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Life Quality (Indexes) related to Cosmetic Products Use: A sociological perspective

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Introduction:

Quality of life (QoL) is a broad multidimensional concept that emerged as an attempt to perceive and "rate" the human behavior regarding specific life events and conditions. Usually is based on subjective evaluations including psychological, social and physical aspects of the individual's life. The concept of Health Related QoL (HRQoL), on an individual level encompasses psychological, social and physical aspects of the overall QoL and correlates this with specific determinants such as health risks and conditions, functional status, social support, and socioeconomic status.

It is important for cosmetic companies to keep up with the expectations from consumers, as a crescent amount of people are slowly shifting mindsets, seeking high quality and effective and long-lasting results through their purchases. Before launching new cosmetic products on the market, the cosmetic companies have a special interest in promote clinical trials, once this shows itself as an essential asset to assess the safety and effectiveness/performance of their products. In this sense, an HRQoL assessment can be seen as an interesting and fundamental complement to the traditional data [6].

Plenty has been studied about Quality-of-Life Indexes (QoL) related to dermatological disturbances, accessed by Health Sciences professionals. However, true metrics specifically designed for the evaluation of the influence of cosmetic products on the QoL of subjects are much rare and lack the social perspective that could be one of the main justifications for the use of such products.

The main objective of this study was, by using the information that was obtained from the more frequent QoL questionnaires, to select the more influential questions using a mathematical approach and define a new QoL standard that can be used to all general type of cosmetic products.

Materials & Methods:

Study design

All protocols were submitted to an Independent Ethical Commission and all subjects gave their informed written consent. One hundred and fifty-two (152) female subjects were considered, including: 20 women from 35 to 44 years old, 108 from 45 to 54 years old and 24 women from 55 to 65 years old.

Data was aggregated, in order to obtain robust samples. All the inclusion and exclusion criteria were consistent in the groups in order to enter the study pool.

Methodologies

Evaluation questionnaires, applied to women aged between 35 and 65 years were collected. 15 questions were initially selected, including issues related to different dimensions, such as "physical" aspects (occurrence of spots and wrinkles on the skin, skin elasticity, oiliness, hydration, skin sensitivity) and issues related to psychological factors, such as self-esteem, beauty, youth and health perception. Also, an overall satisfaction question was considered. All questions were evaluated on 11 terms scales (0-10), before and after a cosmetic product application. The main objective was to select the most relevant questions that allowed to develop the new Sociological Quality of Life Questionnaire – SQoLQ.

Statistical analysis was performed using Factorial Analysis and Multiple Linear Regression analysis.

Results & Discussion:

A factorial analysis was performed on a set of 15 questions. After validation of the assumptions, 4 questions were eliminated due to noncompliance with the required assumptions. The final model included 11 components and extracted 3 main factors (whose Eigenvalues are higher than 1). These 3 factors explain 76.7% of the total variance of the results. The rotated component matrix identified 3 components:

- *Component 1: We called this component "beauty and health improvement perception";*

- *Component 2: We called this component "aging signs improvement perception";*

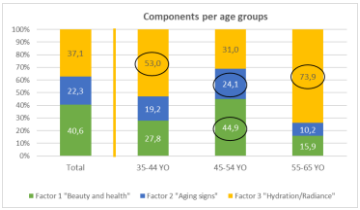
- *Component 3: We called this component "hydrated and radiant skin improvement perception".*

Rotative componente matrix

	Component		
	1	2	3
Q8. Visible health of your skin	,899	,069	,117
Q6 Skin smoothness	,876	,068	,206
Q13. Skin suppleness	,835	,103	,359
Q10. Skin's visible youthfulness	,783	,399	,230
Q9. Overall beauty	,780	,315	,257
Q2. Skin sensitivity / irritability	,006	,900	,067
Q12. Occurrence of wrinkles on your skin	,204	,880	,111
Q15. Skin elasticity	,429	,722	,196
Q4. Skin hydration	,361	-,132	,815
Q11.Occurrence of spots on your skin	,248	,164	,696
Q1. Skin radiance / luminosity	,090	,368	,670

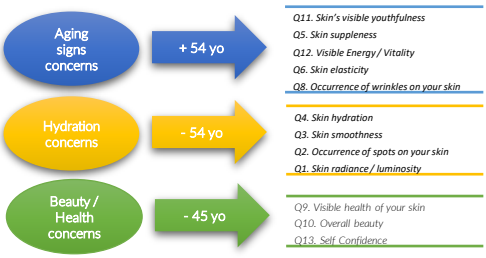
Figure 1 – Rotative component matrix

The 3 components were also analyzed by age, allowing to conclude that women aged between 35-44 years old and women over 55 years old perceive having improved hydration and radiance, while women aged between 45 and 54 years old perceive having improved on skin beauty and health and aging signs.



To verify the factors that most impact the overall satisfaction, the Multilinear Linear Regression test was applied, using factor scores as independent variables. The analysis revealed that all the 3 components have a significant impact in the overall satisfaction. "Beauty and Health" was the most important component, followed by "Hydration / Radiance" factor and finally the "Aging signs" component.

The New Sociological Quality of Life Questionnaire – SQoLQ was applied to a new extended sample, including younger women aged bellow 35 years old. The new analysis also identified 3 main components:



Conclusions:

This analysis was mainly focused on the effects of the use of cosmetic products on subjects. However, both the standard questionnaires and the newly designed QoL Index can correctly describe the influence of the cosmetic products on the Quality of Life of subjects who use the products, validating the sociological relevance of cosmetics application. The procedure allowed to create a new questionnaire to be applied in prospective studies and confirm the analysis among a larger sample of subjects.

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