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Exploring the quality of life of cosmetic users: A cross-sectional analysis from eight Arab countries in the Middle East

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Abstract

Background: The use of cosmetic products is growing in dominance in the Arab population, making it essential to measure its effects on users. The production of cosmetics has been largely driven by consumerism and a bid to keep abreast with the latest trends in the beauty industry with less attention on how the users' quality of life (QoL) is affected.

Aims: This study aims to investigate the effect of cosmetic products on users' quality of life in eight Arab countries.

Methods: A cross-sectional study was carried out using an online data collection approach. A validated and specialist instrument tool called BeautyQoL, which consists of five domains and a total of 52 questions, was distributed to a sample of 2219

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cosmetic users. Descriptive and inferential statistical analysis was done using SPSS® version 26.0.

Results: The mean age of participants was 34 ± 11.25 years, and more women were represented in the sample (71%) than men. The majority of respondents had oily skin type (39.6%) and tan skin tone (30.4%). QoL through cosmetic use is computed with a mean score of 51 out of 100. The users' mean score satisfaction from cosmetic use is centred on attractiveness (56.1), followed by self-confidence (51.8). Cosmetics have a statistically significant effect on participants who are young adults, women, single, and employed with high income. As the respondents' skin tone deepens from very fair to dark, the mean score for each domain significantly increases, whereas when skin type changes from very oily to dry, the mean score for each domain decreases.

Conclusion: The effect of cosmetics on the users' QoL is limited, contrary to the narrative commonly portrayed in cosmetics' advertisements. Therefore, the use of cosmetics among the Arab population should be from an informed perspective of their specific needs instead of conforming to the viral trends pedaled by influencers and bloggers on social media, which might be irrelevant for them.

KEYWORDS
Arab population, cosmetic products, cosmetic users, quality of life

1 | INTRODUCTION

Quality of life is described as the degree to which an individual is happy, healthy, and able to participate in pleasurable life events.[1] While the quality of life may encompass different elements such as energy, self-confidence and mood, the universal concept is that it refers to the wellbeing of an individual. The concept of quality of life is subjective, and individuals resort to several activities and practices which they deem appropriate and relevant in improving their quality of life.[2] The usage of cosmetics has been a major contributing factor in improving an individual's quality of life.[3] The use of cosmetics traces back to Ancient Egypt, where men and women typically used makeup to improve their appearance. Over the years, the use of cosmetics has widened its reach, and cosmetics are more readily accessible.[4] Cosmetic products are defined as any substance or mixture that is purposed to make contact with the human body to perform various functions, including cleaning, perfuming, changing their appearance, correcting any misalignments, and protecting them from damage from external elements.[5] A previous literature study documented that if the main purpose of a product is not among the aforementioned functions; the product is most unlikely regarded as a cosmetic. Considering the functional purposes of cosmetics, it is also necessary to consider the effects which they have on the users' overall wellbeing and quality of life[6] .

Arab countries in the Middle East region are currently one of the fastest-growing beauty markets, with increased consumption of cosmetics.[7] Among the various cosmetics used, the top three highest selling cosmetics are perfumes, makeup and targeted skincare products.[8] The use of cosmetics has been a key determinant in improving consumers' quality of life in five distinct domains: social life,

mood, attractiveness, energy, and self-confidence.[9] When users are satisfied with the cosmetics they use, they are inclined to feel more attractive. Their self-confidence would be increased as they would be less burdened with flaws in their appearance, which the cosmetics would have corrected. When users manage to use cosmetics that address their specific needs, their mood would be uplifted as they enjoy the satisfaction of witnessing value for money. Their energy levels would also be regulated as they would be keen to interact with people and engage in social activities without hesitation.[10] Cosmetic marketing campaigns also pedal this narrative, strategically communicating with the audience that their products will improve the users' quality of life; thus, they should buy them.[11] As much as the marketing campaigns are informative and compelling for users to buy the advertised cosmetics, it is also essential to substantiate these claims.

The production of cosmetics is majorly driven by consumerism, which is the protection or promotion of the interests of consumers and the bid to implement the latest innovation and technology in the beauty industry.[12] Less attention is paid to cosmetics's effects on the users, especially effects on their quality of life and overall wellbeing. Without probing into the effects that cosmetics have on users, it would present a one-sided industry bordering on the lines of profiteering.[13] Therefore, this study would offer insight into the effects of cosmetic use on the users' quality of life; through collection and analysis of the responses presented by the participants. It would also reflect the extent to which cosmetics use is important to users, reflecting whether they are of greater or less importance. This is essential because understanding consumer behavior and their perceptions of offered products and services is key to understand how better to serve the markets.[14] Thus, the present study aims to determine mainly the effect of cosmetics on users' quality of life

among the Arab population in eight Middle Eastern Arab countries and evaluate the difference between the participants' demographic data and the five domains of QoL.

2 | METHODS

2.1 | Study design and population

This quantitative cross-sectional study utilizes an online data collection approach. It was conducted in eight Arab countries in the Middle East, including Iraq, Kuwait, Qatar, Oman, Palestine, Lebanon, Jordan, and Saudi Arabia. The study was carried out for six months, from June 2021 to November 2021. The sample size was based on the assumption that the proportion of response to most of the main questions is 50%, as both responses and response rates were utterly unknown due to the fact there are no previous similar studies from Arab countries in the Middle East. Therefore, it was determined based on a previous literature international study where at least 200 responses from each country are required.[15] The recruited participants were i) adults aged ≥18 years old; ii) currently using any kind of cosmetics such as skincare, lotions, perfumes, lipsticks, nail polish, eye and face makeup, colored contact lenses, hair dyes, hairspray, gels, deodorants, and others. In contrast, people who were unwilling or hesitant to participate in this study, having cognitive impairment such as unable to think, read and pay attention, and working or studying in the cosmetic field, were excluded from participation. The recruited participants were selected from a various regions in each of the eight countries to increase the findings' generalizability. .

2.2 | Measurement instrument and translation procedure

A literature review of similar previous studies was conducted to identify potential items for the study instrument. Based on the literature search, the instrument tool used in this study is a pretested questionnaire called BeautyQoL (Appendix S1). This questionnaire is a new quality-of-life (QoL) instrument with international validity that was explicitly designed to assess cosmetic products and physical appearance.[15] Authority to adapt it was granted from the original developer and tailored to suit the Arab population and assure its applicability.[15] The questionnaire consists of 10 items to assess sociodemographic characteristics of the sample population and 42 items to determine the QoL of cosmetic users. Six standardized scales (completely, a great deal, somewhat, not much, not at all, and it is worse) was used to gather data including five domains as follows: social life scale (16 items), self-confidence scale (9 items), mood scale (8 items), energy scale (4 items), and attractiveness scale (5 items).

The original questionnaire was in English, and it was then translated into Arabic and subjected to a process of forward and backward translation according to the Professional Society for Health Economics and Outcomes Research (ISPOR) guideline.[16] The forward translation was done by a professional translator who had

sector-specific knowledge and experience in translating surveys, whereby his mother tongue was Arabic. Once authors received the first translation, they sent the local language (Arabic version) to a different translator whose mother tongue was English to translate the questionnaire back to the original language (English version). The authors ensured that the back translator had no professional or personal relation to the first translator. Then, the reconciliation process was done by comparing the original questionnaire to the back-translated questionnaire. In this stage, authors highlighted discrepancies and categorized them as either minor (such as wording issues) or significant (such as changes in the meaning of a question). Finally, the accuracy and meaning of the translated versions were double-checked by two experts, and recommended amendments were discussed before the survey was finalized. The authors had a meeting with the two translators to discuss all discrepancies and agree on a final translation. During the meeting, one of the co-authors kept track of all questions, and any concern on the content was noted. The questionnaire was pretested for content, design, readability, and comprehension on 20 individuals. The modification was made; so that the questionnaire was simple to understand and could provide more accurate data. The validity and reliability had been checked by conducting a pilot study on 30 cosmetic users. Cronbach's alpha values for the reliability and internal consistency were 0.96 and 0.94, respectively.

2.3 | Data collection procedure

Questionnaire items were created as an online survey using a data collection software named SurveyMonkey®.[17] A non-probability convenience sampling technique, which is a technique that includes all subjects who are available to be selected by a researcher in order to make the sample a better representation of the entire population, was adopted to distribute the survey link among the targeted population by the researcher from each Arab country. An official invitation for participation was sent to a total of 2700 eligible Arab cosmetic users However, only 2219 participants agreed to participate and complete answering all the items in the survey (response rate = 82%). Social media apps such as Facebook®, Instagram®, and Twitter®; and messaging applications such as WhatsApp®, WeChat®, and Telegram® were utilized to disseminate the questionnaire. Basic information about the study and the letter seeking participants' consent was contained on the introductory page of the online form. All the data collected was kept private and confidential and were to be used only for academic purposes. Follow-ups were sent to participants on a weekly basis to remind them to complete the survey.

2.4 | Scoring procedure and statistical analysis

The scoring procedure of the BeautyQoL instrument had three levels of extensive analyses. Level 1 consisted of a descriptive analysis on a question-by-question basis. Level 2 consisted of classic "algorithmic

scoring" that led to 1 score per dimension (profile) and one overall score (index). The scoring procedure was based on the mean score per dimension linearly transformed to a scale of 0 to 100, with 100 indicating the best possible level of QoL and 0 indicating the worst. In addition, a global index score was computed as the mean of the dimension scores. Negatively worded item scores were also reversed so that higher scores indicated a higher level of QoL.[15]

Responses collected from the questionnaires were encoded and analyzed using IBM Statistical Package for the Social Sciences (SPSS®) software version 26.0. Incomplete responses were filtered using a built-in function from SurveyMonkey® software. Relative and absolute frequencies and percentages were provided for categorical variables and means, and standard deviations (SD) were provided for numerical data. Kolmogorov–Smirnov test value was statistically significant, indicating that the data is not normally distributed. Thus, for the statistical part, the Kruskal–Wallis test and Mann–Whitney U test were used to determine the difference between independent variables (demographic data) and dependent variables (five domains of the BeautyQoL). In addition, Pearson or Spearman correlation coefficient was used to study the linear relationship between two quantitative variables. Results were considered significant when the p-value was less than 0.05.

3 | RESULTS

3.1 | Demographic characteristics

Among the Arab cosmetic users who participated in the survey, Iraq was the country that had the most respondents (28.60%), and Palestine had the least respondents (5.63%). The mean age of participants was 34.48±11.25, and the majority of the respondents were female (71.38%) and single (52.63). In terms of education and employment, more than two-third of the respondents had reached the tertiary level of education (70.94%) and earned a medium income (43.76%). Predominantly, 80.40% of the respondents live in the urban area. The respondents of the survey mainly had oily skin type (39.61%) and tan skin tone (30.42%), which was closely followed by normal skin type (31.19%) and fair skin tone (28.48%). The demographic information of the respondents of this study is presented in Table 1.

3.2 | Quality of life and its five BeautyQoL domains

The users reported the use of cosmetics having a favorable effect on the various domains of their QoL. Table 2 reported that there is a statistically significant difference between the mean of cosmetic users' QoL domains and the study population of each selected country. The effect of cosmetics on the users' social life mean score is statistically the highest among the respondents from Kuwait (58.2), while it is the least among the respondents from Palestine (35.4). Lebanese respondents reported the highest effect on their self-confidence

TABLE 1 Demographic characteristics of participants

Characteristics (N = 2219)	Number of Subjects (%)
Country	
Iraq	635 (28.60)
Jordan	215 (9.69)
Kuwait	133 (5.99)
Oman	259 (11.69)
Lebanon	234 (10.55)
Palestine	125 (5.63)
Qatar	204 (9.19)
Saudi Arabia	414 (18.66)
Age Group (Mean±SD)	34.48±11.25
18–35 Years	1342 (60.48)
36–55 Years	679 (30.60)
≥56 Years	198 (8.92)
Gender	
Female	1584 (71.38)
Male	635 (28.62)
Marital status	
Single	1168 (52.63)
Married	715 (32.22)
Others (e.g., Widow, Divorce, etc)	336 (15.15)
Education level	
Primary education	183 (8.24)
Secondary education	462 (20.82)
Tertiary education	1574 (70.94)
Employment status	
Employed	792 (35.69)
Student	1042 (46.96)
Unemployed	243 (10.95)
Retired	142 (6.40)
Monthly income	
Acceptable	934 (42.09)
Medium	971 (43.76)
High	314 (14.15)
Type of residence	
Urban	1748 (80.40)
Rural	471 (19.60)
Skin type	
Very Oily	212 (9.55)
Oily	879 (39.61)
Normal	692 (31.19)
Dry	436 (19.65)
Skin tone	
Very fair	187 (8.43)
Fair	632 (28.48)
Medium	519 (23.29)
Tan	675 (30.42)
Dark	206 (9.38)

TABLE 2 Mean score of the five BeautyQoL domains of sample size from each participating country

| Country | BeautyQoL Domains | | | | |
| | Mean Score | | | | |
	Social Life[a]	Self-Confidence[a]	Mood[a]	Energy[a]	Attractiveness[a]
Iraq	54.5	51.7	52.1	63.9	57.4
Jordan	49.1	43.3	52.7	43.5	54.8
Kuwait	58.2	48.3	69.6	48.1	59.5
Oman	37.4	52.2	41.3	40.7	58.0
Lebanon	53.6	69.8	63.1	57.1	73.7
Palestine	35.4	46.1	36.5	38.1	42.1
Qatar	43.2	53.2	54.2	44.7	48.9
Saudi Arabia	46.7	49.5	43.4	51.2	54.2

[a]Statistically significant via Kruskal-Wallis test (country vs BeautyQoL 5 domains).

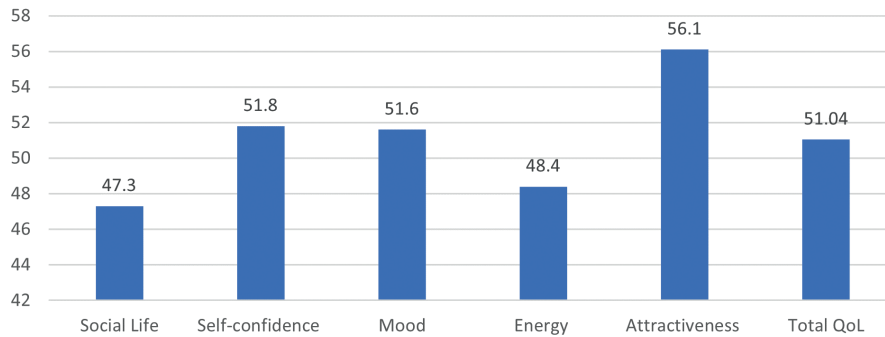## Total Mean Score of the 5 BeautyQoL Domains

FIGURE 1 Total quality of life (QoL) of the 5 BeautyQoL domains of the study population

TABLE 3 Association between the 5 BeautyQoL domains and sociodemographic characteristics of the respondents

| Variables | p-Value of the 5 BeautyQoL Domains | | | | |
	Social Life	Self-Confidence	Mood	Energy	Attractiveness
Age[&@]	0.001[a]	0.021[a]	0.019[a]	0.003[a]	0.002[a]
Gender[$#]	0.0001[a]	0.0342[a]	0.0001[a]	0.0001[a]	0.0001[a]
Marital Status[&^]	0.04[a]	0.001[a]	0.015[a]	0.0001[a]	0.034[a]
Education Level[&]	0.14	0.089	0.061	0.10	0.097
Employment status[&+]	0.026[a]	0.001[a]	0.0001[a]	0.0001[a]	0.043[a]
Monthly income[&=]	0.028[a]	0.043[a]	0.031[a]	0.058	0.001[a]
Type of Residence[$?]	0.34	0.18	0.092	0.042[a]	0.049

[a]Statistically Significant ($p < 0.05$), [&]Kruskal-Wallis test, [$]Mann–Whitney u test, [@]18–35 y.o highest mean score, [#]Females have the highest mean score, [^]Single users have the highest mean score, [+]employed users have the highest mean score, [=] high income users have highest mean score, [?]urban users have the highest mean score.

through the use of cosmetics (69.8), followed by Qatar (53.2) and Iraq (51.7). Regarding mood, respondents from Kuwait (69.9) have a significantly higher mean score than others, closely followed by the respondents from Lebanon (63.1). Iraqi respondents (63.9) reported the highest effect on their energy levels from the use of cosmetics, while Palestinian respondents (38.1) reported the least effect. The effect of cosmetics uses impacted the Lebanese respondents'

attractiveness the highest (73.7), followed by the respondents from Kuwait (59.5) and Oman (58.0).

Moreover, the total mean score of the 5 BeautyQoL domains indicates how cosmetics use affects the respondents' quality of life collectively in the participating countries. The domain with the highest mean score among all the countries is attractiveness which scored 56.1. In a contrast, the domain with the least mean score

among all the countries is social life which scored 47.3. The domains self-confidence and mood had a difference of only 0.2; where self-confidence scored a mean of 51.8 and mood scored 51.6. Therefore, the domains' mean scores were in the following order: attractiveness, self-confidence, mood, energy, and social life. Cumulatively, the total QoL mean scores for all the participating countries are 51.04 out of a possible highest score of 100 (Figure 1).

3.3 | Difference between the 5 BeautyQoL domains and respondents' demographic data

Overall, there is a statistically significant difference between the 5 BeautyQoL domains and cosmetic users' demographic data. Out of all the demographic characteristics of the respondents, education level showed no difference or effect on BeautyQoL domains ($P > 0.05$). The age group with the highest mean score significantly is young adults (18–35 years old). From the results, cosmetics impact the quality of life of females in comparison to men. Likewise, people who earn within the high-income range and single people reported a higher mean score; thus, they are more positively affected by the use of cosmetics. Urban users tend to have their quality of life affected more by the use of cosmetics rather than rural users (Table 3).

Moreover, the association between the skin type and tone with the 5 BeautyQoL domains indicates how cosmetics affect the respondents based on their skin tone and skin types. As the respondents' skin tone deepens from very fair to dark, the means score for each domain increases significantly as well, showing a positive effect of cosmetic use along the spectrum. For dark skin, cosmetic use has the highest effect on attractiveness (70.5) followed by mood (67.8), self-confidence (62.4), social life (58.9), and the least effect on Energy (58.7). The gradual increase in the QoL means scores describes how the effect of cosmetics on users' quality of life increases as the skin tone deepens. As the respondents' skin type changes from very oily to dry, the mean score for each domain significantly decreases as well, showing a reducing effect of cosmetic use along the spectrum. For oily skin, cosmetic use has the highest effect on attractiveness (51.8), followed by self-confidence (53.5), mood (52.8), energy (48.8),

and the least effect on social life (48.3). The gradual decrease in the QoL means scores describes how the effect of cosmetics on users' quality of life reduces as the skin type changes. The mean score of each variable is statistically different for all of the variables (Table 4).

The correlation between the mean scores of the 5 BeautyQoL domains indicates the strength of the relationship between the domains (Table 5). Social life has a good correlation with mood (0.69), energy (0.71), and self-confidence (0.75), while it has an excellent correlation with attractiveness (0.75). Self-confidence has the highest correlation with mood, followed by energy and attractiveness. The mood has a perfect correlation with attractiveness and energy, while energy has a perfect correlation with attractiveness, which is the highest correlation among the variables (Table 5).

4 | DISCUSSION

The Arab population currently constitutes one of the fastest-growing markets for cosmetics.[7] There is an increase in acceptance over the use of cosmetics among the countries of the Middle East, as most of these countries were previously conservative in their consumption of goods.[18] This study is the first to longitudinally evaluate the effect of cosmetics on Arab users' quality of life, where the use of cosmetics is gaining prominence, and thus, it is essential to measure its effect on the users. This study helps in identifying how the Arab markets perceive cosmetic use and guides future production and consumption patterns in the Arab beauty industry.

4.1 | Consumer groups toward cosmetics among the Arab population

In the current study, the country with the most respondents as cosmetic users was Iraq, while the country with the least respondents was Palestine. Besides the relative population size, another factor that affects the distribution of cosmetic users is the level of conservatism present in these Arab countries. There has been hesitation over the liberal use of cosmetics, and this is slowly being eradicated

TABLE 4 Association between the skin type and tone with the 5 BeautyQoL Domains

Variables	Mean score of the 5 BeautyQoL Domains				
	Social Life	Self-Confidence	Mood	Energy	Attractiveness
Skin Type*	56.8	63.5	60.9	55.9	57.4
Very Oily	51.2	57.0	56.8	52.1	53.8
Oily	54.8	60.7	59.4	54.6	56.4
Normal	48.3	53.5	52.8	48.8	51.8
Dry					
Skin Tone*	42.6	48.0	45.6	44.3	39.8
Very fair	48.6	50.3	48.6	45.6	41.2
Fair	53.2	56.8	49.2	51.2	55.4
Medium	56.4	60.4	59.1	52.9	66.1
Tan	58.9	62.4	67.8	58.7	70.5
Dark					

*Statistically significant ($p < 0.05$) with all the five domains.

TABLE 5 Correlation between the mean scores of the 5 BeautyQoL domains

Correlation	r	p
Social life score		
With Self-Confidence	0.75	<0.001[*]
With Mood	0.69	<0.001[*]
With Energy	0.71	<0.001[*]
With Attractiveness	0.82	<0.001[*]
Self Confidence score		
With Mood	0.76	0.015[*]
With Energy	0.65	0.001[*]
With Attractiveness	0.70	<0.001[*]
Mood score		
With Energy	0.79	<0.001[*]
With Attractiveness	0.82	<0.001[*]
Energy score		
With Attractiveness	0.85	0.017[*]

[*]Statistically significant ($p < 0.05$).

due to localized production and the rise of the halal beauty industry.[19] The majority of the respondents are women. Women have always been more concerned with aesthetics and hygiene; thus, they are the more dominant consumers.[19] In some parts of the Middle East, women were previously cautious in liberally using cosmetics, but the gradual change and adaptation are becoming widespread. The cosmetic products which are popularly used are mostly; perfumes, makeup, hair products such as shampoo and targeted skincare products. For example, Saudi females spend more on makeup as compared to women in the Arab world, the West, and the Gulf. According to an estimate, statistics issued by Saudi customs suggest that the number of imported cosmetics in the past year exceeded SR2.3 billion.[20]

The consumption patterns of cosmetics in the Arab population are remarkable. The mean age of participants who use cosmetics is 34 years old, typically a fairly grown adult. While this is the youngest age group among the Arab population to use cosmetics, it is in contrast to the Western markets, where the average age of makeup users is around 24 years old.[21] Employment and income status also play a significant role in influencing the use of cosmetics, with most consumers being employed and earning within the middle-income range. Those with more disposable income are more interested in cosmetics, while those with lower income ranges are more focused on meeting their basic needs.[22] This leads to the consumption of higher-end cosmetics by users with more disposable income as they are able to afford the higher prices and would typically have a taste for those types of cosmetics. More than half of the respondents who use cosmetics are single, and the married are the second largest group. This consumption pattern is linked to the lifestyle of these two groups, where single people use cosmetics to increase their chances of being recognized by an eligible suitor, while the married used cosmetics to maintain their partner's attraction. Based on a

previous cross-sectional study conducted in Brazil, single people are keener in using cosmetics that improve their appearance to be comfortable in meeting potential suitors.[23] Urban residents also use cosmetics far more than the rural residents and this is partially influenced by the proximity to shopping malls and the higher interest in hygiene and aesthetics, which is popular in urban residences.[24] It is noted that the majority of cosmetics users are among those who have reached a tertiary level in education. This is compatible with the findings of the study of Russell et al., 2019, which reported that awareness of product composition and effectiveness is a major driver for consumption.[25] These consumers would be more likely to know the importance of using certain cosmetics such as sunscreen and other targeted skin and hair care products.

The majority of cosmetic users have fair to medium skin and typically have normal to oily skin. In terms of complexion, there is a keen interest in achieving fair skin among Arab women, where fair skin is associated with wealth and a higher standard of beauty.[26] The general market trend is that more products cater to fair skin than those that cater for dark skin. Therefore, when women use cosmetics that increase the fairness of their skin, they would become more self-confident. This is hinged on the lingering effects of societal expectations, leading significant parts of the population to resort to skin bleaching and other treatments to lighten their skin tone.

It is essential to note that the effectiveness of cosmetics differs across users depending on factors such as skin type, skin tone, hair texture, and even cosmetics with considerations to allergens and sensitivity. A previous literature review study reported that when the skin type transitions from normal to dry, the users' satisfaction decreases. This implies that the drier one's skin gets, the more difficult it is for them to find effective cosmetics. Dry skin is quite problematic, and difficult to find appropriate cosmetics for it. Likewise, as the skin tone changes from fair to dark, the effectiveness of cosmetics in improving the user's BeautyQoL decreases.[27]

4.2 | Quality of life of cosmetics' users among the Arab population

The individual Arab countries reported experiencing varying effects of cosmetics in several domains of their quality of life. The BeautyQoL domain, which scored the highest mean among the sample population, is attractiveness. Attractiveness refers to the degree to which people find an individual is desirable and appealing. Therefore, cosmetics proved to improve the attractiveness of cosmetic users, which is cited by Fares et al., 2020, as one of the primary reasons for using cosmetics.[28] The study finds that one of the desired objectives after using cosmetics is to improve one's appearance and desirability, typically from the opposite gender. These findings are asserted by Aguinaldo, 2019, who reported that marketing campaigns that emphasize the product's effect to improve desirability are more successful than marketing campaigns that emphasize the individual's wellbeing.[29] Therefore, marketing campaigns emphasize the ability of their products to improve desirability and attractiveness to induce

more sales from customers. This is contrasted by the findings from Palestine, where the use of cosmetics affects attractiveness the lowest and yet self-confidence the highest. This contrast indicates the argument on whether the use of cosmetics is primarily meant to increase attractiveness or self-confidence.[30] Attractiveness is focused on the attention from external people, while self-confidence is the inner perception towards them. Collectively, the Arab countries which participated in the study found that the use of cosmetics has varying effects on their BeautyQoL. The countries collectively found that the use of cosmetics impacted their attractiveness the highest, with a mean score of 56.1. While this is the domain that scored the highest, the mean is just above half, which means that its impact is moderate and not extremely high. This can be contrasted with a study conducted in the United States which finds that the impact of cosmetic use on user's attractiveness is very high.[31] The rationale behind this could be the stance of Arab women toward aesthetics, where they are not extreme in displaying attractiveness but instead building their own self-confidence, which is the second-highest domain, followed by mood, energy, and social Life.[32]

The domain which scored the second-highest mean score is self-confidence. One of the reasons for using cosmetics is to correct hair and skin problems which typically lowers the individuals' self-confidence.[33] Therefore, the use of cosmetics among the Arab population has to improve their self-confidence levels is prevalent. Self-confidence refers to the attitude that one has towards their skills and ability, and according to Lanzuela et al., 2019, this attitude is significantly driven by appearance.[34] According to Al-Samydai's study, the rationale behind this concept is that people usually consider well-put-together people as being capable and proficient in their line of work and in general.[35] Arab countries have extreme weather with summers with intense heat waves and humidity, leading to excessive sweating and skin sensitivities.[36] When individuals excessively sweat, they would be uncomfortable interacting with people and hesitant to be social in a group setting. However, when they find perfumes and antiperspirants which work optimally for them, they would be more self-confident and comfortable in social settings.

The impact of cosmetics on self-confidence has been growing over the years, especially with advancements in production. Initially, cosmetics were at the most functional, meant to clean, perfume, treat and maintain the body parts, skin and hair in generic ways.[37] This would leave most cosmetics ineffective for quite a considerable number of people. However, with advancements in the production process, cosmetics are becoming more targeted to specific human needs.[38] For example, there are cosmetics based on skin type, skin tone, hair texture and even cosmetics with considerations to allergens and sensitivity. As a result, users can find products that suit their problem areas, and when they use them effectively, their self-confidence is restored.

The findings indicate that the use of cosmetics affects the users' QoL in moderate ways, typically for their mood, energy, and social life. The effect of cosmetics on the users' mood has been reflected in the study of Kosmala et al.,2019, which demonstrated that users of cosmetics such as perfumes and makeup reported an improvement in mood after use.[39] A further literature review probes into the reasons for mood enhancement, and the reasons typically included; the sentimental value derived from the cosmetics and general improvement in appearance.[40] When people use cosmetics and get the desired result, their mood would be uplifted, and they would have a positive attitude towards the products.[41] On the contrary, when people use cosmetics and do not get the desired result or get an allergic reaction or unpleasant feeling, their mood is most likely to be distorted, which forms a negative perception towards that specific product.[42] This is reflected in the study of Wagstaff et al., 2018, which asserted that for products to enhance theuser's mood, they should have proven themselves to be effective in their specific needs.[37] However, another relevant study found that mood enhancement from the use of cosmetics stems from the user's perception of the brand.[38] The use of higher luxury brands induces pleasure and excitement more than other regular and lower-end brands.

The use of cosmetics has a lower effect on the Energy of the users. However, the findings of this study indicate that energy has a perfect correlation with attractiveness. Therefore, it can be argued that the use of cosmetics positively impacts the users' Energy but only as a by-product of attractiveness. Several studies reported that once an individual feels an increase in their attractiveness, then their Energy levels would increase and vice versa, which is consistent with the findings of this study.[43,44] Similarly, cosmetics use does not have a strong direct effect on the Social Life of users; but it has a strong correlation with attractiveness. However, attractive individuals fare better in their social life, and be more proactive in social interactions. Therefore, through the use of cosmetics, users' Social Life is mainly affected as a by-product of attractiveness. Therefore, these sentiments assert the findings of Faust et al, 2018, which described how the primary and most desired effect from cosmetic use is attractiveness.[45]

Lastly, the impact of cosmetics on the overall quality of life of cosmetic users scored 51 out of 100, which is a moderate score. This implies that the quality of life of the Arab population is affected using cosmetics only to a moderate extent and not in significantly major ways. This is much lower than the QoL score from the Western markets, where users report a higher impact of cosmetics on their quality of life.[13,46,47] This could be rationalized by the approach that the Arab population has toward the use of cosmetics. Nowadays, studies reported that social media figures have become key players in the beauty industry, helping make it more accessible and diverse. A previous study focusing on the effect of social media on promoting cosmetic products among Arab people revealed that spending multiple hours a day on social media platforms is linked to an increased likelihood of people considering purchasing cosmetic products. However, there is no guarantee that every cosmetic product can suit the needs and satisfaction of each cosmetic user, thus, causing a drop in their QoL.[48] In addition, the Arab population is relatively conservative, with a massive display of body parts and flamboyant aesthetics disdained. Instead, their approach towards the use of cosmetics is encompassed in modesty, conservatism, and mostly functionality, yet the domains of QoL specified in this study are more from an aesthetic perspective. Therefore, cosmetic industries targeting the Arab

population should identify the values of their target market and find how they can present product offerings that meet these values instead of having a singular offering for Western and Arab markets.

4.3 | Limitations and future study

The current study was limited to cosmetics users to have a user-centric result instead of generalized results, including non-cosmetic users. While a comparison with non-users of cosmetic products has not been made, the study would reflect user-centric results that can be used as a basis for further study.

5 | CONCLUSION

The effect of cosmetics on the users' quality of life is limited, which is contrary to the narrative commonly portrayed in cosmetics' advertisements. Attractiveness and self-confidence domains had a higher mean score whereas other domains of QoL were less impacted by the use of cosmetics, which suggests that these domains are satisfied by other factors besides cosmetics use. It is recommended that cosmetics users be more intentional in researching which cosmetics work best for their specific needs and be satisfied from using the products. It is also recommended that marketers be more transparent and ethical in communicating accurate product information in their campaigns to avoid misleading consumers and promising results that their products do not offer, especially for consumers with dry skin and darker skin tones.

AUTHOR CONTRIBUTIONS
A.H.M and B.A.R.H contributed to the study conception and design. Data collection was performed by B.A.R.H, A.M.W, H.F.A, M.H.N, M.S.E,D.M, S.A.A, E.K, A.A, D.T, M.A, O.A, S.S.F, R.M.D, and A.T.A. Data analysis was done by A.H.M. The first draft of the manuscript was written by A.H.M, A.B, and J.D, and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

CONFLICT OF INTEREST
The authors declare that there is no any financial and non-financial competing in relation to the current work.

ETHICAL STATEMENT
This study protocol was reviewed and approved by Ethics Committee of Al Rafidain University College and University of Qatar (QU-IRB 1592-E/21, EC-67-2021). All procedures performed in this study were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

CONSENT TO PARTICIPATE
Informed consent was obtained from all individual participants in the study.

CONSENT TO PUBLISH
Participants signed informed consent regarding publishing their de-identified data.

DATA AVAILABILITY STATEMENT
Data and other materials are available upon request from the corresponding author.

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