

PROFILE AND PERCEPTIONS OF HEALTH AND AESTHETICS OF BIOMEDICINE STUDENTS: IMPLICATIONS FOR ACTING IN AESTHETIC BIOMEDICINE¹

PERFIL E PERCEPÇÕES DE SAÚDE E ESTÉTICA DE ESTUDANTES DO CURSO DE BIOMEDICINA: IMPLICAÇÕES PARA A ATUAÇÃO NA ÁREA DA ESTÉTICA

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ABSTRACT

With the aim of investigating the profile and concepts of health and aesthetics and its implications in the choice to work in Aesthetic Biomedicine, a qualitative-quantitative research was carried out with students of a Biomedicine course of a private education institution in a city in the interior of Rio Grande do Sul, Brazil. The students answered an online questionnaire with 14 objective questions and 2 open questions. The data obtained were processed and analyzed using the theoretical and methodological framework of Implicative Statistical Analysis, with the CHIC software support. Forty students answered the questionnaire. They were about 23 years old and were enrolled in different semesters. Nineteen students showed interest in the esthetics area, and eight expressed interest in working in the area. Those students who expressed interest in working in the area and those who said they had no interest in it expressed a similar perception in relation to aesthetics, as they related it to beauty, self-esteem and well-being. In relation to health, all participants demonstrated an expanded perception of health, since they evoked terms that reflect well-being, care, physical and food health, among others. The Implicative Statistical Analysis showed a tendency for students to understand that aesthetics is a factor that mobilizes health care and that it is an expanding and very promising field of action.

Keywords: Self concept, Beauty, Higher education.

RESUMO

Com o objetivo de investigar o perfil e os conceitos de saúde e estética e as suas implicações na escolha pela atuação na Biomedicina Estética foi realizada uma pesquisa quali-quantitativa com estudantes de um curso de Biomedicina de uma instituição de ensino privado de um município do interior do Rio Grande do Sul. Os estudantes responderam um questionário on-line com 14 questões e 2 questões discursivas. Os dados obtidos foram tratados e analisados utilizando o quadro teórico e metodológico da Análise Estatística Implicativa, com o apoio do software CHIC. Quarenta estudantes responderam o questionário. Eles tinham idade média de 23 anos e estavam matriculados em diferentes semestres. Dezenove estudantes sinalizaram interesse pela área da estética, sendo que oito, manifestaram interesse em atuar na área. Tanto os estudantes que manifestaram interesse em atuar na área quanto aqueles que disseram não ter interesse pela área da estética manifestaram uma percepção semelhante em relação à estética, pois relacionaram a

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área com beleza, autoestima e bem-estar. Em relação a saúde, todos os respondentes demonstraram possuir uma percepção ampliada de saúde, uma vez que, evocaram termos que reflete o bem-estar, o cuidado, a saúde física e alimentar, entre outros. A análise estatística implicativa mostrou uma tendência dos estudantes entenderem que a estética é um fator que mobiliza os cuidados com a saúde e que é um campo de atuação em expansão e bastante promissor.

Palavras-chave: Autoimagem, Beleza, Educação Superior.

INTRODUCTION

The undergraduate course in Biomedicine has a multidisciplinary formation that, during time, has added up competences and qualifications that allow former students to enter in new work areas. Today, the course has 36 qualifications. According to data from the Biomedicine Federal Council (BFC), in 2016, it was verified that most biomedical professionals were working in clinical analyses; however, it was observed a tendency of new professionals to seek other areas of work, mostly in Aesthetic Biomedicine.

The area of Aesthetic Biomedicine was recognized by the BFC through the Resolution nº 197, February 21st, 2011 (BIOMEDICINE FEDERAL COUNCIL, 2011), and such area already represented one of the most sought out by students, because it is thought to be a promising area, either about employment or in an entrepreneur perspective.

One of the motivations for the ascension of such area is related to financial gain; however, besides such point, this area brings personal and professional satisfaction, once is possible, through services that are offered, to modify people's lives through the offering of treatment that promotes increase in self-esteem and quality of life. Another important question is the fact that Aesthetic Biomedicine has opened new fields of work, allowing the biomedical professional, for example, to work in specialized practices in companies related to aesthetic, such as beauty products industries (SOUZA; CARDOSO, 2017).

According to Brazilian Micro and Small Business Support Service (SEBRAE), Brazil is the third country regarding the use beauty products in the world (VIEIRA; CASTRO, 2018). Although the country has presented, in a general way, low indications of economic growth in the last years, the beauty industry, mainly the cosmetic industry has grown (ABIHPEC, 2016), because it is composed of a loyal clientele even in periods of recession. Such information is ratified through data from Brazilian Association of Cosmetic, Toiletries and Perfumery (ABIHPEC, 2016), which confirmed, even during the pandemic, that the sector maintained its growth and even increased 2,1% regarding generation of direct jobs in 2020 (ABIHPEC, 2022).

Body and appearance care have been accompanying the human being during throughout history. The word aesthetic, which carries the meaning of sensation, perception, and it is related to the study of the nature of beauty and the fundamentals of art, has appeared in Ancient Greece. Aesthetic,

in a way, has always been related to beauty patterns imposed by society and today it is no different. With the increase of the world's life expectancy, there is also an increase in seeking cosmetic treatment that deal with damages caused by aging. Aging may be defined as a dynamic and progressive process that carries morphological, physiological, biochemical, psychological, and functional alterations, which contribute to the gradual loss of adaptation capacity of people to the environment that may cause more greater vulnerability, hence, more incidence of diseases (BORGES; SCORZA, 2016).

Beside the increase of life expectancy, financial conditions have taken a portion of the population to seek out constantly for eternal youth. In a special way, women in the aging process are the ones seeking out more aesthetic procedures that maintain the youthful aesthetic pattern (AUDINO; SCHMITZ, 2012). It is a fact that, our society, in a general way, presents itself to have more vanity and is worried in maintaining facial and body beauty, which establishes beauty patterns. As a result, there is an increase of people looking for aesthetic practices, aiming to reach beauty patterns imposed by society (SHMIDTT; OLIVEIRA; GALLAS, 2009).

The concept of beauty, which is recognized and admired by today's society, is composed of a youthful skin, without wrinkles or spots; however, with aging, people's skin tends to suffer alternations that modify its aspect throughout time, which is a characteristic of aging. A quality within the process of aging has a direct relation to the individual's quality of life (BORGES; SCORZA, 2016)

There is also the concept of self-esteem, being the acceptance (or not) in relation to oneself and the approval or disapproval of one's own image. Such concept has been bringing the attention of health professionals, because such concept is intrinsically related to self-confidence and interpersonal relationships (FLORIANI; MARCANTE; BRAGGIO, 2014).

In a general manner, one may say that the concept of health is extremely complex, because it depends upon many factors related to values, expectations and posture in each people's lives; health also reflects the social, economic and cultural conjecture of each individual. From this context, health does not represent the same thing to all people (CZERESNIA *et al.*, 2013). Many concepts of health may be visualized in different time periods, indicating the tendency of a social thought and the way this same society welcomes the processes of health and sickness.

Minayo, Hartz e Buss (2000) affirm that quality of life is an eminently human notion that has been brought closer to the degree of satisfaction that is found in family, love, social and environmental life and to the own existential aesthetics. Non-tangible materials, such as love, freedom, solidarity and social insertion, personal achievement and happiness compose the concept of quality of life. Therefore, it is possible to notice that the concepts of self-esteem and quality of life are equivalent, that is, to live a good life is understood as a right to quality of life, since self-esteem is obtained through practices of exercises, event participations, good diet and other activities that are beneficial to health, hence maintaining the quality of life, the personal satisfaction. Para Ruidiaz-Gómez e Cacante-Caballero

(2021, p. 69) “Quality of life is a multidimensional concept, influenced by physical health, psychological state, level of independency, life conditions and social relations of the individual.”

In view of a society that values good appearance and that, many times, faces the natural process of aging in a negative way, such process may bring sentiments of low self-esteem and some psychological disorders, bringing about the pursuit of rejuvenation. In today’s time, health professionals have been dedicating themselves not only in treating people who are sick, but also taking care of the appearance of those who are healthy, using procedures to minimize the impact of physical aging in any phase of the adult life (TEIXEIRA *et al.*, 2007).

In view of the aspect that were aforementioned, the objective of this study was to investigate Biomedicine student’s profile, their perceptions about health and aesthetic and the implications in choosing Aesthetic Biomedicine.

MATERIALS AND METHODS

The present research presents its focus from a quantitative and qualitative method that, in accordance with Sampieri, Collado e Lucio (2013), such method aims to obtaining a more complete picture of a phenomenon. Furthermore, the harmony between quantitative and qualitative methods allows safer and more legitimate results.

This research was carried out with Biomedicine undergraduate students from a private institution in the central region of Rio Grande do Sul. All 175 that were enrolled in the course, on the first semester of 2021, were invited to respond to an online questionnaire made on Google Forms. Such instrument was sent by the course coordinator to the students’ institutional email. The questionnaire was composed of 16 questions, divided in three sections: students’ profile (5 objective questions); health and aesthetic perceptions; (2 discursive questions) perceptions related to work area of aesthetics (2 questions with Likert’s scale). It is paramount to point out that the third section of the data collection instrument was answered only by students who positively signaled to the interest in working within the aesthetic area.

Obtained data were treated and analyzed using the theoretical and methodological framework of Implicative Statistical Analysis (ISA), supported by the usage of the Cohesive, Hierarchical and Implicative Classification software (CHIC). According to Dalla Porta (2019). ISA is a methodology commonly using in quali-quantitative researches, allowing organization, construction and visualization of models that seek to explain tendencies of phenomena associated to data. Gras *et al.* (2017) highlight that ASI is a multidimensional statistical method that provided quantification and significance to a set of data through association rules, providing quality indexes in trees of similarities and implicative graphs that are built by CHIC.

To the many variables involved in the objective questions, codes were designed in order to

facilitate visualization and the interpretation of results. For example, the abbreviation 19cp indicates that question nº 19th was answered with the alternative “Completely Agree”. Variables were treated following binary logic, in accordance to the identification of an occurrence (or lack of) of an answer, represented by the values of zero and one. Such values were put in an Excel spreadsheet, that was imported by CHIC to process data.

This research followed the ethical procedures informed by Resolution 510/16 that has been ethically appraised and approved, receiving its approval by CAAE 46707221.3.0000.5306.

RESULTS AND DISCUSSIONS

RESEARCH PARTICIPANTS' PROFILE

Among the 175 enrolled in the undergraduate course of Biomedicine who received the research invitation email, 40 (22.8%) answered the online questionnaire.

Participants' age varied from 18 to 45 years, in an average of 23 years old. Students from all semesters answered the questionnaire: 45% (n=18) of the students were at the first half of the course and 55% (n=22) were in the second half of the course. The respondents' frequency, by semester, in presented in Table 1

Table 1 - Respondents' frequency, by semester

Semester	Frequency	%
1 st	5	12.5
2 nd	3	7.5
3 rd	4	10.0
4 th	3	7.5
5 th	3	7.5
6 th	2	5.0
7 th	12	30.0
8 th	2	5.0
9 th	6	15.0

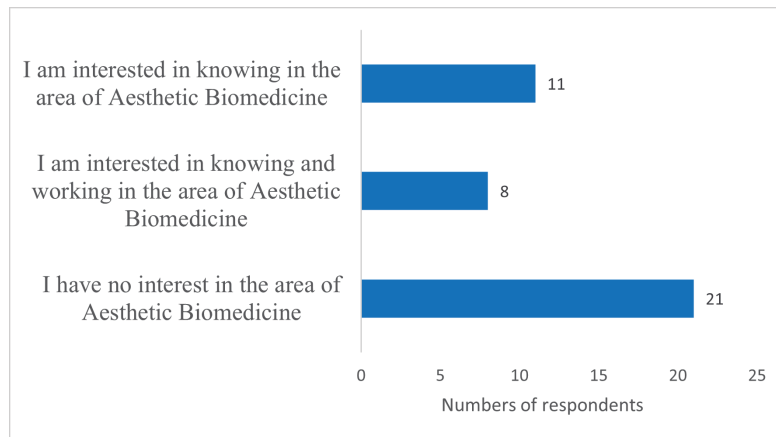
Source: authors

In relation to the fact that the Biomedicine course had been the first undergraduate course option of the students, 60.0 (n=24) have responded yes, and 40.0% (n=16) have responded no, which, for students that did not have Biomedicine as their first undergraduate course option, the most mentioned courses were Medicine (n=6) and Pharmacy (n=3)

In relation to the students' family income, 12.5% (n=5) responded that the family income is of up to 1 minimum wage, 47.5% (n=19) from one to three minimum wages, 25.0% (n=10) from 3 to 6 minimum wages and 15% more than 6 minimum wages. It was also questioned to the students

about their interest in working in Aesthetics (Figure 1), out of the 40 respondents, 27.0% (n=11) are interested in knowing the area, 22.0% (n=8) have interest in knowing and working in the area and 51% (n=21) do not have any interest in the area of Aesthetics.

Figure 1 - Answers from the question: “Is Aesthetic Biomedicine an area of your interest?”



Source: authors

Data obtained from our results point out that there is a considerable interest of the students with the area of Aesthetics. This interest, most probably, is related to the expansion of the aesthetic market, which is one of the most powerful segments of the economy (BRITO; FERREIRA, 2018). Besides that, populational aging and the preoccupation of the contemporary society with appearance make the aesthetic area a promising area and a potential field of work for many health professionals, among them, biomedical professionals.

In our research, we also aimed to acknowledge students' perception in relation to the concept of Aesthetic and Health. To do such, we asked that the participants write three words that make them remember the word “aesthetic” and three words for “health”. Answers were presented considering the perception of students that show interest in Aesthetic Biomedicine (considering students that answered that they show interest as well as students who show interest and volition to work in the area) and from students who do not have any interest in working in aesthetics.

Figure 2 presents a word cloud with the terms that are triggered from the word “aesthetics” from students who have interest in Aesthetic Biomedicine (Figure 2A) and from students who do not have interest in the area (Figure 2B) and Table 2 presents the most evoked 5 words with their respective use frequency.

Figure 2 - Word Cloud. A) Answers from students who have interest in Aesthetic Biomedicine.
 B) Answers from students who do not have interest in the area of Aesthetic Biomedicine



Source: authors

Table 2- A) Most used works from students who have interest in the aesthetic area in relation to the term “aesthetic”
 B) Most used words from students who do not have interest in aesthetic in relation to the term “aesthetics”.

A		B	
Word	Frequency	Word	Frequency
Beauty	14	Beauty	16
Care	9	Self-esteem	9
Self-esteem	8	Botox	4
Harmony	4	Money	3
Well-being; health	3	Well-beig	3

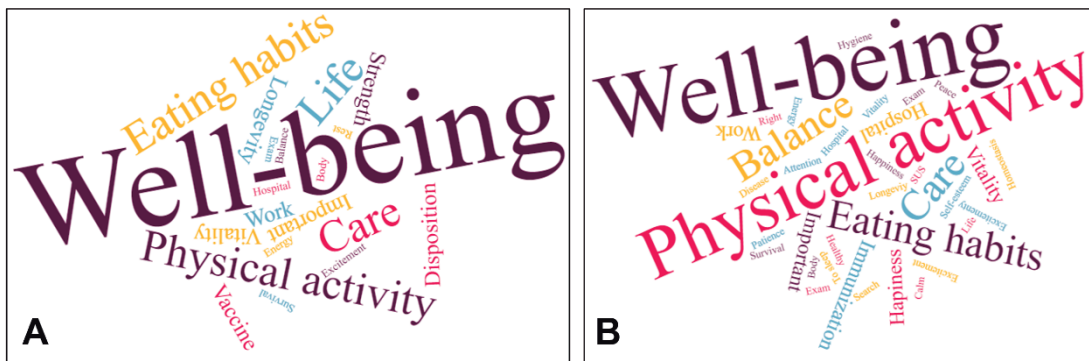
Source: authors

According to the word cloud (Figures 2A and 2B), the terms “beauty”, “care” and “self-esteem” were the most demanded in relation to the work aesthetic. In its own definition, when we think about Aesthetic Biomedicine, we are talking about a professional that takes care of health, well-being, and beauty of the patient, thus, the evocation of these terms makes sense within the participants’ context. However, we also noticed a difference in relation to the evoked words when compared to the answers from students who have interest in working in the area from those who do not have interest. While the former used words like “care”, “harmony” and “health”, the latter, who do not have interest, used words like “Botox” and “money”.

It is possible to notice that students who have interest in aesthetics relate aesthetics with well-being, care, and health. In general way, this fact is paramount, because professionals who work in the area promote health through procedures that increase people’s self-esteem. In their study, Barros e Oliveira (2007) also signaled that aesthetic treatments provide many benefits, resulting in comfort, relief and well-being, contributing with the individual’s health.

Figure 3 presents a word cloud with the terms that are triggered by the work “health” from students who have interest in the area of Aesthetic Biomedicine (Figure 3A) and from students who do not have interest in the area (Figure 3B) and Table 3 presents the most evoked words with their respective frequencies.

Figure 3 - Word Cloud. A) Answers from students who have interest in Aesthetic Biomedicine. B) Answers from students who do not have interest in the area of Aesthetic Biomedicine



Source: authors

Table 3 - Most evoked words from students who have interest in the area of aesthetics in relation to the term “health”.

A		B	
Word	Frequency	Word	Frequency
Well-being	11	Well-being	16
Eating habits	4	Physical Activity	9
Physical Activity	4	Eating habits	4
Care	4	Care	3
Life	4	Balance	3

Source: authors

One can notice that, by observing the most evoked words, that either students who have interest in aesthetics or for those who do not have interest in the area have a similar view when triggered by the word “health”, considering “well-being”, “physical activity”, “diet” and “care” among the most used words. This shows a wider concept of health and one that correlates to what today is advocated and demanded of a health student.

Similar results were found in research from Silva (2019). The author carried out an investigation about the concept of health in university students from an undergraduate course in Interdisciplinary Health and the researcher also verified that the term “well-being” was mentioned by the research participants to the point of becoming an analysis category of the research.

To Waldow (2001, p. 129) “Providing health means [...] is to assure means and situations that amplify quality of life, capacity of autonomy and the individual’s patter of well-being”. That is, it is more than avoiding diseases; to be healthy means to have a strong relation to the well-being of oneself.

In addition, according to the Decision CNE/CES 436/2001, aesthetics is recognized as an area of health that is composed of integrated actions of protection and prevention, education, recuperation, and rehabilitation in reference to individual and collective necessities, aiming the promotion of health, based on a model that surpasses the emphasis in medical and hospital assistance (BRAZIL, 2001).

One may also highlight the importance of discussing the conceptions of health within the academic context. According to Pigatto *et al.* (2011, p. 1)

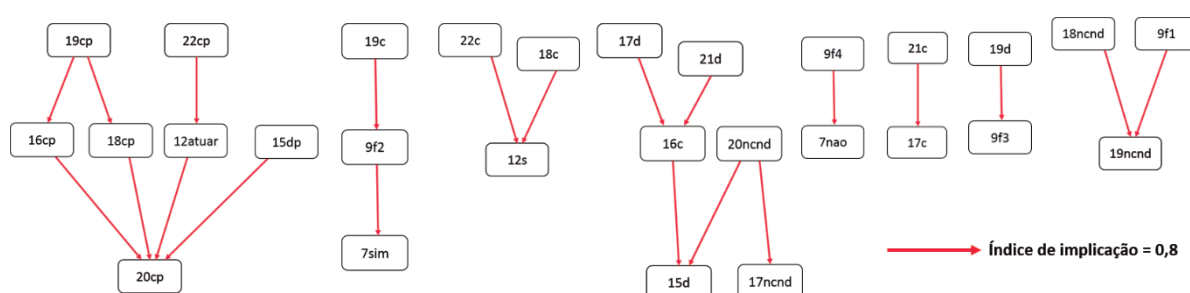
The concept of health is being changed and discussed as much in academic contexts as outside of it. Particularly in academic contexts, reflecting about the concept of health is paramount because it is a decision-making point and, more than that, of actions from health professionals.

To Scliar (2007), the concept of health is not defined by the same way for all people, because it depends on cultural and social and singular elements that the individual has experienced, such as family, religions, among others.

IMPLICATIVE ANALYSES.

We started our implicative analysis through implicative graphs, as showed in Figure 4, which allowed the visualization of the involvement intensity among variables. The implication intensity considered was of 0.8, which, according to Gras *et al.* (2017), is a meaning value from a statistical point of view. It is important to highlight that the analyses from Implicative Analysis say only about answers from participants who have interest in aesthetics.

Figure 4 - Implicative Graph



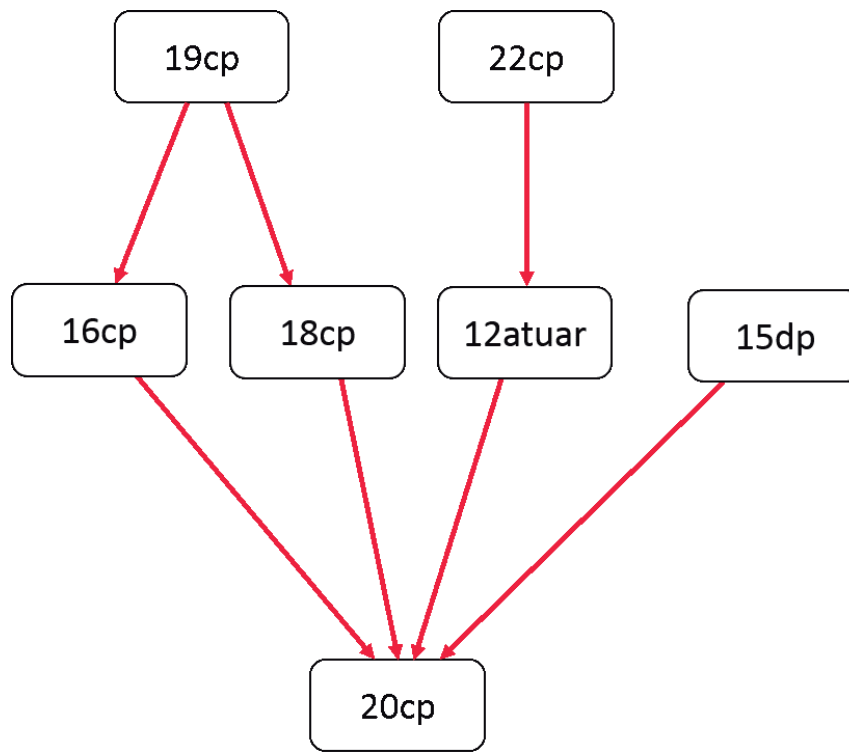
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From the built up implication, we chose the ways that show more relevant tendencies to the research, such as: 19cp→16cp→20cp; 17d→16c→15d; 21d→16c→15d e 22c→12s; 18c→12s.

The way 9cp→16cp→20cp (Figure 5) shows that students understand that the aesthetic area is in expansion because of the individual’s preoccupation with health (19cp). In addition to this, the

interest in working in aesthetics is related to the increase of the individual's search for better health (16c), showing the interest in investing in own enterprises. (20cp).

Figure 5- Implicative Graph from 19cp→16cp→20

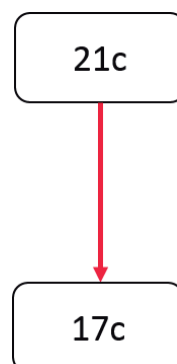


Source: authors

In according to Portela e Dura (2018, p. 28), “populational longevity bring with itself the ideal of aging in a healthy way, with quality of life and well-being. Thus, for that to become reality, body care, appearance care and health care are fundamental”. These needs for care will certainly increase in correspondence to the ampliament of the aesthetic market.

Students who have interest in aesthetics, because they consider it to be easy enter in such work area, understand that this area is the most promising in the field of Biomedicine (17c), a tendency revealed by 21c→17c (Figure 6)

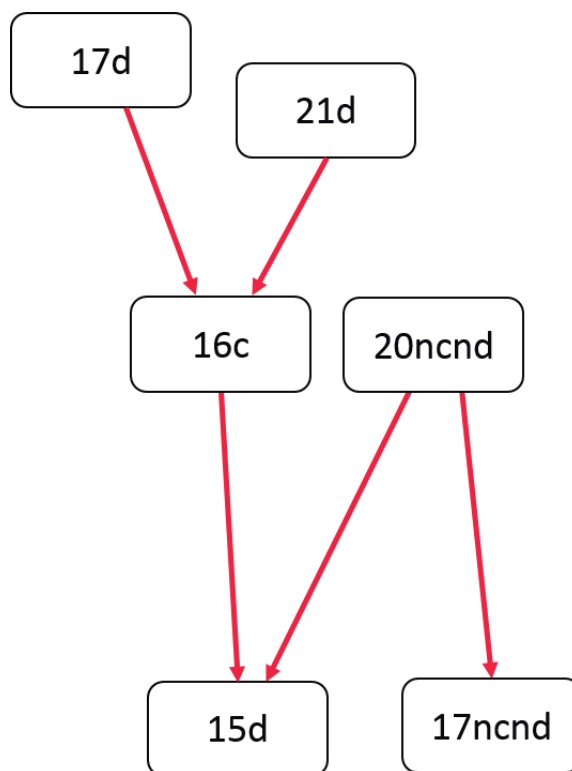
Figura 6 - Implicative Graph 21c →17c



Source: authors

According to Souza e Cardoso (2017), Aesthetic Biomedicine is one the areas that the biomedical professional can obtain a license; such field shows itself to be a promising area. On the other hand, the analysis also showed interesting implications, even when there was divergence in relation to the ideas presented in questions 17 and 21. Let us see: 7d→16c→15d and 21d→16c→15d in Figure 7.

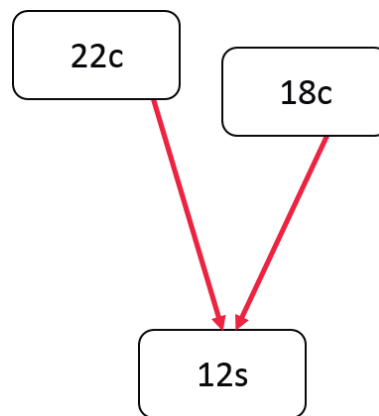
Figure 7 - Implicative Graph 17d→16c→15d and 21d→16c→15d



Source: authors

The implicative graph shows an interesting aspect: both students who disagree that the area of aesthetics is promising (17d) and students who disagree with the easiness of entering such area (21d) agree that aesthetic aspects contribute to the individual’s health (16c), although they have never worked in the area (15d). This implication corroborates with an already presented and discussed aspect in our research: the fact that students, regardless of having or not having interest in working in aesthetic, understand that aesthetics, in addition to promote beauty, also promotes an increase in individuals’ self-esteem. We feel that such result was also triggered by the work “health”.

22c→12s and 18c→12s (Figure 8) show that as much as students who signaled the habit of going through aesthetic procedures (22c) as those who observe that the area of aesthetics in is expansion because of the individuals’ preoccupation with physical appearance (18c), both have interest in the area of aesthetics (12s)

Figure 8 - Implicative Graph 22c →12s and 18c →12s

Source: authors

We live in a world in which imposing social and culturally patterns take people to subject themselves to unnecessary procedures if beauty patterns were not so forcefully established. Is this the purpose of Aesthetic Biomedicine? Should reaching culturally imposing patterns be the aim to these people? To what extent does appearance care relate itself to the search for health maintenance? These questions are relevant, in a special way, for a professional who works or pretend to work in health.

We believe that a wider concept of health, much more than the lack of diseases, reflects the individual's well-being and self-acceptance capacity. The area of aesthetics may contribute substantially with the health of the individual when we base ourselves on the concept that the individual is a whole and that health and beauty are intimately linked. (SOUZA; LOPES; SOUZA, 2018).

However, it is necessary to remember that such discussion is not about beauty promoted by pre-established patterns by the media, in which are comprised of unattainable patterns; it is about beauty that brings with itself the "healthy aspect". When one promotes beauty to an individual, it is possible that the same individual has self-esteem and well-being, in addition to mental and physical health, which becomes a mirror of internal conditions and health of the organism.

FINAL CONSIDERATIONS

Basing our research on the following objective: to investigate undergraduate Biomedicine students' profile, their perception of health and aesthetics and the implications in choosing work in Aesthetic Biomedicine, results point out that the Franciscan University students from the Biomedicine course have a wider concept of health, which is very important because they are future professionals that will deal with people's lives. Thus, one can highlight the importance of these discussions within the academic context.

One may also notice that the students who show interest in working in aesthetics also are interested in the area not only because of the money, but also for the satisfaction in working in an area that provides well-being and betterment of people's self-esteem.

It was also observed a similar perception in relation to aesthetics because both students who manifested interest in working in the area and those who do not have interest understand that aesthetics is related to beauty, self-esteem, and well-being. However, contrary to the students to have interest in aesthetics, those who do not have interest in such area used words as Botox and money in their perceptions. In relation to health, all respondents show to have a wider perception of health, once they used words that reflect well-being, care, physical health, diet, among others. The Implicative Statistical Analysis show a tendency that students understand that aesthetics is a factor that mobilizes health care and that is a promising work field that is in expansion.

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