

## Evaluating La Pelle Skin Care's Efficacy for Eczema, Acne, and General Skin Health: A Comprehensive Survey

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### Abstract

This study aimed to address concerns regarding the standard uncertainty in skincare, particularly the lack of understanding and personal experiences of not feeling heard by medical professionals when it comes to skin care across all life stages. In response, the La Pelle brand has introduced a range of products, including purity gel cleanser, barrier protect serum, barrier balm, and revival skin pads. They have also conducted numerous educational webinars and industry talks, advocating for increased awareness, further research, and support in skincare.

Participants for this study were recruited via social media platforms such as Instagram and TikTok, as well as through a skin clinic that stocked and prescribed the La Pelle range. A total of 63 participants, aged 18–75, completed a survey questionnaire designed to assess their experiences with the La Pelle skincare products. The survey included both qualitative and quantitative questions, focusing on the efficacy of the products in treating skin conditions such as atopic dermatitis, acne vulgaris, eczema, rosacea, and psoriasis.

**The findings revealed common themes, including significant improvements in dryness, redness,**

## **skin hydration, and overall skin health.**

Participants reported a reduction in flare-ups, irritation, and discomfort, leading to enhanced self-confidence and quality of life. The study also highlighted the effectiveness of La Pelle's formulations, particularly the compounded ingredients like Niacinamide, D-Panthenol, hyaluronic acid, urea, and glycerin in treating barrier-dysfunctional skin conditions.

Overall, the research supports the efficacy of the La Pelle skincare range in managing various skin conditions, with a majority of participants expressing satisfaction and a willingness to recommend the products to others. The study emphasises the importance of skincare being fragrance free. The potential health risks associated with using skin care with fragrance on non-compromised and compromised skin conditions, underscored the need for fragrance free targeted skincare solutions.

## **Introduction**

La Pelle Skin Care was founded in 2021 by a dermal clinician and midwife/nurse. They found a gap in research and availability in the skin and health industry regarding females and the pre-/ during, and postpartum stages of life.

Their concern was the standard uncertainty, personal experiences of not feeling heard by medical professionals, and lack of understanding around the medical side of skin and caring for it in all stages of life.

Since then, they have provided a range of purity gel cleansers, barrier protect serum, barrier balm, and revitalised skin pads. Additionally, they have conducted numerous education webinars and industry talks, others in the industry with interprofessional, aiming to create awareness and push for further research and support.

Skincare has been forever evolving, and over the past decade, the market

has been saturated with various cosmetic and cosmeceutical products, leaving many people suspicious and unsure of what the ‘best’ skincare is for their skin and its health.

When choosing skincare, many turn to influencers on online social platforms, therapists, clinicians, their local GP, dermatologist, or even the most convenient place, such as a pharmacy, supermarket, or shop. The rise of online shopping has made it easier for the public to self-prescribe and experiment with various products. However, the allure of budget-friendly or expensive options can often lead to disappointing results.

Since ancient Egypt, skin care has been used to clean the skin for hygiene, protect it, and improve its overall appearance and function.

The skin’s primary role is to keep the body at homeostasis, such as regulating body temperature, holding all organs in place, and protecting the body from external threats, such as

pathogens, in our environment. Without our skin having a healthy, vital barrier function, the body is exposed and at higher risk of infection (Chantalle, C. 2024).

It's interesting to note that 30-40% of dermatologists prescribe cosmeceutical skincare. This category, which sits between cosmetic and topical therapeutic drug medicine, is known for its active ingredients that can alter the biological chemistry of the skin. This unique feature sets it apart from regular skincare products.

With the rise of antibiotic resistance, steroid relapse, and limited pregnancy-safe treatments for acute or chronic skin disorders, the need for alternative therapies and treatments is vital.

Further education and understanding of conditions such as acne, dermatitis, psoriasis, mastitis, rosacea, and more are crucial. Many do not know how to prevent and limit flare-ups or understand why these conditions

arise. The teaching of management and prevention long-term can assist many people financially, physically, and mentally. They aim to improve their overall quality of life and maintain their skin and family's health.

This research study aims to reflect on the range's formulations and their effectiveness in treating various barrier-dysfunctional skin conditions.

The study aims to provide adequate and supportive data to share with the public and put forward with future product innovations. Further, the study seeks to create awareness and encouragement to other professionals and companies in the industry in providing fragrance-free skincare and advocating and revealing that fragrance in our products are not desired by consumers anymore and it increases the risks of adversaries in the skin, which leads to negative experiences with these products.

## **Literature Review**

### **The Skin's structure and process of homeostasis in regards to overall skin barrier function and cellular processing**

It is known that the skin structure comprises three main elements and, when examined more closely, has intricate findings of tissue, nerves, and muscle that create homeostasis functionality (Yousef, H.2022). The skin comprises the epidermis, dermis, and hypodermis, which all play a primary role in the integumentary system. The epidermis and dermis are mostly looked upon in research and studies regarding problematic skin functions, especially barrier dysfunctions (Yousef, H.2022).

The epidermis consists of five main layers, forming the first skin layer. The deepest layer is known as the stratum basale. We then move into the stratum spinosum, stratum granulosum, stratum lucidum, and stratum corneum. The stratum basale

layer is separated from the dermis by the basement membrane.

The epidermis contains non-living protein cells called corneocytes that attach via desmosomes (Yousef, H.2022). The most superficial layer is the stratum corneum, which has 20-30 layers of cells known as squamous for their flattened appearance. This layer's primary duty is to form a first-line defence against microorganisms and pathogens one may be exposed to in one's environment (Yousef, H. 2022)The duty of the skin is to perform barrier defence, immune defence, exocrine process, and sensory response. Importantly, it also acts as a visual communication of systemic health and well-being (Yousef, H., 2022)

The cell envelope creates a layer where water and insoluble lipid proteins create an inner surface plasma membrane to interlink and form a hydrophobic layer. This makes the outer layer that is required to act as a barrier and immune defence for us; however, many immune disorders

and invasive organisms to the skin can disrupt this process's integrity, causing problematic skin conditions such as atopic dermatitis (eczema) and acne vulgaris (Fastner, A.2023).

### **Studying reviews and research on individual Ingredients efficacy to improving and managing various types of skin conditions**

Many well-known actives have been known for their effects on improving skin conditions, but there is a gap in studies on how well these perform when combined. How do they interact with each other, and how do they have a deeper long-term understanding of the evidential improvements. Further, many companies do not publicly provide research studies on the data they find; rather, they provide limited marketing information for 'clinical trials'.

The studies reviewed, however, provide insight into relevant individual ingredients used in the formulations of the La Pelle skincare range that are known for their

outstanding contribution to various skin conditions and overall health.

Vitamins, especially in the B group, are known for their healing properties and ability to reduce erythema and irritations. Boo, Y. C. (2021) reveals that vitamin B3 can create repair and healing in the skin due to its contribution to cell signalling, the process of 'ATP' and DNA repair of the cell. This vitamin is also called niacinamide, where topical application of up to 5% can create great tolerability in treating conditions such as rosacea. This ingredient in skin care has been known to inhibit melanin, which can prevent and treat hyper-pigmented skin conditions such as post-inflammatory hyperpigmented acne scarring. This is by preventing melanosomes from transferring from melanocytes to keratinocytes. These factors in production have been recorded as MITF, TRP-1, TRP -2 and PMEL17 (Boo, Y. C. 2021). Lastly, studies revealed its ability to retain moisture, which prevented

trans-epidermal water loss (TEWL) in the skin. This resulted in anti-aging benefits, such as improving rhytids in the skin (Zhang, H.2020).

Another vitamin B used in the La Pelle skin range is d-panthenol (B5). This has shown the ability to moisturise the skin by retaining water and healing the skin through stimulation of fibroblast proliferation and epithelialization. It can upregulate the genes that are a part of the wound healing process, such as IL-6, IL-1 $\beta$ , CXCL1, CCL18, CYP1B1 and KRTAP 4-2 or KAP 4-2. Studies supported its ability to strengthen the skin's barrier from surgical scars and many more factors (Boo, Y. C.2021).

Other supporting studies revealed individual efficacy for hyaluronic acid (HA), urea, and lactic acid, all found in our cleanser. HA is also formulated with the serum and balm of the La Pelle range.

HA is naturally found in our skin and primarily focuses on its water-binding abilities. Through age, HA levels

decrease in the skin, affecting the ability to support the epidermal and dermal layers of the skin. It also plays a vital role in tissue repair, such as inflammatory cell activation, migration and proliferation. Cell-producing processes such as angiogenesis rely on this. Many will experience skin dryness and loss of volume due to the decrease of this natural moisture factor in the skin (NMF) as we age. Sodium hyaluronic derivative is most commonly chosen for its stability and small molecule size. The smaller size allows for deeper skin penetration. The advantage of this water-based ingredient is its attraction to skin types that are oily or problematic. It also can help restore and repair dry eye syndrome (Abdo, N.2023). Further, it is used for acne-prone skin types due to its ability to reduce microbiota on the skin and decrease the presence of pathogens. This is done by stimulating positive microbiome levels on the skin.

Alternatively, lactic acid, which is a beta hydroxy acid (BHA), is a larger structured molecule that allows the focus on external layers of the skin. It prevents irritations to the skin by limiting its depth of absorption. As shown in other reviewed studies, this chosen acid in the cleanser has shown excellent tolerance to sensitive skin conditions such as rosacea and atopic dermatitis. The lactic acid itself can moisturise and strengthen the skin's barrier whilst still providing an exfoliating effect. Its gentleness in non-professional environments is best at less than 10%. The higher percentages are for clinicians and physicians only who intend to produce a more profound exfoliating treatment (Bravo, B. 2022).

The humectant Urea is an active substance that hydrates the stratum corneum. It enhances the skin's barrier function by regulating gene expression in the keratinocyte differentiation process and biosynthesis of epidermal lipids. It also biosynthesises antimicrobial

peptides. When used in lower percentages (<10%), this ingredient can be hydrating; however, when placed at higher percentages, it can also have exfoliating effects. The lower percentage focuses more on assisting with xerosis (dry skin), ichthyosis, atopic dermatitis, and psoriasis skin conditions. Higher percentages have shown greater advantages for skin proliferation of psoriasis skin conditions.

Studies have reviewed this ingredient, which has provided excellent absorption of medically prescribed creams such as corticosteroids and antifungal-based medicines (Piquero-Casals, J.2021).

**Treatments and management of eczema for topical care to complement other medical therapies or in comparison to their efficacy in treating the condition:**

Atopic dermatitis, or eczema, is a commonly experienced chronic and recurring skin condition. It can increase the chances of infection and

low quality of life if left unattended. It appears as an erythemic rash with symptoms of itchiness that leads to one tempted to scratch. The skin feels quite dry also. 15-30% of children will experience this condition, and 2-10% can have it carry on into adulthood. It is recognised that 60% of people will show signs of this disorder within the first year of birth (Nemeth, V.2022).

The initial resort to managing this condition is hydrating and topical anti-inflammatory medications for severe flare-ups. However, the priority to successfully reduce these flare-ups is using a fragrance-free ointment or lotion daily. Ointments are encouraged over lotions due to a higher lipid presence in skin care. Parental guardians and sufferers of this condition must avoid harsh soaps and detergents with high alkaline pH levels and avoid wearing non-breathable fabrics. They should also be checked for allergens, including environmental factors (Nemeth, V. 2022).



Steroids topically applied are commonly prescribed to assist with flare-ups. Antihistamines are also encouraged during flare-ups to prevent itching, especially during nighttime, to prevent disturbed sleep. They are not encouraged to be taken during the daytime (Nemeth, V.2022).

Steroids, however, are a short-term solution to decrease the severity of a flare-up. However, long-term use creates a reliance that shows signs of atrophy, striae, acne, telangiectasia, rebound dermatitis, and rosacea (Nemeth, V.2022).

Hence, the importance of topical skin care needs to be further in its innovations to reduce a person's need to go on these medical treatments. Management is vital to prevent the high risk of bacteria, viral or fungal-derived infections. Viral infections such as eczema herpeticum can be life-threatening caused by herpes simplex virus - 1. It can appear in blisters, fever and fatigue. This is a severe condition that leads to sepsis

risks and must be prevented at all costs if treated in the instance symptoms show.

Studies have mentioned the need for an interprofessional team of a specialty-trained dermatology nurse or specialty-trained dermatology clinician to provide the best patient care for ongoing treatment and management of this skin condition.

### **Treatments and management of Psoriasis for topical care to complement other medical therapies or in comparison to their efficacy in treating the condition:**

Psoriasis used to be a more ambiguous condition regarding studies and understanding. However, studies have revealed that over the past 15 years, more findings on pathophysiology have been revealed. It is a chronic inflammatory disease that stems from an autoimmune systemic response in the body (Rendon, A. 2019). It occurs through a triggered stimulation of inflammatory danger receptor cytokine cells or an

autoimmune reaction of T-cells. This is prevalent worldwide in 2-11% of the population, depending on various genetic factors. A higher prevalence of this disorder is shown in patients whose first and second-line relatives also were diagnosed and suffered from the condition. The study (2022). JDDonline) discussed epigenetic gene expression and how a patient's genetic family line can become a contributing factor.

This disorder has variations, such as vulgaris, inverse, guttae or pustular. However, others are more prevalent, such as vulgaris, as 90% of cases diagnosed with this show visible plaque-like scales on the skin covering large areas. This is commonly seen on limbs and scalp. The severity of this disorder can vary, and triggering indicators to this scale are drugs, infection or trauma.

The pathogenesis of this condition is derived from ongoing inflammation that stems from the imbalance of keratinocyte proliferation and differentiation. This is seen through

thickening of the skin, known as epidermal hyperplasia or hyperkeratinization. This is shown via the inflammatory links from our dendritic cells, macrophages, T-cells, and neutrophils. Most variations of psoriasis stem from this inflammatory response, with slight visible differences and mechanisms of action to eventual success in treatment. The condition begins with the antigen cell (dendrites), but it is not fully understood what triggers the onset of it to activate. The study reveals various mechanisms and their in-depth onset; however, the simplified conclusion is the recognition of overexpressed cells, such as AMP peptides, triggered by our keratinocytes when an injury has occurred to the body or skin. The damaged cells can self-replicate with damaged DNA material communicating with other cells, such as dendrites, to activate and onset the disorder (Rendon, A.2019).

This condition, however, does not present solely as a skin disorder but

more so as an immune response to an internal health issue. Studies show a linkage of higher risks to cardiovascular disease, stroke, and even death from psoriasis patients. Underlying health conditions are prevalent in patients who suffer from mild-grade psoriasis. There have been further linkages with other health complications, such as kidney disease.

Psoriasis can further result in neurological and psychological stresses such as anxiety and depression due to the visible impacts it has on a person's appearance as well as the discomfort it may bring to their daily life. This can lead to increased risks of suicidal ideation (Rendon, A.2019).

This is a chronic, incurable skin disease, and one must seek ongoing therapy to manage its severity and treat it to improve the condition. The severity level determines the steps to treat via the PASI score scale. Clinicians are commonly referred to for light phototherapy-based

treatments to assist with moderate to severe cases. Prescribed drugs such as cyclosporin A and retinoids (vitamin A) are systematically focused treatments for psoriasis (Zhu, B., 2022). Salicylic acid is a common ingredient placed in skin care and used at higher percentages under clinician supervision, allowing corneocyte desquamation to occur. It removes the cohesiveness of the sc cells by dissolving intercellular cement material, and with a more acidic pH, it can increase hydration and softening outcomes for the skin . It can be used as a first-line treatment in cosmetic products at 2-6% rates Zhu, B.,2022.

However, the gaps in studies to treat this condition are the ability to support pregnancy, children and families that are suffering from this and other barrier dysfunctional conditions. It is known to be deemed unsafe for children to use this ingredient due to its increased risks of toxic absorption. This leads to many having limited access to skincare that

will be able to manage and support their chronic condition.

Studies have relayed the importance of gentle cleansers and skin care to support the skin barrier function with this condition and support patients who may be using other medical therapies such as steroid creams. The study supported the formulation and ingredients used to create the La Pelle Purity gel cleanser for psoriasis as it revealed it was best managed when skincare, particularly cleansers of a lower than 7 PH, was used. They also revealed that skincare provided a <10% urea concentration similar to the gel cleanser mentioned above; it assisted with inflammation and allowed better absorption of other prescribed topical creams, such as corticosteroids (Chantalle C., 2024).

The evidence shows that skin care is vital to improving acute and mild cases of this condition and supporting pregnant women breastfeeding patients to prevent its severity. Emollient-based and occlusive agents

can achieve this by being applied in a simple skin regimen routine.

**Treatments and management of acne for topical care to complement other medical therapies or in comparison to their efficacy in treating the condition:**

Acne Vulgaris is a chronic inflammatory skin condition relating to the pilosebaceous follicles in the skin. It affects many on a global scale and is not fatal. Still, with various measures in severity, it can cause scarring, discomfort, irritation and psychological effects such as depression that have a significant impact on one's quality of life (Vasam, M.2023). Studies have shown that although antibiotic treatments are highly encouraged due to the ability to combat p.acne bacteria, over time, there has been a significant result of this bacteria resisting the treatment. This identifies the vital importance of providing combination and alternative therapies to support sufferers with this condition.

It has been identified that 47% of women will experience acne vulgaris during their term of pregnancy (Tan, A.2018)

The gap in research identified is how traditional therapies cannot support women who are pregnant and may not be able to provide these therapies due to risks and safety precautions.

Additionally, studies have not been able to cater to alternative treatment methods for children, young adults and more who may not be able to take conventional medical treatments.

The other traditional medical treatment is providing retinoids such as isotretinoin and Roaccutane; it is declared not safe whilst lactating, pregnant or trying to conceive. It is recommended to wait at least a minimum of 1 month in studies findings before attempting to conceive. This supports the need for further research in skin care and other dermal therapies clinicians perform to support women in this stage of life.

Causes of this skin condition can vary from hormone imbalances to genetic and lifestyle factors. The increased excretion of sebum is derived from endocrinological androgens of testosterone and insulin (IGH-1), which show a high rate. The androgen hormones will exacerbate inflammatory receptors in the body, causing swelling to the sebaceous gland and impacting the keratinisation processes of the follicular structure. This can then lead to bacterial infections and further inflammation in the skin. The individual follicle should generally be able to shed a single keratinocyte into the lumen, which can then proliferate and be eliminated. However, in acne-suffering patients, the cell is not shed into the lumen, which leads to debris not being eliminated from the pilosebaceous follicle. It can also be retained in lipids and monofilaments (Vasam, M.2023).

Cutibacterium acnes (c.acnes) are gram-positive bacteria that prefer to occupy the sebaceous follicles due to

their attraction to large quantities of sebum. This allows them to increase in amount and grow. These acnes release a lipase enzyme that feeds off the triglycerides in the sebum and transforms them into glycerol and fatty acids. This leads to the common visual lesions of comedones and further inflammation in the skin (Vasam, M.2023).

At high rates, inflammatory receptors such as neutrophils can cause trauma, injury and damage to the follicle, resulting in papule, pustule, cystic and nodular lesions in severe cases. This shows that acne is present within the dermis.

With environmental stresses, acne can also be caused by an alteration in DNA gene expression, which causes a dysfunction of the immune system, leading to the onset of inflammation and progression of acne (Vasam, M.2023).

It is recognised that conventional treatment methods can cause skin irritations, further enhancing the

need for skincare that focuses on supporting the skin's barrier function during such therapies.

Niacinamide can assist in decreasing sebum secretion and preventing the skin from forming acne flare-ups. Its anti-inflammatory benefits are best for mild to moderate cases of acne. It is often applied in medications and skin care products to support patients commonly suffering from acne, so La Pelle has made it a signature ingredient in their range.

### **Treatments and management of rosacea for topical care to complement other medical therapies or in comparison to their efficacy in treating the condition:**

Rosacea is known for chronic skin inflammation, affecting 5% of the world's population (Zhang, H.2020). The disease is visible by flushing, nontransient erythema, papules/pustules, telangiectasia, and phymatous changes. Irritations, along with itching, burning, and stinging

sensations, can also be experienced in rosacea patients (Zhang, H.2020).

Rosacea skin types must practise simple and gentle skin regimens due to the impaired epidermal barrier functionality and sensitives in the skin. A study revealed 999 out of 1010 controlled cases linked to the flare-up of rosacea with the frequent use of cleansing. The main way to reduce these flare-ups in clients is to eliminate the systemic and extrinsic triggers and provide simple and effective skin regimens.

Extrinsic triggers to Rosacea can be from alcohol, dairy, spicy foods, hot coffee or tea and other various foods. This is due to these substances impacting the ion channels in the body by increasing the activation of these receptors (Zhang, H.2020).

Other external triggers are using makeup up to 6 times a week, face masks up to 4 times a week, and foaming-based cleansers (Zhang, H.2020). Hence why, in La Pelle, our vehicle of choice to deliver effective

responses in the skin from our cleanser was gel-based.

Skin regimens consisting of cleansing, hydrating serums, and creams, including SPF, were 90% effective in reducing rosacea-related symptoms (Zhang, H.2020). Skin care in the cosmeceuticals category is essential for this condition due to its combination of drug (therapeutic) and cosmetic formulations prescribed by a clinician (Zhang, H.2020).

In La Pelle's signature formulations, we provide d-panthenol due to studies supporting its assistance with barrier-dysfunctional skin types. This ingredient reduces the symptoms of rosacea by soothing and relieving the skin. La Pelle offers a range that allows rosacea clients to balance the microbiome on their skin via cleansing daily with the purity gel cleanser and then creating a solid lipid bilayer with the serum and balm.

**Fragrance symptoms to adverse responses in the skin and contributing to health and skin**

## **issues for family, children and women:**

It is known that fragrance in products has detrimental effects on people's health. However, many companies still provide their cosmetic products, leading to dermatitis adversaries in the skin and other long-term health complications. Many skin care products will have at some point in the ingredient list parfum/ fragrance, which makes it straightforward to consumers. However, essential oils and other ingredients can often be deceiving to consumers due to their ingredients needing more clarity within the product. When companies place the simple term 'fragrance/ parfum' on their ingredient list, it is difficult to know what exactly is being used and for consumers to deter from many triggering allergies they may experience. This is due to the discovery that when this ingredient is labelled, it could contain 50 - 300 various fragranced compounds in this one product. They place as one big ingredient but do not disclose

individually what they are (Pastor-Nieto, A. 2021).

Due to the market trend of 'chemophobia,' the influence of choosing particular products titled 'natural', 'organic', and more has risen. Media and marketing influence many, for they believe they are choosing safer options, and they go by these labels without knowing the irritations and sensitivities that can arise from certain products.

A study reviewed skin care products on the Danish market and 91% of them were labelled 'natural'. They contained a fragranced ingredient, a common cause linked to contact irritant dermatitis (Pastor-Nieto, A. 2021).

Linalool is most commonly found in balms and ointments targeted at mums for sore nipples from lactating and problematic nappy rashes. This ingredient is popular for these conditions but has been reviewed as a significant contributor to skin irritations. Linalool creates sensitivities due to its instability over



time in a product. Once a product with this ingredient is opened and exposed to the air, it oxidises and changes its original chemical properties. (Arribas, M.2013)

Fragranced cosmetics have concerning links to endocrine system effects, especially in women, causing other systemic health issues (Arribas, M.2013). There is substantial evidence of this. However, the public does not seem aware of this and finds it difficult to avoid it.

The linkage of phthalates, a fragmented ingredient used in soaps and other cosmetic products, formed a direct linkage to thyroid gland dysfunction, endometriosis, and more in young women (Arribas, M.2013). The use of this at high levels of exposure is known to influence a woman's menstruation, ovulation normalities and increased risk of endometriosis. (Arribas, M.2013) endocrine disrupting chemicals (EDC) that alter the hormonal pathways network in the body. This can lead to severe health effects that change the function of the

reproductive system and more. ED molecules can mimic how natural hormones within our body communicate, which alters the communication pathways within the body (Pastor-Nieto, A. 2021). They do this by connecting to hormonal receptors such as oestrogen (ER), androgen (AR), and progesterone (PR) in the body. They often can also move through non-genomic pathways via the ability to bind to the cell membrane of ER, PR or G- -proteins. Further, many studies say that, alternatively, high levels of exposure can cause oxidative stress on the cells, as well as genetic and epigenetic modifications in DNA synthesis processes (Pastor-Nieto, A. 2021). All these pathways alter the female reproductive system leading to irregular menstrual cycles, endometriosis, Polycystic ovary syndrome (POS), premature ovarian insufficiency (POI), uterine fibroids, gynaecological cancers and more. (Arribas, M.2013)

The most common and most significant increase of dysfunction in the reproductive system was women being diagnosed with PCOS. 5-10% of women are being diagnosed with this condition due to many factors such as epigenetics, oxidative stresses, endocrine metabolic and environmental stresses on the body. (Arribas, M.2013).

The exposure can also affect families and couples trying to conceive with not only decreased egg quality but also sperm quality in the male. The linkage of increased risks of miscarriage and pregnancy loss has been connected to this fragrant ingredient. Phthalates were found in women's amniotic fluid, creating poor delivery outcomes like premature cases (Abdo, N.2023) A study performed on over 300 women displayed that exposure caused a 75% primary infertility issues (Dodson, R. 2012).

This brings forth the demand in our survey to see if consumers care about having fragrance-free products, if

formulating our skincare without it has positively affected their overall skin health and concerns, and if they care for their product not having an aroma. This determines what outcome and experience they prefer for their family.

### **Methodology**

The participants were selected via social media platforms Instagram and tiktok using advertising stories and posts. We also advertised via a skin clinic, stocking the range and prescribing to visiting clients. Individuals from the population who wished to participate were instructed to complete a 5-10 minute survey questionnaire linked to the stories via Instagram or a QR code poster in the clinic. This survey requested participants between the ages of 18-75 to answer multiple-choice questions, scaling and short-answer responding questions related to their experience with using the range. The survey began with asking if they had used the range before and if the participant clicked yes it would move them

forward in questions. The next page provided the ability to add details for us to have ID proof of individuals in the study and ensure participants did not do multiple entries. Before participants mentioned whether they use the range we also provided consent to proceed outlining the core purpose of our study and what our research would be able to assist with. A total of 63 participants entered the survey questionnaire. Out of the participants, 5 were male, and 49 were female. The participants' ages varied from 14 being between ages 18-24 and the majority being in ages 25-35; this was a total of 28.

This study enabled qualitative responses amongst many quantitative questions in relation to how the skin, especially with conditions such as atopic dermatitis and acne vulgaris; responded to the range. Through gathering data we were able to review common statistical themes that were occurring from participants' responses. These responses then provided a common ground to themes

and coding processes for collected data. Ethical considerations were carefully thought through with providing consent and transparent information on what we would use their responses for. We also made clear their details and conduction of the survey would remain anonymous and confidential.

The survey was provided via a link and QR code that directed them to complete online. This survey was created and designed via the survey monkey platform. The platform allows analysis of the data in various forms. It provides their written responses, individual answers to each question as well as providing graphs, tables and percentages to the overall collected data.

All information collected on the survey is downloaded to placed securely in the la pelle company drive database. This is securely protected with passwords and code links for identification of who is accessing the data.

## Findings

### Themes/Patterns:

#### Results table collection

Written response Questions	Common Theme
1.Q33 How do these clinical observations align with your personal experiences and perceptions of improvement?	<ul style="list-style-type: none"> <li>• Helpful</li> <li>• Improved dryness</li> <li>• Improved redness</li> <li>• Post treatment care useful</li> <li>• Educational</li> <li>• Simple</li> <li>• Improved dermatitis</li> <li>• Improved hydration</li> <li>• Clearer Skin</li> <li>• Effective</li> </ul>
Q36 How has La Pelle skin range specifically helped improve you or your family member's skin condition (eczema, dermatitis,	<ul style="list-style-type: none"> <li>• Reduced flare-ups of eczema</li> <li>• Improved skin health</li> <li>• Reduced dryness</li> <li>• Reduced irritation</li> <li>• Reduced</li> </ul>

nappy rash, acne, rosacea, psoriasis)? Please describe any noticeable changes or improvements.	<ul style="list-style-type: none"> <li>• redness</li> <li>• Skin has a glow</li> <li>• Skin hydration improved</li> <li>• Soothing</li> <li>• Calming</li> <li>• Reduced breakout severity</li> <li>• Improved dry lips, hands and nappy rash and other areas</li> <li>• Reduced oiliness</li> <li>• Improved texture</li> </ul>
Q37 Can you share any anecdotes or specific instances where La Pelle products have alleviated discomfort or improved the appearance of skin affected by these conditions?	<ul style="list-style-type: none"> <li>• Reduced itchiness in the skin</li> <li>• Clearer skin</li> <li>• Does not trigger flare-ups i.e eczema</li> <li>• Helped skin sensitivities</li> <li>• Brightening</li> <li>• Improved texture</li> <li>• Assisted in healing</li> </ul>

	<p>sun/wind burnt skin</p> <ul style="list-style-type: none"> <li>• Assisted with adverses from medications such as Accutane</li> <li>• Post-treatment improved and quickened downtime</li> <li>• Helped with nose area when sick</li> <li>• Helped dermatitis and impaired skin in hand, nose, lips and bikini areas</li> </ul>
<p>Q38</p> <p>How has the improvement in your or your family member's skin condition impacted daily life and</p>	<ul style="list-style-type: none"> <li>• Improved physical discomfort</li> <li>• Improved social discomfort and anxieties</li> <li>• Improved self-confidence levels</li> <li>• Reduced</li> </ul>

<p>activities? For instance, has it reduced itching, discomfort, or social discomfort related to skin appearance?</p>	<p>itchiness and improved overall quality of one's day</p> <ul style="list-style-type: none"> <li>• Feel less need to wear makeup</li> <li>• Improved hydration</li> <li>• Improved skin for families that suffer from eczema-related conditions</li> <li>• Reduced scarring in skin i.e. acne</li> </ul>
<p>Q49</p> <p>How has the frequency or severity of eczema flare-ups changed?</p>	<ul style="list-style-type: none"> <li>• Cleared flare up completely</li> <li>• Reduced flare-ups frequency</li> <li>• Calmed skin when experiencing flare-ups</li> <li>• Helped skin in winter months</li> </ul>

<p>Q58 Can you describe any objective measurements or changes in skin condition (such as reduction in inflammation, scaling, redness, etc.) that you or your family member experienced after using La Pelle products?</p>	<ul style="list-style-type: none"> <li>● Softer skin</li> <li>● Smoother skin</li> <li>● Reduced itchiness</li> <li>● Reduced irritation</li> </ul>
<p>Q61: What makes La Pelle products stand out from other skincare solutions you have tried?</p>	<ul style="list-style-type: none"> <li>● Effectiveness</li> <li>● Provides results</li> <li>● Vegan friendly</li> <li>● Pregnancy safe</li> <li>● Suitable for children</li> <li>● Gentle</li> <li>● Cost effective</li> <li>● No fragrance</li> <li>● Developed by professionals in skin and</li> </ul>

	<p>health field</p> <ul style="list-style-type: none"> <li>● Formulati on</li> <li>● Simple and easy to use</li> <li>● Large sizing in package</li> </ul>
<p>Q65 Do you have any other comments or suggestions for improving La Pelle products?</p>	<ul style="list-style-type: none"> <li>● Loving the products</li> <li>● Encourag ement to keep going</li> <li>● The want for a moisturis er in the same size as the cleanser</li> <li>● Positive remarks about cleanser and microfibe rr pad</li> <li>● One participan t d after cleansing skin applying serum would leave a foam white</li> </ul>

	<p>appearance on skin.</p> <p>Company has kept this in mind for future reformulation and will further investigate occurrence.</p>
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	midwife/nurse
<p>Q13</p> <p>Has the cleanser helped prevent further dryness in the skin? Has it prevented tightness, flakiness or any other conditional related symptoms?</p>	<p>55.17% - a lot to a great deal</p> <p>34.48% - a moderate amount</p> <p>10.34% - a little</p>

**Results Table of Multiple choice**

Question	Highest percentages/ most chosen answers
<p>Q10: What aspects of the products were most beneficial to you and was a reason for you purchasing the skin care? Select all that apply</p>	<ol style="list-style-type: none"> <li>1. 60% effective formulation</li> <li>2. 56% prescribe by health professional/clinician</li> <li>3. Was created by a dermal clinician and</li> </ol>

<p>Q14</p> <p>How has the cleanser helped in addressing symptoms of dehydrated skin, such as tightness or flakiness, Has the cleanser helped prevent TEWL (water loss) in the skin?</p>	<p>62.07% - a great deal to a lot</p> <p>31.03% - a moderate amount</p> <p>6.90% - a little</p>
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<p>Q15</p> <p>How has the cleanser contributed to maintaining your skin's sebum and oil balance in areas of concern such</p>	<p>52% - A great deal to a lot</p> <p>37.93% - moderate amount</p> <p>6.9% - a little</p>
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as 't-zone'?	
Q 16 How has the cleanser contributed to maintaining your skin's excessive oil production and keeping levels under control?	55.17% - A great deal to alot  31.03% - a moderate amount  6.9% - a little
Q19 Are there specific aspects of the formulation (e.g., ease of application, absorption rate) that you find particularly appealing or beneficial with the serum?	82.5% - light weight  77.5% - does not leave skin sticky / tacky  75% - Easy to apply  67.5% - great absorption  67.5% - that it is fragrance free
Q 22 How has the serum helped manage excess oil and improve skin texture? Please rate on a scale of 1 to 5 ( Not effective - Very effective)	62.5% - Very to extremely effective  27.5% - somewhat effective  7.5% not so effective

Q 23 How has the serum been in balancing oily and dry areas? Please rate on a scale of Not effective - Very effective.	70% - very to extremely effective  25% - somewhat effective  5% - not so effective
Q24 How has the serum improved hydration and reduced dryness? Please rate on a scale of Not effective - Very effective.	85% - very to extremely effective  12.5% - somewhat effective  2.5% - not so effective
Q25 How has the serum improved been in replenishing moisture and improving skin barrier function? Please rate on a scale of Not effective - Very effective.	82.5% - very to extremely effective  15% - somewhat effective  2.5% - not so effective
Q28 How effective is the microfiber	92.31% - very to extremely effective



skin pad in cleansing your skin compared to other methods (e.g., hands, washcloth)?	7.69% - no so effective
Q29 Has using the microfiber skin pad improved the texture and smoothness of your skin?	76.93% - very to extremely effective 15.38% - somewhat effective 7.69% - little effective
Q30 Does the microfiber skin pad help in removing makeup and impurities effectively?	92.31% - very to extremely effective 7.69% - somewhat effective
Q34 How long have you been using La Pelle skin care for?	13.51% - a few days 2.7% - a few weeks 32.43% - a few months

	35.14% - 6 to 12 months 16.22% - +12 months
Q35 How long until you started seeing improvements in using La Pelle Skin Care?	5.41% - instantly 43.24% - within a few days 40.54% - within a few weeks 8.11% - within a few months
Q39 Has using La Pelle products made managing skin conditions easier in terms of daily skincare routines or medical treatments?	86.11% - a great deal to alot 8.33% - a moderate amount 2.78% - a little amount
Q47 How would you rate the overall efficacy of the La Pelle range in managing rosacea symptoms based on your personal	100% - a great deal

experience and observations?	
<p>Q48</p> <p>Have you noticed any measurable improvements in eczema symptoms such as itching, redness, or dryness since using La Pelle products?</p>	<p>78.57% - Agree - strongly agree</p> <p>21.43% - neither agree or disagree</p>
<p>Q51</p> <p>Glycerin, Niacinamide, Candula wax and D-Panthenol are commonly used for soothing dermatitis. These ingredients are found in our balm. How have you found these ingredients in La Pelle products in managing your symptoms?</p>	<p>100% - satisfied to very satisfied</p>

<p>Q53</p> <p>What changes have you observed in your acne-prone skin since starting to use La Pelle products?</p>	<p>40% - Reduction in frequency of breakouts</p> <p>20% - skin feels less oily</p> <p>13.33% - scarring had improved</p>
<p>Q54</p> <p>Have you used the La Pelle Purity Gel Cleanser? If so, how have lactic acid, urea, and glycerin helped your acne-prone skin?</p>	<p>73.33% - skin is not as dry and feels more hydrated</p> <p>60% - skin is softer and smoother in appearance</p> <p>26.67% - reduction in PAE</p>
<p>Q55</p> <p>How effective has the La Pelle cleanser been in managing your acne breakouts?</p>	<p>92.86% - A lot to a great deal</p> <p>7.14% - a moderate amount</p>
<p>Q56</p> <p>In your</p>	<p>91.31% - a great deal to alot</p>

experience, how well does the La Pelle cleanser cleanse excess oil and impurities without over-drying or irritating your acne-prone skin?	7.69% - a moderate amount
Q57 Have you noticed any improvements in skin barrier function or hydration levels since using La Pelle?	93.75% - yes
Q58 Can you describe any objective measurements or changes in skin condition (such as reduction in inflammation, scaling, redness, etc.) that you or your family member	74.19% - skin felt smoother and softer  64.52% - reduction in itchiness and irritation  54.84% - improvement in texture and congestion  54.84% - less

experienced after using La Pelle products?	commonly experiencing breakouts  54.84% - skin has improved in hydration levels  48.39% - reduction in erythema (redness)  41.94% - breakouts healing alot quicker  45.11% - brightening of overall skin tonality  16.3% - used the product and said it helped with the healing of the skin are surgery or injury / wounds.
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**Results of Rating on a scale Questions Table**

Questions	Scale results
<p>Q21</p> <p>How has the serum benefited your skin? Please rate the following attributes on a scale of 1 to 5 (1 = Not effective, 5 = Very effective):</p>	<p>Brightening - 3.71 out of 5</p> <p>Hydrating - 4.40 out of 5</p> <p>Overall skin tone and complexion - 4.08 out of 5</p>
<p>Q26</p> <p>How has the Balm benefited your skin? Please rate the following attributes on a scale of 1 to 5 (1 = Not effective, 5 = Very effective):</p>	<p>Soothing - 4.37 out of 5</p> <p>Hydrating - 4.49 out of 5</p> <p>Reducing irritation - 4.23 out of 5</p> <p>Reducing texture - 3.19 out of 5</p> <p>Moisturising - 4.43 out of 5</p> <p>Improve barrier function - 4.37 out of 5</p> <p>Reduce itchiness - 4.23 out of 5</p>

<p>Q64</p> <p>How likely are you to recommend la pelle products to a friend, family or someone you know?  (out of 1-100%)</p>	<p>95% would recommend to a friend, family or someone they know</p>
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The central theme addressed across all data was that participants who had been consistently using the La Pelle skin range over some time could see, to some degree, results and improvements in overall skin health. Whether they experienced atopic dermatitis-based conditions or acne vulgaris, they could see how La Pelle provided positive responses to the skin and did not cause any irritation or exacerbation of the skin conditions.

Question 33 of the survey evaluated the participant's point of view and personal experience with using the product. What enticed them or stood out to them? The common themes were how the La Pelle brand itself can be educational and provide information on various skin conditions and their overall health from professionals in the skin and health field. Others mentioned how it

was effective, noticing improvements and how it has been helpful for skin healing and downtime from advanced skin procedure treatments. They mentioned they used it for post-treatment care in the range, especially the balm. Participant 43 mentioned how the company has 'Provided education for clients' about 'treating' their skin conditions with 'top quality' formulations. They also added that they were fond of a 'simple' routine and still be able 'to see massive improvements'.

Following written answer questions, participants reported improved dermatitis symptoms, reduced frequency of active breakouts, and many other factors.

Additionally, participant 21 reported how 'whilst using Roaccutane' they noticed La Pelle assisted with managing the side effects of this medication. Another participant 39 reported that the skin care soothed the skin and helped manage sunburn symptoms, stating 'it calmed it down'.

Question 38 in the survey evaluated how these improvements in their skin conditions, such as psoriasis, acne or dermatitis, have impacted their or loved ones' daily lives. The most common response was that they noticed they had become less self-conscious and more confident. Many noticed they had less social

discomfort alongside less physical pain. Participant 59 explained how they saw they had become more confident through the ability to go outside in public 'without the need to wear makeup'. Furthermore, Participant 1 mentioned how it reduced 'red patches' on their arm, making them less self-conscious due to 'people not noticing' as much.

Statistics from other questions support these statements, with 60% saying they purchased la pelle for its effective formulation.

Additionally, 86.11% reported that the range has helped manage their chronic skin conditions through medical intervention and advanced dermal therapy treatments.

The cleanser formulation includes ingredients such as lactic acid, urea, hyaluronic acid and more, which supports our literary research on the benefits of supporting acne patients. 91.31 % mentioned that the cleanser assisted with removing excess oil and impurities in their skin. Additionally, 92.86% reported that the cleanser has reduced their acne flare-ups and had less frequent breakouts since using the La Pelle cleanser.

The serum was rated highly on a scale of 5 for hydrating, reducing itchiness, and improving overall skin tonality

and texture. It was rated 4.49 out of 5 for providing hydration in participants' skin and 4.37 out of 5 for improving barrier function.

When asked if they would recommend the serum to a friend, family member, or someone they know, 95% of participants expressed willingness to do so.

The survey questionnaire was able to gather various forms of information that support the evidential data in organic chemistry that many in the field research on how to further advance in skin topical therapies for people suffering from acute and chronic skin conditions.

## **7. Discussion -**

Our research aimed to explore the La Pelle Skin range's efficacy in treating barrier-dysfunctional skin conditions.

La Pelle's formulations and signature ingredients are compounded together to support the added curiosity of the efficacy of these actives individually and combined. The gap in research established was that only some companies displayed results of what occurs when these ingredients are compounded together. However, by conducting our survey, we have been able to see how core ingredients of

Niacinamide, d- d-panthenol, hyaluronic acid, urea and glycerin in the range can work together to reduce symptoms of atopic dermatitis, contact irritant dermatitis, post-procedure erythema, healing of skin wounds and injury as well as acne vulgaris, rosacea and psoriasis skin conditions.

Research has shown that cleansing is essential to keeping the skin clean and removing impurities and microorganisms from the day. However, when someone with barrier-compromised skin and various disorders uses a soap bar or cleaning agent with a high alkaline scale, they risk further distracting the intracellular lipid found in the stratum corneum. This increases the risk of colonising gram-positive bacteria in the compromised skin (Mukhopadhyay, P.2011).

This can be catastrophic for patients suffering from acne as they already have bacteria in the follicles and sometimes even the dermis. Destructing the skin's barrier further will only cause more havoc and encourage the presence of bacteria to grow.

When a cleanser is formulated in a gentle gel manner, it can assist with removing impurities, sebum, and more when placed at the correct pH

scale, similar to the skin's 5.5. This supports why the cleanser in the La Pelle range had positive feedback from participants. Its use of lactic acid, urea, niacinamide and hyaluronic acid could improve and manage their skin health. Lactic acid is a gentle exfoliating and microbial agent, urea is an anti-inflammatory, and hyaluronic acid supports microbiota on the skin and is a moisturising agent.

A study established the difficulty with cosmeceuticals such as serums receiving the required efficacy or dermatologists' recommendations (Karwal, K.2023). This is due to the industry continuously growing and being dependent on where and how it is being made. New actives are being found or used, and claims are being made that are hard for industry professionals to keep informed about. This study identified that many patients are moving away from medical prescription drugs and choosing cosmeceuticals over the counter. This shows the essential need for skin care efficacy with serums.

The study identified evidential results regarding erythema and blotchiness in the skin, which they believed was supported by the mechanism of action of vitamin B<sub>3</sub> (Karwal, K.2023).

They also noticed how this ingredient improved the appearance of epidermal hyperpigmentation due to the linkage and findings of niacinamide being a pigment inhibitor (Karwal, K.2023).

This research identifies why the need for categorising cosmeceutical skin care and placing it in a separate category from other skin care and prescription drugs. This is due to its topical 'drug-like effects' on the skin but put in a cosmetic format.

Skincare, deemed cosmeceutical rather than cosmetic, is in this category due to studies, evidence, and therapeutic claims regarding its ability to adjust and manipulate the cell function in the skin.

Dermatologists have reported that if the product has ingredients with evident mechanisms of action and evidential support for its formulation, it is considered cosmeceutical (Karwal, K.2023).

Studies have discussed multiple skin issues, especially postpartum, with nipple soreness and fissures from lactating. Majority of women in the season of breastfeeding will experience micro tears, erythema, blistering and oedema. The main thing advised in history is to use common DIY remedies or balms that highly contain lanolin. Before more recent studies, this was deemed most

effective in short-term use. However, our literature has shown concerns about sensitivities and the impact of barriers on the skin. If women, however, are not provided with optimal care, these fissures can lead to further issues such as blocked milk ducts, mastitis and more, which is quite painful (Dahan, A.2020)

This study supported that lanolin is not practical for assisting with nipple soreness and pain when breastfeeding; however, aloe vera and camellia leaf can have antibacterial and anti-inflammatory properties that are known to help with nipple fissures. Both these ingredients have been provided in the La Pelle barrier balm.

The balm formulation in our study has supported previous research findings on how its occlusive nature and ingredients included assist with symptoms and sufferers of atopic dermatitis. They acknowledge its ability to help with skin barrier function and rebalance skin microbiota (Magnolo, N. 2023).

Additionally, the inclusion of the microfiber pad within the survey and participants' positive responses to the product supported the efficacy of other studies on its use. Limited research exists on physical reusable pads that remove makeup and assist

with the cleansing part of the skin regimen.

Much research focuses on the comparison of disposable facial wet wipes and more.

However, our study clearly shows that the microfiber pad effectively removes not only makeup but also impurities, debris, and excessive sebum from participants' skin. The results table showed high satisfaction and support in skin cleansing without exacerbating or triggering any barrier dysfunctional skin conditions such as dermatitis.

This study supported existing literature on the efficacy of cosmeceutical formulations consisting of the ingredients in La Pelle and how they help acute and chronic skin conditions. However, our study was able to push further and find conclusive answers to La Pelle skin ranges' efficacy on these conditions and answer the gaps in the industry regarding the short—and long-term effectiveness of managing these conditions.

The exclusion of fragrance in the La Pelle skin range has supported research on how it can prevent flare-ups of contact irritant dermatitis, eczema, and other conditions. Many women are



becoming more educated about its long-term impacts on their families and self-health that they are desiring more brands in skincare to stop the use of unnecessary ingredients. The industry has changed over the years; consumers want cosmeceuticals not for the luxurious experience but for the efficacy and results-driven outcomes in skin health and well-being. They care about visiting and taking advice from dermal clinicians and allied health professionals over any cosmetic brand. Many will use and try to stick with what these professionals prescribe them in trust of their expertise on the skin.

Future studies with participants solely using the La Pelle skincare range for these conditions, tracking pre- and post-results via visual evidence and further qualitative data surveys/interviews, can enhance the efficacy and encourage other skin ranges to stop using fragrance in their products. This will also support the brand's efficacy compared to other ranges available on the market.

Further study around specific time periods, use, and various elements

will help to make a more conclusive understanding of how this range assists with these skin conditions.

## **Conclusion**

The responses demonstrate that La Pelle skincare products have been highly effective in improving various skin conditions, including eczema, dermatitis, acne, and rosacea. A significant 86.11% of users found that the products made managing skin conditions easier in terms of daily skincare routines or medical treatments. Users reported improvements in skin hydration (93.75%), texture (74.19%), and overall skin health, with 78.57% agreeing that eczema symptoms like itching, redness, and dryness had improved.

The products effectively reduced redness, dryness, irritation, and flare-ups, with 92.86% stating that the La Pelle cleanser significantly managed acne breakouts. Additionally, 91.31% of users noted that the cleanser effectively removed excess oil and impurities without over-drying the

skin. Improvements in skin barrier function and hydration levels were observed by 93.75% of users.

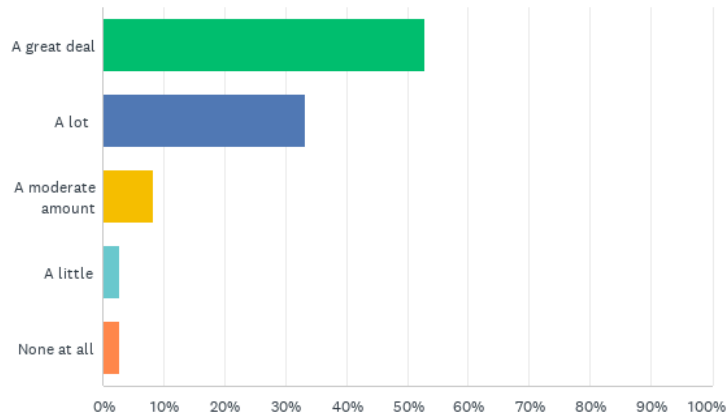
The serum was particularly praised, with 85% rating it as very to extremely effective in improving hydration and reducing dryness. Furthermore, the microfiber skin pad received a high approval rating, with 92.31% finding it very to extremely effective in cleansing the skin.

Overall, users expressed high satisfaction with the products, with 100% being satisfied to very satisfied with the balm ingredients for managing dermatitis. The product's ability to balance oil levels, improve hydration, and maintain skin health was also highlighted, with 62.5% rating the serum as very to extremely effective in managing excess oil and improving skin texture. Users also observed a reduction in acne breakouts (40%) and improved skin softness and smoothness (73.33%) after using the La Pelle Purity Gel Cleanser.

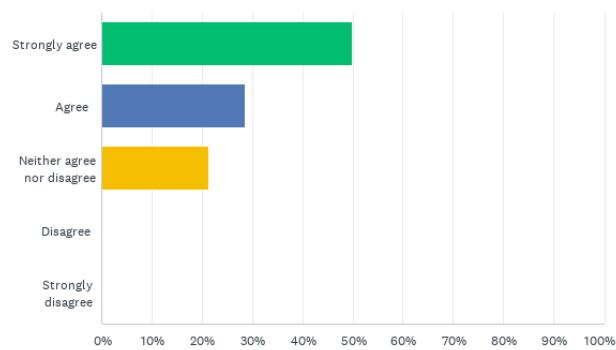
The conclusive evidence found in this study is that La Pelle skincare products have significantly benefited users, resulting in tangible improvements in skin conditions and overall satisfaction, with suggestions for continued use and potential adjustments to packaging sizes.

## Appendices

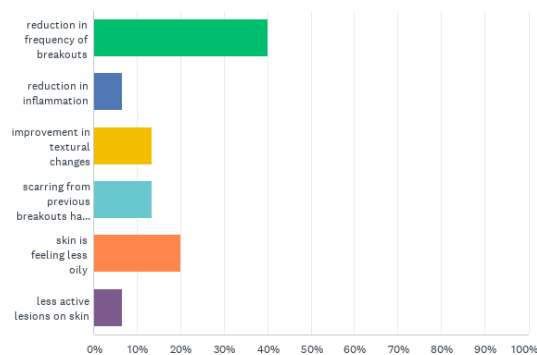
Q39 Has using La Pelle products made managing skin conditions easier in terms of daily skincare routines or medical treatments?



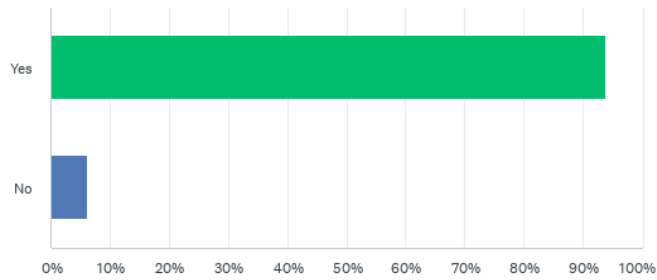
Q48 Have you noticed any measurable improvements in eczema symptoms such as itching, redness, or dryness since using La Pelle products?



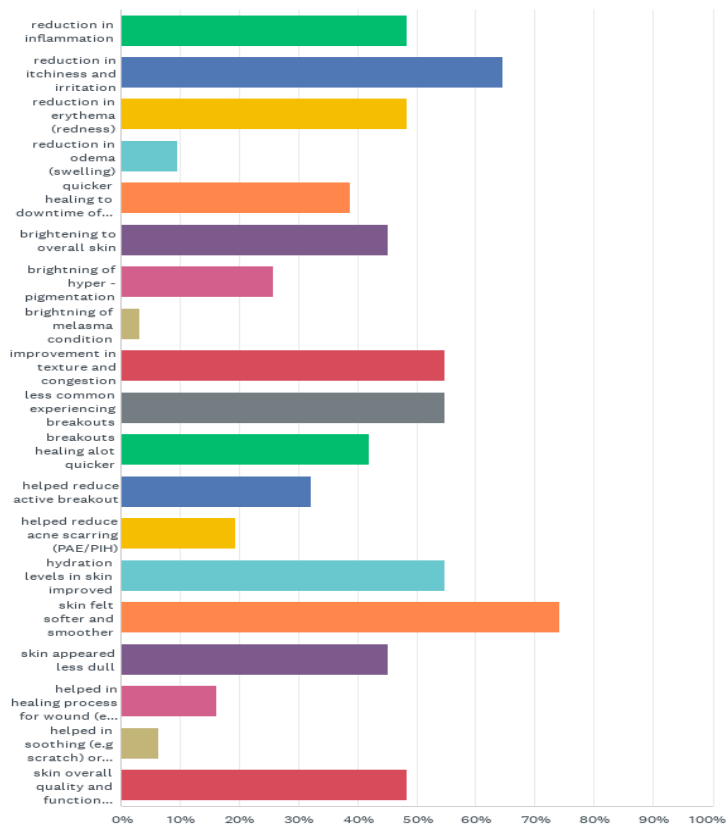
Q53 What changes have you observed in your acne-prone skin since starting to use La Pelle products?



**Q57 Have you noticed any improvements in skin barrier function or hydration levels since using La Pelle?**



**Q58 Can you describe any objective measurements or changes in skin condition (such as reduction in inflammation, scaling, redness, etc.) that you or your family member experienced after using La Pelle products?**



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