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Analyzing Socio-Economic Factors Influencing Skin Disease Management and Service Accessibility in Kumbakonam, Tamil Nadu, India

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ABSTRACT

This study identifies income, occupation, education, housing, and diet as key determinants of both skin health management and access to dermatological services in Kumbakonam, Tamil Nadu. Specifically, low income, manual occupations, limited education, and inadequate housing are linked to poorer skin health and restricted healthcare access. Poor diet and hygiene, and difficulties in following treatment, further hinder management. Notably, women, low-income groups, and rural residents face the highest disparities in accessing services. These findings highlight critical gaps and point to policy priorities—improved transport, decentralized health services, and culturally relevant education. While the study's self-reported data and small sample size limit generalizability, its findings offer practical guidance for promoting equitable, justice-driven care and indicate the need for broader studies.

Keywords: Chi-Square, Correlation, Socio-economic determinants, Skin disease management, Healthcare accessibility, Service disparities

1. Introduction

This research examines how socio-economic and demographic variables influence dermatological care in Kumbakonam, Tamil Nadu. These include income, occupation, educational attainment, place of residence, and dietary patterns. The primary objective is to identify key local barriers and recommend actionable strategies. Structural determinants, such as housing, occupation, and education, are examined alongside intermediary factors, such as hygiene and treatment adherence. This approach aims to strengthen policy and healthcare interventions within the local context.

This analysis shows the specific impact of each socio-economic factor on the management of skin diseases in Kumbakonam. Higher income improves healthcare access and supports adherence to treatments. Physically demanding jobs may worsen skin conditions, but stable employment helps maintain care. Higher education is associated with better health literacy and adherence. Where people live affects exposure to risk factors, and dietary habits directly influence skin health outcomes.

The research highlights that income, education, and treatment adherence have the strongest influence on skin disease management and healthcare access in Kumbakonam. Data analysis shows that higher income and education levels are associated with better skin health and greater service use. Strong adherence to treatment is also linked to improved health outcomes. Each of these factors faces specific local barriers, which are outlined in the study.

2. Background and Literature Review

Interest in skin diseases has grown in India and globally (Varma, 2025) and now draws both national and local attention. The World Health Organization (2022, 2023, and 2024) notes skin problems are common and recommends providing skin care through primary health services. Studies show that in developing regions, limited access to treatment is due to long distances and scarce resources (Shashank & Shashank, 2025). Kumbakonam faces similar challenges. Local cultural practices shape disease management. Rural rituals influence outcomes, while poorer communities face a higher prevalence. Socioeconomic factors—jobs, education, income—shape health. Rural residents experience more hardship, including travel and financial barriers. They also have less awareness of prevention and management (Ramasamy et al., 2016, pp. 1234-1241).

House construction and job type may raise risk, while education influences skin care and mental health (Nagendran & Sakkaravarthi, 2025, pp. 130-134). Gender and diet also affect access. Women use skin care services more frequently than men. Clinic choice depends on cost, convenience, and perceived quality. There are gender differences in the use of health care services (Barbara Starfield et al., 2000). Diet matters. Vitamin deficiencies make problems worse, while healthy eating helps prevent them (The Influence of a Plant-Based Diet on Skin Health: Inflammatory Skin Diseases, Skin Healing, and Plant-Based Sources of Micro- and Macro-Nutrients, Min, M. et al 2023). Poor hygiene is a major risk factor. Chronic skin problems cause stress and anxiety. Both government and private clinics provide care, but there are still gaps in access and affordability. Solutions include adding more clinics and improving support. Socioeconomic status, employment, and education are key determinants of health (Smith and Patel, 2022; World Bank, 2021; Rao and Sharma, 2023). Rural areas face barriers like distance, costs, and low awareness (Chandran and Raj, 2024; Jain and Banerjee, 2022). Many residents travel long distances for treatment (Jain and Banerjee, 2022; Ramesh and Pillai, 2021).

Family income, work, and housing directly affect skin health. Housing and job conditions can raise the risk and severity of skin disorders (Das and Roy, 2022; Shukla and Prasad, 2023). Education shapes both skin care and mental health. Here, we label housing, work, and education as structural factors, and hygiene and adherence as intermediary ones. This distinction clarifies how status relates to skin health and aligns with earlier findings.

Studies find women use dermatological care more than men (Johnson et al., 2022). People choose government or private care based on access, service, and cost (George and Mathew, 2022; Singh and Thomas, 2023).

Vitamin lack causes skin disorders (Vijay and Lakshmi, 2021; Mehra and Pillai, 2024; National Family

Health Survey, 2021). Diet can help or hurt skin (Mehra and Pillai, 2024). Poor hygiene increases the risk of skin disease (Joshi and Das, 2022). Chronic conditions harm quality of life and mental health, so comprehensive care is needed (Kumar and Rao, 2023; Sharma and Gupta, 2024).

Private and government clinics provide dermatological care in resource-limited settings (Kannan and Nair, 2023; George and Mathew, 2022; Indian Council of Medical Research, 2023). The literature notes the need for accessible, effective services. Kumbakonam, the second-largest town in Thanjavur district, is known as the rice bowl of Tamil Nadu and as a major temple center. The 2011 census records a population of 140,156, literacy at 83.21%, and a favorable sex ratio. The municipality spans 12.58 square kilometers across 45 wards. Cultural diversity and events like Mahamaham shape the context for research on socio-economic factors in skin disease management and healthcare access.

3. Study Area

Kumbakonam, in Thanjavur district, Tamil Nadu, is the district's second largest town (Figure 1). Known as the "rice bowl of Tamil Nadu" and a major temple town, it had a 2011 census population of 140,156, a high literacy rate of 83.21%, and a favorable sex ratio. The 12.58 sq. km town has 45 wards and is known for cultural diversity and the Mahamaham festival.

3.1 Aim and Objective

This study assesses how socio-economic and demographic factors shape local perceptions and management of skin diseases in Kumbakonam. It aims to inform policy development. Main factors examined include healthcare access, education, jobs, water and sanitation, income, living conditions, and nutrition. Their influence on treatment adherence, quality of life, and service use is also considered. The research objectives align with policy recommendations, including transport subsidies, outreach, and improved infrastructure. Targets include reducing travel distance to healthcare by 25 kilometers in three years and expanding educational campaigns by 30 percent over two years. The study also aims to improve access to water and sanitation for 50% of underserved households over 5 years. Study variables, research design, and intervention strategies are discussed. Residents are affected by various dermatological conditions.

To ensure comprehensive representation, participants were purposively selected from both rural and urban areas of Kumbakonam, encompassing diverse geographic and socio-economic backgrounds. The study employed stratified random sampling, first dividing Kumbakonam into rural and urban strata and then selecting participants proportionally from each area’s population. Within each stratum, households were randomly approached using predefined lists obtained from local administrative records. Eligibility criteria included: current residency in Kumbakonam and a clinical diagnosis of a skin condition confirmed by a medical professional. Individuals who were not residents or who had not received an official diagnosis of skin disease were excluded from participation. Recruitment took place through established healthcare facilities, outreach in community centres, and door-to-door invitations using trained field staff. Following recruitment, data were collected using structured surveys and face-to-face interviews administered by the study team.

These instruments covered demographic information, daily routines, occupational activities, dietary habits, and skincare practices. The data collection process also included identifying factors that facilitate or impede access to medical care. Chi-square tests were used to analyse relationships between variables, assessing the effects of income and education on treatment adherence and outcomes, while adjusting for potential confounders, including age, gender, and residential location.

3.2 Methodology

For our analysis, we used simple statistics to identify associations among factors such as income, education, and treatment frequency. The study specifically examined whether certain groups, such as those with lower income or lower levels of education, experienced greater difficulty managing their skin health. All participants provided informed consent, and confidentiality of personal information was maintained throughout the study. Their habits affect the prevalence of skin problems in Kumbakonam. We interviewed 600 people aged 16 to 81, most of whom were between 21 and 60, from diverse family backgrounds, occupations, and education levels (Singh et al., 2020). They included workers, farmers, business owners, and homemakers. Most lived in their own homes and ate a lot of non-vegetarian food.

Accessing medical care was challenging for many participants. More than half reported travelling more than 100 kilometres to consult a physician for skin conditions, a distance significantly greater than the state average in Tamil Nadu. (Anjaneyulu, 2024) Analysis of the sample's nutritional and weight status revealed that fewer than half of respondents maintained a healthy weight, while the remainder were classified as underweight, overweight, or obese (Prevalence of overweight and obesity and associated demographic and health factors in India: Findings from Comprehensive National Nutrition Survey (Sethi V et al, 2024). The distribution of respondents across these weight categories suggests a dual burden of malnutrition within the community.

4. Findings and Discussions

Underweight participants may be at increased risk for dermatological disorders related to micronutrient deficiencies, while overweight and obese individuals may experience skin issues linked to metabolic dysregulation and chronic inflammation (Figure 2). These findings are relevant to existing research, as both inadequate nutrition and abnormal body weight have been associated with impaired skin barrier function, increased susceptibility to infection, and delayed wound healing (Vadivel S et al., 2025). Thus, targeted interventions that address both undernutrition and overnutrition could benefit overall skin health and disease management in this population.

Many people have other health problems too, like diabetes, high blood pressure, allergies, thyroid issues, or even cancer (Figure 3). The most common skin problems were fungal infections, psoriasis, scabies, and dandruff. These issues may occur at certain times of year or year-round, often beginning with visible skin changes or pain.

Most participants sought treatment from allopathic physicians, although some utilised alternative medical systems. Common therapeutic modalities included topical creams, oral medications, and, in some cases, minor surgical procedures, with most treatments lasting less than 2 months. Frequently reported symptoms were itching, pain, swelling, and alterations in skin pigmentation, a minority experienced ulcers or blisters. Most respondents reported adherence to good hygiene practices. Despite the considerable travel and financial burden associated with seeking care, participants demonstrated strong health-seeking behaviour, often supported by family members. Perceptions regarding the etiology of skin conditions varied, with attributes to hygiene, dietary factors, stress, or sun exposure. Many individuals reported feelings of embarrassment or psychological distress related to their skin conditions, and some engaged in unhealthy behaviours such as smoking or inadequate sleep. Nevertheless, the majority expressed satisfaction with the treatment received.

4.1 Hypothesis: Annual Income

H_0: The family's annual income is not significantly associated with socio-economic status, personal hyg-

iene, and skin care treatment.

H_1: The family's annual income is significantly associated with socio-economic status, personal hygiene, and skin care treatment

Table 1 presents the results of correlation and chi-square tests between the family's annual income and several variables related to socio-economic status, personal hygiene, and skin care practices. According to the null hypothesis (H_o), there is no significant association between family income and these variables, while the alternative hypothesis (H_1) suggests a significant association.

The results in Table 1 indicate that all variables listed—such as number of family members, respondent's occupation and education, maintaining clean nails, overall cleanliness, adequate home ventilation, following physician's advice, and using medicated soap—show statistically significant correlations with annual income. This is evidenced by the Pearson correlation significance values, all of which are below 0.05 (with most at the 0.01 level), as well as the chi-square test values, which are also significant.

Thus, the data indicate that the family's annual income is significantly associated with socio-economic status markers and behaviors related to personal hygiene and skin care. The null hypothesis (H_o) is rejected, as the statistical evidence demonstrates meaningful associations between income and these factors.

4.2 Hypothesis: Respondent's Occupation

H_o: The occupation of the respondent does not have a significant relationship with educational status, types of food and houses, and skin disease with other health problems.

H_1: The occupation of the respondent has a significant relationship with educational status, Types of food and houses, and skin disease with other health problems.

The null hypothesis (H_o) posits that the respondent's occupation does not have a significant relationship with educational status, types of food and houses, or the presence of skin disease with other health problems. Conversely, the alternative hypothesis (H_1) suggests that occupation is significantly associated with these variables.

Table 2 provides statistical evidence to evaluate these hypotheses. The Pearson correlation significance values (Sig. (2-tailed)) for all listed variables—respondent's education (0.001), types of houses (0.001), types of food (0.004), and skin disease with other health problems (0.031)—are all below the conventional 0.05 threshold. This indicates statistically significant correlations between the respondent's occupation and each variable. Additionally, the chi-square test values for all variables are also significant (all reported as 0.001).

Based on these results, there is strong statistical support for rejecting the null hypothesis (H_o). The data clearly demonstrate that the respondent's occupation is significantly related to their educational status, the types of food they consume, the types of houses they live in, and the occurrence of skin disease alongside other health problems. Therefore, the findings support the alternative hypothesis (H_1).

4.3 Hypothesis: Respondent's Education

H_o: The education of the respondent does not have a significant affiliation with skin care management and psycho-social conditions.

H_1: The education of the respondent has a significant affiliation with skin care management and psycho-social conditions.

The null hypothesis (H_o) states that there is no significant association between respondents' education and their skin care management or psychosocial conditions. The alternative hypothesis (H_1) posits that education is significantly associated with these factors.

Table 3 provides statistical evidence to evaluate these hypotheses by presenting Pearson correlation coefficients, significance values (Sig. (2-tailed)), and chi-square test results for a range of variables related to skin care and psychosocial factors. For each variable, the significance values are compared against the conventional 0.05 threshold to determine if the relationship is statistically significant.

Skin Care Management: Most variables related to skin care management, such as type of skin disease (Sig. = 0.045), duration of suffering from skin disease (0.002), type of treatment (0.001), cleanness (0.003), following the physician's advice (0.001), taking medicine on time (0.001), using medicated soap (0.008), and the belief that uncleanliness causes skin disease (0.001), all have significance values below 0.05. This indicates significant associations between education and these aspects of skin care management.

Psycho-Social Conditions: Variables such as psychological distress due to skin disease (Sig. = 0.001), relatives/friends looking awkwardly (Sig. = 0.001), and the habit of bathing twice daily (Sig. = 0.001) also show significance values well below 0.05. This demonstrates that education is significantly related to these psycho-social factors.

Other Causes: Additional factors, such as the belief that skin disease is caused by tight clothing (0.018) or by the tartness of food (0.001), also show significant associations with education.

Therefore, since all the significance values for the variables listed in Table 3 are below the 0.05 threshold, there is strong evidence to reject the null hypothesis. The data support the conclusion that the respondent's education is significantly associated with both skin care management practices and psychological conditions. Therefore, the findings uphold the alternative hypothesis (H_1).

4.4 Hypothesis: Types of Houses

H_o: The respondent's living house does not have a significant link with types of food consumption, physiological problems, and skin disease.

H_1: The respondent's living house has a significant link with types of food consumption, physiological problems, and skin disease.

Table 4 presents the statistical associations between the type of living house and various variables, including food consumption types, physiological problems, and skin disease. The null hypothesis (Ho) claims there is no significant link between the respondent's living house and these factors, while the alternative hypothesis (H_1) asserts that such a significant link exists.

Upon examining Table 4, the significance values (Sig. (2-tailed)) for all listed variables—such as types of food, BMI, mouth ulcers, blisters, fatigue or body pain, hairless patches, family skin problems, vitamin deficiency, skin disease due to bathing soap, associated health issues, late bedtime, and satisfaction with treatment—are all below the conventional threshold of 0.05 (ranging from 0.001 to 0.047). This demonstrates statistically significant associations between the type of house and each variable.

Specifically, the low p-values indicate that the type of living house is significantly associated with the types of food consumed, various physiological health problems (such as ulcers, blisters, fatigue, and vitamin deficiencies), and the occurrence or perception of skin diseases. Therefore, the evidence strongly favours rejecting the null hypothesis in favour of the alternative hypothesis.

As a result, Table 4 supports the conclusion that the respondent's living house is significantly associated with food consumption patterns, physiological problems, and skin disease. This result upholds the alternative hypothesis (H_1).

4.5 Hypothesis: Consumption of Food

H_o: The consumption of food does not have positive or negative relationships with skin problems.

H_1: The consumption of food has positive and negative relationships with skin problems.

The hypothesis states: H_o: The consumption of food does not have positive or negative relationships with skin problems. H_1: The consumption of food has positive and negative relationships with skin problems.
Referring to Table 5, which presents the correlation and significance values between food consumption and various skin-related variables, we observe the following: For each variable listed (such as mouth ulcers, hairless patches, family skin problems, related health issues, bedtime habits, skin problems, treatment, feelings in affected areas, use of medicated soap, number of doctors consulted, and depression due to skin problems), the significance level (*Sig. (2-tailed)*) is consistently below 0.05. This indicates statistically significant associations between food consumption and all the variables shown.
Furthermore, the Pearson correlation coefficients in Table 5 reveal both positive and negative relationships. For example, "Ulcer in the mouth" and "Go to bed late at night" show positive correlations, while "Skin problem," "Treatment," "Feeling in the affected area of the skin," "Using medicated soap," "Number of doctors consulted," and "Depressed because of a skin problem" display negative correlations with food consumption.
Hence, the data in Table 5 support rejecting the null hypothesis (H_o) and accepting the alternative hypothesis (H_1). There are both positive and negative statistically significant relationships between food consumption and various skin problems, as evidenced by the correlation coefficients and their associated p-values.

4.6 Hypothesis: Skin Care Treatment

H_o: Skin care treatment does not have a bond with curative measures of skin care management.
H_1: Skin care treatment plays a pivotal role in the management of skin diseases.
The null hypothesis (H_o) posits that skin care treatment is not associated with curative measures in skin care management, whereas the alternative hypothesis (H_1) posits that skin care treatment plays a pivotal role in managing skin diseases.
Referring to Table 6: Correlated Variables with Skin Care Problems, we observe the following: Several curative and management-related variables, such as "Following the physician's advice," "Taking medicine on time," and "Use medicated soap suggested by a skin specialist," all exhibit positive Pearson correlation coefficients (0.21, 0.312, and 0.158, respectively) with highly significant p-values (Sig. (2-tailed) = 0.001** for each). This indicates strong, statistically significant associations between proper skin care treatments and improved management of skin problems.
Additionally, other variables such as "Ulcer in the mouth," "Feeling tired or in pain in the body," "Small patches without hair on the head," "Family members are having the same skin problem," and "Having a vitamin deficiency" show negative correlations. These negative coefficients suggest that as effective skin care treatments and adherence to medical advice increase, the prevalence or severity of these related issues tends to decrease. Importantly, all these variables also have significant p-values (all ≤ 0.005), reinforcing the reliability of these associations.
Thus, the evidence from Table 6 supports rejecting the null hypothesis. There is clear statistical support for the idea that skin care treatment is significantly linked to curative outcomes and effective management of skin diseases. Therefore, the alternative hypothesis (H_1) is accepted: skin care treatment plays a pivotal role in managing skin diseases.

4.7 Accessibility of Skin Care Providers

Respondents reported that many private and government hospitals provide skin care services in and around Kumbakonam town (Figure 4). Due to time constraints, the researcher visited only six private hospitals: K.S., S.T., Anbu, N.K., Nepolian, and Sugam, collecting information about the perception and

management of skin disease. Data revealed that 37.8%, 8.8%, and 53.4% of respondents travelled less than 50 km, between 51 and 100 km, and more than 101 km, respectively, to receive skin care treatment at these hospitals. Regarding gender, 47.5% of respondents were male, and 52.5% were female. (Warren Dodd, 2016; Sunita Bandewar, Shelley Saha, 2025)

This distribution presents an opportunity to explore if gender-specific travel burdens exist, potentially influenced by gender roles and safety concerns when accessing these services. Analyzing whether women face distinct challenges arising from societal expectations or safety concerns can inform gender-responsive policy recommendations. For instance, women may face constraints on caregiving duties, limiting their ability to travel long distances for healthcare. Safety concerns, especially late at night or in remote areas, could also deter women from seeking timely care. Developing policies to address these issues, such as providing childcare options at healthcare facilities or enhancing public transportation safety, can facilitate equitable access to services. A targeted investigation into the varied experiences of men and women in accessing healthcare can lead to more equitable strategies.

The findings demonstrate that income, occupation, education, housing, and dietary patterns significantly influence the management of skin diseases in Kumbakonam. Individuals with stable income, higher occupational status, or greater educational attainment are more likely to adhere to treatment regimens and maintain adequate hygiene, whereas those with lower income, less stable employment, or limited education encounter greater obstacles. Travel distance to healthcare facilities remains a substantial barrier, particularly for residents of remote or rural areas.

5. Conclusion

Improving access to dermatological care requires targeted policy interventions that directly address the study's key findings. Given the reported long travel distances faced by more than half of participants, transportation support or travel subsidies are necessary to mitigate geographic barriers to care for those seeking treatment. The finding that limited health literacy and culturally specific beliefs hinder prevention and management underscores the need for local health education initiatives tailored to community languages and traditions. The study shows that rural residents face limited access to healthcare; increasing clinic capacity or deploying mobile health units in remote areas can help reduce these disparities. Finally, the positive association between specialist collaboration and patient outcomes identified in the data highlights the importance of strengthening partnerships between local clinics and dermatology specialists to enhance the comprehensiveness and continuity of patient support. By prioritizing these strategies, policymakers and health planners can improve equitable access to dermatological care, regardless of individuals' geographic location or socioeconomic status.

6. Research Gap

Despite providing valuable insights into skin care service utilization and socio-economic factors in Kumbakonam, this study highlights several actionable research gaps. Priority areas include (1) gathering empirical data on transportation barriers faced by marginalized or rural populations—particularly the frequency, cost, and distance of travel for dermatological care; (2) quantifying the financial burden of treatment, such as direct expenses and the proportion of household income allocated to care; and (3) assessing the effectiveness and reach of information resources related to skin disease prevention and management. Addressing these gaps will guide targeted interventions and inform future research.

Additionally, although cultural beliefs and disease-related stigma are identified as influencing factors, the absence of psychometric instruments or qualitative measures for stigma and culturally shaped health attitudes represents a further limitation. To make the research gap more actionable, future studies should operationalize variables such as average out-of-pocket transport costs, the number of missed workdays due to travel, and access to educational resources. Another gap is the absence of longitudinal research that tracks variations in quality care, treatment adherence, and patient satisfaction over time within distinct socioeconomic or occupational groups; existing studies are primarily cross-sectional.

It is also essential to consider the generalizability of these findings to other regions or populations. The study's focus on Kumbakonam, with its unique socio-economic and cultural dynamics, may limit the broader applicability of the results. Factors such as regional economic conditions, cultural health practices, and infrastructure disparities could significantly influence healthcare access and skin disease management in other areas. As a result, although these insights are useful for local policy decisions, it's important to exercise caution when applying them to other contexts. Future research should include a wider range of geographic and demographic contexts to enhance the generalizability of these insights.

7. Future research and Implications

Future research should prioritize comprehensive, community-based studies that examine the unique barriers marginalized and rural populations face in accessing dermatological services, particularly those residing more than 100 kilometres from care centres. A mixed-methods study design, incorporating both quantitative surveys and qualitative interviews, would effectively capture the complex influences of socio-economic and cultural factors on treatment-seeking behaviours and thereby inform specific policy interventions. Longitudinal cohort studies could be valuable for tracking patient outcomes over time and for identifying shifts in healthcare utilization patterns resulting from policy changes. Integrating qualitative approaches is recommended to better understand the influence of cultural beliefs and awareness on treatment-seeking behaviours, ultimately supporting culturally responsive policy frameworks.

Additionally, systematic evaluation of the quality of care, patient satisfaction, and long-term outcomes across both public and private providers is essential not only for developing targeted interventions but also for generating evidence-based recommendations for service improvement. Collaboration between policymakers and healthcare providers is necessary to enhance outreach, health education, and infrastructure. Findings from future research should directly guide the design and implementation of equitable and effective skin care policies for all socioeconomic groups in the region. These efforts will contribute to a more inclusive and sustainable model of skin health management in Kumbakonam and comparable contexts, supporting the translation of research findings into impactful policy solutions.

Immediate actions should include conducting a thorough needs assessment to identify specific access barriers and cultural factors that affect skin health among marginalized communities. In the medium term, collaborative initiatives between policymakers and healthcare providers should be established to develop and implement community outreach and education programs. For long-term success, a continuous feedback loop is essential, incorporating patient satisfaction and treatment outcome evaluations to refine healthcare strategies and ensure sustained improvement in service accessibility and quality.

8. Ethical Issues and Standards

This study adhered to stringent ethical guidelines concerning research involving minors. Informed consent was obtained from parents or guardians, and participants provided assent after the study’s aims,

procedures, and potential risks were explained in Tamil to ensure a clear understanding. Participation was voluntary, and both guardians and respondents were informed about their right to withdraw at any time without penalty. Confidentiality and anonymity were maintained by removing identifying information and securely storing data accessible only to authorized personnel. Interviews and assessments respected participant privacy and cultural norms, particularly when discussing sensitive topics with female adolescents. To minimize psychological distress, the questionnaire was designed to be non-intrusive and administered by trained staff sensitive to participants' needs. The research protocol was approved by the Research Committee, Bharathidasan University, Tiruchirappalli, Tamil Nadu, India. Data were used strictly for academic and public health purposes, with results reported in aggregate to protect individual and community identities.

Ethics Approval

This study involved collecting primary data from respondents. Ethical clearance was obtained from individuals. Prior informed consent was obtained from the parents or guardians of all respondents.

Consent to Participate

Informed consent was obtained from the parents or legal guardians of all individual participants included in the study.

Consent for Publication

It is not applicable, as the manuscript does not contain any personally identifiable information or images.

Data Analyzed

The datasets generated and analyzed during the current study are available from the corresponding author upon reasonable request.

Details of the AI usage are given below:

We hereby declare that Grammarly software is used for checking the grammar and Plagiarism of this manuscript.

1. Grammarly Proofreader
2. Grammarly Plagiarism Checker

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Figure 1: Study Area: Kumbakonam Town

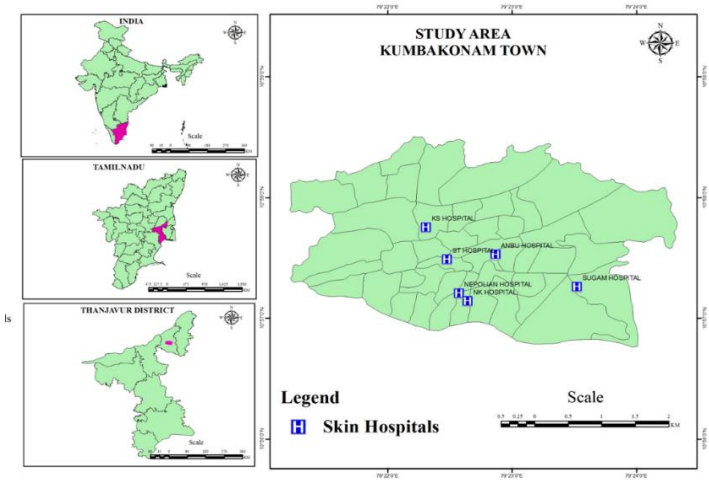

Figure 2: Body Mass Index

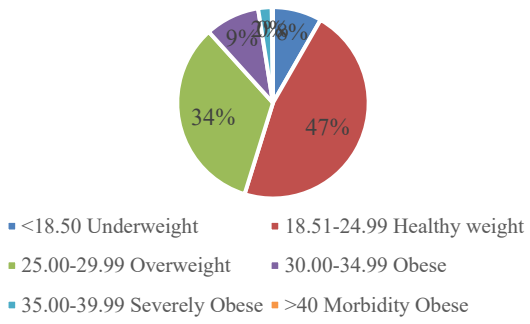

Figure 3: Other Health Problem

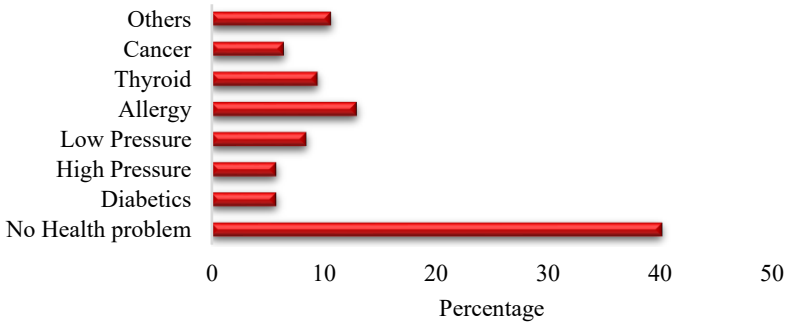

Figure 4: Skin Care Providers Kumbakonam Town

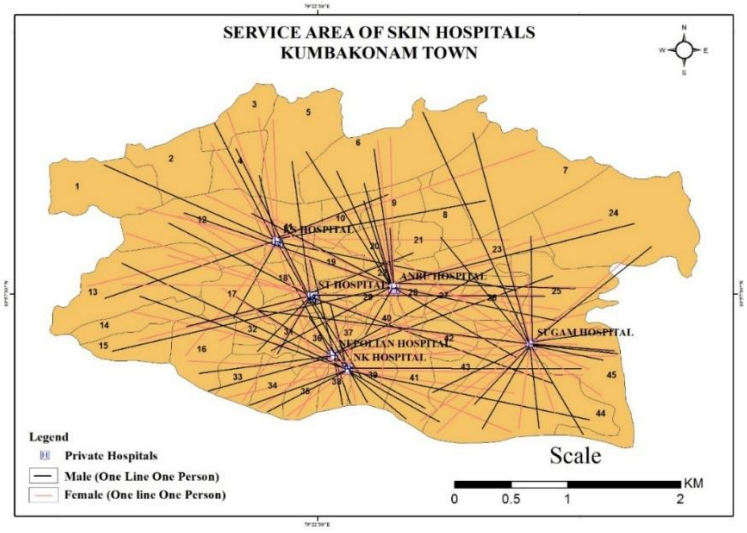

Table 1: Correlated Variables with Annual Income

S. No	Variable Name	Pearson Correlation	Sig. (2-tailed)	Chi-Square Tests
1	Number of family members	0.178	0.001**	0.001
2	Respondent's occupation	0.199	0.001**	0.001
3	Respondent's education	0.200	0.001**	0.001
4	Keep your nails clean	0.126	0.002**	0.046

5	Cleanness	0.134	0.001**	0.008
6	Enough ventilation in your home	0.087	0.033*	0.048
7	Following the physician's advice	0.127	0.002**	0.019
8	Using medicated soap, as suggested by a skin specialist	0.146	0.001**	0.001

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 2: Correlated Variables with Occupation

S. No	Variable Name	Pearson Correlation	Sig. (2-tailed)	Chi-Square Tests
1	Respondent's Education	0.200	0.001**	0.001
2	Types of Houses	0.215	0.001**	0.001
3	Types of Food	0.118	0.004**	0.001
4	The skin disease with other health problems	0.088	0.031*	0.001

Table 3: Correlated Variables with Education

S. No	Variable Name	Pearson Correlation	Sig. (2-tailed)	Chi-Square Tests
1	Type of skin disease(s)	0.082	0.045*	0.038
2	Duration of suffering from skin disease	0.129	0.002**	0.002
3	Type of Treatment	0.167	0.001**	0.001
4	Cleanness	0.121	0.003**	0.001
5	Following the physician's advice	0.144	0.001**	0.001
6	Taking medicine on time	0.187	0.001**	0.001
7	Using medicated soap	0.108	0.008**	0.001
8	The causes of skin disease are due to uncleanliness	0.182	0.001**	0.001
9	The causes of skin disease are due to tight clothing	0.097	0.018*	0.001
10	The causes of skin disease are because of tartness food	0.219	0.001**	0.001
11	Psychological distress due to skin disease	0.151	0.001**	0.001
12	Relatives/friends looking awkwardly	0.199	0.001**	0.001
13	Habit of bathing two times daily	0.156	0.001**	0.001

Table 4: Correlated Variables with Types of Houses

S. No	Variable Name	Pearson Correlation	Sig. (2-tailed)	Chi-Square Tests
1	Types of Food	0.265	0.001**	0.001
2	Body mass index (BMI)	0.103	0.012*	0.876
3	Ulcer in the mouth	0.228	0.001**	0.001
4	A blister between the finger and the armpit	0.088	0.032**	0.001

5	Feeling tired or having body pain	0.359	0.001**	0.001
6	Having small patches without hair on the head	0.327	0.001**	0.001
7	Having the same skin problems as my family members	0.552	0.047**	0.001
8	Having a vitamin deficiency	0.438	0.001**	0.001
9	The skin disease is because of bathing soap	0.258	0.001**	0.001
10	The dermatological condition is associated with additional health concerns.	0.519	0.001**	0.001
11	Go to bed late at night	0.473	0.001**	0.001
12	Satisfied with the present treatment	0.081	0.047*	0.001

Table 5: Correlated Variables with Consumption of Food

S. No	Variable Name	Pearson Correlation	Sig. (2-tailed)	Chi-Square Tests
1	Ulcer in the mouth	0.187	0.001**	0.001
2	Having small patches without hair on the head	0.108	0.008**	0.002
3	Having the same skin problems as my family members	0.288	0.001**	0.001
4	Skin diseases relate to other health problems	0.268	0.001**	0.001
5	Go to bed late at night	0.187	0.001**	0.001
6	Skin problem	-0.106	0.010**	0.016
7	Treatment	-0.237	0.001**	0.001
8	Feeling in the affected area of the skin	-0.117	0.004**	0.010
9	Using medicated soap	-0.236	0.001**	0.001
10	Number of doctors consulted	-0.129	0.001**	0.001
11	Depressed because of a skin problem	-0.148	0.001**	0.001

Table 6: Correlated Variables with Skin Care Problems

S. No	Variable Name	Pearson Correlation	Sig. (2-tailed)	Chi-Square Tests
1	Following the physician's advice	0.210	0.001**	0.462
2	Taking medicine on time	0.312	0.001**	0.029
3	Use medicated soap suggested by a skin specialist	0.158	0.001**	0.015
4	Ulcer in the mouth	-0.159	0.001**	0.136
5	Feeling tired or in pain in the body?	-0.202	0.001**	0.003
6	Small patches without hair on the head	-0.160	0.001**	0.149
7	Family members are having the same skin problem	-0.378	0.001**	0.001
8	Having a vitamin deficiency	-0.290	0.005**	0.303