



FACULTY OF SCIENCE AND EDUCATION

DEPARTMENT OF BIOLOGY

**ASSESSMENT OF PREVALENCE, PSYCHO-SOCIAL IMPACT AND CONTROL
STRATEGIES OF *ACNE VULGARIS* AMONG YOUTHS IN KKONA VILLAGE,
WAKISO DISTRICT**

BY

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BU/UG/2020/1919

**This final year Research Report is submitted to the Department of Biology in partial
fulfillment of the requirement for the award of the degree of Bachelors of Science in
Education of Busitema University**

NOVEMBER 2023

DECLARATION

I **BAGENDA GEORGE WILLIAM**, hereby declare that this research report for a topic *“Assessment of the prevalence, psycho-social impact and control strategies of acne among youths in Kkona Village, Wakiso district”* is my original work and has not been presented for a degree or diploma award in any other institution of higher learning.

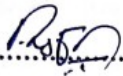
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APPROVAL

This report entitled *Assessment of prevalence, psycho-social impact and control strategies of acne vulgaris among youths in kkona village, Wakiso district*, has been submitted for examination with the approval of the following supervisor evidenced by the signature in the consent below.

I have satisfactorily read through the dissertation and consent to its submission to the Department of Biology, Nagongera Campus for the award of Bachelor of Science in Education of Busitema University.

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ACKNOWLEDGEMENT

I take this magnificent opportunity to give great thanks to the Almighty God for enabling me make this research a reality.

I recognize and cherish my supervisor for this research, Mr. Kifuko Richard whose help through guidance, advice and kindness propelled the success of this research as well as the whole Biology department of Busitema University, Nagongera campus.

Exceptional thanks go to my parents (Mr. Mayanja Erenest and Ms. Namuswe Margie) as well as Mr. Mugabi Stanley who without second thought sponsored my whole course for this Bachelor's Degree. May the Almighty bless you.

I also appreciate the board of Nansana Secondary School and everyone that played part in my education career whether directly or indirectly. I specially thank Mr. Musoke William and Mr. Ggita Erisa Tendo who shaped my education through secondary level.

I express sincere gratitude to all the people that were involved in this study either as respondents or helped in the data collection process at any point of this research.

DEDICATIONS

This is dedicated to my beloved parents (Mr. Mayanja Erenest and Ms. Namuswe Margie), beloved siblings, and Uncle Mr. Mugabi Stanley for their unconditional support, love, care and guidance up to date. To my cherished friends, Ssemata Ibrahim and Ssekabira Hassan as well as my course-mates for their support in the different ways which has seen me make it through this course. I can only pray to the lord to bless you abundantly.

A special dedication goes to my sister the late Nakayiza Elvine Sarah who was always a second mother to all of us. May her soul rest in eternal peace.

DEFINITIONS, ABBREVIATIONS AND ACRONYMS

Acne: a skin condition characterized by red pimples, on the skin especially on the surface.

Dermatology: branch of medicine concerned with the diagnosis and treatment of skin disorders.

Dermatologist: a medical practitioner specializing in the diagnosis and treatment of skin disorders

Comedone: small, flesh-colored, white or dark bumps that give the skin a rough texture.

Topical: relating or applied directly on the body

DLQI: Dermatology Life Quality Index

GAGS: Global Acne Grading System

QoL: Quality of Life

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ABSTRACT

Background: Acne (*Acne vulgaris*) is a common chronic skin disorder that primarily affects the face but can also appear on the neck, chest, back and shoulders. It causes appearance of pimples, blackheads, whiteheads and sometimes deeper cysts or nodules on the skin.

Objective: To examine the current understanding of the prevalence rates, risk factors, and the effectiveness of various control strategies employed by the youths.

Methods: In this study, a sample population of 50 respondents from Kkona village, Wakiso District was studied of which 30 were female and 20 males. The respondents were asked to fill a self-reported questionnaire and the presence of acne was determined by clinical observation by a dermatologist. The severity was graded according to the Global Acne Grading System (GAGS) and the impact on Quality of life was assessed using the Dermatology Life Quality Index (DLQI).

Results: The overall prevalence of acne was 72%. It was significantly affected by age and gender where it was more in males (80%) as compared to females (66.67%). Post-inflammatory hyperpigmentation was recorded in a few cases. A few cases (6) of severe acne were present and the rest had mild or moderate acne. 36.11% of the cases had no effect; 11.11% had a small effect; 33.33% had a moderate effect; 8.33% large effect and 11.11% had extremely large effect on their life quality. At least 70% of the respondents used one or more treatment methods for the acne.

Conclusion: Acne is a major problem among the youths as it had at least a large impact on the quality of life in 19.44% of the cases.

Recommendation: The youths should be educated on how to control facial acne and how to deal with the problem.

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CHAPTER ONE: INTRODUCTION

1.1 Background

Acne (*Acne vulgaris*) is one of the most prevalent skin conditions affecting teenagers. It is a disease of the pilosebaceous unit. Blockage of sebaceous glands and colonization with *Proinobacterium acnes* leads to acne (Ayer & Burrows, 2006). A changed keratinization pattern in the hair follicle leads to blockage of sebum secretion. Probably, hyper responsiveness to the stimulation of sebocytes and follicular keratinocytes by androgens leads to the hyperplasia of sebaceous glands and seborrhea that characterize acne. The enlarged follicular lumen attributable to congealed keratin and lipid debris forms a closed comedo (whitehead) and when the follicle has a portal of entry at the skin, the semisolid mass protrudes forming a plug, producing an open comedo (blackhead).

Acne is one of the most prevalent skin conditions, affecting more than 85% of teenagers (James, 2005). It typically starts at puberty and resolves slowly as the person reaches their 20's, although some people continue to have acne into their 40's and 50's (Goulden, Clark, & Cunliffe, 1997). It is rarely life threatening and is often dismissed a self-limiting condition and is given little or no attention in all education levels. Despite its dermatological nature, effects of acne can go far deeper than the surface of the skin, and can place a heavy emotional and psychological burden on the victims which may even be worse than the physical impact. The change in skin appearance may lead to anger, fear, shame, anxiety, depression, embarrassment, and bullying and stigmatization within peer groups (Goulden *et al.*, 1997). Lack of confidence, social withdrawal, feelings of insecurity and inferiority, limited employment opportunities, functional and interpersonal difficulties at work, and suicidal tendencies have also been reported attributed to the effects of acne (Koo & Smith, 1991).

Acne is caused by multiple factors such as genetic factors (Bataille, Snieder, McGregor, Sasieni, & Spector, 2002), stress (Chiu, Chon, & Kimball, 2003), androgens, and excess sweating (Cunliffe & Gould, 1979). All these factors influence the development and severity of acne. Corticosteroids, oral contraceptives, iodides, bromides, lithium, and chemicals such as dioxins are known to induce acne eruptions, along with endocrine disorders such as Cushing's syndrome and polycystic ovary syndrome. Acne is often worse in current smokers, but despite popular

belief, diet, lack of exercise, lack of hygiene, greasy hair hanging over the face, and masturbation do not have any effect (Fries, 1978).

The clinical features of acne are signs related to distended, inflamed, or scarred pilosebaceous units. Lesional polymorphism is the main feature, and is most commonly seen on the face, back and chest (Ayer & Burrows, 2006). In more severe cases, multiple inflammatory papules and nodules fuse to form draining sinuses, which lead to chronic scars and rarely malignant changes (Diane & James, 2013). Post inflammatory lesions may also occur and are represented by macular pigmentation and scars (hypertrophic, keloids, ice pick scars, depressed fibrotic and atrophic macules, and perifollicular elastolysis). Post inflammatory hyperpigmentation is commonly seen in pigmented skin (Norris & Cunliffe, 1988).

Grading the severity of acne is important to determine the appropriate treatment. This is done using any of the multiple grading systems available such as *The Global Acne Grading System*, a numerical pictorial grading system which seems to be the most accurate, reproducible and rapid. It is as well important to assess the psychological impact using tools such as *the Dermatology Life Quality Index*, *the APSEA questionnaire* or *the Cardiff acne disability index* (James, 2005). Generally, acne is graded into three namely; mild acne, moderate acne, and severe acne.

Management of acne consists of safe treatment, reduction of the psychological tension through emotional and social support, and clarifying popular misconceptions about the disease (Ayer & Burrows, 2006). Treatment should be started early to minimize the risk of forming scars and adverse psychological effects. It is mainly focused on reducing non-inflammatory lesions that are often precursors of inflammatory lesions. Treatment of acne is chosen basing on the individual patient, the type of acne, its severity, patients' ability to use the treatment and their psychological state (Chiu *et al.*, 2003).

Currently, a large number of teenagers and youths in Uganda are affected by acne and are not aware of its causes, prevention, control and treatment and hence the basis for this study among teenagers and youths in Kkona Village, Wakiso district.

1.2 Problem statement

The prevalence of acne is a major concern to teenagers, youths, parents, dermatologists, researchers and even scientists in general. Acne is one of the most prevalent conditions among

teenagers and youths worldwide, and it comes along with several effects ranging from simple ones such as altering appearance to adverse effects such as psychological torture. These effects can lead to extra expenses both economically and socially and hence low standards of living if the sufferers and at times families.

Acne is a multifactorial condition that is; several factors can lead to the disorder such as genetic factors, stress, androgens, excess sweating, corticosteroids, oral contraceptives, iodides, bromides, lithium, and chemicals such as dioxins (Winston & Shalita, 1991).

Different studies have been carried mostly covering the prevalence and psycho-social impact on the quality of life in other areas such as Nottingham, England (Smithard, Glazerbrook, & Williams, 2001) and Iran (Zahra, Orawa, & Christos, 2009) but little has been done to find out the different treatment methods and their effectiveness hence the basis of this study was modified to find out the effectiveness of the different treatment methods.

An understanding of the prevalence, psycho-social impact and various control strategies against acne employed by different individuals can help to control the impact of this condition on the lifestyles of teenagers and youths. This research involved observing cases of individuals with acne, severity of the acne cases, and various control strategies employed by individuals to get rid of acne in Kkona Village, Wakiso District.

The prevalence of acne is a complex matter that requires ongoing research and cooperation of community and scientists towards a better and common understanding of the various causes, effects and treatments of acne. This can help ensure the effective control of acne along with its effects.

1.3 Objectives

1.3.1 General objective

This research is to gain a better understanding of the frequency of acne and the effectiveness of the different control measures. This data can be used to develop improved and much more effective treatments for acne conditions.

1.3.2 Specific objectives

- To find out the distribution of acne across different age groups. At the end of the research, the data was analyzed to determine the age groups that are mostly affected by acne. This information was important in ascertaining the causes and most effective control measures.
- To find out the different methods employed by individuals to encounter acne. Data collected was analyzed to determine the effectiveness of different methods used. This information can be important in generating a complete guide to effectively control of acne.

1.4 Research questions

How does *Acne vulgaris* affect the life quality of youths in Kkona Village, Wakiso District?

What control strategies are employed by the youths to fight *Acne vulgaris*?

1.5 Significance of the study

The study of prevalence, psycho-social impact and control strategies of acne is significant for several reasons which among others include;

Health impact: acne is a common skin condition that affects large numbers of people worldwide, particularly during adolescence. It can have a significant impact on individuals' physical and mental well-being causing pain, discomfort, scarring, and emotional distress. Understanding the causes, mechanisms, and effective treatments for acne can greatly improve the health and quality of life for those affected.

Prevalence and social impact: acne is highly prevalent; with estimates suggesting up to 85% of people will experience acne at some point in their lives. It can affect people of all genders and ethnicities. The social impact of acne cannot be under estimated as its effects cause depression. Research can shed light on the psychological and social aspects of acne and help develop interventions to address these challenges.

Treatment customization: people experience acne differently, with variations in severity, types of lesions, and treatment responses. Research can help identify subtypes of acne and determine which treatments are most effective for specific subtypes. Personalized approaches to acne

treatment can be developed based on these findings, optimizing outcomes and minimizing adverse effects.

1.6 Scope of the study

This research was conducted in Kkona Village, Wakiso town Council, Busiro County, Wakiso district in the Central region 4.5km off Kampala-Hoima road in Uganda, East Africa. Wakiso district is bordered by Kampala and Mpigi districts in central part of Uganda.

The study design was cross sectional which involved selecting samples of individuals in different age groups and observing and analyzing their awareness and experience concerning acne as a skin condition. This involved finding out how the different individuals handle acne cases and various control steps they take in case any. All people within the range of 11 – 35 years were eligible only if they were free from any other skin diseases such as measles, pox among others but the researcher made sure not to take more than two members from the same homestead to reduce biasness of the study.

To conduct a thorough and comprehensive study on the prevalence of acne, collection of data from different sources was needed such as scientific journals, health reports and academic publications. Field surveys were then conducted to gather information on the distribution and severity of acne cases among different age groups.

For the control of facial acne, different methods such as avoiding excessive sun exposure, appropriate moisturizing, use of non-comedogenic products and also seeking dermatological treatment were suggested. The effectiveness of these measures varied for different individuals depending on the severity, cause, age, and period of treatment.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Although a quite considerable number of studies have been done on the prevalence of acne, only a small percentage of these studies have been carried out in village areas in Uganda. Acne remains a major concern among a large number of youths in Uganda due to its effects ranging from simple to adverse as seen in the previous sections. The aim of this study is mainly concerned with acne prevalence among youths and teenagers in Uganda. To begin with, a preview on acne cases in other countries around the world is given.

2.2 Theoretical literature review

Acne (*acne vulgaris*) is an inflammatory disorder of the pilosebaceous unit, which runs a chronic course and it is self-limiting (Amita, Suturia, Sadia, & Joel, 2023). Acne is triggered by *Cutibacterium acnes* or *Proinobacterium acnes* in adolescence, under the influence of normal circulating dehydroepiandrosterone (DHEA). It is a very common disorder which can present with inflammatory and non-inflammatory lesions chiefly on the face but can also occur on upper arms, trunk and back (Yan *et al.*, 2018).

Acne occurs by hypersensitivity of the sebaceous glands to a normal circulating level of androgens which are aggravated by *Proinobacterium acnes* and inflammation (Reynolds & Das, 2014). The causes of acne include; use of medications like lithium, steroids and anticonvulsants, exposure to excess sunlight, use of occlusive wear like shoulder pads, headbands, backpacks, and underwire brassieres, endocrine disorders such as polycystic ovarian syndrome and pregnancy, and genetic factors which affect the percentage of branched fatty acids in sebum, and the heritability estimates range from 50 -90% (Webster, 2002).

Acne usually appears during adolescence and at times persists through the early 30's. It is more popular in males than females due to the differences in body systems and processes such as oilier complexion of the skin due to production of more testosterone and sebum (Tanghetti *et al.*, 2014). It is also more in urban populations due to the diet and exposure to toxins that at times clog the skin pores. About 20% of affected individuals develop severe acne and its effects such as scarring (Goulden *et al.*, 1997). To some extent, one's race affects the chances of contracting acne with Asians and Africans tending to develop severe acne and mild acne being common in white populations (Amita *et al.*, 2023).

During puberty, the influence of androgens increases sebum secretion which leads to an increased hyper proliferation of the follicular epidermis, so there is retention of sebum (Eady, Gloor, & Leyden, 2003). The rupture of distended follicles and release pro-inflammatory chemicals into the dermis and stimulates inflammation. *C. acnes*, *S. epidermis*, and *M. furfur* induce follicular epidermal proliferation (Yan *et al.*, 2018).

Usually, acne lesions show dilated follicles with keratin plugs which at times result into comedones. Large acne lesions can develop fibrosis and scarring. Acne can be diagnosed clinically but however in women of child bearing age, history of hirsutism or dysmenorrhea should be checked before. If positive, then levels of testosterone, leutenising hormone, follicle stimulating hormone, and DHEA should be checked (Goulden *et al.*, 1997).

Various treatments can be used to manage acne cases such as topical therapies (Gollnick & Schramm, 1998; Krautheim & Gollnick, 2004) and systemic therapies. Scars can be treated with submission, trichloroacetic acid, derma roller, micro needling, or fractional CO₂ laser (James, 2005). Different skin complexions may respond to the treatments differently. Not all acne treatments will work for everyone. If used for at least 10 -12 weeks and no change has been observed, one may need to try a different medication. At times, one may have try several medications before finding the one that works for them (Angela, 2022). It is always advised to at least consult a dermatologist before taking any acne treatments as some types of skin may respond violently to the treatment. Also the severity of the acne must be known before any treatments are made (Tina, 2022).

Acne is unavoidable but can be controlled by regular washing of the face by a pH balancing wash which is available as benzoyl peroxide and salicylic acid face wash, stress management, and early detection treatments of the underlying causes (Amita *et al.*, 2023). Patients often have a good result after treatment but in some, it leaves residual scars. Such scars can be avoided by resisting the urge to manipulate the lesions and seeking timely care. In some cases, the acne re-appears after treatment is stopped and this may call for change of treatment or getting a skin care routine (Angela, 2022).

More attention is drawn to the effectiveness of the treatments which was explored in this study.

CHAPTER THREE: METHODOLOGY

3.1 Description of the Study Area

The field survey was conducted in Kkona Village. This is located in Busiro county, Wakiso sub-county, and Lukwanga Parish in Wakiso district. Wakiso district is in the central part of Uganda, Buganda region bordered by Kampala district to the East, Mpigi district to the West and North and Lake Victoria to the South. Kkona village is located on Wakiso district headquarters road, 4.5km off Kampala-Hoima road.

The research was categorized into age groups that is; 11-15, 16-20, 21-25, 26-30, and 31-35 years. Samples were taken from each group and the overall incidence and severity of the acne was recorded based on visual signs and symptoms. This was a cross sectional study which involved selecting samples of individuals in different age groups and observing and analyzing their awareness and experience concerning acne as a skin condition. This involved finding out how the different individuals handle acne cases and various control steps they take in case any. All people within the range of 11 – 35 years were eligible only if they were free from any other skin diseases such as measles, pox among others but the researcher made sure not to take more than two members from the same homestead to reduce biasness of the study.

3.2 Analysis of symptoms

The samples were analyzed to observe the presence of acne symptoms. Condition severity was graded using the Global Acne Grading System where it was graded into three stages namely; mild acne (<10 comedones, few small papules and few pustules), moderate acne (numerous comedones and small inflammatory papules), and severe acne (Numerous comedones, deeper papules and pustules, deep and large lesions, presence of cysts and abscesses).

The Dermatology Life Quality Index was used to assess the impact of acne on the quality of life. The different scores were; no effect (0-1), small effect (2-5), moderate effect (6-10), large effect (11-20) and extremely large effect (21-30). The respondents were required to fill a self-reported questionnaire embedded with the DLQI together with other related questions to find out the psych-social impact and treatment methods of acne that were used.

The data was represented tables 1, 2, 3 and 4 and also a bar graph (figure 1).

3.3 Occurrence of acne

Occurrence of acne was determined by calculating the percentage of infection for each age group observed. The percentage of affected individuals was calculated for each age group and the overall percentage for the whole survey.

The percentage occurrence of acne was represented on a bar graph in figure 1.

CHAPTER FOUR: RESULTS

4.1 Results

The number of respondents used in this study was 50 with 30 females (60%) and 20 males (40).

Table 1 shows the prevalence of *Acne vulgaris* among the youths in relation to gender and age. The overall prevalence of *Acne vulgaris* was 72%. The provenance of acne differed significantly according to gender as it was more in males (80%) as compared to females (66.67%). The prevalence of acne differed with age as it was more between the ages of 16 – 20 years (100%) and less in 11 – 15 years (25%).



Figure 1-4: Faces affected by acne

	Presence of acne		No acne		Total
	n	%	N	%	N
GENDER					
Male	16	80.00	4	20.00	20
Female	20	66.67	10	33.33	30
AGE GROUP					
11 - 15	2	25.00	6	75.00	8
16 - 20	12	100.00	0	0.00	12
21 - 25	8	80.00	2	20.00	10
26 - 30	9	81.82	2	18.18	11
31 - 35	5	55.56	4	44.44	9
Total	36	72.00	14	28.00	50

Table 1-4: Prevalence of acne among the youths

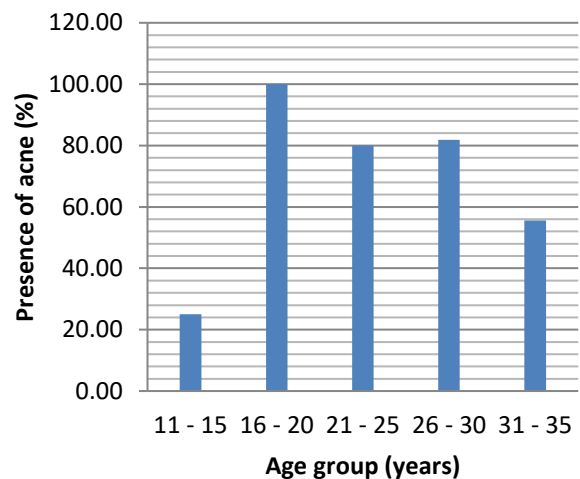


Figure 2-4: Prevalence of acne

Regarding severity of acne, table 2 shows that 33.33% had mild acne, 50% moderate acne and 16.67% had severe acne. Some few cases reported post inflammatory hyperpigmentation and scarring but no scars were found in most cases. A higher percentage of those with mild acne were females and a higher percentage of severe acne were males (66.67%).



Figure 3-4: Severity levels of acne

	Mild acne		Moderate acne		Severe acne		Total
	n	%	N	%	n	%	n
GENDER							
Male	4	25.00	8	50.00	4	25.00	16
Female	8	40.00	10	50.00	2	10.00	20
AGE GROUP							
11 - 15	2	100.00	0	0.00	0	0.00	2
16 - 20	3	25.00	6	50.00	3	25.00	12
21 - 25	1	12.50	5	62.50	2	25.00	8
26 - 30	3	33.33	5	55.56	1	11.11	9
31 - 35	3	60.00	2	40.00	0	0.00	5
Total	12	33.33	18	50.00	6	16.67	36

Table 2-4: Severity of facial acne by gender and age group

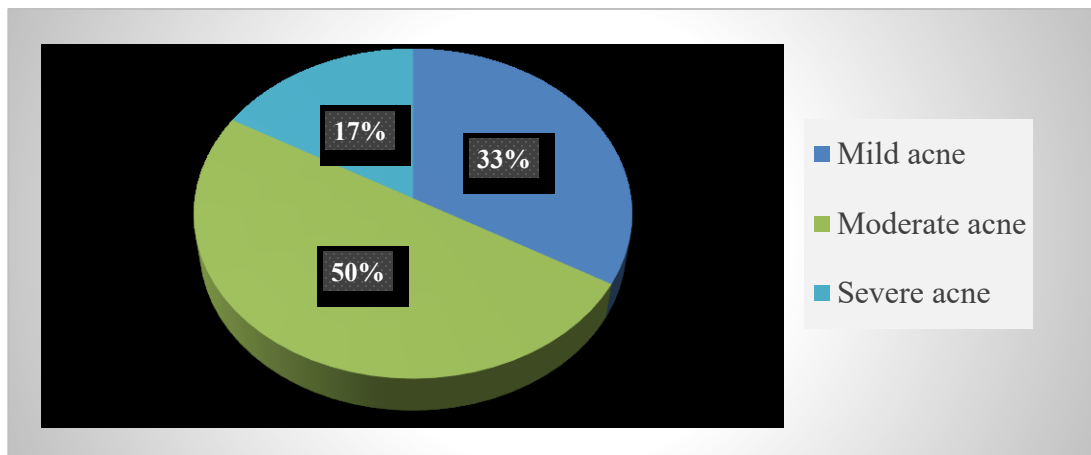


Figure 4-4: General severity of acne

Table 3 shows the effect of acne on the quality of life. Overall, most cases either had no effect (36.11%) or moderate effect (33.33%) on the quality of life. 11.11%, 8.33% and 11.11% had a small effect, large effect and extremely large effect respectively.

DLQI score	Male		Female		Overall	% of Total
	N	%	N	%		
No effect (0 -1)	10	62.50	3	15.00	13	36.11
Small effect (2 - 5)	2	12.50	2	10.00	4	11.11
Moderate effect (6 -10)	3	18.75	9	45.00	12	33.33
Large effect (11 - 20)	1	6.25	2	10.00	3	8.33
Extremely large effect (21 - 30)	0	0.00	4	20.00	4	11.11
Total	16	100.00	20	100.00	36	100.00

Table 3-4: Effect of acne on QoL according to DLQI

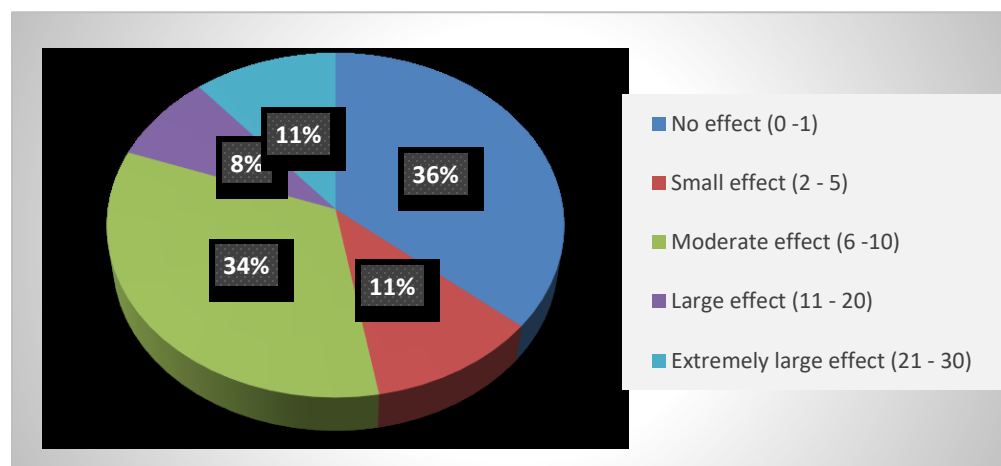


Figure 5-4: Effect of acne on QoL according to DLQI score

According to gender, the effect on the QoL significantly differed; with most males having no effect (62.50%) and most females (45.00%) had a moderate effect. Also an extremely large effect was recorded in only females (4) and none in males.

Table 4 shows the usage of the different treatment methods. A large percentage (46.00%) of the respondents used topical treatments such as lotions and body creams. From the table, it can be seen that oral tablets were the most effective method (100% success rate) followed by topical treatments (65.22% success rate). Those who used none of the methods were recorded to be ineffective and hence 0% success rate.

Treatment method	Number of users		Effectiveness	
	n	%	n	Percentage
Local herbs	5	10.00	1	20.00%
Oral tablets	3	6.00	3	100.00%
Topical treatments	23	46.00	15	65.22%
None	15	30.00		0.00%
Other	4	8.00	0	0.00%
Total	50	100	19	38.00%

Table 4-4: Treatment of acne

CHAPTER FIVE: DISCUSSION OF RESULTS

This study showed that facial acne was a common problem among the youths in Kkona village affecting 80% of males and 66.67% of females. The overall prevalence of acne was 72% which is slightly lower than the 85% reported in most previous studies (Bhate & Williams, 2013). A similar study in Nottingham, England showed a prevalence of 50% (Smithard et al., 2001). The difference in the prevalence rates between these studies may be attributed to ethnic differences or the design of the study. Another study in Iran showed the overall prevalence of acne was 93.2% (Zahra et al., 2009). Comparison of the prevalence rates between studies is mainly limited by the different methods of acne grading used by the different studies and the wide range of diagnostic criteria used.

In this study, we reported all the possible manifestations of acne from comedone to nodules by both presence and number. The acne severity was graded according to the Global Acne Grading System. There is no internationally agreed acne grading system despite the many that have been recommended. In this study the Global Acne Grading System was used because it was found to be more accurate and have minimal inter and intra-rater variability (Yu, Fei, Ning, & Cui, 2022).

The study showed that acne prevalence was more between ages 16 – 20 years which corresponds with other researches that showed it to be more between 14 – 19 years (Web, 2023). It was also found that males had more severe acne compared to the females. These findings align with the previous studies done in other areas. Generally acne was found to be more in males (80%) than in females (66.67%). This can be attributed to the oilier complexion, higher androgens levels (Burton, Cunliffe, Stafford, & Shuster, 1971) and even the males' attitude towards treatment and control of acne.

The Dermatology Life Quality Index (DLQI) was used to assess the effect on the Quality of life of the respondents. The subscales include; itchy sore and painful skin, embarrassed or self-conscious, skin interfered during shopping, looking after home or garden, skin influenced clothing, skin affected social or leisure activities, skin made it difficult to play sports, skin prevented from working or studying, skin created problems with partner or friends, skin caused sexual difficulties and skin treatment was a problem e.g. taking time or making a mess.

Following this study, the analysis of the subscales evidenced that the youths had particular difficulties in the areas of emotion and social interference.

A study in Scotland showed that 50% of the youths were emotionally affected by their facial acne. About 25% of them were affected in their personal and social lives, and about 10% avoided swimming and other sports because of embarrassment (Walker & Lewis, 2006).

In this study, 4 respondents (11.11%) scored above 20 in the DLQI which was equal to an extremely large effect and implied that these had severe psychological impact from facial acne problem. However, the median score of the DLQI was 6 which was average and implied that overall, the youths were moderately affected psychologically. This could be attributed to the

higher prevalence of moderately mild acne among the youths. In this study, some males were not even bothered by acne as a skin problem. The impact of acne was influenced by severity as shown by the study.

This study demonstrated a moderately strong correlation between the total DLQI scores and acne severity. The impact of acne on QoL increased with severity of acne. This finding aligns with previous studies (Killikenny & Merlin, 1998) which also showed a fairly good correlation between acne severity and impact on QoL. Considering this, impact on Quality of life becomes crucial in the management of facial acne.

All (4) the cases with an extremely large effect on Quality of life reported were females. This result is consistent with most studies that found females to generally experience more psychological morbidity than males (Cotteril & Cunliffe, 1997). However to some extent, the study showed that males were also aware of their skin problems with 37.50% being at least affected.

This study also showed that a higher percentage of the respondents (70%) at least tried to get rid of their acne by using either one or more treatment options. Most respondents (23) used topical treatments such as lotions and ointments (Skderm cream, CeraVe acne control gel, lemon clear and different smearing oils). Other treatment options used were local herbs (aloevera, neem leaves, onion extract, and lemon juice), oral tablets (erythromycin, minocycline and doxycycline), other (washing face with warm water) and some did not try to treat the acne (none).

In this study, oral tablets showed 100% effectiveness and were recorded as the most effective method of treatment of acne among the youths in Kkona village. However this finding can be opposed by the extremely small number of reported users (3).

Topical treatments which were the most popular method recorded an effectiveness score of 65.22% and local herbs 20.00%. According to the findings of this study, oral tablets were the most effective way of acne treatment followed by topical treatments. A few respondents reported that the topical treatments would only remove the acne for a short time and then it returns when the treatment stops. The limited number of respondents using oral tablets may be attributed to the cost as compared to topical treatments. Some respondents also reported that they never got any medical advice from a professional or a dermatologist while choosing the suitable method. In other words, they practiced self-prescription and medication. Others said that they got advice from peers who also had no medical qualifications but relied on rumors or previous experiences with acne.

Overall, the effectiveness of any of these methods may have been greatly affected by other factors such as consistency, length or period of usage, cause of the acne (for example hormones, stress) (Angela, 2022) among others.

A major limitation to this study was its cross-sectional design. To clearly observe the effectiveness of the different treatment methods, a longitudinal study would be carried over a particular period of time clearly observing any effects of the method and time of action. Also the sampling method used may have had a great impact on the prevalence of acne recorded because the researcher studied friends and friends of friends. Although quite recognizable results like from similar studies were obtained, it is possible that certain sections and opinions may have been left out. The study is therefore likely to have under estimated the impact of acne on Quality of life and the effectiveness of the different treatment strategies.

CONCLUSION

Facial acne is a common problem among the youths and it can cause a major impact on their Quality of life. This impact is also dependent on severity of acne in some cases. Many methods of acne treatment are being used but their effectiveness is uncertain and some have been seen to be more effective than others.

RECOMMENDATION

Authorities should conduct health education programs among the youths to help them know what treatment options are available and from whom and where to seek advice. Health professionals can include Quality of life measurements when handling youths with acne or any other skin problems. The youths should also be made aware that early treatment of acne can prevent escalation of the condition.

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APPENDICES

Appendix 1

INFORMED CONSENT FORM

This is to **consent to participate in the study** entitled, “Assessment of the prevalence, psycho-social impact and control strategies of acne among youths in Kkona Village, Wakiso district”. I am **Bagenda George William**, a student at the Faculty of Science and Education, Nagongera Campus, Busitema University.

You have full rights to participate or not in this study.

I after getting clear explanation on the above study and being informed of my rights to participate or not, do hereby consent to participate in the study by authority of my signature..... Date.....

QUESTIONNAIRE

INTRODUCTION

I am Bagenda George William, an undergraduate student at Busitema University, Nagongera Campus. I am requesting you to participate in this survey research study with the aim of understanding the prevalence, psycho-social impact and control measures of acne among the youths in Kkona village, Wakiso district. Your responses are very important for this research and will be treated with utmost confidentiality and only be used for study purposes. For any questions or additions on this survey, contact 0703120943 through any means (whatsapp, sms, mobile).

SECTION A: PERSONAL DETAILS

Respondent's contact:.....

1. Choose the age group to which you belong.
☐ 11 to 15 years ☐ 16 to 20 years ☐ 21 to 25 years ☐ 26 to 30 years
☐ 31 to 35 years
2. Choose your gender: Male ☐ Female ☐
3. Level of education: Primary ☐ O' level ☐ A' level ☐ Tertiary ☐ University ☐
4. Have you ever had acne? Yes ☐ No ☐
5. If yes, for how long did (have) you have (had) acne cases?
☐ Less than 1 year ☐ 1 to 2 years ☐ 3 to 5 years ☐ More than 5 years
6. **Females only:** Do you have regular monthly periods? (*Where applicable*)

- ☐ Yes ☐ No
- Does the acne increase during or around your period? Yes ☐ No ☐
- If yes, tick how bad the increase is around your periods: Mild ☐ Moderate ☐ Severe ☐
7. Choose your skin type
- ☐ Very oily ☐ Oily ☐ Normal ☐ Dry
- ☐ Very dry ☐ Sensitive ☐ Combination
8. If sensitive, what is your skin sensitive to?
-
-
-
9. Do you have a family history of acne? Yes ☐ No ☐
10. How old were you when your acne started?
- ☐ Under 15 years ☐ 15 to 20 years ☐ Above 20 years

SECTION B (DLQI)

The aim of this section is to measure how much your *acne vulgaris* has affected your life over the last week. Please tick on box for each question.

- Over the last week, how itchy, sore, painful or stinging has your skin been?
☐ Not at all ☐ A little ☐ A lot ☐ Very much
- Over the last week, how embarrassed or self-conscious have you been because of your skin?
☐ Not at all ☐ A little ☐ A lot ☐ Very much
- Over the last week, how much has your skin interfered with you going shopping looking after your home or garden?
☐ Not at all ☐ A little ☐ A lot ☐ Very much ☐ Not relevant
- Over the last week, how much has your skin influenced the clothes you wear?
☐ Not at all ☐ A little ☐ A lot ☐ Very much ☐ Not relevant
- Over the last week, how much has your skin affected any social or leisure activities?
☐ Not at all ☐ A little ☐ A lot ☐ Very much ☐ Not relevant
- Over the last week, how much has your skin made it difficult for you to do any sport?
☐ Not at all ☐ A little ☐ A lot ☐ Very much ☐ Not relevant
- Over the last week, has your skin prevented you from working or studying?
☐ Yes ☐ No ☐ Not relevant
If "NO", over the last week, how much has your skin been a problem at work or studying?
☐ Not at all ☐ A little ☐ A lot ☐ Very much
- Over the last week, how much has your skin created problems with your partner or any of your close friends or relatives?
☐ Not at all ☐ A little ☐ A lot ☐ Very much ☐ Not relevant
- Over the last week, how much has your skin caused any sexual difficulties?
☐ Not at all ☐ A little ☐ A lot ☐ Very much ☐ Not relevant

10. Over the last week, how much of a problem has the treatment of your skin been, for example by making your home messy, or by taking up time?

☐ Not at all ☐ A little ☐ A lot ☐ Very much ☐ Not relevant

SECTION C (control methods)

1. Have you tried to treat your acne? Yes ☐ No ☐

2. If yes, choose all the treatment methods you have used from the list below

☐ Local herbs (e.g. raw aloe vera)

☐ Oral tablets

☐ Topical treatments (gels, creams and lotions)

☐ Other

If other,

state

.....

3. Did the treatments you used work for you? Yes ☐ No ☐

4. Did they have any side effects like dry skin, or allergic reactions? Please provide details below

.....

.....

.....

5. What non-prescription products have you used for the acne?

.....

.....

6. What prescription products have you used now and the past?