"One year cross sectional study of the dermatology life quality index in patients with striae distensae."

By

REG NO: BT0120001

Dissertation

Submitted to the

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DOCTOR OF MEDICINE (M.D)

In

DEPARTMENT OF DERMATOLOGY, VENEREOLOGY AND LEPROSY

DEPARTMENT OF DERMATOLOGY, VENEREOLOGY AND LEPROSY

J. N. MEDICAL COLLEGE, NEHRU NAGAR

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Sub: Institutional Ethical Clearance for the study.

With reference to the above, we wish to inform you that your proposed research project titled **"ONE YEAR HOSPITAL BASED CROSS SECTIONAL STUDY OF THE DERMATOLOGY LIFE QUALITY INDEX IN PATIENTS WITH STRIAE DISTENSAE AT A TERTIARY CARE CENTRE",** is ethical and justifiable. The proposed research project has been cleared by the JNMC Institutional Ethics Committee on Human Subjects Research.

(Dr. Smita Sonoli)
Member Secretary
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on Human Subjects Research,
J.N.Medical College, Belagavi.

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LIST OF ABBREVIATIONS USED

Sl. No.	Abbreviation	Expansion
1	Mrna	Mitochondrial riboneucleic acid
2	SD	Striae distensae
3	SCGB	secretoglobulin
4	RCM	REFLECTANCE CONFOCAL MICROSCOPY
5	CO2 laser	Carbon dioxide laser
6	TCA	Trichloroacetic acid
7	PCR	Polymerase chain reaction
8	YAG	Yttrium aluminum garnet
9	PDL	PULSED DYE LASER
10	FPT	fractional photothermolysis
11	MTZs	microthermal zones
12	RF	Radiofrequency
13	WHO	World health organization
14	MELASQOL	Melasma quality of life scale

15	**DLQI**	**Dermatology life quality index**
16	**QoL**	**Quality of life**
17	**DQOLS**	**Dermatology Quality of Life Scales**
18	**DSQL**	**Dermatology Specific Quality of Life**
19	**QUAVIDERM**	**Qualita di Vita Italiana in Dermatologia**
20	**SF-36**	**Short Form 36**
21	**GHQ**	**General health questionnaire**

ABSTRACT

BACKGROUND

Striae distensae can be disfiguring and psychologically upsetting to patients even though they have no symptoms at all.

Hence it is worthwhile assessing the DLQI in these patients and thus might provide insight into patients psyche, improving patient-physician relationship, therefore, leading to better compliance and treatment outcome.

AIMS AND OBJECTIVE OF THE STUDY:

To evaluate the quality of life in patients suffering from striae distensae using Dermatology Life Quality Index.

MATERIALS & METHODS

Study design: Cross-sectional study

Study period: Jan 2021 to December 2021

Study population: The present study was conducted on both male and female patients in the age group 18-60 years attending KLE DR. PRABHAKAR KORE HOSPITAL. having striae distensae, who voluntarily agreed to participate.

To evaluate the social and psychological impact of dermatological illnesses on quality of life, Final and Khan's DLQI was employed.

RESULTS:

Out of 200 subjects included in the study, The mean age of the study population is 30±10 years. Among 200 subjects majority (80%) were housewives and students and 58% were married. 63.5% of the subjects were from urban areas and 36.5% from rural

area. The abdomen was the most common site affected. Out of 200 subjects involved in the study 13% had DM, 7.5% had PCOS, 4% had Cushing's, 3.5% had hypothyroidism and 22.5% had obesity. 5% of the subjects were found to have an abdominal tumour, 6%. were noted to have recent weight loss and 35.5% of the subjects had recent weight gain. 18% of the subjects had a history of application of topical steroids. Factors associated with a significant effect on QOL as per DLQI scoring. Noted in our study include female sex, urban living, obesity, recent weight gain, legs and arms being affected sites, seeking treatment in the past, and the red colour of the lesion. Marital status, pregnancy status, recent. weight loss, steroid application, and duration of the lesion had no significant effect.

CONCLUSION: Striae distensae has an impact the on Quality of life the in majority of the affected population with a significantly higher impact in females. Early impact and therapy stratification may enhance this population's quality of life, although more research is needed to support this. This study shows that there is a huge scope for comprehensive treatments for striae distensae including treatment of psychological aspects of the disease.

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INTRODUCTION

Striae distensae, a common form of dermal scarring, frequently takes appearance of linear erythematous, violaceous, or hypopigmented striations on skin. Striae distensae that develop because of pregnancy are known as striae gravidarum.

Striae rubra and Striae alba are the two primary varieties of striae distensae. Striae rubra are the earliest manifestation and may change over time to become striae alba. Common locations include the abdomen, breasts, medial upper arms, hips, lower back, buttocks and thighs.

It is likely complex and poorly understood how striae distensae develop. physical causes that cause the skin to become more tense.The discovery that striae frequently appear in areas undergoing rapid increases in girth, points to a function for mechanical stress on the skin.

Striae distensae do not always form at mechanically stressed skin areas or in all people. As a result, some traits of the skin in the affected areas may have an impact on development. Marfan syndrome frequently manifests as striae distensae.

The idea that hormonal variables influence the development of the illness has been supported by the frequent incidence of striae in pregnancy and in patients with Cushing syndrome.

Striae distensae can be disfiguring and psychologically upsetting to patients, even though they are mostly asymptomatic. Striae distensae are difficult to treat because no therapy results in full resolution. Furthermore, the lack of conclusive guidance for the optimal course of treatment is caused by the dearth of quality trials

and the absence of trustworthy and commonly used methods to evaluate the severity of striae and treatment responses. Hence it is worthwhile assessing the DLQI in these patients and thus might provide insight into patient's psyche, improving patient-physician relationship therefore leading to better compliance and treatment outcome

OBJECTIVE

- To evaluate the quality of life in patients suffering from striae distensae using Dermatology Life Quality Index.

REVIEW OF LITERATURE

Definition:

"Striae are visible linear scars which form in areas of dermal damage produced by stretching of the skin. They are characterized histologically by thinning of the overlying epidermis, with fine dermal collagen bundles arranged in straight lines parallel to the surface".[1]

Aetiology:

Striae are skin defects that look like bands or lines that are better known as stretch marks. They are a common disfiguring skin disorder of significant cosmetic concern.[2] Many writers have hypothesised that striae arise as a result of stress rupture of the connective tissue framework, but others disagree.[3] There is little knowledge of the factors that control how striae form. They may manifest more readily in skin that contains a critical amount of rigid cross-linked collagen, which occurs in early adulthood.[4] Contrarily, the lack of cross-linkage causes "elasticity" and excessive stretching, which can eventually cause the skin to rupture if the stretch exceeds the elastic limit. Therefore, striae seem to only form in skin where tight cross linkage and "elastic" unlinked collagen allow for a small intradermal rupture, or striae. However, striae formation is influenced by a number of circumstances.[5]

Pathogenesis of Striae distensae:

1) Dermal and connective tissue changes

It would be evident that the stages of Striae distensae are quite similar to the stages of scar development after thoroughly discussing the pathophysiology of Striae distensae. Everything starts with excessive stretching of the skin, which causes rips and damage to the dermis. Inflammatory edema then affects the extracellular matrix (ECM), causing fibres of collagen, elastin, and fibronectin to rupture. Recently, it was

discovered that atrophic alterations in striae distensae are brought on by dermal changes caused by a fault in fibroblasts' function, a loss in fibrillin and elastin, and a lack of organisation of collagen fibrils into bundles.[6]

It was shown that the primary contributing factors in the pathogenesis of Striae distensae are connective tissue weakening and loss of elasticity. This was clarified in recent research that discovered a high correlation between the development of Striae distensae and pelvic organ prolapse[7] and the development of perineal tears during childbirth and the severity of Striae gravidraum.[8]

2) Genetic factors:

Striae distensae have been observed in monozygotic twins, a hereditary predisposition is assumed. Due to the abrupt appearance of crimson lesions on both thighs, the twins were observed. The development of striae rubrae was thought to be caused by a genetic abnormality in these patients that affected the expression of the collagen, elastin, and fibronectin genes, along with a noticeably altered fibroblast metabolism.[9]

Although its specific role is yet unknown, fibrillin microfibrils can be found in both elastic and non-elastic tissue. In comparison to normal tissues, there is an evident and coordinated decrease in the amounts of (I) and (III) procollagen mRNA in striae distensae tissues.[10] As a result, the expression of collagen, elastin, and fibronectin mRNA is diminished, and extracellular matrix is lost in the dermis. One possibility is that the absence of striae-associated fibroblasts accounts for the low levels of fibronectin mRNA and extracellular matrix RNA.

Marfan syndrome, an autosomal dominant connective tissue illness brought on by mutations in the genes that make fibrillins, can manifest as a wide range of clinical symptoms, including striae distensae (fibrillin 1 on chromosome 15 and fibrillin 2 on chromosome 5). Reduced fibrillin deposition in Marfan syndrome is the result of the

aberrant Fibrillin molecules' dominating negative effect. In some cases, it has prognostic and perhaps diagnostic importance.[11] This suggests that changes in fibrillin molecule expression may contribute to the emergence of striae distensae. In Ehler-Danlos syndrome, there are no striae throughout pregnancy, which emphasises the importance of genetic factors in determining connective tissue susceptibility to striae. The collagen fibres in this disease are different from those in a dermis that is normal in size, irregularity, and spacing. In contrast, there is a significant increase in amorphous and elastic microfibrils.[12]

The secretoglobulins (SCGBs), which primarily interact with various steroid hormones, were the most obviously expressed genes. Steroids' anti-inflammatory effects are mostly mediated via SCGBs.

This may explain the high correlation between the development of SD and long-term steroid use or conditions like Cushing syndrome, which impair the steroid's metabolism.[13] Keratin genes are negatively regulated in SD. Keratins are part of the cytoskeleton of epithelial cells that anchor epithelial cells and adjacent tissues providing support during mechanical stress, this indicates that there is a loss of the mechanobiological power in the skin affected with SD.[14]

3) Hormonal factors:

Hormonal changes and striae distensae have a direct relationship. It was discovered that SD has much. higher levels of oestrogen, androgen, and glucocorticoid receptor expression than does normal skin.

Increased glucocorticoid activity results from this, which inhibits fibroblast activity and proliferation. As a result, collagen and elastic fibre production are significantly reduced, and connective Tissue repair is impaired.[15]

During pregnancy, the relaxin hormone increases by around 10 times, preventing uterine contractions until late in the pregnancy. Through the restriction of collagen organisation and density, it also lowers the level of collagen. Due to the skin's lower capacity to endure. mechanical stress, this is connected with an increase in the incidence of Striae gravidarum.[16]

3) Glucocorticoids:

Through a dose-related pharmacological action, glucocorticoid medication, both systemic and local, can cause cutaneous atrophy.[17]

The collagen gene is inhibited by corticosteroids as their method of action. Topical steroids also reduce the action of enzymes associated with collagen formation, and were found to suppress collagen synthesis both in vivo and in fibroblast cells expression at transcriptional, translational, and post-translational levels.[18]

4) Pregnancy:

Continuous and progressive stretch cause alteration and damage in the extracellular matrix, which may remodel the elastic fiber network particularly fibrillin component in susceptible individuals and manifest itself clinically as striae distensae. In pregnancy, the combination of. endocrine changes (increase steroid levels in the blood) and mechanical stretching of the skin is responsible for most striae distensae.[19]

5) Vitamin deficiency:

Recent studies on the function of vitamin D insufficiency in the onset of SD found that normal values of serum 25-hydroxyvitamin D are associated with a decreased risk of SD development when compared to low serum levels.[19] This can be explained by how vitamin D's active form helps to keep the epidermal permeability barrier intact and stimulates the growth and activity of fibroblasts and keratinocytes.

CLINICAL FEATURES:

Striae are often symmetric, numerous, well-defined, linear atrophic lesions that frequently coincide with the lines of cleavage. They rarely ulcerate but are typically more of an aesthetic concern. Initially known as striae rubra, striae are raised reddish-to-violet streaks that might be mildly itchy. The lesions grow atrophic and lose their colour over time, and the skin's surface develops small wrinkles. Although these striae alba are typically persistent, they may gradually diminish. The striae can be as little as a few millimetres to a few centimetres wide and as long as several centimetres. During puberty, striae develop in locations where the size of the body increases.

In girls, the most frequent locations are the thighs, hips, buttocks, and breasts, whereas in guys, the shoulders, thighs, and lumbosacral area are the most frequent locations.[1]The neck, upper arms, axillae, and abdomen are other less frequent locations.

Striae distensae are frequently found on the belly of pregnant women, but less frequently on the breasts and thighs, particularly during the third trimester. They occur more frequently in younger primigravidas compared to older expectant mothers, in women who gained more weight during pregnancy, and/or in women whose babies were born weighing more.

Striae gravidarum are statistically significant indicators of lacerations following vaginal birth, according to one study. More recently, it was discovered that striae are a risk factor for pelvic relaxation and clinical prolapse.

Systemic corticosteroid medication and Cushing's syndrome have been linked to bigger, more dispersed striae.[1] The risk of striae from topical corticosteroid usage is higher in flexural and intertriginous areas.

After thelarche, the pubertal growth spurt-induced SD are frequently observed. In girls, they cover the thighs, buttocks, and breasts. Boys frequently develop them over the lumbosacral area and the outside of the thighs.[1]

During the third trimester, it's typical to find stretch marks, also known as striae gravidarum (SG), on the thighs, breasts, and belly. Younger primigravida have a higher prevalence of SG lesions, which are linked to larger-than-average babies at term and a higher chance of caesarean delivery.[1]

HISTOPATHOLOGY:

The epidermis is thin and flattened. Dermal thickness is getting thinner. In the upper area of the dermis, straight, thin collagen bundles are positioned parallel to the skin's surface and transverse to the direction of the striae. The arrangement of the elastic fibres is similar. Early lesions have mostly thin elastic fibres, but older lesions have more thick elastic fibres. There are few nuclei and no sweat glands or hair follicles within the striae. The elastic fibres in striae are thought to be newly created and gradually grow and thicken with age.[20]

REFLECTANCE CONFOCAL MICROSCOPY

Parallel collagen bundles in the dermis, and some features that are not well recognised by light microscopy, including distortion. of dermal papillae, are demonstrable using RCM.[21]

DERMOSCOPIC FEATURES OF Striae distensae:

SD causes a variety of dermoscopic alterations, depending on the type. In SD, the regular skin's honeycomb melanotic network is always changed. In striae alba, dermoscopy reveals a whitish, hazy appearance with only distinct features. While striae nigral are distinguished by a pronounced streaky melanotic pattern in continuity with the honeycomb melanotic network of the adjacent normal skin, striae

rubrae are defined by a mild streaky pattern of dilated vessels oriented at a right angle to the axis of the striae.[22]

TREATMENT

Avoiding rapid weight gain or loss is one of the general techniques for preventing the formation of stretch marks, especially in high-risk populations like adolescents, athletes, and pregnant women.

In the past, it was believed that changing your diet, starting an exercise routine and to keep the body was key to reducing your risk of SD.

TOPICAL AGENTS

Treatment targets of different therapies used in striae distensae

1. Activation of fibroblasts and induction of cutaneous collagen synthesis (to improve tissue strength)

2. Decrease in lesional vascularity (especially in Striae Rubra)

3. Reduction of skin roughness and wrinkles (to improve texture)

4. Improvements in cell proliferation, elasticity, blood flow, skin hydration, and anti-inflammatory qualities. Increased pigmentation (in Striae alba).

Most topical treatments make the claim that they can reduce the look of SD by promoting collagen formation and improving skin suppleness.

TRETINOIN

Vitamin A derivatives known as retinoids have been used to treat acne. Since Weiss and Ellis' 1988 study detailing the advantages of tretinoin in the treatment of photoaging, its use has grown tremendously. When applied topically, it is quickly digested and primarily eliminated in bile; a tiny quantity also penetrates through the dermis but has not yet been found systemically. Tretinoin, on the other hand, has an

impact on a variety of processes in epithelial cells, including differentiation, neoplastic transformation, tumour promotion, collagen production, wound healing, stimulation and modulation of immune response, inflammation, cell membrane, and many others.[23]

According to (Ash et al., 1998) striae alba can look better when 20% glycolic acid is applied along with either 0.05% tretinoin,. emollient cream, or 10% L-ascorbic acid .[24]

Patients should discontinue receiving treatment if a reaction that would indicate sensitivity or irritation occurs. The use of sunscreen, wearing protective clothing, and limiting exposure to sunlight and sunlamps. should all be recommended to patients using tretinoin. However, these medications are not advised for use in those who are pregnant, nursing, or who have sunburns.

CENTELLA ASIATICA

It is a widely used traditional medicinal herb in East Asian folk medicine, with a variety of purposes. According to Velasco and Romero (1976), the substance's precise mode of action is the stimulation of fibroblastic activity. In a randomised controlled experiment, 80 participants compared the treatment cream to a placebo. Their findings showed that 34% of individuals in the treatment group and 56% of those in the placebo group experienced SD.[25]

SILICONE GEL

It has been recommended for use in acne, chickenpox, and SD scars that have atrophied. Hyaluronic acid may boost fibroblast activity and collagen formation, according to some research. According to one randomised controlled study, ten

percent of women in the treatment cohort versus seventy percent in the placebo group experienced SD.[26]

VITAMIN C

Several hydroxylases and monooxygenases need ascorbic acid (vitamin C) as a cofactor in order to operate. Humans cannot synthesis it; therefore, it must be obtained through diet or medical treatments. Vitamin C enhances transcription and lengthens the half-life of the transcripts in fibroblast cultures to increase the steady state level of mRNA for collagen types I and III. This drives collagen synthesis.[27]

The stratum corneum and epidermal layers were not destroyed when the CO2 laser was used at a lower fluence to increase vitamin C permeability. With the CO2 laser, additional improvement was seen at higher fluences, along with a noticeable ablation impact. According to trans epidermal water loss levels, microdermabrasion ablated the stratum corneum layers with no modification of the skin barrier characteristics. When compared to untreated skin, the flow and skin deposition of vitamin C throughout microdermabrasion-treated skin was around 20 times higher.[28]

Chemical peeling in treatment of striae distensae:

1.Alpha hydroxy acid (AHA): Glycolic acid between 50% and 70% aids in the treatment of stretch marks that appear early (striae rubra). Six peels were administered to SD of various types on the thigh over a 6-month period in an Randomized control trial using glycolic acid 70% peels. At six months, striae rubra demonstrated significantly reduced furrow width and haemoglobin content, while striae alba displayed similarly diminished furrow width and elevated melanin levels.[29]

2. Jessner's response: It has ethanol (100cc), salicylic acid (14 gm), lactic acid (14 cc), and resorcinol (14 gm) in it (100 cc). Jessner's solution alone can cause superficial

peeling when used (50). It can be used, then TCA 35% can be applied right after it to provide a medium depth peel.[30]

3.Trichloroacetic acid (TCA): A minor epithelial slough will clinically manifest as a superficial coagulation of epidermal proteins in a solution with a TCA content of 15–25%. A greater concentration of up to 45% will result in partial dermal denaturation, dermal inflammatory cell response, and epidermal necrosis. The degree of damage can vary depending on the application method. To improve penetration, vigorously rub the solution into the skin while eliminating any debris that has already been pulled off by the acid's action.[31]

MICRODERM-ABRASION

There are sporadic anecdotal accounts of striae looking better after using other peels, although the majority of these comments are related to vacuum-based aluminium oxide microderm abrasion.

Combining microdermabrasion with a topical treatment that contains glycolic acid, retinal, and magnesium ascorbyl phosphate may improve clinical outcomes in comparison to microdermabrasion alone. Aluminum oxide or sodium chloride crystals used in microdermabrasion impact the skin and cause superficial damage. Repetitive intraepidermal injury is thought to gradually repair injured skin by promoting fibroblast proliferation and collagen formation, which results in new collagen being deposited in the dermis.[32]

In a study on the clinical and molecular evaluation of using dermabrasion to treat SD, stretch marks were found to be beneficial. Twenty SD patients who underwent five microdermabrasion treatments five times per week on one half of their bodies served as the study's control group. Real-time reverse transcriptase PCR was used to assess the amounts of type I procollagen I-mRNA in patient biopsies. More

than half of the individuals had an overall good to outstanding response, with striae rubra showing the most improvement. Type I procollagen mRNA was shown to be upregulated in all treated SD samples.[33]

LASER THERAPY:

ERBIUM: YAG LASER:

The Erbium: The striae can be effectively treated with the Erbium:YAG laser. Compared to CO2 laser systems, it exhibits higher safety and control because the CO2 laser causes severe peripheral thermal damage.[34]

SHORT PULSED CARBON DIOXIDE LASER:

Another technology that, in theory, might be helpful in the treatment of stretch marks is the short pulsed carbon dioxide laser. This laser system uses an infrared beam at 10,600 nm to target water, which causes a controlled abrasion of the skin.[35]

NON ABLATIVE LASER THERAPY

Non-ablative lasers don't cause skin to burn like standard ablative lasers do. Depending on the wave lengths and intensity utilised during the procedure, both a rise and a decrease in collagen formation have been observed after laser treatment.[36]

PULSED DYE LASER (PDL; 585 NM):

Additionally, it has been demonstrated that PDL-irradiated striae have a significant amount of local mast cells, which may produce a variety of cytokines that may potentially accelerate the collagen remodelling process.[37]

FRACTIONAL PHOTOTHERMOLYSIS:

A more recent non-ablative resurfacing laser technology called fractional photothermolysis (FPT) damages the skin by producing microzones or microthermal zones (MTZs). 53 individuals received fractional laser photothermolysis therapy in a study by Alster and colleagues for atrophic scars. There were no issues or negative side effects. After just one treatment, 90% of patients saw at least a 25% to 50% improvement; 87% of patients who received three treatments saw at least a 51% to 75% change in the way their scars looked after a month, and steady improvement after six months.[36]

RADIOFREQUENCY DEVICES:

According to reports, using radiofrequency (RF) devices to tighten the skin on the face and neck is an efficient and secure non-invasive procedure. According to a report, collagen fibril contraction happens right away after RF treatments, which promotes the production of new collagen.[38]

COSMETIC SURGERY:

Usually used as a last resort, for the most severe scarring form of stretch marks. A tiny incision is made along the length of the stretch marks and the affected area is removed and then stitched together.

Quality of life is described by the WHO as "individuals' judgments of their place in life in relation to their objectives, aspirations, standards, and concerns in the context of the culture and value systems in which they live."[39] Beyond just affecting the skin,

chronic skin disorders can have a considerable negative influence on a patient's QOL since lesions present on the skin can negatively impact a person's sense of appearance, self-esteem, and confidence, as well as their social interactions.

WHY MEASURE QOL?

Health service research, clinical settings, clinical studies, and dermatology service audits can all benefit from QOL evaluation.

Every dermatologist uses their perception of how a patient's condition affects their lives to assist direct therapy every day in clinical practise. For instance, the risk benefit ratio is influenced in part by the degree of the patient's handicap while deciding whether to start methotrexate for extensive psoriasis. Given that dermatologists might not be able to estimate this parameter with sufficient accuracy, it would be beneficial to have a formal measure of QOL impairment in this case.

When evaluating new medicines in clinical trials, drug licencing authorities are likely to want QOL data in addition to the more conventional metrics of disease activity. Already, several pharmaceutical firms employ these strategies.

In this era of managed care and/or state intervention, using a patient-oriented outcome measure is becoming more and more appealing.

TECHNIQUES USED

Usually, validated questionnaires are used to evaluate QOL impairment. These can be created to treat a variety of diseases, disorders affecting a single system, or they can be modified to treat a specific disease. Other procedures involve asking patients to rank and list their symptoms, as well as the application of utilitarian techniques. By

asking patients how much daily time or life shortening they would "swap" for an improvement in their medical state, these strategies determine the value that a patient sets on their illness.

The Dermatology Life Quality Index (DLQI) Skindex, Dermatology Quality of Life Scales (DQOLS), Dermatology Specific Quality of Life (DSQL), and Qualita di Vita Italiana in Dermatologia are among the at least five dermatology-specific questionnaires that have been described for use in people (QUAVIDERM). We have the greatest expertise with the DLQI because it was the first to be described.

Generic QOL measures

1. Short Form 36 (SF-36)

   The self-reporting health status questionnaire, which consists of 36 items and 8 domains of health status, includes questions about bodily pain, social activities, usual emotional role activities, general mental health, vitality, and general health perceptions. It also asks about physical activity and usual physical role activities. A score can range from 0 to 100. The SF-36 may be the most helpful instrument for assessing changes in quality of life among diverse illnesses. Higher values indicate superior HRQL.[40] Scale of Subjective Well-Being (SWLS)

This is a tool consisting of 5-varibles intended to measure global life satisfaction. It is validated and correlated with other method of subjective well being.

3.Nottingham Health Profile

The Nottingham health profile consists of 38 statements that are used to create six scales that indicate health issues like physical mobility and discomfort as well as other serious statements concerning the aspects of everyday life that are most frequently impacted by health. The responses from the tick boxes are weighted.

4.General health questionnaire

A self-managed screening tool, the GHQ. It comes in 60, 30, 28, and 12 piece items, with the 12 and 28 piece forms being used for skin conditions. The 28-item version comprises four subscales for somatic symptoms, anxiety and insomnia, social dysfunction, and severe depression.[41]

5.Skindex-16

It consists of domain ratings that evaluate how acne-related symptoms, feelings, and functioning impact patients' quality of life. The total score averages three domain scores, which are all standardised to a 0–100 scale, with 0 denoting that their skin condition has no effect on QOL and 100 denoting that it has the most negative influence on QOL.[42]

6.Sickness Impact Profile assessment:

It is a comprehensive evaluation of how well daily tasks are performed. Patients have the option of agreeing or disagreeing with 136 statements on daily activities. These are broken down into seven major categories: physical, psychological, sleep, food, managing the home, leisure, and hobbies.

DLQI

The main dermatology specific quality of life tool, DLQI, was created in for the first time in 1994. It has been regularly used in over 80 countries and is available in over 90 languages. A total of 1000 articles have been released with this DLQI, many of which are the results of international investigations.[43]

The purpose of the Dermatology Life Quality of Index questionnaire practical application in individuals older than 16. This questionnaire is self-explanatory, making it possible to present it to the respondent without providing a detailed explanation because it is so straightforward.

Each of the 10 questions on the DLQI questionnaire has four alternative answers, and each question receives a score between 0 and 3. The DLQI score is determined by adding the results of each question, yielding a 30 at most, and 0 at the least. The lower the quality of life, the higher the score is.[44,45,46]

This is how the score is being interpreted:

Interpretation of the DLQI score

"No effect at all on the patient's life, 0-1

Small effect on patient's life: 2–5

Moderate effect on patient's quality of life 6-10

Very large effect on the patient's life, 11–20

Extremely large effect on the patient's life 21-30"

The expansion of stretch marks is detrimental to one's self-esteem. Some patients have reported large amounts of agony over their stretch marks, even when they are suffering from major, acute, or chronic illnesses.

No research studies investigating the effects of pregnant stretch marks on life satisfaction, sexual performance, self-esteem, or self-confidence could be found.

There have been studies on the psychological effects of scars, however few published research papers on the psychological effects of stretch marks could be found.

Rumsey and colleagues looked into how patients' physical deformities affected their psychological functioning in a study. 220 adult patients who were being treated for illnesses that most affected their appearance, such as skin diseases, bum wounds, and head and neck cancer, made up the study group. The effects of these disorders included altered skin

structure, skin discolouration, elevated or depressed scars, and/or asymmetry of the body. "Patients seeking plastic surgery for additional concerns about appearance were also assessed."

Researchers found that a "considerable proportion of participants (between 13% and 93% on various measures) were experiencing psychosocial difficulties as a result of their conditions, including anxiety, depression, social anxiety or social avoidance, and physical, physiological, and environmental problems".[47]

Quality of life study is especially important for illnesses with dermatological relevance to better understand the true impact of the disease on the subject's social life and normal life outside of merely the therapy provided from a medical point of view.

MATERIAL AND METHODS

STUDY SOURCE: This study was conducted in department of dermatology, venerology and leprosy, in tertiary care hospital, Belgaum as a part of the MD academic curriculum.

Study Duration: 1st January 2021 upto 31st December 2021

Ethical clearance: Clearance was taken from ethical committee of the institute.

Sample size :

The formula for calculating sample size is

p(100 p)Z2 n =E2 (Purposive sampling)

The necessary sample size is n, and the percentage is p. occurrence of a condition or state (proportion or prevalence), E is the greatest error percentage required, and Z is the value of required level of confidence.

In this study we assumed that, prevalence of striae distensae in KLE Prabhakar Kore's hospital, Belgaum as 7%. This prevalence was used for sample size calculation and percentage of maximum error required was 5% at 95% confidence level sample size is given by,

$7 \times 93 \times (1.96)2$

$n =$ 52

$n = 100.0316 \approx \mathbf{100}$

Hence 100 minimum samples were required for the study.

Hence a total of 200 patients were taken in the study.

Sample collection criteria : The present study was conducted on both male and female patients in the age group 18-60 years attending KLE DR. PRABHAKAR KORE HOSPITAL having striae distensae, who voluntarily agreed to participate and satisfy the inclusion and exclusion criteria.

Inclusion criteria:

Subjects of either sex of age group 18-60, with a diagnosis of striae distensae confirmed by a dermatologist.

Subjects willing to give informed consent.

Exclusion criteria:

Any other dermatologic conditions coexisting with striae distensae over the same location.

Subjects not educated enough to read, understand and answer the questionnaire.

Data collection:

• The subject of the study and the questionnaire's personal nature were explained to the patient.

• A single examiner gathered the data, which was then recorded in the case record proforma.

• The DLQI questionnaire was made available in English, Hindi, Marathi, and Kannada to those who provided informed written consent.

• The DLQI was determined by adding the results from each question, which might result in a highest score of 30 and a least score of 0. The lower the quality of life, the higher the score. The DLQI responses were graded using Finlay AY Khan's standards.

Data analysis:

The Statistical package for the Social sciences was used for all statistical analysis.

Statistical method for data analysis:

Data collected was entered in the Microsoft excel spread sheet and later transferred into Statistical Package for Social Sciences (SPSS Inc., Chicago., IL, version 24.0 trial ver) for analysis. Parametric data was represented in means and Standard deviations and non-parametric data was expressed in

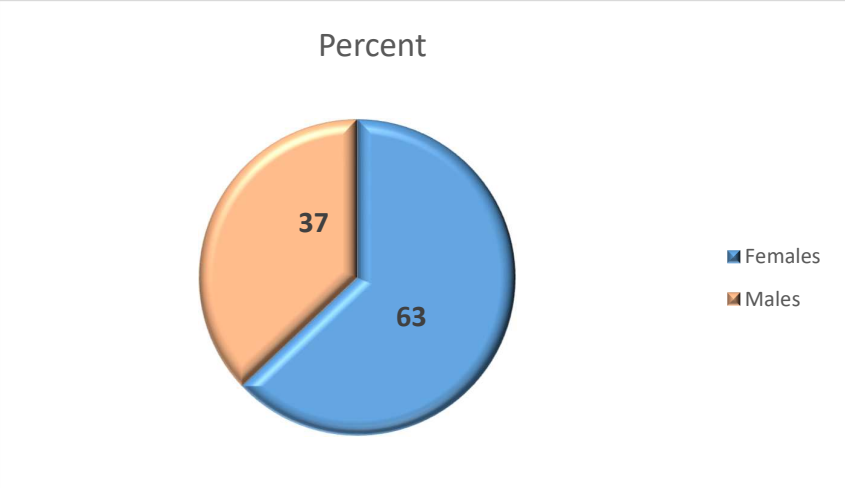
proportions. Normality of data is tested, and data was normally distributed. Statistical tests like chi-square test, Fisher's exact test, ANOVA and Mann Whitney test were applied. P Value less than 0.05 was considered statistically significant.

RESULTS AND OBSERVATIONS

Sex distribution

Out of 200 subjects recruited, males accounted for 37%, n=74 and female's 63%, n=123. The mean age of study population is 30+/- 9 years.

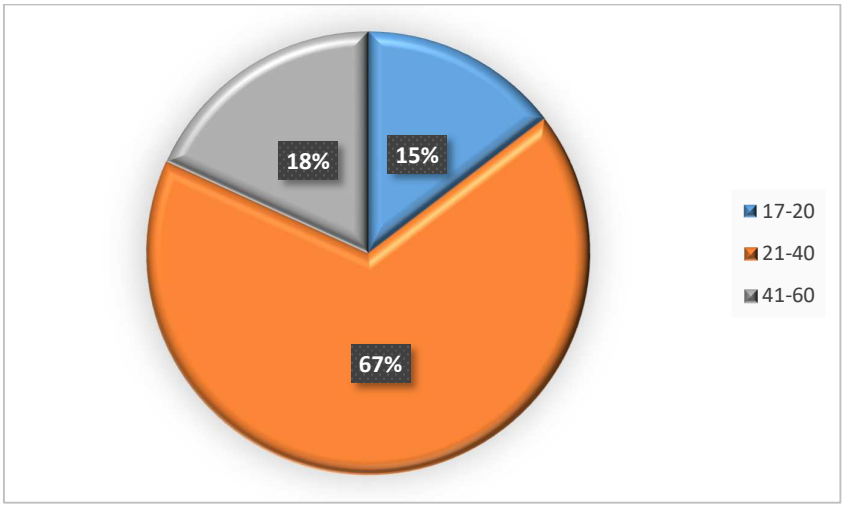
Figure 1: Sex distribution



Age distribution

Out of 200 subjects recruited, between 17-20 was 14.6% (n=31), 21- 40 was 67.2%, (n=133) and 41-60 was 18.2%, n=36. The mean age of study population is 30±10 years.

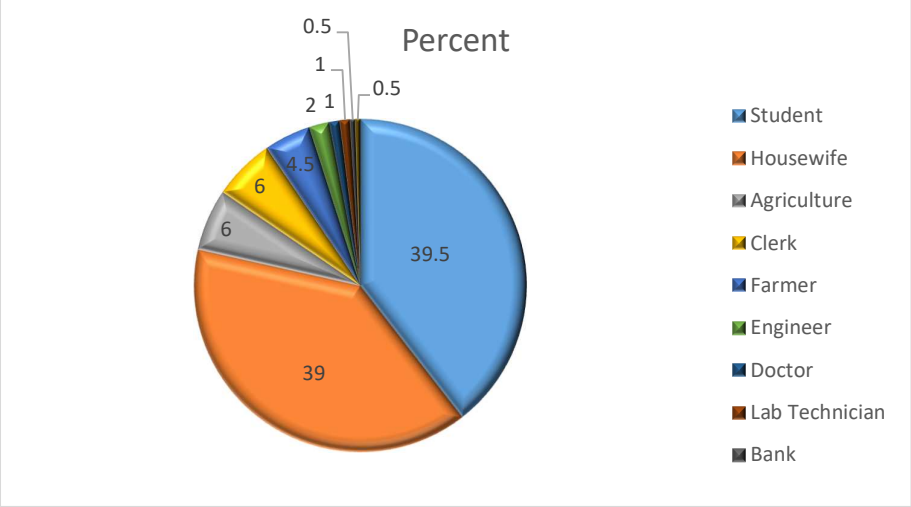
Figure 2: Age Distribution



Occupation of study participants

Majority of study subject were housewives and students constituting nearly 80 percent.

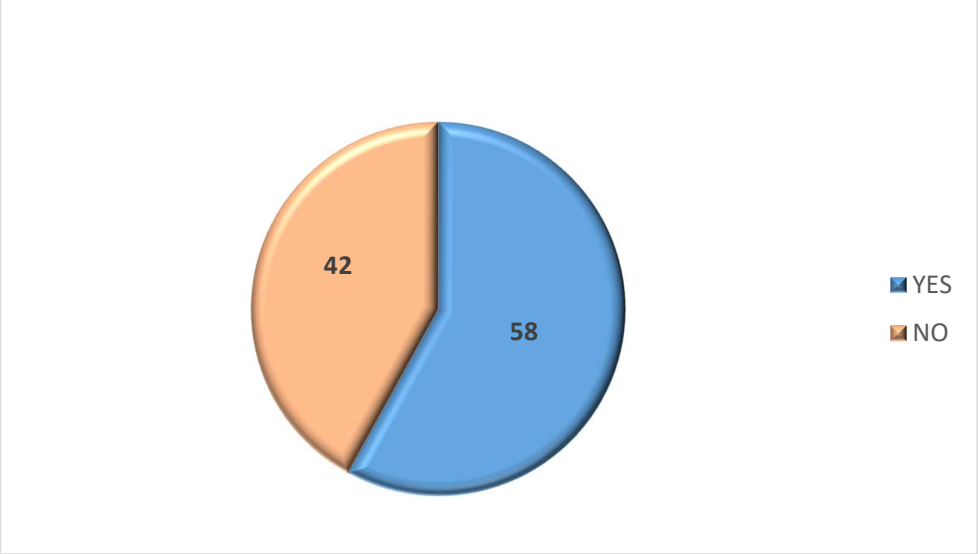
Figure 3: Occupation of study participants



Marriage status

Out of 200 subjects recruited married were 58% (n=116) and unmarried were 42% (n=42) present in similar proportions.

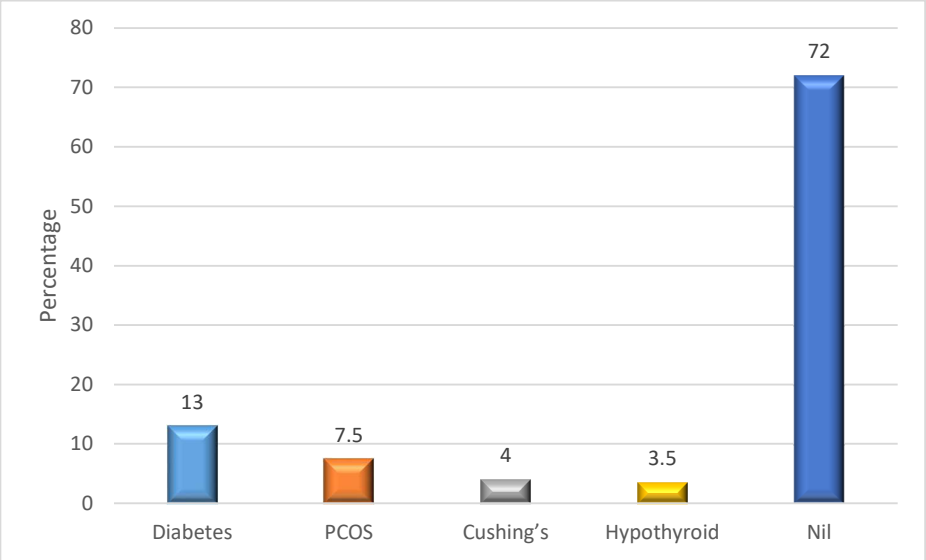
Figure 4: Marriage status



Underlying disease status

Diabetes was a major underlying condition followed by PCOS. 4 percent of cases had Cushing's and 3.5 percent had hypothyroid.

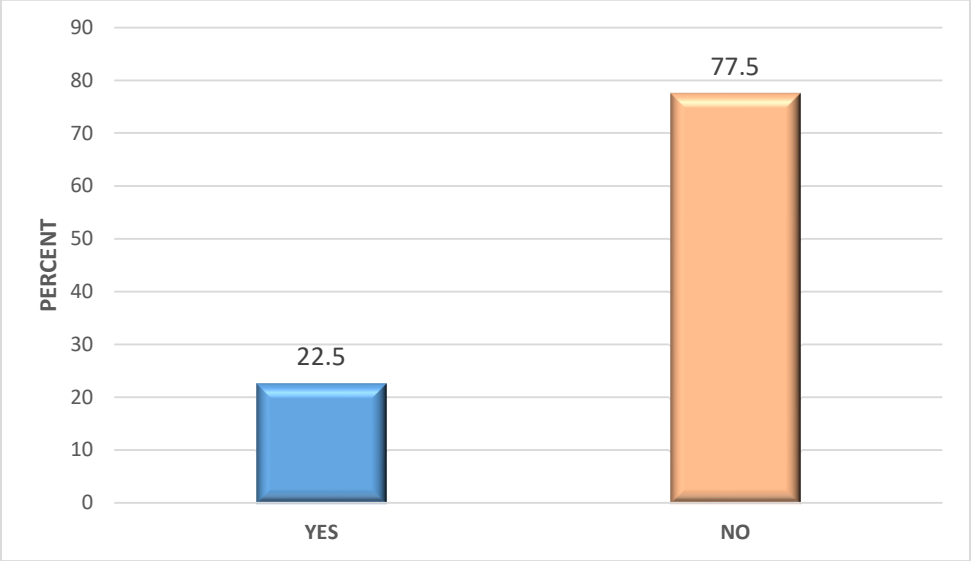
Figure 5: Underlying Disease status



Obesity

WHO identifies obesity when BMI is >/= 30. In Asians, the cut off for Obesity is >25 kg/sqm is lower than WHO criteria and the same cut off was used to define obese population in our study. 22.5 percent(n=45) of study participants were suffered from obesity in our study.

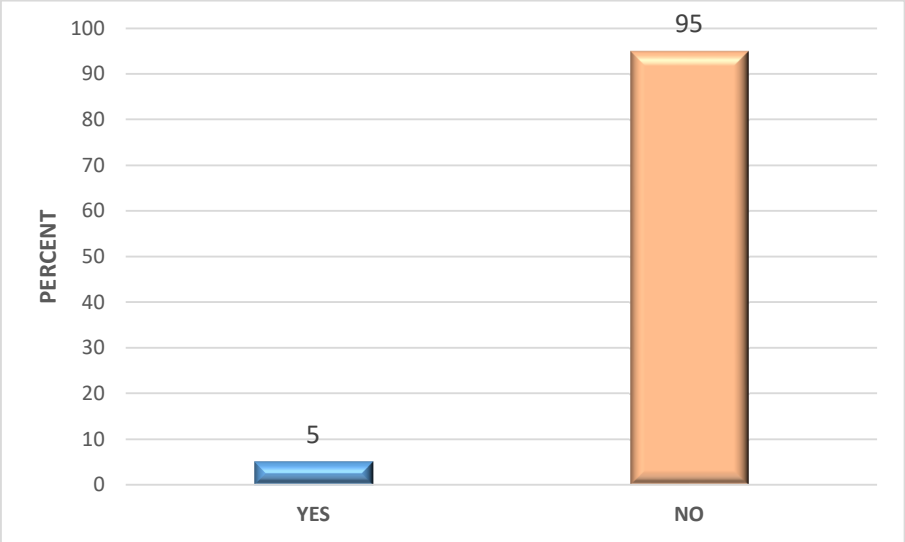
Figure 6: Percentage of obese subjects



Abdominal tumors

In our study 5 percent n=10 of study participants suffered from abdominal tumour.

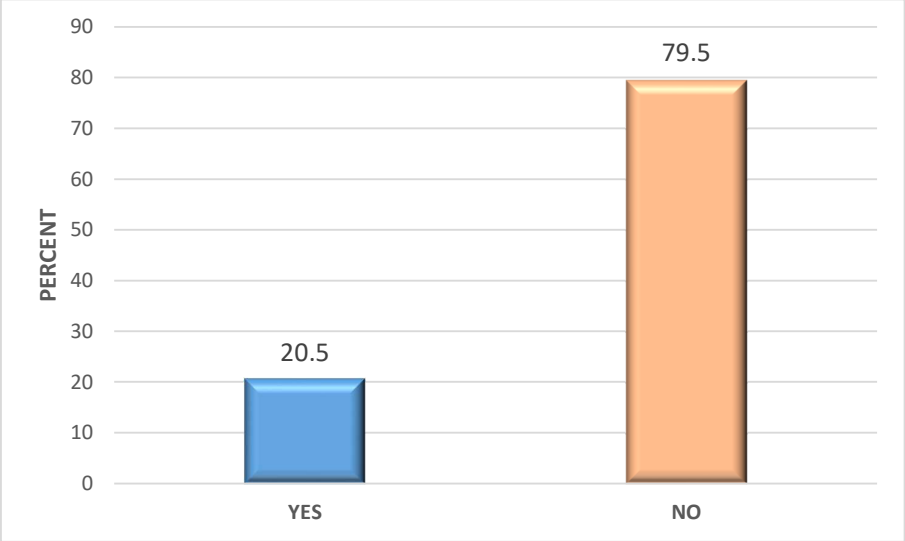
Figure 7: Subjects with abdominal tumour



Pregnancy status

In our study 20.5 percent(n=41) of study participants were pregnant.

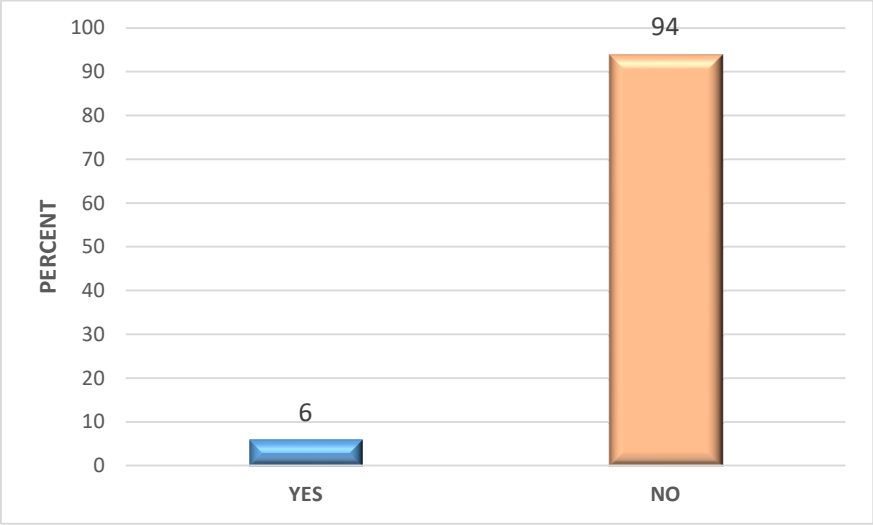
Figure 8: Pregnancy status among subjects



Recent weight loss

In our study out of 200 subjects recruited 6 percent(n=12) of study participants had recent history of weight loss

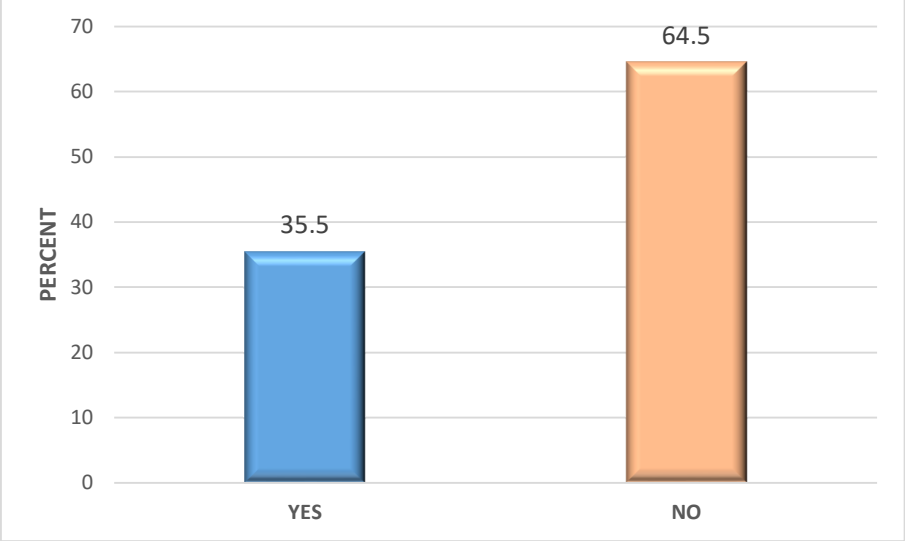
Figure 9: Subjects with recent weight loss



Recent weight gain

In our study out of 200 subjects recruited,35.5 percent (n=71) of study participants had recent history of weight gain

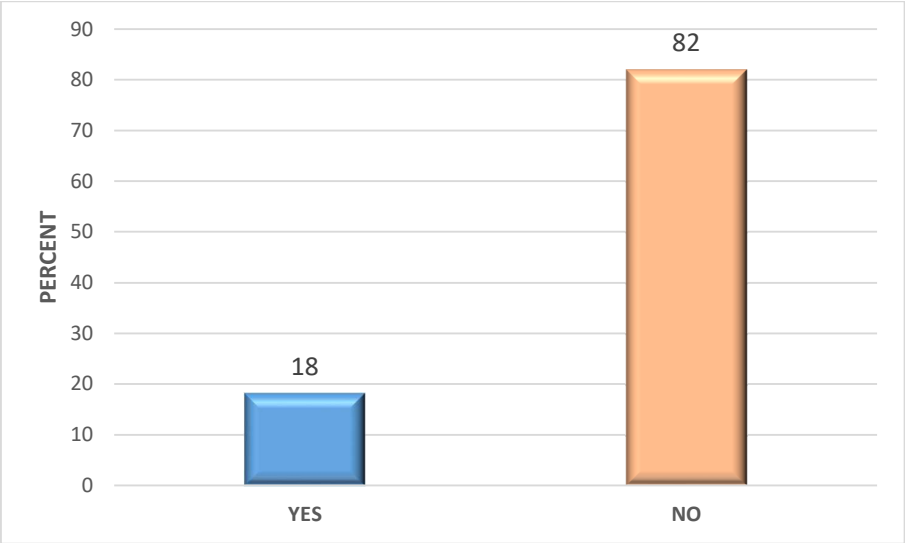
Figure 10: RECENT WEIGHT GAIN



Application of Topical steroid:

Out of 200 subjects recruited 36(18%) had history of application of topical steroid

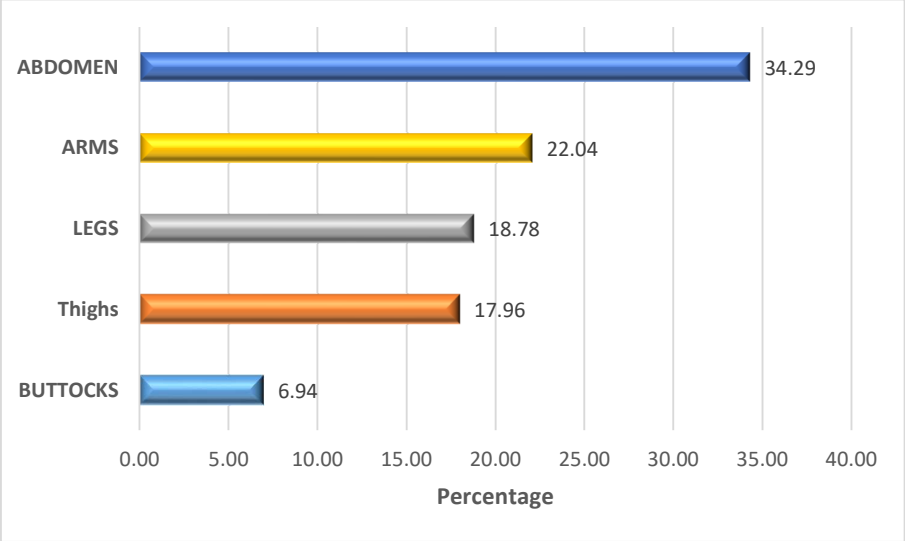
Figure 11: Topical steroid



Site of lesion

In our study out of 200 subjects recruited abdomen(n=84,34.29%) was the major site of lesion followed by arms, and legs. 22 percent(n=54) had lesions on the Arms,18.78 %(n= 46)had lesions on legs ,17.96 percent had lesions on the thighs and least on buttocks.

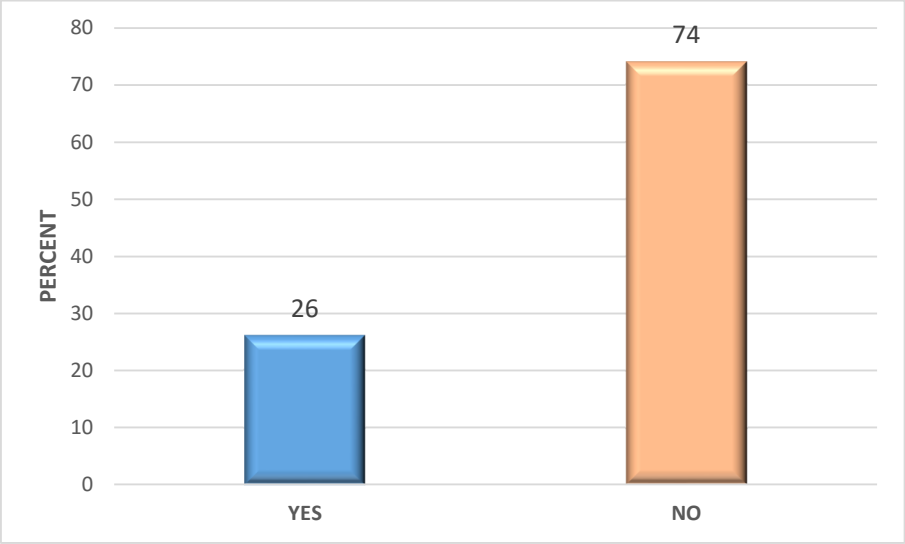
Figure 12: Site of lesion



Lesion on exposed area.

In our study out of 200 subjects recruited, 74%(n=148) of study participants had lesions on exposed areas

Figure 13: Lesion on exposed area.



Psychiatry visit

In our study out of 200 subjects recruited, 1.5 percent(n=3) of study participants had psychiatric visit.

DLQI effect wise distribution

Table 1: DLQI effect wise distribution

	Frequency	Percent
EXTREMELY LARGE EFFECT	1	0.5
MODERATE EFFECT	57	28.5
NO EFFECT	1	0.5
SMALL EFFECT	112	56
VERY LARGE EFFECT	29	14.5
Total	200	100

In our study out of 200 subjects recruited, patients with extremely large effect on the DLQI score was 0.5%(n=1), moderate effect were 28.5% (n=57), no effect was 0.5%(n=1), very large effect were 14.5%(n=29) and majority of the study participants had small effect that is 56%(n=112).

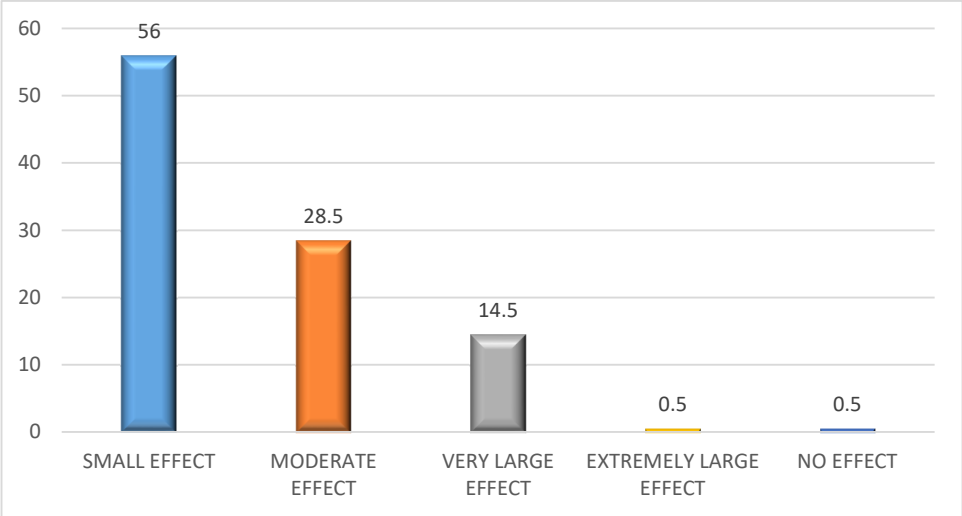


Figure14: DLQI effect wise distribution

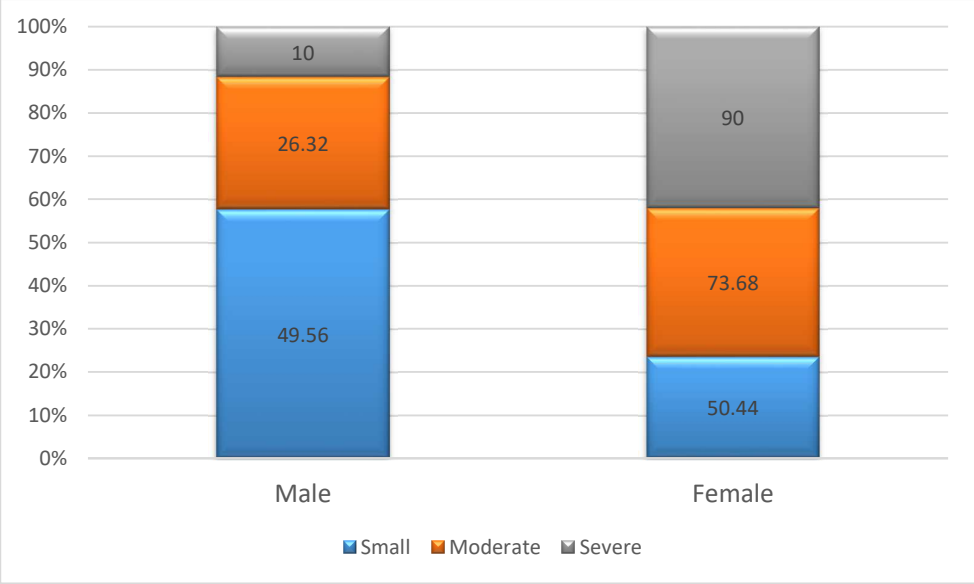
Association between Gender and DLQI effect

Table 2: Association between Gender and DLQI effect

	Small	Moderate	Very Large	P value
Sex	**N**	**N**	**N**	
Male	56	15	3	0.01
Female	57	42	27	Sig

There was an association between Gender and DLQI effect (p=0.01), where females had moderate to large effect.

Figure 15: Association between Gender and DLQI effect



Association of Occupation and DLQI effect

Table 3: Association of Occupation and DLQI effect

	Small Effect	Moderate Effect	Very Large Effect	P value
OCCUPATION	**N**	**N**	**N**	
Student	37	29	13	0.01
Housewife	39	24	15	
Agriculture	12	0	0	
Bank	1	0	0	
Clerk	10	0	2	
Contractor	1	0	0	
Doctor	0	2	0	
Engineer	3	1	0	
Farmer	8	1	0	
Lab Technician	2	0	0	

There was an association between Gender and DLQI effect (p=0.01), Housewives(n=29) and students(n=24) are having significantly high proportion of moderate effect.

Association of Marital status and DLQI effect

Table 4: Association of Marital status and DLQI effect

	Small Effect	Moderate Effect	Very Large Effect	P value
MARRIED	**N**	**N**	**N**	
YES	73	26	17	0.06
NO	40	31	13	Not.Sig

There is no association between married status and impression.

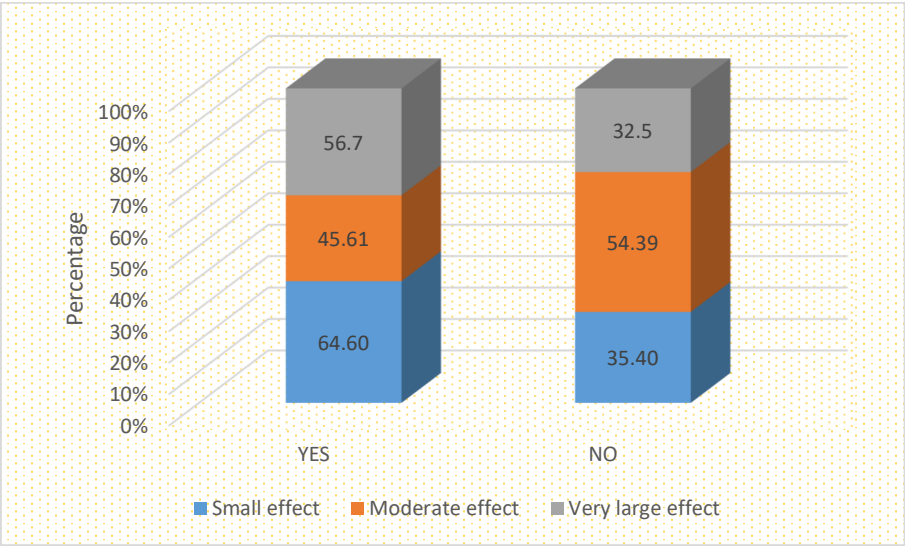


Figure16: Association of Marital status and DLQI effect

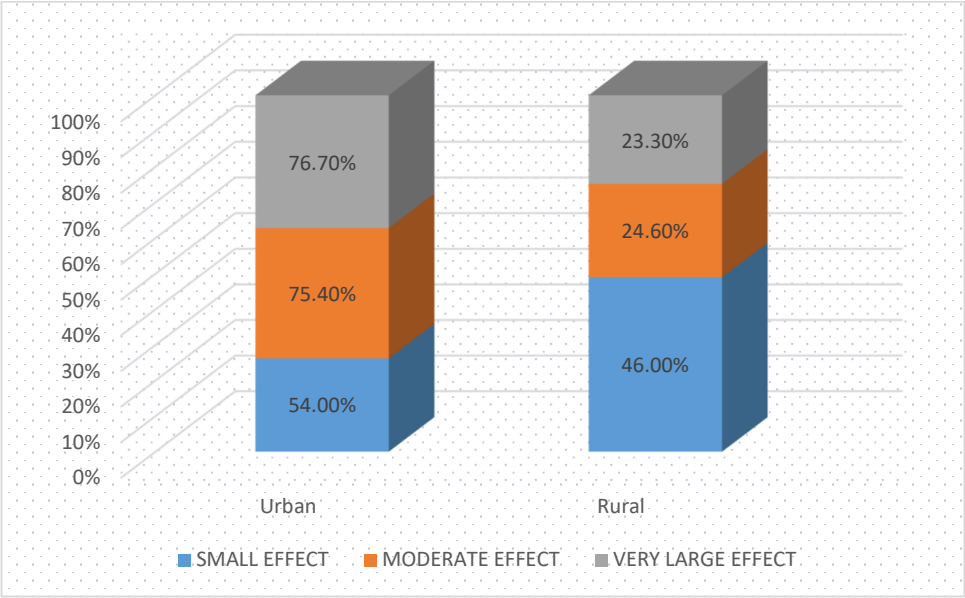
Association of Place of Residence and DLQI effect

Table 5: Association of Place of Residence and DLQI effect

	Small Effect	Moderate Effect	Very Large Effect	P value
	N	N	N	
Urban	61	43	23	0.01
Rural	52	14	7	Sig

There was an association between Place of Residence and impression(p=0.01). Urban study participants had significantly higher number of moderate(n=43) and large effect(n=23) when compared to rural study participants.

Figure 17: Association of Place of Residence and DLQI effect



Association of Abdominal tumour and DLQI effect

Table 6: Association of Abdominal tumour and DLQI effect

	Small Effect	Moderate Effect	Very Large Effect	P value
Abdominal Tumour	**N**	**N**	**N**	
YES	5	2	3	0.06
NO	108	55	27	Not.Sig

No association between the Abdominal tumour and impression (p=0.06)

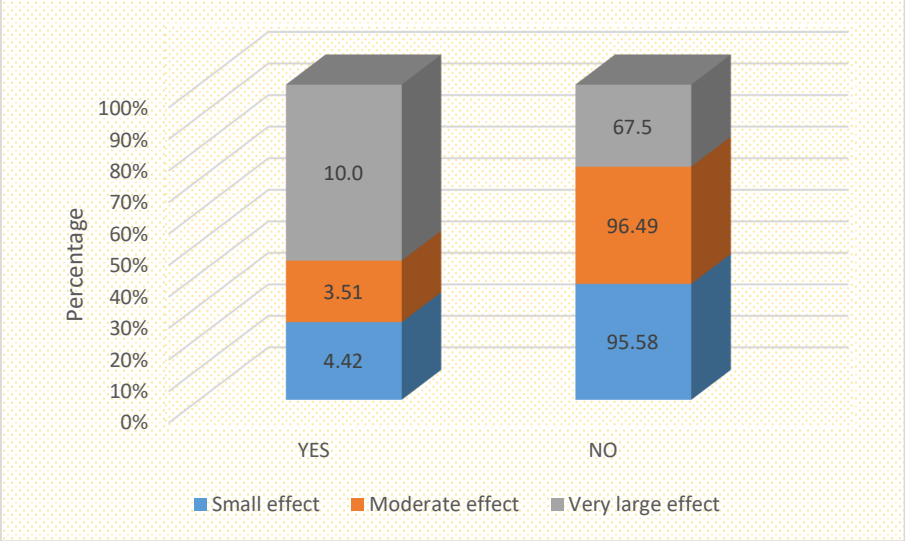


Figure 18: association between abdominal tumour and Impression

Association of obesity and DLQI effect

Table 7: Association of obesity and DLQI effect

	Small Effect	Moderate Effect	Very Large Effect	P value
Obesity	N	N	N	
YES	23	10	12	0.041
NO	90	47	18	Sig

There was a significant association between obesity and DLQI effect(p=0.04) with subjects having very large effect (26.6%)

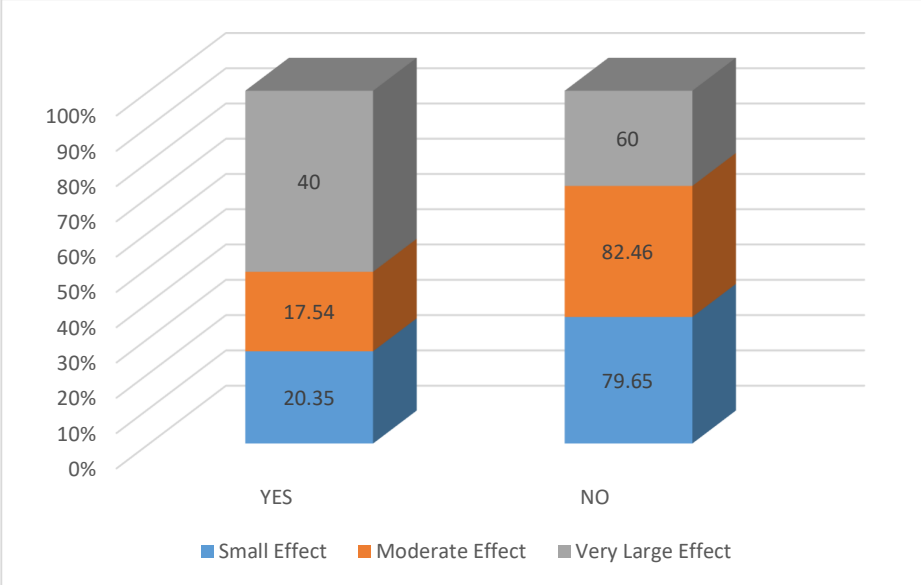


Figure 19: Association between obesity and DLQI effect

Association of Pregnancy and DLQI effect

Table 8: Association of Pregnancy and DLQI effect

	Small Effect	Moderate Effect	Very Large Effect	P value
Pregnancy	**N**	**N**	**N**	
YES	19	11	11	0.382
NO	94	46	19	Not.Sig

No association between the pregnancy status and impression (p=0.38)

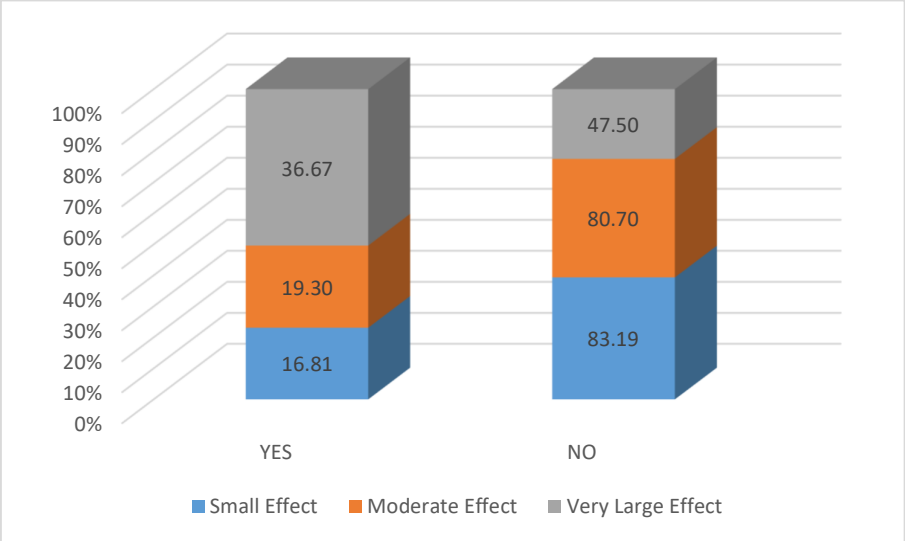


Figure 20: Association between Pregnancy and DLQI effect

Association of Cushing's syndrome vs DLQI effect

Table 9: Association of Cushing's syndrome vs DLQI effect

	Small and Moderate Effect	Very Large Effect	P value
Cushing's syndrome	**N**	**N**	
YES	1	2	0.06
NO	169	28	Not.Sig

No association between the Cushing's syndrome and DLQI effect (0.06)

Association of Recent weight loss and DLQI effect

Table 10: Association of recent weight loss and DLQI

	Small Effect	Moderate Effect	Very Large Effect	P value
Recent weight loss	N	N	N	
YES	6	4	2	0.894
NO	107	53	28	Not.Sig

There is no association between the recent weight loss and the Impression

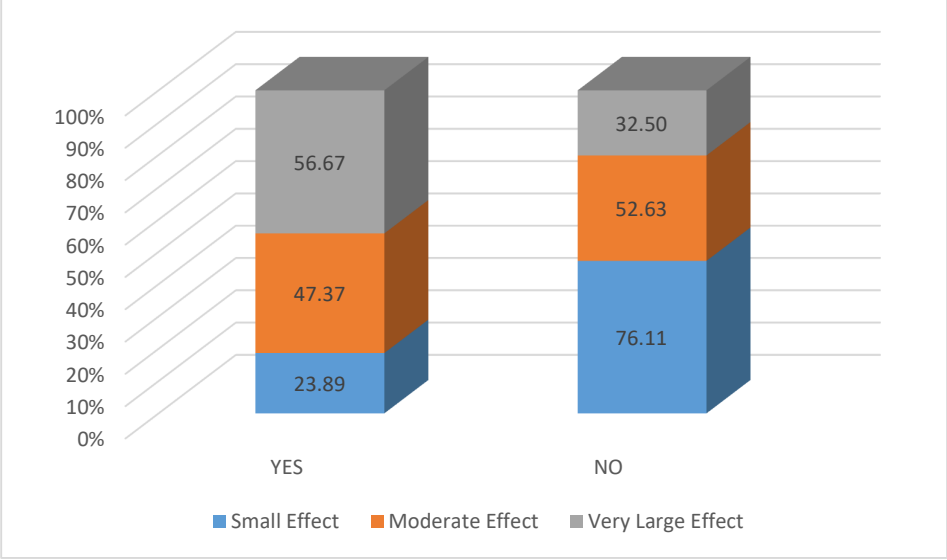
Association of Recent weight gain and DLQI effect

Table 11: Association of recent weight gain and DLQI

	Small Effect	Moderate Effect	Very Large Effect	P value
Recent weight gain	**N**	**N**	**N**	
YES	27	27	17	0.001
NO	86	30	13	Sig

Presence of recent weight gain was associated with moderate (38.02%) to very large effect (23.9%)

Figure 21: Association recent weight gain and DLQI effect



Association between topical steroid usage and DLQI effect

Table 12: Association between Topical Steroid usage and DLQI effect

	SMALL EFFECT	MODERATE EFFECT	VERY LARGE EFFECT	P value
Topical Steroid	**N**	**N**	**N**	
YES	22	6	8	0.146
NO	91	51	22	Not Sig

t

there was no association between topical steroid application and DLQI score. (p=0.14)

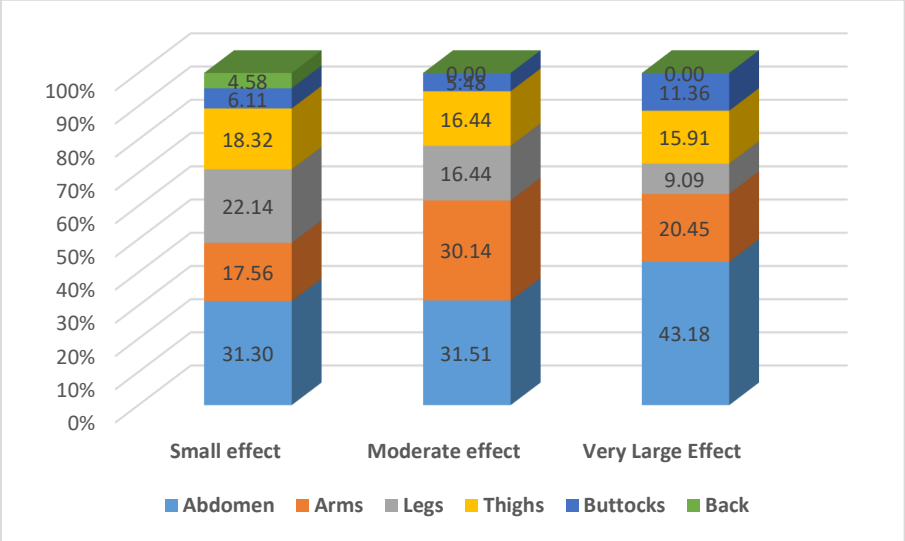
Association between site of striae and DLQI effect

Table 13: Association between site of striae and DLQI effect

	SMALL EFFECT	MODERATE EFFECT	VERY LARGE EFFECT	P value
SITE	**N**	**N**	**N**	
LEGS	59	23	7	0.001
ARMS	27	22	10	Sig
THIGHS	17	7	2	
BUTTOCKS	9	1	3	
ABDOMEN	1	4	8	

There was significant association between site of lesion and effect on dlqi (p=0.001), where Legs had moderate to severe forms of effect on DLQI

Figure 22: Association between site of striae and DLQI effect



Association between exposed area and DLQI effect

Table 14: Association between Exposed Area and DLQI effect

	Small Effect	Moderate Effect	Very Large Effect	P value
EXPOSED AREA	**N**	**N**	**N**	
YES	9	22	21	0.001
NO	104	35	9	Sig

Exposed area is having significant moderate (42%) to large effect (41%).

Association between psychiatry and DLQI effect

Table 15: Association between Psychiatry Visit and DLQI effect

	Small and Moderate Effect	Very Large Effect	P value
PSYCIATRY VISIT	**N**	**N**	
YES	0	3	0.0031(Fisher's)
NO	170	27	Sig

There was an association between psychiatry visits and DLQI effect Association between colour of lesion and DLQI effect

Table16: Association between Colour of Lesion and DLQI effect

		Small Effect	Moderate Effect	Very Large Effect	P value
		Count	Count	Count	
Colour Of Lesion	RED	13	19	18	P=0.001 Sig
	WHITE	100	38	12	

Out of 200 subjects recruited, 48(24%) subjects had red colour lesion and there is an association between colour of lesion and impression. Red colour lesion has moderate (39.5%) to very large effect (37.5).

Association between Patient seeking treatment vs DLQI effect

Table 17: Association between Patient seeking treatment and DLQI effect

		Small Effect	Moderate Effect	Very Large Effect	P value
	Patient Seeking Treatment	Count	Count	Count	
Patient Seeking Treatment	YES	24	51	30	P=0.001 Sig
	NO	89	6	0	

In current study 52.5% of patients sought treatment in the past. There was an association between patient seeking therapy and DLQI effect, with those seeking treatment having a moderate to very substantial effect. (p=0.01)

Association between DLQI effect and duration of lesion.

Table 17: Association between DLQI Effect and Duration of lesion

	Duration of lesion in years	
	Mean	Standard Deviation
EXTREMELY LARGE EFFECT	0.3	.
MODERATE EFFECT	2.82	2.06
NO EFFECT	0.4	.
SMALL EFFECT	2.49	1.69
VERY LARGE EFFECT	3.3	3.11

On further analysing whether there was no significant between the mean duration of lesion and impression (p value= 0.68 Not.Sig; Mann Whitney).

DISCUSSION

This is the first study in India to determine the impact of Striae distensae on the Dermatological Life Quality Index (DLQI). Multiple studies over time have evaluated the demographics of patients with striae distensae and the impact of striae gravidarum on DLQI. There aren't many studies looking at how Striae distensae affects people's quality of life, though.

Age and Sex :

This study included 200 subjects attending the outpatient department. The mean age of the study population is 30±10 years. Most of the study population was in the age group 21-40. Most of the subjects in our study were females constituting 66% of the study population. A study by Akinboro et al evaluated the risk factors and Quality of life among Nigerians.[48] They included 520 adults with and without striae distensae with a mean age of 24.1±5.4years and females constituting 71.9% of the study population.

Demographics:

In our study, among 200 subjects majority (80%) were housewives and students. 58% of the subjects were married. 63.5% of the subjects were from urban areas and 36.5% were from rural areas. In the study by Akinboro et al, 76.4% of the study population were students and 71.8% .[48] A quarter of our study population had lesions on exposed areas and very few sought counselling for the condition in the past.

Site of involvement:

In a study done by Akinboro et al, it was noted that upper arms and thighs were the most commonly associated sites (39.4% and 44.3%) and abdomen involvement was noted only in 9.8%. In our study population abdomen was the most

frequently affected area. This discrepancy is probably because of the pregnant women who constitute 20.5% of our study population while striae were noted first during pregnancy in only 7.3% of subjects in the study by Akinboro et al.[48] Striae distensae are frequently found on the belly of pregnant women, but less frequently on the breasts and thighs, particularly during the third trimester. Similarly, a study by Alageel et al noted that the abdomen was the most common site involved consistent with the findings in our study.[49]

Colour of lesion:

In our study, 74.5% had white stretch marks and 24% had red lesions and 1.5% had both. In the study by Akinboro et al, the colour of striae was red in 42.2%, dark in 40.3% and 17.5% had red lesions.[48]

Associated comorbidities:

Striae distensae occurs in pregnancy (43% to 88%), puberty (6% to 86%), and obesity (43%), according to a review by M Okaley et al. Striae atrophicans occur in response to exogenous topical or systemic corticosteroids, surgery, or other medical conditions, including Cushing syndrome/disease.[50]

In our study 13% had DM, 7.5% had PCOS, 4% had Cushing's, 3.5% has hypothyroidism, 22.5% had obesity and 5% of the subjects were found to have an abdominal tumour. Much of our study population (72%) has no major comorbidities. 6% were noted to have recent weight loss and 35.5% of the subjects had recent weight gain. 18% of the subjects had a history of the application of topical steroids. In the study by Algeel et al 23.9% stated that they were obese or had a chronic condition such as hypertension or diabetes mellitus consistent with the findings in our study.[49]

Domain-wise effect of disease on DLQI

Symptoms associated with striae:

According to a study done by Abdelwahed et al, 42.2% patients were mildy symptomatic, in our study 22% of patients were symptomatic.[51] This discrepancy might be because in our study only one fourth of study population i.e, 24% of patients had striae rubra which is known to be associated with itching.

Effect on daily activities:

In a study done by Abdelwahed et al 40.6% of patients had little effect on performing daily activities like gardening, shopping and the influence on wearing clothes.[51] In our study 26% had little effect on daily activities and wearing clothes. This may be because only a quarter of our study population had lesions on an exposed area .

Leisure activities:

In a study done by Abdelwahed et al 52.3% of patients had a lot of effect on social and leisure activities (mean DLQI score 2.34+/-0.69).[51] We noted that the proportion of subjects with a lot of effect on social and leisure activities was less compared to the above study and 42.5% of patients had only little effect on social and leisure activities.

Personal relationships:

In study done by Abdelwahed et al 51.7% patients had a lot of effect in a personal relationship(mean DLQI score – 2.3+/-0.70).[51] In our study, 27% had a lot of effect on a personal relationship.

Treatment of striae effect :

In a study done by Abdelwahed et al, 51.7 % of patients taking treatment of striae had a lot of effect on daily activities due to the treatment taken. [51] In our study,

only 52.7% of patients took treatment for striae. 32% of them showed little effect on daily activities due to the treatment. Many patients in our study were unaware of different treatment modalities for striae and had a lack of adherence to the treatment.

In our study, maximum effect of the disease was seen on patients' daily activity like gardening, shopping etc. whereas in a study done by Abdelwahed et al maximum effect was effect was seen in personal relationship.

Table: Domain-wise effect of disease on DLQI

Heading	Our study	Abdelwahed et al
Symptoms and feelings	22%	44.2%
Daily activities	40.6%	26%
Leisure	52.3%	42.5%
Personal relationship	27%	51.7%
Treatment	32%	50%

DLQI score

Interpreting the DLQI score can provide insight into how severely Striae distensae patients' quality of life has been impacted. DLQI scoring has been used for a while to evaluate individuals with psoriasis, vitiligo, and atopic dermatitis' quality of life and associate it with the severity of their conditions. However, researchers have not studied DLQI interpretation in persons with striae distensae. In our study more than a third of the study population had moderate effect as per DLQI scoring (28.5% moderate effect, 14.5% very large effect, 0.5% extremely large effect). A study by Yamaguchi *et al*. utilized a quality-of-life questionnaire for female patients with and without SD and demonstrated that those with Striae distensae had moderate effect on DLQI($p=0.012$).[52]

Striae gravidarum and DLQI score effect:

In a study by Genclogan et al, investigators evaluated DLQI scores in pregnant females with striae distensae and found that "young age, low education, high BMI, high birth weight, and family history of striae were risk factors for striae formation and that quality of life in women with a more number and greater width of striae was impaired." [53]

However, these studies did not compare the effect of striae on DLQI scores in pregnant women and the general population. In our study, it was shown that 26.8% had a moderate, 26.8% had a very large, and 46.3% of pregnant women had a tiny effect. However, there was no association between pregnancy status and the DLQI effect as compared with the rest of the population (p=0.382).

Marital status and DLQI effect:

Akinboro et al noted that singles are more likely to have their emotions affected more than married in their study conducted in a Nigerian population (Higher DLQI ranks 267.12 vs 205.69, p=0.001).[48] However, in our study conducted in a cohort of Indian population, we noted that 62.9% of the married subjects had a small effect, 22.4% had a moderate effect and 14.6% had a very large effect. There was no significant effect of marital status on the DLQI score (p=0.06).

Site of involvement and DLQI effect:

We noted that in patients with Striae distensae on exposed areas 17.3% had a small effect, 42.3% had a moderate effect and 40.3% had a very large effect. Subjects with striae in exposed areas had more severe emotional involvement compared to subjects with striae in non-exposed areas. Similar findings were noted in the study by Akinboro et al.[48]

Obesity and DLQI effect:

In the study by Genclogan et al it was noted that those women with higher BMI had significantly higher DLQI scores.[53] In our study we noted that 51.1% of obese subjects had a small effect, 24.4% had a moderate effect and 24.4% had a very large effect. There was a significant association between obesity and the DLQI effect compared to non-obese subjects (p= 0.041).

In our study, factors associated with a significant effect on QOL as per DLQI scoring noted were

- Female sex
- Urban living
- Obesity
- Recent weight gain
- Legs
- Arms being affected sites
- Seeking treatment in the past
- Red colour of the lesion.

Whereas marital status, pregnancy status, recent weight loss, steroid application, and duration of the lesion had no significant effect on DLQI score.

CONCLUSION

Straie distensae is a benign disease whose risk factors include, obesity, pregnancy and history of topical steroids. Striae distensae is a cosmetic condition with no symptoms, but this study demonstrates that the majority of those who are affected experience a reduction in quality of life. The determinants of impaired DLQI include younger age group, females, obesity, lesions on exposed area and red coloured lesion. Patients with striae distensae require more empathic attitude from a dermatologist. In addition to considering the disease itself, the severity of striae distensae should also consider how it affects quality of life.. Psychological aspects need to be addressed while treating these patients. This study shows that there is a huge scope for comprehensive treatments for striae distensae including treatment of psychological aspects of disease.

LIMITATIONS

- Striae distensae is a common disease. This study included only 200 subjects and was found that quality of life was affected among them. There is a need for a study with larger sample size.
- In our study there is no comparison between the severity of striae and its effect on the DLQI score. There is a need for a study evaluating the same.

SUMMARY

Striae distensae are common form of dermal scarring that appear on skin as erythematous, violaceous or hypopigmented linear striations. There were 200 participants in this study, of whom 126 were female and 74 were male. The DLQI questionnaire (available in English, Hindi, Marathi, and Kannada) was presented to everyone who provided informed written consent after the patient was introduced to the study's topic and made aware of the questionnaire's personal nature. The DLQI was calculated by summing the score of each question resulting in a maximum of 30 and a minimum of 0.

In our study striae were more prevalent in females, younger age group 21 to 40 years, Pregnant females, obese patients, and patients with a history of recent weight gain and steroid application. In our study population abdomen was the most frequently affected area. 22 % of our study population were symptomatic.

In our study more than a third of the study population had a moderate effect as per DLQI scoring (28.5% moderate effect, 14.5% very large effect, 0.5% extremely large effect). We found that there was no significant effect of marital status on the DLQI score ($p=0.06$). There was no association between pregnancy status and the DLQI effect as compared with the rest of the population.

The factors associated with a significant effect on QOL as per DLQI scoring noted in our study were female sex, urban living, obesity, recent weight gain, exposed area, patients seeking treatment in the past, and the red colour of the lesion. Although striae distensae is a cosmetic problem without any symptoms, this study shows that Striae distensae affects the QOL in majority of affected persons. Therefore, it is important to consider both the disease itself and how it affects quality of life when evaluating the severity of striae distensae.

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ANNEXURE I – CONSENT FORM

Title of the study: **"To study the Dermatology Life Quality Index in patients with striae distensae."**

The study is conducted by **Reg no- BT0120001**Post Graduate (M.D)student in Dermatology under the guidance of DR. **_____,** Associate Professor, Department of Dermatology, Venereology and Leprosy, JNMC, BELAGAVI.

Respected Sir/Madam,

We invite you to participate in our study as you are eligible for the same. During the study you will be asked some questions in detail regarding your present complaints.

Purpose of the study:

Although totally asymptomatic, striae distensae may be disfiguring and psychologically distressing to the patients. Treatment of striae distensae can be challenging, as no therapy induces complete resolution. Moreover, a paucity of high-quality trials and a lack of reliable, validated and widely accepted tools to assess striae severity and responses to treatment preclude definitive guidelines for the best approach to treatment. Hence it is worthwhile assessing the DLQI in these patients and thus might provide insight into patient's psyche, improving patient-physician relationship therefore leading to better compliance and treatment outcome.

Procedure:

You will be asked to give a detailed history of your disease, will be given a questionnaire regarding the disease and the effect on quality of life and undergo a physical examination along with clinical pictures of the area affected.

Risks and Benefits:

The result of you taking part in this research would provide insight into patient's psyche, improving patient- physician relationships therefore leading to better compliance and outcome.

Alternatives:

If you decide not to participate in this study, you will still be receiving the usual standard care for your disease.

Privacy and confidentiality:

Your privacy will be respected and all information collected about you during the course of this study will be kept confidential. Your identity will remain undisclosed.

Relations with the Institutional policy:

The J N Medical College will provide, within the limitations of the laws of the State of Karnataka, facilities and medical attention to patients who suffer injuries as a result of participating in this project.

Financial incentives:

You shall not be receiving any payment or any financial incentives for participating in this studyAuthorisation to publish results:

The results of this study may be published for scientific purpose or presented to a

scientific group. Your identity, however, will be maintained confidential at all times.

Voluntary participation:

Your participation in this study is voluntary. Your decision whether or not to participate will neither affect the care of your current disease, nor your future relations with the doctor or the hospital. In the event if you suffer any physical injury as the result of your participation in this study, you may contact **Reg no- BT0120001** Telephone No. 8884343473 or DR. _____ Telephone No: _____.

In case you need further information regarding your rights as a study participant, you may please contact

DR. ROOPA M BELLAD**,** chairman of the ethical committee, J N Medical College, Belagavi.

ANNEXURE II – PROFORMA

"One year cross sectional study of the Dermatology Life Quality Index inpatients with striae distensae." AT Dr. PRABHAKAR KORE, KLE HOSPITAL, BELGAUM

Case No. OP/IP No.

Name:

Age:

Sex:

Occupation:

Income:

Address with phone number:

History of presenting illness:

1) Type of lesion observed……..
2) Onset of lesion…….
3) Duration of lesion……
4) Site of lesion……

History of any local application……..

Past history:

History of other medical condition: Yes/No

Diabetes mellitus: □

PCOS: □

Obesity: □

Abdominal Tumours: □

Cushing syndrome: □

Family history

Marital history: Married/Unmarried

If female patient then…….

Pregnant: Yes/No

Obstetric score……..

Any similar lesion in previous pregnancy: Yes/No

Treatment History……

Any history of topical drug application in the area of lesion: Yes/No If yes, which topical drug was used……

On any other medication…….

Personal History: Diet: veg/mixed Sleep: normal/disturbed

Appetite: normal/disturbed Bowel and Bladder: normal/disturbed Habits…….

Any history of recent weight gain or weight loss: Yes/No

Are the lesions over skin are exposed out of the daily dressing style?

Yes /No

Have you ever visited psychiatrist for counselling regarding your lesions on your skin?

Yes/No

Any history of visits to the gym:

Yes/No

If yes, how often do you go……

Inspection:

Clinical examination of striae distensae

- PATTERN:
- DISTRIBUTION:

- SITE:
- SYMMETRY:
- COLOUR:
- SECONDARY CHANGES:
- Any other skin changes:
- Palpation:

Surface texture of surrounding skin

Diagnosis: - Signature:

Guide's Signature

DERMATOLOGY LIFE QUALITY INDEX (DLQI)

Hospital No: Name: Address:

Date: Score: Diagnosis:

The aim of this questionnaire is to measure how much your skin problem has affected your life

OVER THE LAST WEEK. Please tick (one box for each question.

1)Over the last week, how itchy, sore, painful or stinging has your skin been? Very much □

A lot □ A little □

Not at all □

2)Over the last week, how embarrassed or self conscious have you been because of your skin? very much □

A lot □ A little □

Not at all □

3)Over the last week, how much has your skin interfered with you going shopping or looking after your home or garden?

Very much □ A lot □

A little □

Not at all □ Not relevant □

4)Over the last week, how much has your skin influenced the clothes you wear? Very much □

A lot □ A little □

Not at all □ Not relevant □

5)Over the last week, how much has your skin affected any social or leisure activities? Very much □

A lot □ A little □

Not at all □ Not relevant □

6)Over the last week, how much has your skin made it difficult for you to do any sport? Very much □

A lot □ A little □

Not at all □ Not relevant □

7)Over the last week, has your skin prevented you from working or studying? Yes □ No □

If "No", over the last week how much has your skin been a problem at work or studying? Very much □

A lot □ A little □

Not at all □ Not relavent □

8)Over the last week, how much has your skin created problems with your partner or any of your close friends or relatives?

Very much □ A lot □

A little □

Not at all □ Not relevant □

9)Over the last week, how much has your skin caused any sexual difficulties? Very much □

A lot □ A little □

Not at all □ Not relevant □

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

Very much □ A lot □

A little □

Not at all □ Not relevant □

ANNEXURE III – PHOTOGRAPHS

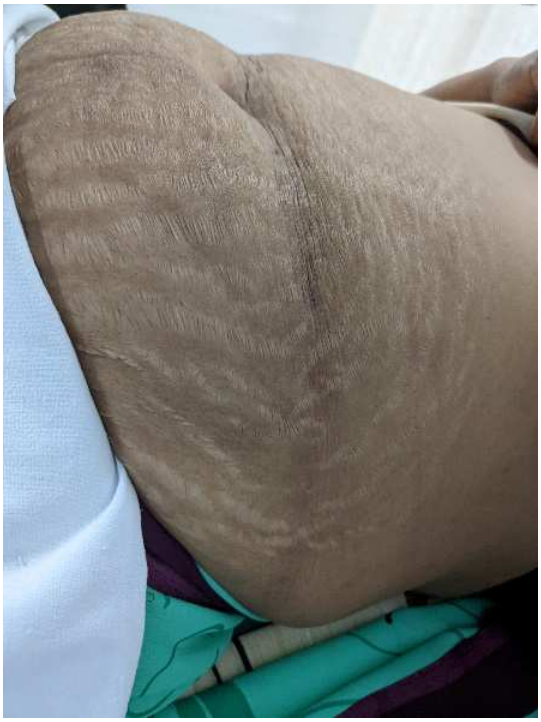

Figure 1a: Clinical image of striae alba showing multiple whitish atrophic linear scars on abdomen

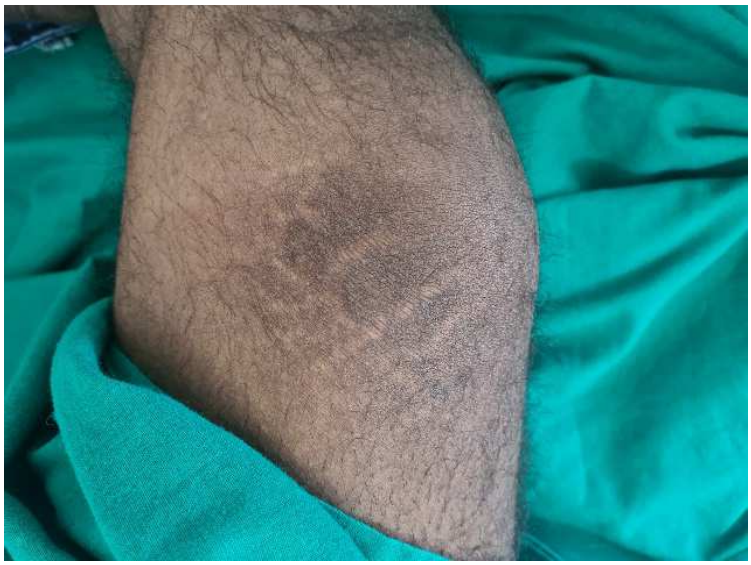

Figure 1b: Clinical image of striae alba showing multiple whitish atrophic linear scars on left knee

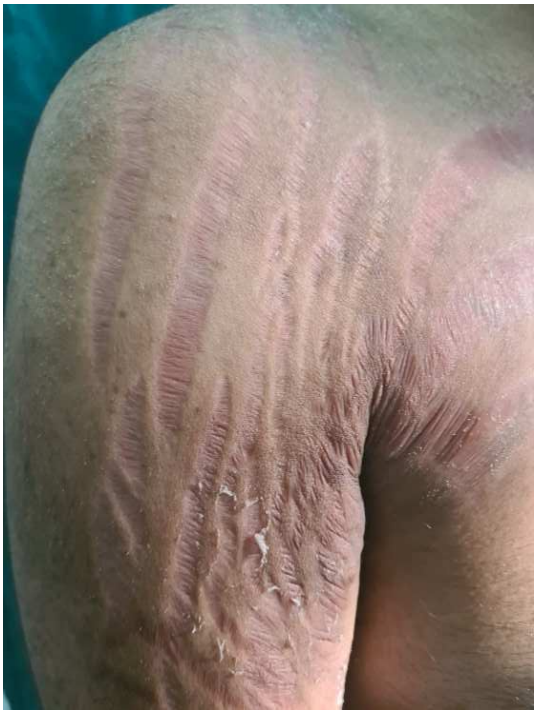

Figure 1c: Clinical image of striae rubra showing multiple red atrophic linear scars on right shoulder

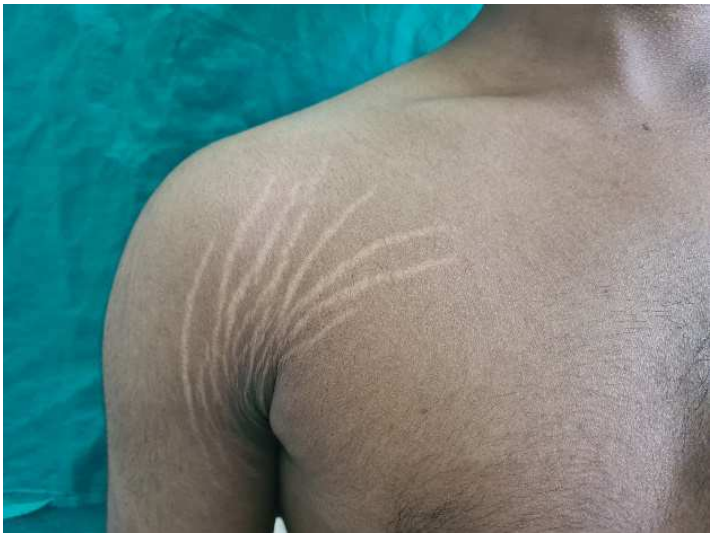

Figure 1d: Clinical image of striae alba showing multiple whitish atrophic linear scars on right shoulder

SL no	Age	OCCUPATION	urban/rural	MARRIED	Sex	DISEASE	Symptoms	Personal relation	Leisure	affecting social life	daily activities	Obesity	abdominal tumor	pregnancy	Cushings syndrome	Recent weight loss	Recent weight gain	Duration of lesion	colour of lesion	Topical Steroid	SITE	EXPOSED AREA	SEEKING TREATMENT	PSYCIATRY VISIT	DLQI EFFECT	DLQI Impression
1	38	ENGINIER	urban	YES	m	NIL	1	2	2	0	1	NO	NO	NO	NO	NO	NO	5 years	WHITE	NO	ARMS	YES	YES	NO	9	MODERATE EFFECT
2	18	HOUSE WIFE	urban	YES	F	NIL	1	1	1	1	0	NO	NO	NO	NO	NO	NO	2 years	WHITE	YES	ARMS	YES	YES	NO	6	MODERATE EFFECT
3	22	HOUSE WIFE	urban	YES	F	NIL	0	0	0	1	0	NO	NO	NO	NO	NO	NO	3 years	WHITE	NO	THIGHS	NO	NO	NO	2	SMALL EFFECT
4	48	CONTRACTOR	urban	YES	M	Diabetes	0	0	0	0	0	NO	NO	NO	NO	NO	NO	12 years	WHITE	YES	THIGHS	NO	NO	NO	2	SMALL EFFECT
5	23	STUDENT	urban	NO	M	NIL	1	1	1	1	0	NO	NO	NO	NO	NO	NO	3 years	WHITE	NO	THIGHS	NO	YES	NO	6	MODERATE EFFECT
6		STUDENT	urban	NO	F	NIL	0	0	0	0	0	NO	NO	NO	NO	NO	NO	5 years	WHITE	NO	THIGHS	NO	NO	NO	2	SMALL EFFECT
7	23	STUDENT	urban	NO	F	NIL	1	1	1	0	0	NO	NO	NO	NO	NO	NO	3 years	WHITE	YES	THIGHS	NO	NO	NO	7	MODERATE EFFECT
8	22	STUDENT	urban	NO	M	NIL	2	2	2	0	1	NO	NO	NO	NO	NO	NO	10 years	RED,WHITE	YES	ABDOMEN	YES	YES	NO	12	VER LARGE EFFECT
9	37	CLERK	urban	YES	F	diabetes	0	1	1	0	0	NO	NO	NO	NO	NO	NO	4 years	WHITE	NO	BUTTOCKS	NO	NO	NO	4	SMALL EFFECT
10	18	STUDENT	urban	NO	M	NIL	0	0	0	1	0	NO	NO	NO	NO	NO	NO	4 years	WHITE	NO	BUTTOCKS	NO	NO	NO	2	SMALL EFFECT
11	22	STUDENT	urban	NO	M	NIL	0	0	0	1	0	NO	NO	NO	NO	YES	NO	5 years	WHITE	NO	BUTTOCKS	NO	NO	NO	4	SMALL EFFECT
12	31	STUDENT	urban	NO	F	NIL	0	2	0	2	0	NO	NO	NO	NO	NO	YES	6 years	WHITE	NO	BUTTOCKS	NO	NO	NO	6	MODERATE EFFECT
13	16	STUDENT	urban	NO	F	pcos	2	0	0	2	2	YES	NO	NO	NO	NO	YES	7 years	WHITE	NO	ARMS	YES	YES	YES	17	VERY LARGE EFFECT
14	23	STUDENT	urban	NO	M	NIL	0	0	0	1	2	NO	NO	NO	NO	NO	NO	3 years	WHITE	NO	ARMS	NO	YES	NO	9	MODERATE EFFECT
15	28	HOUSEWIFE	urban	YES	F	NIL	0	1	1	1	0	NO	NO	NO	NO	NO	NO	3 years	WHITE	NO	ARMS	NO	NO	NO	4	SMALL EFFECT
16	31	STUDENT	urban	NO	F	NIL	1	0	0	2	1	NO	NO	NO	NO	NO	YES	5 years	WHITE	NO	ARMS	NO	YES	NO	6	MODERATE EFFECT
17	22	HOUSEWIFE	urban	YES	F	NIL	0	2	0	0	0	NO	NO	NO	NO	YES	NO	3 years	WHITE	NO	ARMS	NO	NO	NO	2	SMALL EFFECT
18	23	HOUSEWIFE	urban	YES	F	hypothyroid	0	2	2	2	0	YES	NO	NO	NO	NO	NO	5 years	WHITE	NO	ARMS	NO	NO	NO	9	MODERATE EFFECT
19	28	HOUSEWIFE	urban	YES	F	NIL	0	1	1	1	2	NO	NO	NO	NO	NO	NO	3 years	WHITE	NO	ABDOMEN	NO	NO	NO	4	SMALL EFFECT
20	31	HOUSEWIFE	rural	YES	F	NIL	0	1	1	0	0	NO	NO	NO	NO	NO	YES	2 years	WHITE	NO	ABDOMEN	NO	NO	NO	4	SMALL EFFECT
21	43	HOUSEWIFE	rural	YES	F	Diabetes	0	0	2	2	0	YES	NO	NO	NO	NO	NO	3 years	WHITE	NO	ABDOMEN	NO	NO	NO	4	SMALL EFFECT
22	24	HOUSEWIFE	rural	YES	M	NIL	0	2	2	1	0	NO	NO	NO	NO	YES	NO	6 years	WHITE	NO	ARMS	NO	YES	NO	9	MODERATE EFFECT
23	35	STUDENT	urban	YES	M	NIL	0	1	1	0	0	NO	NO	NO	NO	NO	NO	5 years	WHITE	NO	ARMS	NO	NO	NO	4	SMALL EFFECT
24	22	STUDENT	urban	NO	F	NIL	0	0	0	2	2	NO	NO	NO	NO	NO	NO	8 years	WHITE	YES	ARMS,LEG	YES	YES	YES	12	VERY LARGE EFFECT
25	56	HOUSEWIFE	urban	YES	F	diabetes	1	0	0	0	0	YES	NO	NO	NO	NO	NO	4 years	WHITE	NO	ARMS	NO	NO	NO	2	SMALL EEFECT
26	44	HOUSEWIFE	urban	YES	F	NIL	1	2	2	0	1	NO	NO	NO	NO	NO	YES	5 years	WHITE	NO	ARMS	NO	NO	NO	8	MODERATE EFFECT
27	44	ENGINEER	urban	NO	M	NIL	0	0	0	1	1	NO	NO	NO	NO	NO	NO	3 years	WHITE	NO	ARMS	NO	NO	NO	5	SMALL EFFECT
28	50	HOUSEWIFE	rural	YES	F	Diabetes	2	2	2	1	1	NO	YES	YES	YES	NO	YES	6 months	RED	YES	ARMS	NO	YES	NO	12	VERY LARGE EFFECT
29	44	AGREICULTURE	rural	YES	M	NIL	0	1	1	0	0	YES	NO	NO	NO	NO	NO	2 years	WHITE	NO	ARMS	NO	NO	NO	3	SMALL EFFECT
30	50	AGRICULTURE	rural	YES	M	NIL	0	0	0	1	0	NO	NO	NO	NO	NO	NO	1 years	WHITE	YES	ARMS	NO	NO	NO	2	SMALL EFFECT
31	35	HOUSEWIFE	rural	YES	F	hypothyroid	0	1	2	1	2	NO	NO	NO	NO	NO	NO	5 years	WHITE	NO	ARMS	NO	YES	NO	9	MODERATE EFFECT
32	40	HOUSEWIFE	rural	YES	F	NIL	0	1	2	1	1	NO	YES	NO	NO	NO	NO	4 months	RED	NO	ARMS	NO	YES	NO	7	MODERATE EFFECT
33	56	AGRICULTURE	rural	YES	M	NIL	0	0	0	1	0	NO	NO	NO	NO	NO	NO	2 years	WHITE	NO	ARMS	NO	NO	NO	3	SMALL EFFECT
34	30	STUDENT	rural	NO	F	hypothyroid	0	0	0	1	1	NO	NO	NO	NO	NO	YES	6 years	WHITE	NO	ARMS	NO	YES	NO	8	MODERATE EFFECT
35	40	AGRICULTURE	rural	YES	M	diabetes	0	0	0	1	0	NO	NO	NO	NO	NO	NO	1 years	WHITE	YES	ARMS	NO	NO	NO	2	SMALL EFFECT
36	39	AGRICULTURE	rural	YES	M	NIL	0	1	1	0	0	YES	NO	NO	NO	NO	NO	2 years	WHITE	NO	ARMS	NO	NO	NO	4	SMALL EFFECT
37	22	STUDENT	urban	NO	M	NIL	0	0	0	1	1	NO	NO	NO	NO	NO	YES	3 years	WHITE	NO	ARMS,ABDOMEN	YES	YES	NO	6	MODERATE EFFECT
38	26	STUDENT	urban	NO	F	hypothyroid	0	0	0	3	2	YES	NO	NO	NO	NO	NO	6 years	WHITE	NO	ARMS	YES	YES	YES	14	VERY LARGE EFFECT
39	42	AGRICULTURE	rural	YES	F	NIL	0	0	0	1	0	NO	NO	NO	NO	NO	NO	1 years	WHITE	NO	ABDOMEN	NO	NO	NO	3	SMALL EFFECT
40	32	STUDENT	urban	NO	M	NIL	0	0	0	2	1	NO	NO	NO	NO	NO	NO	2 years	WHITE	NO	ABDOMEN	NO	YES	NO	5	SMALL EFFECT
41	44	BANK	urban	YES	M	NIL	0	0	0	0	1	YES	NO	NO	NO	NO	NO	1 years	WHITE	NO	ABDOMEN	NO	NO	NO	3	SMALL EFFECT
42	32	HOUSEWIFE	urban	YES	F	NIL	0	0	0	2	2	NO	NO	NO	NO	NO	YES	3 years	WHITE	NO	ABDOMEN	NO	YES	NO	8	MODERATE EFFECT
43	38	HOUSEWIFE	urban	YES	F	NIL	0	1	1	0	0	NO	NO	NO	NO	NO	NO	3 years	WHITE	NO	ABDOMEN	NO	NO	NO	2	SMALL EFFECT
44	39	LAB TECHNICIAN	urban	YES	M	diabetes	0	1	1	0	0	NO	NO	NO	NO	NO	NO	3 years	WHITE	NO	ABDOMEN	NO	NO	NO	2	SMALL EFFECT
45	30	STUDENT	urban	NO	M	NIL	0	0	0	0	2	NO	NO	NO	NO	YES	NO	2 years	WHITE	NO	ABDOMEN	NO	YES	NO	5	SMALL EFFECT

46	22	STUDENT	urban	NO	F	pcos	0	0	0	2	2	YES	NO	NO	NO	NO	NO	6 years	WHITE	NO	ABDOMEN	NO	YES	NO	7	MODERATE EFFECT
47	26	DOCTOR	urban	NO	F	NIL	1	0	0	2	2	NO	NO	NO	NO	NO	YES	5 years	WHITE	NO	RMS,ABDOMEN,LEG	YES	YES	NO	9	MODERATE EFFECT
48	49	FARMER	urban	YES	F	NIL	0	1	1	0	0	NO	NO	NO	NO	NO	NO	2 years	WHITE	NO	LEGS	NO	NO	NO	2	SMALL EFFECT
49	34	ENGINER	urban	YES	M	NIL	0	0	0	0	1	NO	NO	NO	NO	NO	NO	2 years	WHITE	NO	LEGS	NO	NO	NO	3	SMALL EFFECT
50	27	STUDENT	urban	NO	M	NIL	0	0	0	2	2	NO	NO	NO	NO	NO	YES	4 years	WHITE	NO	LEGS	NO	YES	NO	8	MODERATE EFFECT
51	44	HOUSEWIFE	urban	YES	F	diabetes	0	0	0	0	1	YES	NO	NO	NO	NO	NO	3 years	WHITE	NO	LEGS	NO	NO	NO	2	SMALL EFFECT
52	29	HOUSEWIFE	urban	YES	F	pcos	1	1	1	0	1	NO	NO	NO	NO	NO	NO	6 years	WHITE	NO	ABDOMEN	NO	YES	NO	9	MODERATE EFFECT
53	37	CLERK	urban	YES	M	NIL	0	0	0	1	1	NO	NO	NO	NO	NO	NO	4 years	WHITE	NO	ABDOMEN	NO	NO	NO	3	SMALL EFFECT
54	46	HOUSEWIFE	urban	YES	F	diabetes	0	2	1	0	0	NO	NO	NO	NO	NO	NO	4 years	WHITE	NO	ABDOMEN	NO	YES	NO	5	SMALL EFFECT
55	27	STUDENT	urban	NO	F	NIL	0	0	0	2	2	NO	NO	NO	NO	NO	NO	6 years	WHITE	NO	ABDOMEN	YES	YES	NO	12	VERY LARGE EFFECT
56	24	STUDENT	urban	NO	M	NIL	1	0	0	1	2	NO	NO	NO	NO	NO	NO	2 years	WHITE	NO	BACK	NO	YES	NO	5	SMALL EFFECT
57	26	HOUSEWIFE	rural	YES	F	NIL	1	1	1	0	0	YES	YES	NO	NO	NO	YES	2months	RED	NO	BACK	NO	YES	NO	5	SMALL EFFECT
58	21	HOUSEWIFE	rural	YES	F	NIL	0	2	1	1	0	NO	YES	NO	NO	NO	YES	3months	RED	NO	BACK	NO	YES	NO	4	SMALL EFFECT
59	27	HOUSEWIFE	rural	YES	F	NIL	1	2	1	0	1	YES	NO	NO	NO	YES	NO	6 years	WHITE	NO	BDOMEN,BUTTOCK	YES	YES	NO	12	VERY LARGE EFFECT
60	30	FARMER	rural	YES	F	NIL	0	1	0	2	1	NO	YES	NO	NO	NO	YES	3 years	WHITE	NO	ARMS	NO	YES	NO	5	SMALL EFFECT
61	18	HOUSEWIFE	rural	YES	F	NIL	1	0	0	0	1	NO	NO	YES	NO	NO	YES	3 months	WHITE	NO	ABDOMEN,THIGHS	NO	NO	NO	3	SMALL EFFECT
62	26	HOUSEWIFE	rural	YES	F	NIL	0	1	1	0	1	NO	NO	YES	NO	NO	YES	2 months	RED	NO	ABDOMEN,THIGHS	NO	YES	NO	5	SMALL EFFECT
63	27	HOUSEWIFE	rural	YES	F	NIL	0	0	0	0	0	NO	NO	YES	NO	NO	YES	5 months	RED, WHITE	NO	ABDOMEN,THIGHS	NO	NO	NO	0	NO EFFECT
64	20	HOUSEWIFE	rural	YES	F	NIL	0	1	2	1	1	NO	NO	YES	NO	NO	YES	3 months	WHITE	NO	ABDOMEN,THIGHS	NO	YES	NO	11	VERY LARGE EFFECT
65	22	HOUSEWIFE	rural	YES	F	NIL	0	1	0	0	1	NO	NO	YES	NO	NO	YES	3 months	RED, BLACK	NO	ABDOMEN,THIGHS	NO	NO	NO	3	SMALL EFFECT
66	16	HOUSEWIFE	rural	YES	F	NIL	0	1	2	1	1	NO	NO	YES	NO	NO	YES	4 months	RED, BLACK	NO	ABDOMEN,THIGHS	YES	YES	NO	7	MODERATE EFFECT
67	27	HOUSEWIFE	rural	YES	F	NIL	0	2	1	1	2	YES	NO	YES	NO	NO	YES	8 months	RED, BLACK	NO	ABDOMEN,THIGHS	NO	YES	NO	13	VERY LARGE EFFECT
68	25	HOUSEWIFE	rural	YES	F	NIL	0	1	2	1	0	NO	NO	YES	NO	NO	YES	4 months	RED, BLACK	NO	ABDOMEN,THIGHS	YES	YES	NO	8	MODERATE EFFECT
69	20	HOUSEWIFE	rural	YES	F	NIL	0	2	2	1	1	YES	NO	YES	NO	NO	YES	4 months	RED, BLACK	NO	ABDOMEN,THIGHS	YES	YES	NO	8	MODERATE EFFECT
70	21	HOUSEWIFE	rural	YES	F	pcos	0	2	2	0	2	NO	NO	YES	NO	NO	YES	6 months	RED, BLACK	YES	ABDOMEN,THIGHS	YES	YES	NO	12	VERY LARGE EFFECT
71	22	HOUSEWIFE	rural	YES	F	pcos	1	2	2	1	1	YES	NO	YES	NO	NO	YES	2 months	RED, BLACK	NO	ABDOMEN,THIGHS	YES	YES	NO	13	VERY LARGE EFFECT
72	23	HOUSEWIFE	rural	YES	F	NIL	0	1	1	1	0	YES	NO	NO	NO	NO	YES	2 years	WHITE	NO	ABDOMEN,THIGHS	NO	NO	NO	5	SMALL EFFECT
73	22	STUDENT	urban	NO	F	NIL	0		0	2	2	NO	NO	YES	NO	NO	YES	3 months	WHITE	YES	ABDOMEN,THIGHS	YES	YES	NO	9	MODERATE EFFECT
74	21	STUDENT	urban	NO	F	NIL	0	0	0	1	1	NO	NO	YES	NO	NO	YES	2 months	WHITE	NO	ABDOMEN,THIGHS	YES	YES	NO	5	SMALL EFFECT
75	23	STUDENT	urban	NO	F	NIL	0	0	0	1	0	NO	NO	YES	NO	NO	YES	5 months	WHITE	NO	ABDOMEN,THIGHS	NO	NO	NO	3	SMALL EFFECT
76	25	HOUSEWIFE	urban	YES	F	NIL	0	1	1	2	1	YES	NO	YES	NO	NO	YES	4 months	RED	NO	ABDOMEN,THIGHS	YES	YES	NO	9	MODERATE EFFECT
77	22	STUDENT	urban	NO	F	NIL	0	0	0	2	1	NO	NO	YES	NO	NO	YES	5 months	RED	YES	ABDOMEN,THIGHS	YES	YES	NO	6	SMALL EFFECT
78	26	STUDENT	urban	NO	F	pcos	1	0	0	2	2	NO	NO	YES	NO	NO	YES	7 months	RED	NO	ABDOMEN,THIGHS	YES	YES	NO	12	VERY LARGE EFFECT
79	24	STUDENT	urban	NO	F	NIL	0	0	0	2	1	NO	NO	YES	NO	NO	YES	3 months	RED	NO	ABDOMEN,LEGS	NO	NO	NO	5	SMALL EFFECT
80	24	HOUSEWIFE	urban	YES	F	NIL	0	2	2	1	1	YES	NO	YES	NO	NO	YES	8 months	RED	NO	ABDOMEN,THIGHS	YES	YES	NO	8	MODERATE EFFECT
81	24	HOUSEWIFE	urban	YES	F	pcos	0	2	2	1	1	YES	NO	YES	NO	NO	YES	7 months	RED, WHITE	YES	ABDOMEN,THIGHS	YES	YES	NO	8	MODERATE EFFECT
82	22	STUDENT	urban	NO	F	NIL	0	0	0	1	1	NO	NO	YES	NO	NO	YES	5 months	RED	YES	ABDOMEN,THIGHS	NO	NO	NO	4	SMALL EFFECT
83	23	STUDENT	urban	NO	F	NIL	0	0	0	2	1	NO	NO	YES	NO	NO	YES	4 months	RED	YES	ABDOMEN,THIGHS	NO	YES	NO	5	SMALL EFFECT
84	23	STUDENT	urban	NO	F	NIL	0	1	1	1	0	NO	NO	YES	NO	NO	YES	6 months	RED	YES	ABDOMEN, LEGS	NO	YES	NO	5	SMALL EFFECT
85	24	STUDENT	urban	NO	F	NIL	1	0	0	1	1	NO	NO	YES	NO	NO	YES	3 months	RED	YES	ABDOMEN,THIGHS	NO	NO	NO	4	SMALL EFFECT
86	21	HOUSEWIFE	urban	YES	F	pcos	1	1	1	2	2	YES	NO	YES	NO	NO	YES	5 months	RED	NO	ABDOMEN,THIGHS	YES	YES	NO	12	VERY LARGE EFFECT
87	26	STUDENT	urban	NO	F	NIL	0	0	0	0	1	NO	NO	YES	NO	NO	YES	3 months	WHITE	NO	LEGS	NO	NO	NO	2	SMALL EFFECT
88	18	STUDENT	urban	NO	F	NIL	0	1	1	2	1	NO	NO	YES	NO	NO	YES	4 months	RED	NO	LEGS	YES	YES	NO	6	MODERATE EFFECT
89	25	STUDENT	urban	NO	M	NIL	0	0	0	2	1	NO	NO	NO	NO	NO	NO	3 years	WHITE	YES	LEGS	NO	YES	NO	5	SMALL EFFECT
90	25	STUDENT	urban	NO	M	NIL	0	0	0	1	2	NO	NO	NO	NO	NO	NO	2 years	WHITE	YES	LEGS	NO	YES	NO	4	SMALL EFFECT
91	48	HOUSEWIFE	urban	YES	F	diabetes	0	1	1	0	0	YES	NO	NO	NO	NO	NO	3 years	WHITE	YES	LEGS	NO	NO	NO	3	SMALL EFFECT
92	35	STUDENT	urban	NO	M	NIL	0	0	0	2	1	NO	NO	NO	NO	NO	NO	3 years	WHITE	YES	LEGS	NO	YES	NO	5	SMALL EFFECT
93	25	STUDENT	urban	NO	F	NIL	0	0	0	0	2	NO	NO	NO	NO	NO	NO	3 years	WHITE	YES	LEGS	NO	NO	NO	4	SMALL EFFECT
94	50	CLERK	urban	NO	M	NIL	0	0	0	0	1	NO	NO	NO	NO	NO	NO	4 years	WHITE	NO	LEGS	NO	NO	NO	2	SMALL EFFECT
95	40	HOUSEWIFE	urban	YES	F	pcos	1	2	2	1	2	YES	NO	NO	NO	NO	NO	7 years	WHITE	YES	ABDOMEN	YES	YES	NO	13	VERY LARGE EFFECT
96	30	STUDENT	urban	NO	F	NIL	0	1	1	1	1	NO	NO	NO	NO	NO	NO	6 years	WHITE	YES	LEGS	NO	YES	NO	7	MODERATE EFFECT
97	31	FARMER	rural	YES	F	NIL	0	2	2	1	1	NO	NO	NO	NO	NO	NO	8 years	WHITE	YES	LEGS	NO	YES	NO	8	MODERATE EFFECT
98	56	FARMER	rural	YES	M	NIL	0	0	0	1	1	NO	NO	NO	NO	NO	NO	4 years	WHITE	YES	LEGS	NO	YES	NO	4	SMALL EFFECT

99	47	CLERK	rural	YES	F	diabetes	1	1	2	2	1	NO	NO	NO	NO	NO	NO	7 years	WHITE	YES	ABDOMEN	YES	YES	NO	11	VERY LARGE EFFECT
100	51	FARMER	rural	YES	M	diabetes	0	0	0	1	1	NO	NO	NO	NO	NO	NO	2 years	WHITE	YES	ABDOMEN	NO	NO	NO	4	SMALL EFFECT
101	20	STUDENT	urban	NO	M	NIL	1	0	0	2	2	NO	NO	NO	NO	NO	YES	3 months	RED	NO	ABDOMEN	YES	YES	NO	8	MODERATE EFFECT
102	20	STUDENT	urban	NO	F	NIL	0	0	0	1	1	NO	NO	NO	NO	NO	NO	2 years	WHITE	NO	ABDOMEN	NO	NO	NO	4	SMALL EFFECT
103	19	STUDENT	urban	NO	M	NIL	0	0	0	0	1	NO	NO	NO	NO	NO	NO	3 years	WHITE	NO	ABDOMEN	NO	NO	NO	2	SMALL EFFECT
104	19	STUDENT	urban	NO	M	NIL	0	0	0	1	1	NO	NO	NO	NO	NO	NO	2 years	WHITE	NO	ABDOMEN	NO	NO	NO	4	SMALL EFFECT
105	19	STUDENT	urban	NO	M	NIL	0	0	0	1	1	NO	NO	NO	NO	NO	NO	3 years	WHITE	NO	ABDOMEN	NO	NO	NO	4	MODERATE EFFECT
106	19	STUDENT	urban	NO	M	NIL	0	0	0	0	1	NO	NO	NO	NO	NO	NO	4 years	WHITE	NO	ABDOMEN	NO	NO	NO	2	SMALL EFFECT
107	19	STUDENT	urban	NO	F	CUSHINGS	1	2	2	2	2	NO	NO	NO	NO	NO	YES	7 months	RED	NO	LEGS,ARMS	YES	YES	NO	13	VERY LARGE EFFECT
108	18	STUDENT	urban	NO	F	NIL	0	0	0	1	1	NO	NO	NO	NO	NO	NO	4 years	WHITE	NO	ABDOMEN	NO	NO	NO	4	SMALL EFFECT
109	20	STUDENT	urban	NO	F	NIL	0	0	0	1	0	NO	NO	NO	NO	NO	NO	5 years	WHITE	NO	ABDOMEN	NO	NO	NO	3	SMALL EFFECT
110	20	STUDENT	urban	NO	F	NIL	1	0	0	2	1	NO	NO	NO	NO	NO	YES	5 months	WHITE	NO	ABDOMEN	NO	YES	NO	8	MODERATE EFFECT
111	20	STUDENT	urban	NO	M	NIL	0	0	0	1	1	NO	NO	NO	NO	NO	NO	4 years	WHITE	NO	ABDOMEN	NO	NO	NO	4	SMALL EFFECT
112	19	STUDENT	urban	NO	M	NIL	0	0	0	1	1	NO	NO	NO	NO	NO	NO	4 years	WHITE	NO	ABDOMEN	NO	NO	NO	4	SMALL EFFECT
113	20	STUDENT	urban	NO	F	NIL	0	0	0	1	2	NO	NO	NO	NO	NO	NO	5 years	WHITE	NO	ABDOMEN	NO	YES	NO	6	MODERATE EFFECT
114	20	STUDENT	urban	NO	F	NIL	0	0	0	1	1	NO	NO	NO	NO	NO	NO	6 years	WHITE	NO	ABDOMEN	NO	NO	NO	3	SMALL EFFECT
115	19	STUDENT	urban	NO	F	CUSHINGS	0	2	2	1	2	YES	NO	NO	NO	NO	NO	8 years	WHITE	NO	ABDOMEN	YES	YES	NO	11	VERY LARGE EFFECT
116	19	STUDENT	urban	NO	M	NIL	0	0	0	0	1	NO	NO	NO	NO	NO	NO	3 years	WHITE	NO	ABDOMEN	NO	NO	NO	2	SMALL EFFECT
117	20	STUDENT	urban	NO	F	NIL	0	0	0	2	2	NO	NO	NO	NO	NO	NO	4 years	WHITE	NO	THIGHS	NO	YES	NO	6	MODERATE EFFECT
118	19	STUDENT	urban	NO	M	NIL	0	0	0	1	1	NO	NO	NO	NO	NO	NO	3 years	WHITE	NO	THIGHS	NO	NO	NO	4	SMALL EFFECT
119	20	STUDENT	urban	NO	F	NIL	2	1	1	2	2	NO	NO	NO	NO	NO	NO	1 years	WHITE	NO	THIGHS	YES	YES	NO	12	VERY LARGE EFFECT
120	20	STUDENT	urban	NO	M	NIL	1	0	0	1	1	NO	NO	NO	NO	NO	NO	2 years	WHITE	NO	THIGHS	NO	NO	NO	4	SMALL EFFECT
121	22	STUDENT	urban	NO	F	NIL	1	0	0	0	1	NO	NO	YES	NO	NO	YES	8 months	WHITE	NO	ABDOMEN,BUTTOCK	NO	NO	NO	3	SMALL EFFECT
122	28	HOUSEWIFE	urban	YES	F	pcos	1	2	2	1	1	NO	NO	YES	NO	NO	YES	6 months	WHITE	NO	ABDOMEN,BUTTOCK	NO	YES	NO	7	MODERATE EFFECT
123	27	HOUSEWIFE	urban	YES	F	NIL	1	0	0	1	1	YES	NO	YES	NO	NO	YES	4 months	WHITE	NO	ABDOMEN,BUTTOCK	NO	NO	NO	3	SMALL EFFECT
124	25	STUDENT	urban	NO	F	pcos	2	0	0	2	2	NO	NO	YES	NO	NO	YES	6 months	RED	NO	ABDOMEN,BUTTOCK	YES	YES	NO	8	MODERATE EFFECT
125	32	HOUSEWIFE	rural	YES	F	NIL	1	0	0	2	0	NO	NO	YES	NO	NO	YES	4 months	WHITE	NO	ABDOMEN,BUTTOCK	NO	NO	NO	3	SMALL EFFECT
126	26	HOUSEWIFE	rural	YES	F	CUSHINGS	1	2	1	2	2	NO	NO	YES	NO	NO	YES	5 months	RED	NO	ABDOMEN,BUTTOCK	NO	YES	NO	11	VERY LARGE EFFECT
127	26	HOUSEWIFE	rural	YES	F	NIL	1	0	0	1	1	YES	NO	YES	NO	NO	YES	3 months	WHITE	NO	ABDOMEN,BUTTOCK	NO	NO	NO	3	SMALL EFFECT
128	32	HOUSEWIFE	rural	YES	f	CUSHINGS	1	2	2	2	3	YES	NO	YES	NO	NO	YES	3 months	RED	NO	ABDOMEN,BUTTOCK	YES	YES	NO	22	TREMELY LARGE EFFE
129	24	HOUSEWIFE	rural	YES	F	pcos	2	2	2	1	1	NO	NO	YES	NO	NO	YES	6 months	RED	NO	ABDOMEN,BUTTOCK	NO	YES	NO	10	MODERATE EFFECT
130	32	HOUSEWIFE	rural	YES	F	pcos	1	2	2	2	2	YES	NO	YES	NO	NO	YES	7 months	RED	NO	ABDOMEN,BUTTOCK	NO	YES	NO	16	VERY LARGE EFFECT
131	26	HOUSEWIFE	rural	YES	F	NIL	1	1	0	0	0	YES	NO	YES	NO	NO	YES	7 months	WHITE	NO	ABDOMEN,BUTTOCK	NO	YES	NO	2	SMALL EFFECT
132	28	HOUSEWIFE	rural	YES	M	NIL	1	0	0	1	1	NO	NO	NO	NO	NO	NO	2 years	WHITE	YES	LEGS	NO	NO	NO	4	SMALL EFFECT
133	30	STUDENT	rural	NO	M	NIL	0	0	0	2	2	NO	NO	NO	NO	YES	NO	4 years	RED	NO	LEGS	YES	YES	NO	8	MODERATE EFFECT
134	24	STUDENT	rural	NO	M	NIL	0	0	0	2	2	NO	NO	NO	YES	NO	NO	4 years	RED	NO	LEGS	YES	YES	NO	8	MODERATE EFFECT
135	24	STUDENT	rural	NO	M	NIL	1	0	0	2	2	NO	NO	NO	NO	NO	NO	3 years	WHITE	NO	LEGS	YES	YES	NO	7	MODERATE EFFECT
136	28	FARMER	rural	YES	M	NIL	0	0	0	1	0	NO	NO	NO	NO	NO	NO	4 years	WHITE	NO	LEGS	NO	NO	NO	3	SMALL EFFECT
137	42	CLERK	urban	YES	M	diabetes	0	0	0	1	0	NO	NO	NO	NO	NO	NO	2 years	WHITE	YES	THIGHS	NO	NO	NO	3	SMALL EFFECT
138	40	CLERK	urban	YES	M	diabetes	0	0	0	1	0	NO	NO	NO	NO	NO	NO	5 years	WHITE	YES	THIGHS	NO	NO	NO	3	SMALL EFFECT
139	38	CLERK	urban	YES	M	diabetes	0	0	0	1	0	NO	NO	NO	NO	NO	NO	3 years	WHITE	YES	THIGHS	NO	NO	NO	2	SMALL EFFECT
140	18	HOUSEWIFE	rural	YES	F	NIL	0	0	0	0	1	YES	NO	NO	NO	YES	NO	4 years	WHITE	NO	THIGHS	NO	NO	NO	2	SMALL EFFECT
141	34	HOUSEWIFE	rural	YES	M	NIL	0	0	0	1	1	YES	NO	NO	NO	NO	NO	3 years	WHITE	NO	THIGHS	YES	NO	NO	2	SMALL EFFECT
142	38	CLERK	rural	NO	M	NIL	0	0	0	1	1	NO	NO	NO	NO	NO	NO	2 years	WHITE	NO	ARMS	NO	NO	NO	2	SMALL EEFECT
143	32	HOUSEWIFE	rural	YES	M	NIL	0	0	0	1	1	YES	NO	NO	NO	NO	NO	3 years	WHITE	NO	THIGHS	NO	NO	NO	3	SMALL EFFECT
144	43	HOUSEWIFE	rural	YES	M	diabetes	0	0	0	0	2	YES	NO	NO	NO	NO	NO	3 years	WHITE	YES	THIGHS	NO	NO	NO	2	SMALL EFFECT
145	19	STUDENT	urban	NO	F	NIL	0	0	0	2	1	YES	NO	NO	NO	NO	NO	2 years	WHITE	NO	THIGHS	NO	YES	NO	5	MODERATE EFFECT
146	29	STUDENT	urban	NO	M	NIL	0	0	0	2	1	NO	NO	NO	NO	NO	NO	4 years	WHITE	NO	THIGHS	NO	NO	NO	5	MODERATE EFFECT
147	37	HOUSEWIFE	urban	YES	F	NIL	1	0	0	2	2	YES	NO	NO	NO	NO	NO	4 years	WHITE	NO	ABDOMEN	NO	YES	NO	9	MODERATE EFFECT
148	26	STUDENT	urban	NO	F	NIL	1	0	0	2	2	NO	NO	NO	NO	YES	NO	3 years	WHITE	NO	ABDOMEN	YES	YES	NO	9	MODERATE EFFECT
149	43	HOUSEWIFE	urban	YES	F	diabetes	1	1	2	2	2	NO	NO	NO	NO	NO	YES	6 months	RED	NO	ABDOMEN	NO	YES	NO	13	VERY LARGE EFFECT
150	37	HOUSEWIFE	urban	YES	M	CUSHINGS	0	1	2	1	1	NO	NO	NO	NO	NO	YES	5 months	RED	NO	ABDOMEN	YES	YES	NO	11	VERY LARGE EFFECT
151	42	CLERK	urban	YES	M	DIABETES	0	0	0	0	1	NO	NO	NO	NO	NO	NO	2 years	WHITE	NO	ABDOMEN	NO	NO	NO	2	SMALL EFFECT

152	23	STUDENT	urban	NO	M	NIL	0	0	0	2	2	NO	NO	NO	NO	NO	NO	3 years	WHITE	NO	ARMS	NO	YES	NO	9	MODERATE EFFECT
153	28	HOUSEWIFE	urban	YES	F	NIL	0	0	0	1	1	NO	NO	NO	NO	NO	NO	4 years	WHITE	NO	ARMS	NO	YES	NO	4	SMALL EFFECT
154	31	STUDENT	urban	NO	F	NIL	0	0	0	2	2	NO	NO	NO	NO	NO	YES	9 months	RED	NO	ARMS	NO	YES	NO	6	MODERATE EFFECT
155	22	HOUSEWIFE	rural	YES	F	NIL	0	0	0	0	1	NO	NO	NO	NO	YES	NO	6 years	WHITE	NO	ARMS	NO	NO	NO	2	SMALL EFFECT
156	23	HOUSEWIFE	rural	YES	F	hypothyroid	0	1	1	2	2	YES	NO	NO	NO	NO	NO	3 years	RED,WHITE	NO	ARMS	NO	YES	NO	9	MODERATE EFFECT
157	28	HOUSEWIFE	rural	YES	F	NIL	0	0	0	1	1	NO	NO	NO	NO	NO	NO	4 years	WHITE	NO	LEGS	NO	NO	NO	4	SMALL EFFECT
158	31	HOUSEWIFE	rural	YES	F	NIL	0	0	0	1	1	NO	NO	NO	NO	NO	YES	11 months	WHITE	NO	LEGS	NO	NO	NO	4	SMALL EFFECT
159	43	HOUSEWIFE	rural	YES	F	Diabetes	0	0	0	1	1	YES	NO	NO	NO	NO	NO	2 years	WHITE	NO	LEGS	NO	NO	NO	4	SMALL EFFECT
160	24	HOUSEWIFE	rural	YES	M	NIL	0	0	2	2	2	NO	NO	NO	NO	YES	NO	3 years	WHITE	NO	ARMS	NO	YES	NO	9	MODERATE EFFECT
161	35	STUDENT	rural	YES	M	NIL	0	1	1	0	0	NO	NO	NO	NO	NO	NO	4 years	WHITE	NO	ARMS	NO	NO	NO	4	SMALL EFFECT
162	22	STUDENT	rural	NO	F	CUSHINGS	0	1	2	1	2	NO	NO	NO	NO	NO	NO	3 years	WHITE	YES	ARMS,LEG	YES	YES	NO	12	VERY LARGE EFFECT
163	56	HOUSEWIFE	rural	YES	F	diabetes	0	0	0	0	1	YES	NO	NO	NO	NO	NO	2 years	WHITE	NO	ARMS	NO	NO	NO	2	SMALL EEFECT
164	44	HOUSEWIFE	rural	YES	F	NIL	0	1	0	1	1	NO	NO	NO	NO	NO	YES	1 years	WHITE	NO	ARMS	YES	YES	NO	6	MODERATE EFFECT
165	44	CLERK	rural	NO	M	NIL	0	0	0	2	1	NO	NO	NO	NO	NO	NO	3 years	WHITE	NO	ARMS	NO	YES	NO	5	SMALL EFFECT
166	50	HOUSEWIFE	rural	YES	F	Diabetes	1	2	1	2	2	NO	YES	YES	YES	NO	YES	1 years	RED	YES	ARMS	NO	YES	NO	11	VERY LARGE EFFECT
167	44	AGREICULTURE	rural	YES	M	NIL	0	0	0	1	1	YES	NO	NO	NO	NO	NO	2 years	WHITE	NO	ARMS	NO	NO	NO	3	SMALL EFFECT
168	50	AGRICULTURE	rural	YES	M	NIL	0	0	0	0	1	NO	NO	NO	NO	NO	NO	3 years	WHITE	YES	ARMS	YES	NO	NO	2	SMALL EFFECT
169	35	HOUSEWIFE	rural	YES	F	hypothyroid	0	1	1	2	2	NO	NO	NO	NO	NO	NO	2 years	RED	NO	ARMS	NO	YES	NO	9	MODERATE EFFECT
170	40	HOUSEWIFE	rural	YES	F	NIL	1	1	1	2	2	NO	YES	NO	NO	NO	NO	1 years	RED	NO	ARMS	NO	YES	NO	7	MODERATE EFFECT
171	56	AGRICULTURE	rural	YES	M	NIL	0	1	1	0	0	NO	NO	NO	NO	NO	NO	2 years	WHITE	NO	ARMS	YES	NO	NO	3	SMALL EFFECT
172	30	STUDENT	rural	NO	F	hypothyroid	0	0	0	2	2	NO	NO	NO	NO	NO	YES	2 years	RED	NO	ARMS	NO	YES	NO	8	MODERATE EFFECT
173	40	AGRICULTURE	rural	YES	M	diabetes	0	0	0	1	1	NO	NO	NO	NO	NO	NO	3 years	WHITE	YES	ARMS	NO	NO	NO	2	SMALL EFFECT
174	39	AGRICULTURE	rural	YES	M	NIL	0	1	1	1	1	YES	NO	NO	NO	NO	NO	2 years	WHITE	NO	ARMS	YES	NO	NO	4	SMALL EFFECT
175	22	STUDENT	urban	NO	M	NIL	0	1	1	2	1	NO	NO	NO	NO	NO	YES	2 years	WHITE	NO	ARMS,ABDOMEN	YES	YES	NO	6	MODERATE EFFECT
176	26	STUDENT	urban	NO	F	CUSHINGS	0	0	0	2	2	YES	NO	NO	NO	NO	NO	6 years	RED	NO	ARMS	YES	YES	NO	14	VERY LARGE EFFECT
177	36	FARMER	rural	NO	M	DIABETES	0	0	0	1	1	NO	NO	NO	NO	NO	NI	1 years	WHITE	NO	THIGH	NO	NO	NO	3	SMALL EFFECT
178	42	AGRICULTURE	rural	YES	F	NIL	0	0	0	1	1	NO	NO	NO	NO	NO	NO	3 years	WHITE	NO	LEGS	NO	NO	NO	3	SMALL EFFECT
179	32	STUDENT	urban	NO	M	NIL	0	0	0	1	2	NO	NO	NO	NO	NO	NO	4 years	WHITE	NO	LEGS	NO	YES	NO	5	SMALL EFFECT
180	44	CLERK	urban	YES	M	NIL	0	0	0	1	1	YES	NO	NO	NO	NO	NO	3 years	RED	NO	LEGS	NO	NO	NO	3	SMALL EFFECT
181	32	HOUSEWIFE	urban	YES	F	NIL	0	0	0	2	2	NO	NO	NO	NO	NO	YES	2 years	WHITE	NO	LEGS	YES	YES	NO	8	MODERATE EFFECT
182	38	HOUSEWIFE	urban	YES	F	NIL	0	0	0	1	1	NO	NO	NO	NO	NO	NO	1 years	WHITE	NO	LEGS	YES	NO	NO	2	SMALL EFFECT
183	39	LAB TECHNICIAN	urban	YES	M	diabetes	0	0	0	1	1	NO	NO	NO	NO	NO	NO	3 years	WHITE	NO	LEGS	YES	NO	NO	2	SMALL EFFECT
184	30	STUDENT	urban	NO	M	NIL	0	0	0	1	2	NO	NO	NO	NO	YES	NO	3 years	WHITE	NO	LEGS	YES	YES	NO	5	SMALL EFFECT
185	22	STUDENT	urban	NO	F	pcos	0	0	0	2	2	YES	NO	NO	NO	NO	NO	5 years	RED	NO	LEGS	NO	YES	NO	7	MODERATE EFFECT
186	26	DOCTOR	urban	NO	F	NIL	0	0	0	3	2	NO	NO	NO	NO	NO	YES	3 years	RED	NO	RMS,ABDOMEN,LEG	YES	YES	NO	9	MODERATE EFFECT
187	49	FARMER	rural	YES	F	NIL	0	0	0	1	1	NO	NO	NO	NO	NO	NO	4 years	WHITE	NO	LEGS	NO	NO	NO	2	SMALL EFFECT
188	34	ENGINER	urban	YES	M	NIL	0	0	0	1	1	NO	NO	NO	NO	NO	NO	2 years	WHITE	NO	LEGS	NO	NO	NO	3	SMALL EFFECT
189	27	STUDENT	urban	NO	M	NIL	0	1	1	2	2	NO	NO	NO	NO	NO	YES	5 years	RED	NO	LEGS	NO	YES	NO	12	VERY LARGE EFFECT
190	44	HOUSEWIFE	urban	YES	F	diabetes	0	0	0	1	1	YES	NO	NO	NO	NO	NO	1 years	WHITE	NO	LEGS	NO	NO	NO	2	SMALL EFFECT
191	29	HOUSEWIFE	urban	YES	F	pcos	0	2	1	2	2	NO	NO	NO	NO	NO	NO	3 years	WHITE	NO	LEGS	NO	YES	NO	9	MODERATE EFFECT
192	37	FARMER	urban	YES	M	NIL	0	1	1	0	1	NO	NO	NO	NO	NO	NO	2 years	WHITE	NO	LEGS	NO	NO	NO	3	SMALL EFFECT
193	46	HOUSEWIFE	urban	YES	F	diabetes	0	0	0	1	1	NO	NO	NO	NO	NO	NO	2 years	WHITE	NO	LEGS	NO	YES	NO	5	SMALL EFFECT
194	27	STUDENT	urban	NO	F	CUSHINGS	0	0	0	2	2	NO	NO	NO	NO	NO	NO	4 years	RED	NO	ABDOMEN	YES	YES	NO	12	VERY LARGE EFFECT
195	24	STUDENT	urban	NO	M	NIL	1	0	0	1	1	NO	NO	NO	NO	NO	NO	3 years	WHITE	NO	BACK	NO	YES	NO	5	SMALL EFFECT
196	26	HOUSEWIFE	urban	YES	F	NIL	1	0	0	1	1	YES	YES	NO	NO	NO	YES	2 years	WHITE	NO	BACK	NO	YES	NO	5	SMALL EFFECT
197	21	HOUSEWIFE	urban	YES	F	NIL	1	0	0	1	1	NO	YES	NO	NO	NO	YES	2 years	RED	NO	BACK	NO	NO	NO	4	SMALL EFFECT
198	27	HOUSEWIFE	urban	YES	F	NIL	0	2	1	2	2	YES	NO	NO	NO	YES	NO	3 years	RED,WHITE	NO	BDOMEN,BUTTOCK	YES	YES	NO	13	VERY LARGE EFFECT
199	30	CLERK	urban	YES	F	NIL	0	2	1	2	2	NO	YES	NO	NO	NO	YES	2 years	WHITE	NO	ARMS	NO	YES	NO	11	VERY LARGE EFFECT
200	18	HOUSEWIFE	urban	YES	F	NIL	0	0	0	1	1	NO	NO	YES	NO	NO	YES	2 years	WHITE	NO	ARMS	NO	NO	NO	3	SMALL EFFECT