



Risks of Cosmetics and Level of Awareness of Both Genders in Libya

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Abstract

This study aimed to find out the level of awareness of the harmful effects of cosmetics in Libya. The study also included the effects of cosmetics on health. A structured questionnaire was the primary method used to collect the data and which were analyzed descriptively. The questionnaire was administered to a total of 500 participants of both sexes, chosen randomly in ten Libyan cities. The results showed that 1 % of the women were aware of the presence of toxic substances and carcinogens while 99 % were not aware of the harmful effects of cosmetics. The responses indicated a negative sign of the lack of awareness of the dangers of cosmetics among the citizens. Also, a survey revealed that the Ministries of Health and Education had failed to raise awareness and knowledge of the negative and harmful effects of cosmetics in the Libyan society. Therefore, we encourage the institutions concerned with monitoring and to note the exemption for their and others, and to inform them of the dangers of these products circulating in the Libyan markets, which pose a great danger to the health of the citizens.

Keywords: Awareness, Azo, Chemical compounds, Cosmetics, Cancers.

1.0 INTRODUCTION

Since ancient times, the use of natural cosmetics (NCs) has been a way to show the glamorous beauty of women and men; and their use continued even after the Industrial Revolution. NCs have been replaced by chemical products such as Azo and others that are harmful to health and cause cancer in various organs. The composition of cosmetics distributed in the global market included lipsticks, powders, creams, mascaras, skin and nail products, sun protection products (SPP) and other types of carcinogens [1]. Also, there are a variety of chemicals that cause cancer in different parts of the body, for example butylated hydroxyanisole (BHA) [2], titanium dioxide and derivatives [3], parabens and derivatives [4], paraffin and derivatives [5-7], catechol [8, 9], iron oxides [10], Silica [11], talc [12, 13] and others. Long-term use of a cosmetic product containing BHA penetrates the stomach cells, causing cancer cells to multiply in the stomach, because BHA is a phenolic antioxidant that affects glandular cells in the stomach [14].

Human papillomavirus (HPV) is a common sexually transmitted virus that affects both men and women and is one of the most important factors and causes

of infection with various types of high and low-risk cancers [15, 16]. Catechol is an industrial chemical, and naturally found in fruits, vegetables and cigarette smoke. It used to make pesticides, perfumes, pharmaceuticals, polymerization inhibitors, and used as an antiseptic, in photography, and tinctures [17].

In addition, catechol causes different types of malignancies in a tongue, esophagus, stomach and glands, as well as stimulates high infection HPV. The most dangerous chemicals found in most cosmetic products are zinc oxide and its derivatives. They negatively affect nucleic acids, causing genetic mutations to change and lead to various types of cancers [17, 18]. Moreover, parabens and their derivatives are organic chemicals used as preservatives for cosmetic products; they negatively affect the male and female reproductive system. Especially the female component, as a result of their excessive use of cosmetics [19], they suffer from different types of cancers resulting from cosmetics containing parabens and its derivatives in their composition.

Parabens possess a weak estrogenic activity. These chemicals might cause disruption of endocrine systems and consequently influence the growth, differentiation, and function of reproductive systems. The potential adverse effects of an alteration evoked by in patterns of gene expression caused aberrant estrogen signaling in cells and adversely influenced breast cancer development. Parabens are quickly absorbed through the skin and are present in

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human breast tissue and milk. Parabens could mimic the effects of physiological estrogen, they bind to ERs, stimulate the ER-dependent response, and influence the expression of estrogen-responsive genes, including estrogen receptor alpha (ER- α), progesterone receptor (PR), and pS2 [20]. ER-dependent estrogenic activities of parabens demonstrated in MCF-7 human breast cancer cells, ZR-75-1 cell lines and others [21]. The estrogenic potency of parabens has been shown to depend on the lengths of their alkyl side chains [22]. Although parabens share features of structural similarity with 17 β -estradiol, which enable their estrogenic activity, the estrogenic activities of these environmental endocrine disruptors (EDs) are not clearly understood. Parabens converted into p-hydroxybenzoic acid by hepatic metabolism, and this metabolite detected in the blood and urine of mammals exposed to parabens [23].

The increasing use of cosmetics has caused a growing concern about the safety of these products, yet little is known about cosmetics from the consumers' point of view. Therefore, the aim of this study is to spread consumer awareness, perceptions and attitudes towards cosmetics and their ingredients.

2.0 MATERIALS AND METHODS

2.1 Materials

Opinions were surveyed on social networking sites using real questionnaire questions in order to know the awareness of the dangers of cosmetics and collect data. A choice of answers is included on each page of the survey which states: "Please choose an answer (Yes) or (No) to the questions of the full survey. The participants were instructed to complete the survey using automated form filler.

2.2 Methods

2.2.1 Study Design and Participants

A total of 653 Libyan participants randomly were recruited for the online survey through a social media (Facebook and Twitter) campaign using questionnaire in various Libyan Cities. Participants who were not entitled to participants who did not fully answer the questionnaire questions and who not serious excluded from analysis. This resulted in a final data set consisting of 500 respondents. The entire study was conducted from October 2020 to April 2021, over a period of seven months.

2.2.2 Questionnaire administration

A representative descriptive study used the data obtained from different social networking sites to take statistics using a questionnaire to check the customer's awareness of carcinogenic ingredients in cosmetics. The

study was based on statistic data genders, cosmetics, and awareness. On this basis, the questionnaire was classified into three stages: (1) cosmetic; (2) Specify the gender used (male/female); and (3) determining genders awareness (as shown in Tables 1 and 2).

Furthermore, it was found that all cosmetic products sold in the Libyan market (LMs) are counterfeit and adulterated, so there was no need to conduct animal examinations or use a laboratory cell test to prove the safety of cosmetics or ensure are free of dangerous chemicals (carcinogenic) that are damage to the skin and tissues causing cancer in target organs. Thus, the absence of awareness and knowledge of the dangers of cancer-causing chemicals that are included in cosmetics led to their legally spread in the Libyan market, with the approval and permission of the Libyan customs and municipal guards. Consequently, the absence of laws prohibiting and restricting fake cosmetics or those containing carcinogens increased the demand for them in the Libyan market. Moreover, we asked participants to cooperate with us to conduct this questionnaire to reveal the extent of their knowledge of these cosmetics. A variation results were in knowledge and culture ratios between medium and low levels of cosmetics. Also, there was negativity from some of them due to the lack of complete knowledge about the subject, while others expressed their concern about these products that are widespread in the market, and some agreed on the importance of the role of education and health in cooperation with some of them in awareness and educating the community. This investigation used data through secondary sources available in the public domain that did not identify or disclose the names of survey respondents, so it did not require the approval of the Ethics Committee. The present study was designed with the aim of knowing the range, purpose, type and awareness of cosmetics in people's daily lives in Libya (Figure 1)

2.2.3 Date collection

Data were collected, from October 2020 to April 2021; by answering a questionnaire through various social media sites in ten cites Libyan. Interested consumers were asked to answer all the questions in the questionnaire. On average, the participants were able to complete the questionnaire within 15 minutes. All the participants in the study were asked to read explanatory statement describing the purpose and objectives prior to participate in the study.

2.2.4 Data analysis

The statistics data collected in this study were tabulated and analyzed using Excel program. The assessed using the following answers questions: 1 for "yes," 2 for

“no,” 3 for “Safety,” 4 for “Dangerous,” 5 for “Worrying,” 6 for “Do not known,” and 7 for “Known.”

3.0 RESULTS AND DISCUSSION

Libyan women (LW) used cosmetics since ancient times and were limited to natural materials such as eyeliner, walnut tree (known as a hot miswak), and others to beautify themselves, but with the development of science and the introduction of chemicals in the components of cosmetics, LW began to consume large quantities of these materials in order to give them a beautiful appearance and hide skin imperfections that suffers from problems or used for whitening and lightening the skin. However, it hides on many LW the risks and repercussions of the excessive use of chemical cosmetics that contain carcinogenic chemicals in their components.

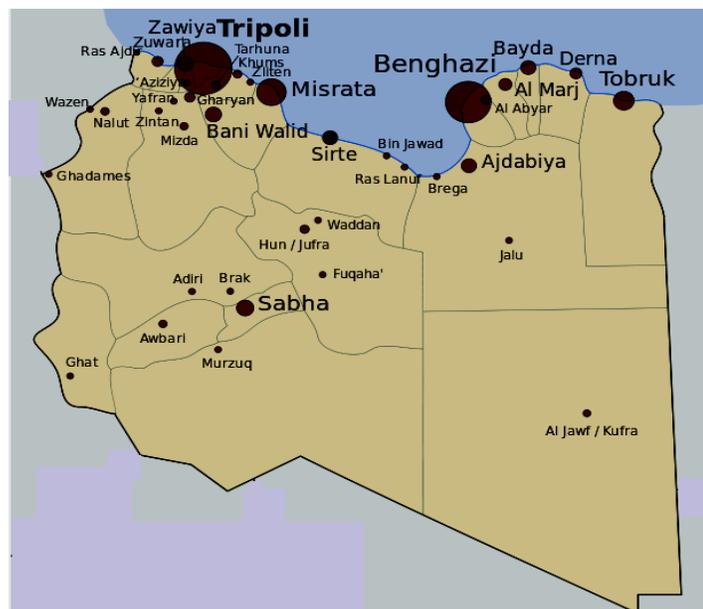


Figure 1: Shows the responses of some Libyan cities in the 2020-2021 survey.

In Libya today, Individuals have become more conscious about their appearance. Due to the changing gender roles, women and men started using cosmetic products increasingly. As a result, the women and male

cosmetic market, considered a niche market, has grown enormously. The men and women need to take care of themselves, combining pleasure and well-being. Thus, many brands have begun to seriously consider the entry into this rapidly developing market segment, in such a way a real competition has been created. Cosmetics are synonymous with seduction, beauty and pleasure, what women want when they look for cosmetics suitable for them. However, these words do not adapt to male cosmetics, although there are no big differences between products for the two sex genders, the two markets are well differentiated. Men do have the same approach with regard to the product with simple changes such as the mentality of the new male generation, the appearance of the «metrosexual», social liberalization of homosexuals and the fact these men want a youthful appearance. Unfortunately, most genders did not aware of the harmful effects of cosmetics that not used properly.

500 participants were considered for this survey-based research. 500 completed questionnaires were collected and described for results. Of the 500 people who completed the questionnaires, 345 used cosmetics while the other 155 did not use makeup (Table 2 and Figure 1). However, as a result of prolonged poor storage, preservatives lose their effectiveness in the cosmetic product, leading to health risks such as cancer. As noted, the labels on some cosmetics lack basic information such as product safety requirements, manufacturing dates or expiration dates. Thus, these substances remain for long hours, which may reach 5 or more, without deep cleaning of the skin, leads to a penetration of these substances into the depths of the skin and affects the genes, nucleic acids, glands and enhance infection with [15, 16] human papillomavirus (HPV), which plays a role in increasing the incidence of various types of cancerous tumors that affect human organs as the genitals, breast, stomach, bladder, head and others. The use of cosmetics is not limited to women only, but Libyan men also use them for the same purposes. We will present the carcinogenic chemical products that are included in the composition of the cosmetic products present in the LMs.

Table 1: Displays the percentage of responses for some cities by gender.

City	Cases (%) (n =500)	Total Female	Total Male
Tripoli	(20%) 99	(19%) 83	(31%) 16
Misurata	(11%) 53	(11%) 49	(8%) 4
Benghazi	(17%) 83	(16%) 72	(21%) 11
Sabha	(19%) 94	(20%) 89	(10%) 5
Sirte	(14%) 71	(15%) 68	(6%) 3
Bani Walid	(6%) 32	(7%) 32	(0%)
Kufra	(1%) 5	(1%) 5	(0%)

City	Cases (%) (n =500)	Total Female	Total Male
Derna	(4%) 21	(4%) 19	(4%) 2
Al Bayda	(2%) 11	(2%) 9	(4%) 2
Tobruk	(6%) 31	(5%) 23	(16%) 8

In the Libyan markets, many azo dyes contain benzidine (Bz), and Bz is a known human carcinogen, which can be released by metabolism [24], and also contain BHT and others that affect genetic mutations, It was found that exposure to a small dose of azo dye causes disturbances in the cell division cycle, which leads to cell death by the inhibition of DNA synthesis at S-phase that most probably happened due to decreasing ATP level and the pressure from the functioning of the energy production centre [25]. The inhibition of certain cell cycle specific enzyme such as DNA polymerase, which was essential for DNA replication, might have caused anti-mitotic effect, resembling colchicines' mode of action. Colchicines' inhibits the formation of spindle fibers and temporarily arrests mitosis [26].

This inhibition could be due to either the blocking of G1 suppressing DNA synthesis or a blocking in G2 preventing the cell from entering mitosis [27], that also causing a change in the enzymes pathways, resulting in various cancers such as cancer of the bladder, liver, lung and blood (white blood cells), which increased the stimulation of infection with HPV in the genitals for males and females [15,16] These changes are brought about in chemical carcinogenesis were administration of azo dyes is associated with a persistence of dye binding to DNA, the appearance of a nuclear azo protein, and increased RNA precursor utilization with prolonged using. Functional aberrations of DNA have found when a reactive intermediate (N-benzolyoxy-DAB) incubated with DNA. All of these points to some changes in DNA transcription or expression indicate these responses are important in carcinogenesis and reflect a cellular response to the carcinogens.

Silica and its derivatives such as silica dimethylsilate, siloxanes, talc, and others are genetically toxic and affect the respiratory system (lung) leading to a defect in the enzyme system, hypersecretion of the liver gland, affecting genes and leading to the possibility of cancer. These substances are genetically toxic, affect the activity of steroid hormones such as estrogen, and cause the influx of these substances and their deposition in the luteinizing hormone (LH), affecting ovulation and pregnancy, and causing cancers such as the uterus, cervix, endometrium, skin, lungs, kidneys, liver and others.

Talc is a naturally occurring mineral consisting of magnesium silicate, which is included in the manufacture of various types as baby powder, cosmetics, condoms, and

deodorizers in the male and female genitals. Talc-containing cosmetics increase the risk of genital tumors, such as ovarian cancer, endometrial cancer, and mucosal cell carcinoma in women, and penile cancer in men. This is why talc is considered the most important risk factor for increasing the incidence of ovarian cancer due to the excessive use of cosmetics by women (as shown Table 2). The increase was in the incidence of Libyan women with reproductive cancers as ovarian, endometrial, mucosal, cervical and vaginal cancers was due to the penetration of talc into the mucosal tissues of the lining of the uterus and ovaries, affecting the genetic genes of nucleic acids, damage and weakening of the immune system.

Paraffin and its derivatives are flammable organic hydrocarbon compounds. When absorbed by the skin or digestive system, it affects the metabolism and biological activity, leading to impaired sexual activity; Continuous exposure to these substances for long periods affects the genotoxicity and enzyme pathway and causes cancers.

Catechol is a toxic organic compound, and chemically known as pyrocatechol or 1,2-dihydroxybenzene, and was mainly responsible for a defect in genetic mutations estrogen-related that disrupts the estrogen (E1, E2) metabolism pathways in two pathways. The association of catechol with estrogen causes many cancers as breast, uterine, ovarian, brain, kidney, neck and prostate cancer. In general, the increased secretion of estrogen enhances its association with chemical compounds contained in cosmetics, which leads to malfunctions in the genetic system, hormonal disorders, and causes the synthesis of HPV infection.

Titanium dioxide is an inorganic compound that used in cosmetics and sunscreens and is known as a concealer and whitener. In some cosmetics, titanium dioxide is referred to as CI77891; while Iron Oxides (CI177491), (CI77492) Red 6 Lake (CI15850), Red 36 Lake (CI12085), Orange 4 Lake (CI15510), KI403 (1) (CI10316), Iron Oxides (CI77499), (CI15850): 1 . Titanium dioxide causes lung and urinary tract cancer. In addition, titanium dioxide, iron oxide, methylparaben, polyisobutene, petrolatum and others also cause various types of cancers such as squamous cell carcinoma (SCC), trachea, lung, HPV, thyroid cancer, and anaplastic thyroid cancer.

Table 2 shows participants' questionnaire results for total cosmetic used (69%) and unused (31%). Thus, the total for participants who did not read the ingredients of

the cosmetics was higher (99%) and only (1%) who read, as the Excel program was used to analyze survey data perform the statistical operations in percentages. Table 2 of the questionnaire results also shows the complete lack of awareness of the participants about the healthy methods and habits of dealing with cosmetics. The total use of the fingers of the hand in distributing cosmetics on the face was higher for (85%) compared to using the brush/sponge reached (77%). Using the fingers to distribute the lotion leads to the spread of microbes, the growth of bacteria, infections, insomnia, skin contamination, and skin problems as acne and its effects, ulcers and widen the pores. The total sharing or borrowing of the product with family members or friends was the lowest by (23%) compared to those who did not borrow to bringing the total to the highest value (77%). Females scored the highest value (73%) who did not borrow by comparing them with males to reach the lowest value (27%). The responses of most women was using cosmetics after the expiration date were high (88%). These are all negative signs because sharing cosmetics increases the chances of microbial growth and infection for all users and using unsterilized cosmetics spreads bacteria from one person to another and causes eye infections. Beauty salons are considered one of

the most important factors for the spread of infection, and most women's salons use expired cosmetics, share cosmetics to customers, not sterilize them, not adhere to safety conditions, the absence of health supervision, and the absence of Libyan Municipal Guard (Table 2 shows the results in detail). Thus, most of the participants (99%) answered that they are not aware of toxic substances found in cosmetic ingredients such as lead, carcinogens and some preservatives that are harmful to health as the results in table 2. The lack of educational and awareness-raising means and indicative advertisements for the Ministries of Education, Higher Education and Scientific Research, and Health contributed to the low awareness of the dangers of ingredients found in cosmetics scattered in the Libyan markets. The results of the questionnaire in Table 2 showed that some women prefer awareness via the Ministries of Education and Health (42%) and (78%) of women expressed the failure of the Ministries of Education and Health in raising awareness and educating the community; compared to men who prefer social media (50%). These convergent results of the data indicate the low level of knowledge and the failure of education and health to spread awareness to spare society the risks of uncontrolled and unsafe industrial products.

Table 2: Consumer awareness of cosmetic ingredients for gender in Libya

Study Parameter	Total of people (%)(n=500)	Total Males (%)(n=103)	Total Females (%)(n=397)
Do you use cosmetics?			
Yes	(69%)345	(23%)77	(77%)265
Not	(31%)155	(16%)26	(84%)132
What kind of cosmetics are you using?			
Claire	(2%)8	-	(2%)8
Skin light	(4%)20	-	(5%)20
Moisturizer	(17%)86	(7%)7	(20%)79
Sunscreen	(8%)40	(3%)3	(9%)37
Fairness cream	(8%)41	-	(11%)41
Lipstick	(13%)67	-	(17%)67
Eye shadow	(6%)31	-	(8%)31
Compact	(2%)9	(4%) 4	(1%) 5
Concealer	(4%) 19	(2%) 2	(4%) 17
Foundation cream	(7%) 33	(1%) 1	(8%) 32
Contour	(10%) 51	-	(13%) 51
Shaving cream	(19%) 95	(83%) 86	(2%) 9
Is the cosmetic used with tools (brushes/sponges) or your finger?			
Tools (brushes/sponges)	(74%) 370	(23%) 84	(77%) 286
Finger	(26%) 130	(15%) 19	(85%) 111
Do you read cosmetic ingredients?			
Yes	(1%) 5	-	(100%) 5
No	(99%)495	(21%)103	(79%)392
Do you check the expiration date before purchasing it?			
Yes	(17%)84	(23%)19	(77%)65

Study Parameter	Total of people (%)(n=500)	Total Males (%)(n=103)	Total Females (%)(n=397)
No	(83%) 416	(20%) 84	(80%) 332
If it expires, would you buy and used it?			
Yes	(3%) 17	(12%) 2	(88%) 15
No	(97%) 483	(21%) 101	(79%) 382
Are cosmetics expensive?			
Yes	(82%) 409	(4%) 16	(96%) 393
No	(18%) 91	(96%) 87	(4%) 4
Do you use cosmetics daily?			
Yes	(75%) 374	(20%) 76	(80%) 298
No	(25%) 126	(21%) 27	(79%) 99
Do you share the same packaging with brothers and friends?			
Yes	(23%) 113	-	(100%) 113
No	(77%) 387	(27%) 103	(73%) 284
Do you sleep without removing the cosmetic product?			
Yes	(59%) 293	(19%) 56	(81%) 237
No	(41%) 207	(23%) 47	(77%) 160
Do you feel beautiful and confident when you use cosmetics?			
Yes	(77%) 383	(17%) 64	(83%) 319
No	(23%) 117	(33%) 39	(67%) 78
Are you aware of the presence of toxic substances such as lead, carcinogens, some preservatives, etc. that harm your health inside cosmetic ingredients?			
Yes	(1%) 3	(33%) 1	(67%) 2
No	(99%) 497	(21%) 102	(79%) 395
The growing demand for cosmetics is an indication			
Safety	(56%) 278	(54%) 56	(56%) 222
Dangerous	(0%) 2	(1%) 1	(1%) 1
Worrying	(19%) 94	(20%) 20	(19%) 74
Do not know	(25%) 126	(25%) 26	(25%) 100
Have you visited beauty centers (Beauty salon)?			
Yes	(100%) 500	(21%) 103	(79%) 397
No	-	-	-
Visited beauty centers (Beauty salon)			
Daily	(45%) 226	(7%) 7	(55%) 219
Weekly	(28%) 141	(15%) 15	(32%) 126
Monthly	(15%) 73	(54%) 56	(4%) 17
Yearly	(12%) 60	(24%) 25	(9%) 35
Do you share beauty and makeup tools inside beauty salons?			
Yes	(100%) 500	(21%) 103	(79%) 397
No	-	-	-
Maybe avoid it	-	-	-
Do you use cosmetic test kits in the markets or beauty salons?			
Yes	(99%) 494	(20%) 99	(80%) 395
No	-	-	-
Maybe	(1%) 6	(67%) 4	(33%) 2
Do salons sterilize beauty tools?			
Yes	(100%) 500	(21%) 103	(79%) 397
No	-	-	-
Have you visited a skin doctor?			
Yes	(33%) 167	(22%) 37	(78%) 130
No	(67%) 333	(20%) 66	(80%) 267

Study Parameter	Total of people (%)(n=500)	Total Males (%)(n=103)	Total Females (%)(n=397)
Do you have cancer?			
Yes	(42%) 212	(8%) 16	(92%) 196
No	(58%) 288	(30%) 87	(70%) 201
If yes, which the type of cancer that the doctor diagnosed is			
Skin cancer	(16%) 35	(37%) 6	(15%) 29
Breast cancer	(17%) 35	-	(18%) 35
Cervical cancer	(4%) 8	-	(4%) 8
Others (determine what is)	(63%) 134	(63%) 10	(63%) 124
Is there an alternative to using cosmetics?			
Yes	(8%) 41	(18%) 19	(6%) 22
No	(30%) 149	(53%) 55	(24%) 94
Do not know	(34%) 171	(15%) 15	(39%) 156
Maybe	(28%) 139	(14%) 14	(31%) 125
Are there side effects of cosmetics?			
Yes	(100%) 500	(21%) 103	(79%) 397
No	-	-	-
Yes, there are side effects of cosmetics as			
Acne	(18%) 88	(11%) 12	(19%) 76
Allergy	(3%) 16	(5%) 5	(3%) 11
Skin itching	(3%) 15	(3%) 3	(3%) 12
Skin burn	(2%) 11	(2%) 2	(2%) 9
Black spot	(1%) 6	(1%) 1	(1%) 5
Eyes irritation	(5%) 22	(10%) 10	(3%) 12
Nasal irritation	(2%) 12	(7%) 7	(1%) 5
Body odor	(3%) 15	(8%) 8	(2%) 7
Cancers	(42%) 212	(15%) 16	(50%) 196
Infection	(8%) 40	(3%) 3	(9%) 37
Inflammatory	(13%) 63	(35%) 36	(7%) 27
Do you support community awareness and education by the Ministries of Education and Health?			
Yes	(40%) 203	(37%) 38	(42%) 165
No	(20%) 98	(13%) 13	(21%) 85
Other (social media)	(40%) 199	(50%) 52	(37%) 147
Did the Ministries of Education and Health fail to educate society about the dangers of carcinogenic chemicals in the composition of cosmetics?			
Yes	(59%) 297	(22%) 65	(78%) 232
No	(41%) 203	(19%) 38	(81%) 165
Do you think strict regulations should be put in place for manufacturers?			
Yes	(100%) 500	(21%) 103	(79%) 397
No	-	-	-
Is it important to be aware of the presence of toxic substances such as lead, carcinogens, some preservatives, etc.?			
Yes	(100%) 500	(21%) 103	(79%) 397
No	-	-	-

In Libya, The use of moisturizing creams and constant exposure to high doses of UV rays increase the risk of developing skin cancer. Cosmetic products like Claire's products, eye shadows, compact powder and contouring powder contain asbestos. Asbestos is a naturally occurring fibrous silicate mineral. There are six

types, all of which are composed of long and thin fibrous crystals, each fiber being composed of many microscopic fibrils that can be released into the atmosphere by abrasion and other processes. Asbestos is extremely fibrous and the tiny fibers are easily breathed in where they can become trapped in the lungs. Being exposed to asbestos increases

the risk of developing cancers of the lung, ovary and larynx as well as mesothelioma (cancer of the lining of the lung). These cancers often develop decades after exposure to asbestos.

Cosmetic products such as make-up, moisturizers and shaving cream have been found in their components carcinogenic organic parabens, which are one of the most important risk factors for breast cancer, skin cancer and low sperm count in males. The ingredients of the lipstick are distinguished by the fact that they contain highly toxic heavy metals such as lead, which causes cancer and toxicity in the reproductive organs. Formaldehyde is an organic, carcinogenic substance that is found in many cosmetics as liquid lipsticks, cream cleansers, skin moisturizers, mascara, concealer, sunscreen, waterproof eye make-up, and others. Exposure to formaldehyde causes eye, nose, throat and skin irritation, and exposure to high levels of it causes some types of cancers as myeloid leukemia skin cancer, brain cancer, and carcinoma of the paranasal sinuses, nasal cavity and nasopharynx. Sodium Lauryl Sulfate (SLS) is a widely used surfactant in cleaning products, cosmetic, and personal care products. SLS was found in the composition of foundation and other creams, which causes skin irritation, canker sores and acne around the mouth and chin, disrupts the natural oil balance of the skin, and damages the eyes.

4.0 CONCLUSION

Many consumer products in Libya contain chemicals harmful to human health or the environment, it is worrying that there are a large number of people who are not aware of this fact and do not have the competence to use the qualified risk communication tools appropriately. Participants in the current study reported their use of information sources to improve risk reporting about harmful substances in consumer products. Not only the motivated citizens, but also the general public deserves accurate and accessible information to make the deliberate purchase and handling decisions in their daily routine. They have the right to know and the right to comprehend. On the basis of the results of the present survey, we compiled the presumed essential needs that consumers have in respect of harmful substances in products (Table 2).

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