International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

From Cultural Heritage to Consumer Trust: Examining the Influence of Localised Branding on Purchase Intention in the UAE Skincare Market

Ms. Srinidhi Srinivas Sayani

Student, School, Gems New Millennium School

Abstract

Skin concerns in the United Arab Emirates are often explained through everyday exposure to water, heat, sweating and movement between indoor and outdoor environments. This paper examines those explanations through published dermatological evidence, official water information and a descriptive reanalysis of an existing consumer survey. Its central question is whether concern about environmental exposure corresponds to demonstrated skin effects, and how the distinction should inform consumer education and the UAE skin care market.

The survey contains 77 responses overall, with 76 answers to the water awareness question and 75 to the treatment question. Frequent or occasional breakouts were reported by 78.0% of respondents, while 89.6% reported at least some perceived difference between air conditioned indoors and hot outdoors. Among those answering the water question, 60.5% believed their household water was hard and affected their skin or hair. These results indicate consumer concern, not measured exposure or clinical causation.

Two published studies provide complementary case studies: a controlled investigation of water hardness and detergent deposition, and a randomised trial of domestic water softeners for childhood eczema. Together, they show why a plausible mechanism should not be confused with a demonstrated treatment benefit. The paper concludes that the UAE market presents a need for clearer information, comfortable daily routines and trustworthy advice. It does not establish that hard water causes acne in the UAE or that all local tap water is hard. Recommendations focus on better measurement, transparent communication and stronger local research.

Introduction

For people living in the UAE, skin care takes place within a distinctive daily setting: outdoor heat, indoor cooling, sun protection and repeated washing. Consumers may associate a change in skin comfort or appearance with these conditions, particularly after relocation or a change in routine. Such experiences deserve investigation, but an apparent timing relationship does not establish which exposure caused the change. Age, existing skin conditions, washing habits and treatment history may also be relevant.

The present study approaches the subject as both a scientific and a consumer research question. The scientific question concerns what hard water can do under specified conditions. The consumer question concerns what residents experience, believe and seek when choosing skin care. These questions overlap, but their evidence requirements differ. A survey can describe dissatisfaction and beliefs; it cannot measure

water chemistry or diagnose a skin disorder unless those additional assessments are built into its design. Acne also needs to be distinguished from irritation and eczema. The National Institute of Arthritis and Musculoskeletal and Skin Diseases describes acne as an inflammatory condition involving follicles, sebum and accumulated skin cells [1]. A study measuring detergent residue or skin barrier function therefore does not automatically establish an effect on acne. The distinction is particularly important here because the source survey asks about acne and breakouts, while much of the water hardness literature concerns atopic dermatitis.

ENVIRONMENTAL SKIN RESEARCH United Arab Emirates

Research Objectives

1. Examine the evidence linking water hardness with skin barrier effects and distinguish it from evidence about acne.
2. Assess the relevance and limits of official water information for interpreting household experiences in the UAE.
3. Describe the survey's reported concerns, environmental perceptions, treatment habits and decision priorities. 4. Compare two published studies to understand the difference between mechanisms and clinical outcomes.
4. Identify implications for consumer information, market research and future local studies without referring to any proposed brand or formulation.

Literature Review

Water Hardness and the Skin Barrier

Hardness primarily reflects dissolved calcium and magnesium and is commonly expressed as milligrams per litre of calcium carbonate equivalent. The US Geological Survey classifies 0 to 60 mg/L as soft, 61 to 120 as moderately hard, 121 to 180 as hard and values above 180 as very hard [2]. These are chemical categories, rather than categories of skin disease. Hardness is also distinct from total dissolved solids or disinfectant concentration.

The relevant dermatological literature examines interactions among water chemistry, cleansing agents and individual skin susceptibility. This is more specific than the general claim that minerals simply block pores. A useful framework distinguishes exposure, a possible biological mechanism and an observable health outcome. Each link requires its own evidence; proof of one does not establish the entire chain.

Clinical Outcomes and the Limits of Extrapolation

A systematic review by Jabbar Lopez and colleagues included 16 studies. Its pooled observational evidence associated harder water with higher odds of childhood atopic eczema, but the certainty of that association was rated very low. Trials of water softening did not demonstrate improved objective severity of established eczema [3]. The distinction between developing a condition and treating an existing condition is therefore essential. Neither question is equivalent to whether water hardness causes acne among young UAE residents.

Acne, Daily Routines and Sun Protection

American Academy of Dermatology guidance emphasises gentle skin care and warns that repeated washing, scrubbing and irritation can worsen acne [4]. Its sunscreen guidance recommends options labelled noncomedogenic or as not clogging pores for people with acne prone skin [5]. These recommendations support examining tolerability and routines, rather than treating sunscreen use itself as

proof of a harmful exposure. Sun protection should remain part of the discussion when interpreting concerns about breakouts.

Gaps Addressed by This Paper

The supplied survey combines consumer beliefs with questions about routine and visible concerns, but it contains no household hardness measurements or clinical assessments. This paper addresses that gap at the level of interpretation by separating what was reported from what can be concluded. It does not claim to fill the empirical gap through new fieldwork. Instead, it identifies the measurements needed for a future UAE study.

ENVIRONMENTAL SKIN RESEARCH United Arab Emirates

Research Methodology

Research Approach

The study uses a descriptive secondary analysis of an existing student survey alongside a targeted literature review. The survey was supplied within an earlier marketing project and is treated as unpublished source material [8]. Published experimental and clinical studies provide comparative evidence. This is not a clinical trial, a systematic review or a new representative survey of the UAE population.

Sources were selected for direct relevance: official water specifications for local context, dermatology research for biological and clinical questions, and professional guidance for routine and sun protection. The review was completed on 4 November 2026. It was designed to answer the paper's research questions rather than exhaustively catalogue every study on water and skin.

Data Sources and Verification

The original survey charts were inspected alongside their written interpretation. Where the accompanying narrative conflicted with the charts, the chart labels and response totals were prioritised. The overall sample was 77, but item nonresponse reduced the water question to 76 and the treatment question to 75. Percentages are reported to one decimal place where possible. Counts are reconstructed where the displayed percentages and denominator identify an unambiguous whole number.

Several checks materially change the interpretation. The breakout chart shows 16.9% reporting rare breakouts, leaving 5.2% reporting none, rather than the 6.5% stated in the narrative. For perceived indoor versus outdoor effects, 69 of 77 responses correspond to 89.6%; adding the two individually rounded chart labels produces 89.7%. The residence chart also indicates approximately 94.8% in categories of two years or more, rather than the narrative's 82%.

Analytical Framework

Descriptive analysis: report distributions and clearly retain the denominator for each question.

Evidence comparison: distinguish self reported experience, belief about water, measured chemistry and clinically assessed outcomes.

Case study analysis: compare a controlled mechanism study with a trial of a household intervention.

Market interpretation: identify questions about need, trust and access without converting a small survey into a national revenue estimate.

Limitations and Ethical Considerations

Recruitment methods, survey dates, consent procedures and individual response records were not supplied. The sample is strongly concentrated among adolescents, so findings cannot be generalised to all UAE residents. Responses may also reflect recall, existing beliefs and the wording or order of questions. No association between variables can be calculated because linked individual responses are unavailable. For

the same reason, no correlation, chi square test or causal estimate is reported.

The analysis uses aggregate information only. Any future study involving minors should establish appropriate consent and assent arrangements before recruitment and protect identifiable information. Existing observations are reported as survey findings rather than diagnoses. The earlier project's anecdotes are not treated as independently verified case histories.

The UAE Water and Environmental Context

Measured Water Quality

DEWA's Sustainability Report 2025 gives a Jebel Ali potable water hardness specification of 40 to 120 mg/L and a typical value of 60.7 mg/L [6]. The typical figure is around the soft to moderately hard boundary. It does not support describing all Dubai tap water as very hard. Nor can a figure for one supply system establish household exposure throughout Abu Dhabi, Sharjah or the rest of the UAE.

The UAE Government identifies desalination as a major part of national water supply [7]. However, the origin of the water does not establish its hardness at the point of use. The appropriate research approach is to measure the water actually used for washing and document location, sampling date and any treatment. A supply specification and a household test answer related but different questions.

Heat, Sweating and Indoor Cooling

The project raises an important question about changes in perceived skin condition between indoor and outdoor settings. However, its survey does not specify whether respondents mean oiliness, dryness, redness, discomfort or acne. It also does not record humidity, temperature, exposure duration or clinical barrier measures. Those omissions prevent the observed answers from proving a particular mechanism such as barrier disruption from cooling transitions.

Sweating and sports likewise combine multiple exposures: friction, clothing, cleansing after exercise, time outdoors and personal routines. The questionnaire records a perceived pattern rather than isolating any of them. A future investigation should collect these details separately so that a report of discomfort after exercise is not automatically attributed to sweat or water chemistry.

Survey Findings and Consumer Needs

Sample Profile and Reported Breakouts

Among 77 respondents, 60 were aged 15 to 18, corresponding to 77.9%, and 14 were aged 19 to 25, corresponding to 18.2%. The remaining three respondents were in the other age categories. This makes the survey most useful as an exploratory account of a predominantly adolescent group. It is not a balanced cross section of the UAE skin care market.

Frequent breakouts were reported by 29 respondents, or 37.7%, and occasional breakouts by 31, or 40.3%. Thirteen respondents reported rare breakouts and four reported none. Thus, 60 of 77, or 78.0%, reported frequent or occasional concerns. The question measures frequency in ordinary language and does not establish acne severity, duration or diagnosis.

Forty one respondents, or 53.2%, selected residence of ten years or more. The other displayed categories were two to five years at 29.9%, five to ten years at 11.7%, and less than one year at approximately 5.2%. The labels leave an apparent gap for one to two years and ambiguous boundaries at five and ten years. These design weaknesses should be corrected before the survey is repeated. Long residence also does not prove sustained exposure to hard water.

Perceived Environmental Effects and Routine

Thirty seven respondents, or 48.1%, reported a very noticeable difference between indoor cooling and outdoor heat, while 32, or 41.6%, reported some difference. Taken together, 69 respondents noticed an effect, equivalent to 89.6% of the sample. The result identifies perceived environmental sensitivity, but the direction and type of skin change remain unspecified.

For sunscreen, 23 respondents reported daily use and 24 reported use a few times a week, corresponding to 29.9% and 31.2%. Eleven selected use only at the beach or pool and 19 selected rarely or never. These answers describe behaviour. They do not measure residue, pore obstruction, protection achieved or the composition of anything applied.

When asked when breakouts were most noticeable, 35 respondents, or 45.5%, selected no clear pattern; 24, or 31.2%, selected heavy sweating or sports; and 12, or 15.6%, selected sunscreen or makeup. The remaining six selected swimming. No clear pattern was the largest response category, but it was not a majority. It does not prove that a combination of environmental causes must be responsible.

Water Awareness and Existing Treatment Habits

The water question had 76 responses. Forty six, or 60.5%, believed their water was hard and affected their skin or hair. Twelve, or 15.8%, believed it was hard but had noticed no effect. Ten, or 13.2%, did not know what the term meant, and eight, or 10.5%, believed their water was not hard. The combined reference to skin and hair prevents the 60.5% figure from being interpreted as a skin specific outcome. No testing verified these classifications.

The treatment question had 75 responses. Twenty nine, or 38.7%, selected pharmacy or drugstore care; 21, or 28.0%, selected dermatologist prescribed treatment; 17, or 22.7%, selected natural or home remedies; and eight, or 10.7%, selected no treatment. A selection of prescribed treatment does not necessarily indicate a current clinic visit. The question also provides no information about spending, adherence or effectiveness.

Decision Priorities and Market Interpretation

Trusted recommendations were selected as the most important decision factor by 26 of 77 respondents, or 33.8%. Fast visible results were selected by 24, or 31.2%, and natural or clean ingredients by 22, or 28.6%. The remaining five selected price, corresponding to approximately 6.5%; the written project gives 6.4%, which should be treated as a rounding or transcription discrepancy.

These results suggest that credibility and expectations of effectiveness deserve attention in further market research. They do not establish that price is unimportant, that respondents can afford any particular amount, or that natural ingredients are safer. Asking for one most important factor also obscures tradeoffs: the same person may value advice, comfort and affordability simultaneously. The appropriate next step is to test those tradeoffs directly.

Case Study 1: Water Hardness and Detergent Deposition

Background and Study Design

Danby and colleagues studied 80 participants, including healthy controls and people with atopic dermatitis, with and without relevant filaggrin gene mutations. Test sites were washed with sodium lauryl sulfate in water of different hardness and chlorine concentrations, followed by assessment of residue and skin effects [9].

Findings and Interpretation

Hard water increased detergent deposition and associated irritation and water loss, especially in

susceptible participants. Softening reduced these effects under the experimental conditions; a clear chlorine effect was not observed. This supports a specific interaction between wash water and a cleansing agent. It does not show that all cleansers behave identically or that minerals cause acne by directly obstructing pores.

Relevance to the UAE

The study helps define variables for local research: water hardness, cleansing exposure and baseline susceptibility. It was not a UAE population survey and did not test acne outcomes. Its findings should therefore inform hypotheses and study design rather than establish the cause of the supplied respondents' breakouts.

Case Study 2: Household Water Softening and Childhood Eczema

Background and Study Design

Thomas and colleagues conducted a randomised trial involving 336 children with moderate or severe eczema in hard water areas. They compared installation of a domestic water softener plus usual care with usual care alone. Trained assessors who did not know treatment allocation evaluated eczema severity after 12 weeks [10].

Findings and Interpretation

The trial found no significant additional benefit in its main objective severity outcome. Both groups improved, and the difference between them was not statistically significant. Some parent reported secondary outcomes favoured the intervention, but the investigators noted that awareness of allocation could affect these reports. The trial therefore did not support an assumption that changing water hardness would improve established eczema.

Relevance to Consumer Decisions

This case illustrates the difference between changing an exposure and improving a health outcome. It does not resolve questions about preventing eczema or treating acne. It does show why a household intervention should be evaluated against the specific benefit claimed rather than assumed to work because a mechanism is plausible.

Comparative Insights

The two case studies examine different endpoints. One investigates controlled interactions at skin test sites; the other evaluates a clinical outcome during ordinary care. Their findings should not be simplified into a claim that one proves and the other disproves every water effect. Together, they show that evidence must match the question being asked.

The UAE survey adds a third type of evidence: consumer perception. A respondent can accurately report discomfort without accurately identifying its cause. Equally, uncertainty about cause does not make the concern unimportant. Combining respectful interpretation of experience with objective measurement offers a stronger research foundation than either dismissing the concern or accepting its explanation without testing.

Consumer Education and Market Responses

Clearer Communication

Information should distinguish acne, dryness, irritation and eczema, and explain what a water measurement can and cannot show. Terms such as hard water should refer to a measured property where possible. Explanations should also avoid presenting the UAE climate as a universal cause or suggesting

that consumers are responsible for persistent skin problems because they have failed to identify one environmental trigger.

Trust, Affordability and Practical Needs

The survey indicates interest in trusted advice and visible improvement, but it does not measure the balance between these priorities and cost. Further interviews could examine what makes advice credible, how respondents judge improvement and what they can sustainably spend. Simple routines, clear expectations and explanations of tolerability are plausible areas of value to investigate, rather than proven preferences across the whole market.

No national market size is calculated. Such an estimate would require a clearly defined category, representative buyer numbers and reliable annual expenditure. The present percentages cannot be multiplied by the UAE population to produce either a clinical prevalence or a revenue opportunity. Existing treatment behaviour indicates engagement with a concern, not a verified amount of purchasing demand

Evaluation of Future Responses

Future research should assess whether educational information improves understanding, whether practical routines are acceptable and whether measured outcomes change. Satisfaction, skin comfort and clinical severity should remain separate endpoints. A change in confidence after receiving advice is valuable to document, but it should not be reported as proof that a disease has improved.

Conclusion

The supplied survey identifies frequent concerns about breakouts among a predominantly adolescent sample and substantial interest in environmental explanations. It also shows widespread perception of differences between indoor and outdoor settings and a preference for trusted recommendations. These findings support further investigation of consumer needs in the UAE, while leaving the underlying causes unresolved.

The scientific evidence requires a narrower interpretation than the original project's environmental narrative. Water chemistry can interact with cleansing conditions and skin susceptibility, but this does not establish that hard water is a general cause of acne. Official Dubai supply information also challenges the assumption that all local water is highly hard. Household testing and clearer clinical definitions are needed before linking exposure to a particular respondent's condition.

Key Findings

Reported concerns were common in this sample, but the survey does not establish national prevalence or severity.

Water awareness was self reported and combined skin with hair, limiting skin specific interpretation.

Item response totals and chart values must be retained rather than applying a denominator of 77 to every question.

Mechanistic evidence and clinical intervention evidence answer different questions and should be evaluated separately.

Trust and perceived results were prominent priorities, but price sensitivity and actual expenditure remain unknown.

Recommendations

1. Measure household hardness and document sampling conditions before classifying individual

exposure. 2. Separate acne, irritation, dryness and eczema in future questionnaires and outcome assessments.

2. Recruit across age groups and emirates, disclose sampling methods and retain individual response records securely.
3. Record cleansing routines, treatment history, sun protection and relevant environmental exposures as separate variables.
4. Evaluate consumer understanding and clinical outcomes independently, with appropriate professional oversight for clinical research.

The most defensible opportunity is to improve the fit between what people experience, what evidence can explain and what information they receive. A credible response to UAE skin concerns begins with careful measurement and realistic expectations, rather than an assumption that the environment alone explains every breakout.

Bibliography

Academic Studies

1. Jabbar Lopez, Z. K., et al. (2021). The effect of water hardness on atopic eczema, skin barrier function: A systematic review, meta analysis. Clinical and Experimental Allergy. Access source.Reposition after Washing and Subsequent Skin Irritation in Atopic Dermatitis Patients and Healthy Control Subjects. Journal of Investigative Dermatology, 138(1), 68 to 77. Access source.
2. Thomas, K. S., et al. (2011). A randomised controlled trial of ion exchange water softeners for the treatment of eczema in children. PLoS Medicine, 8(2), e1000395. Access source.

Official and Professional Sources

1. National Institute of Arthritis and Musculoskeletal and Skin Diseases. Acne. Access source. [2] U.S. Geological Survey. Hardness of Water. Access source.
2. American Academy of Dermatology. 10 skin care habits that can worsen acne. Access source. [5] American Academy of Dermatology. How do I know if I am using the right sunscreen? Access source.
3. Dubai Electricity and Water Authority. Sustainability Report 2025. Jebel Ali potable water specification. Access source.
4. United Arab Emirates Government. Water. Access source.

Survey Data

1. Sayani, S. Unpublished Class 12 consumer survey on skin concerns and routines in the UAE. Charts reproduced in the supplied project, pages 21 to 24; 77 responses overall, with item totals of 76 and 75 where stated. Date of fieldwork not supplied. Reanalysed from aggregate charts; individual records unavailable.
2. Online references accessed 4 November 2026. This paper is a research manuscript and does not claim journal publication.
3. Research manuscript November 2026 8