs to 11- 14years of selected School Mysuru.

Accessible population

In this study accessible population are the early adolescence belongs to 11- 14years of Sree Nataraja Public School and BGS Public School Mysuru who met the designated criteria and who were also available for the research study.

Method of data collection

The data can collected from early adolescents who belong to the age group of 11-14 years regarding acne and quality of life in selected schools Mysore by using global acne grading scale and modified Cardiff quality index questionnaires.

Sampling Procedure

This research study will adopt purposive sampling for selecting samples. Out of total population defined those who will meet inclusion criteria will be selected for the study.

Sampling size

Total 60 of early adolescence were selected for the sample by purposive sampling. From each school 30 students were selected. The sample size was determined on the types of the study, variables being studied, the statistical significance required and availability of sample and feasibility of conducting study.

Inclusion Criteria for sampling

Early adolescents who belongs to 10-14 years.
The adolescents who are willing to participate in the study.
The adolescents who are able to read and understand Kannada or English.

Exclusion Criteria for sampling:

Early adolescents who belongs more than 10-14 years.
The adolescents who are critically ill.
The adolescents who are unable to read and understand Kannada or English.

Instrument Used

Modified global acne grading system and modified Cardiff quality index structured questionnaire to assess the acne score and quality of life.

Data collection technique

The back ground factors were collected by using a structured baseline Performa prepared by the investigator. The effectiveness of Aloeneem therapy regarding acne and quality of life among early adolescence by using Modified global acne grading system and Modified Cardiff Quality acne index for both pre-test and post-test.

Description of tool

In order to determine the existing awareness and effectiveness of Aloeneem therapy regarding acne and quality of life among early adolescence Modified global acne grading system and Modified Cardiff acne quality was constructed with total number of 10 samples.

Section A: Demographic data

Section B: Modified global acne grading system

Section C: Modified Cardiff acne quality index.

Section A: Demographic data

It consists of the following items such as age, gender, religion, Class studying, Type of skin, Number of time a day that you wash your face, Do you have acne before, Acne affects negatively that others treat you, Therapy currently using for your acne and eating more Junk foods.

Section B: Modified global acne grading system

It consists of items which helps to grade the acne among early adolescence.

The items were framed in the table which has the rows for location of acne it includes and its score Forehead (2), Right Check (2), Left Check (2), Nose (1) and Chin (1) and the column is for the acne type that its scores is Clear skin (0). One small lesion (1), Few Lesion (2), Small Nodules (3) And Few Nodules (4). Based on these criteria grading is done by using Score = Factor X Grade.

There by acne severity scoring can be done that as follows Mild (1-8), moderate (9-16) and severe (17-32). The tool was prepared in English to facilitate better comprehension.

Section C: Modified Cardiff acne quality index.

This Index Questionnaire is designed for use in children. It is self-explanatory. It consists of 5 questions regarding the

acne quality index on adolescence. The items were of multiple-choice types which 4 options and that carry the scores.

The scoring of each question is as follow:

Very much (3), Quite a lot (2), only a little (1), Not at all (0) and questions, unanswered (0) will be scored.

This can be calculated by summing the score of each question resulting in a maximum of 15 and a minimum 0. The higher the score, the more quality of life is impaired.

The result were discussed according to study findings

A. Description of sample characteristics

It was observed in experimental group 2 (6.7%) were in age group of 11 years, 3 (10%) were in age group of 12 years, 8 (26.7%) were in age group of 13 years And 17 (56.7%) were in age group of 14 years. Among control group 2(6.7%) were in age group of 11 years, 3 (10%) were in age group of 12 years, 14 (46.7%) were in age group of 13 years and 11 (36.7%) were in age group of 14 years

It was observed that experimental group majority of the samples were males 17 (56.7%) and females 13 (43.4%). In control group majority of the samples were females 17 (56.7%) and males 13 (43.4%).

With regard to the religion majority of the samples in experimental group are Hindu 29 (96.7%), Chirstin 0 (0), Muslim 1 (3.4%) and others 0 (0%). In control group majority of the samples are Hindu 29 (96.7%), Chirstin0 (0), Muslim 1 (3.4%) and others 0 (0%).

It was observed that experimental group majority of the samples were studding 6th (6.7%), 7th 8 (26.7%), 8th 10 (38.4%) and 9th 10 (38.4%). In control group majority samples were studding 6th 1 (3.4%), 7th 3 (10%), 8th 17 (56.7%) and 9th 9 (30%).

It was observed that experimental group majority of the samples skin types are dry 11 (36.7%), oily 12 (40%), combined 1 (3.4%) and sensitive 6(20%). In control group majority the samples skin types are dry 5 (16.7%), oily 16 (53.4%), combined 9 (30%) and sensitive 0 (0%).

It was observed that experimental group number of times the samples wash their face per day once 0 (0%), twice 20 (66.7%), thrice 8 (26.7%) and more than thrice 2 (6.7%). In control group majority the samples wash their face per day once 0 (0%), twice 18 (60.7%), thrice 9 (30%) and more than thrice 3 (10%).

With regard to the previous acne in experimental the samples yes15 (50%) and No 15 (50%).In control group majority the samples yes 12 (40%) and No 18 (60%) With regard to acne affects negatively like others treat you in experimental group the samples yes 14 (46.7%) and No 16 (53.4%). In control group majority the samples yes 5 (16.7%) and No 25 (83.4%).

It was observed that in experimental group the current therapy used for acne Hormonal therapy 0 (0%) oral 0 (0%) topical application 6 (20%) and No treatment 10 (33.3%). In control group majority the samples the current therapy used for acne Hormonal therapy 0 (0%) oral 0 (0%) topical application 3 (10%) and No treatment 27 (90%).

With regard to consuming more Junk foods in experimental group samples yes 19 (63.4%) and No 11 (36.7%). In control group majority the samples yes 20 (66.7%) and No 10 (33.4%). 2.90 and the obtained t test value is 2.6052, which is found to be greater than the table value 2.0010. The obtained t value is highly significant at the level of p=0.05

Conclusion drawn from the study were as follows

The overall pre-test data in experimental group and control group reveals a percentage of acne grading and quality of life. Aloeneem therapy was administered to early adolescence in the experimental group over a period of 4 weeks.

After the Aloeneem therapy the mean post test scores of level of score in the experimental group and the control group was found to be 11.67 and 14.57 respectively. The mean difference value is 2.9 and the obtained $t=2.065$. which are found to be greater than t table value-2.010. It is inferred that there is a significance difference between posttest level of of acne grading and quality of life among early adolescence in the experimental group and the control group. This shows that Aloeneem therapy was very effective regarding of acne and quality of life among early adolescence

Results

Organization of the study findings Analysis of the study findings are categorized and presented under the following headings:

Section 1: Description of the demographic variables of early adolescents under study.

Section 2: Data analysis of pre- test and post- test regarding acne score and quality of life score among early adolescents in experimental group.

Section 3: Data analysis of pre -test and post- test regarding acne score and quality of life score among early adolescents in control group.

Section 4: Data on comparison of post- test acne and quality of life score of experimental and control group.

Section 5: Findings related to association of the level of acne and quality of life score among early adolescents with demographic variables in experimental and control group.

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