General content analysis of profiles managed by Instagram® nurses

Análise de conteúdo geral dos perfis gerenciados por enfermeiros no Instagram®

Análisis de contenido general de perfiles gestionados por enfermeras de Instagram®

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Abstract
The production of digital content has gained increasing relevance in Brazil and worldwide and nurses have stood out in this scenario, especially within the social network Instagram®. Therefore, the aim of this study was to analyze and present the general content produced by nurses on the Instagram® social network. This is a qualitative study of direct observation in the Instagram® application of nurses’ profiles, carried out in October 2021. With the strategies and search engines, 105 nurses’ profiles resulted. After prior analysis and application of the inclusion and exclusion criteria, the sample consisted of 25 profiles. Among the main findings, 60% of the profiles analyzed had less than 10,000 followers and 36% had as their main scope the sharing of routines and study tips for nurses taking public exams and other course students’ area. Furthermore, 12% sought to share political content about the inclusion of nursing in political debates and valuing the profession. Therefore, Public profiles of nurses on Instagram® are used for a variety of professional purposes, all of them with great relevance for the propagation of content in the field of Nursing. Most of these profiles produce content for their own professional category. It is important that professional nurses can occupy these spaces of social media also to further provide the general population with health knowledge based on scientific evidence.

Keywords: Social network analysis; Nursing; Social media; Social networking.

1. Introduction
The production of digital content has gained increasing relevance in Brazil and worldwide, mainly due to technological advances and the expansion of social networks (Frazier et al., 2014). In the world, 56.7% of the population uses the internet, and in Brazil, this percentage reaches 78.3% of the population, occupying the fifth position among the countries that most use the internet (Banco Mundial & Brazil, 2021).

Social media, also called social networks, aim to connect people in real time. They can be used for personal purposes...
connection with friends and family), as well as for professionals, providing informative and educational content for other professional colleagues and the general population. Among the most popular and currently used social networks are Facebook®, YouTube®, WhatsApp®, Instagram®, Twitter® and Snapchat®, respectively, according to Statista (2020).

In these virtual spaces, the sharing of professional content has been increasingly frequent, especially among nursing professionals (Mesquita et al., 2017). Its benefits include the simultaneous exchange of information related to health issues to the general population, often demystifying the so-called “fakes news”. As well as the dissemination of information relevant to the profession itself, in order to help colleagues in training or already graduated. Thus, they present the possibility of maintaining a diversified audience, configuring themselves as an extremely important communication space for the nursing professional.

A bibliographic study carried out in order to identify and analyze the evidence available in the literature on the use of social networks in nursing work processes showed that the social media most used by nurses are Facebook (66.5%), Twitter (30%) and WhatsApp (3.5%). There social networks were used for research purposes in 70.5% of the evaluated studies; in 18.5% as an instrument to help students in academic activities; and in 11% to perform virtual interventions (Mesquita et al., 2017). The presence of nursing professionals in this space is real, which is why it is necessary to know the content conveyed through these networks.

In addition, it is important to highlight that in the context of the COVID-19 disease pandemic, the image of the nursing professional has been increasingly publicized on Instagram®, mainly through photos (91%) and videos (9%), reaching different impressions, having their importance often reduced only to the application of vaccines, according to Lima et al. (2020). There is little appreciation of the profession and its struggles as a whole (Lima et al., 2020). Therefore, considering the evidenced facts, it is relevant to know the content produced by professional nurses on social networks, especially those most accessed, such as Instagram®.

Given the facts presented, the following question arises: what is the professional content in general produced by nurses on Instagram®. The justification for this study is in fact that nurses have increasingly occupied the spaces of social networks, especially Instagram®. Furthermore, nursing is the largest category of health professionals in Brazil and in the world, so this analysis and presentation is of great relevance. Therefore, the objective of this study is to analyze and present the general content produced by nurses on the Instagram® social network.

2. Methodology

2.1 Type of search and Observation field

This is a qualitative study of direct observation in the Instagram® application of nurses' profiles, carried out in October 2021. The field of investigation and observation of this research was the social network Instagram®, as it was been disseminated and widely accessed on the current scenario of sharing experiences and information (Lima et al., 2020).

This social network is highly popular among internet users in Brazil. For 2015, the average number of Brazilians on the platform would be higher than the world's according to estimates. A year later, in 2016, this number jumped to 75%, higher than the global average for that year (42%). Since 2019, the Brazilian public has been ranked third in the ranking of Instagram® users, second only to the United States of America and India, respectively (Statista, 2020). The aforementioned social network was the field of investigation for this research because of all these facts revealed.

2.2 Research Protocol

The population of this research consisted of Instagram® profiles of professional nurses who had the objective of disseminating professional content and experiences on the platform. To be included in the study, the profile should be open to
the public and its last post should have been at least 1 week ago, evidencing the active character of the profile. In addition, a nurse of any gender and have an easily identifiable scope of profile should manage the profile. This information must be clear in the profile, without taking into account the length of professional experience or professional or academic qualification. The profiles of nurses used for personal purposes were excluded, that is, those without the objective of sharing professional content.

2.3 Data Collection

To perform the data collection, the authors of this study performed two searches on the Instagram Platform® through the professional profile of one of the researchers in this research, on October 29, 2021. "Enfermeiro" and "Enfermeira" (in Portuguese), which means "nurse" in English for male and female, respectively, were the words used for this search, in the command "search >> profiles" on Instagram. Thus, there were two searches, one search at a time. The search took place in a single day so as not to bias the study and so that the exhaustion and recording of all research findings was possible. After removing the duplicated profiles from the survey, the result was 105 nurses' profiles.

2.4 Data Organization and Analysis

To compose the sample of this study, we considered the selection of 50% of the profiles found, considering the lack of a formula or a standard cut available in the literature that could guide the number of profiles needed for analysis in this type of research. The analysis of all profiles would not be possible, taking into account the fact that it is not possible to gather all available information about the profiles for synthesizing them for use in this article.

To choose the profiles that would enter the analysis, they were randomly listed from 1 to 105 and 52 numbers were drawn by a site that performs the draw. In this way, it was possible to analyze the content of 52 of all profiles found. Of these analyzed profiles, after applying the inclusion and exclusion criteria, the final sample of the study was composed of 25 (48.1%) profiles managed by nurses.

2.5 Ethical aspects

It is noteworthy that the data used to carry out this research are in the public domain and as a result, there is no need for approval by the Research Ethics Committee (Mainardes, 2017). However, it is noteworthy that this study did not reveal any data regarding the identification of professionals who manage the analyzed profiles. Thus, in compliance with Resolution 466/2012, all ethical and legal aspects were duly respected (Fernandes, 2015).

3. Results and Discussion

The final study sample consisted of 25 profiles, all managed by nurses. All profiles found and selected are managed by Brazilian nurses, residing or not in the country, according to information available in the social network's biography.

Table 1 shows the main information of the profiles included in this analysis regarding the number of followers, the number of posts in the feed and the scope of action. It is noteworthy that to protect the identity of the analyzed profiles, they were numbered from 1 to 25 (P.1 ... P.25). This information refers to what was analyzed on October 29, 2021, the date on which the survey was carried out.
Table 1. Descriptive analysis of professional profiles of nurses on Instagram®.

<table>
<thead>
<tr>
<th>Profile</th>
<th>Number of followers</th>
<th>Number of posts in the feed</th>
<th>Profile Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.1</td>
<td>51.400</td>
<td>905</td>
<td>Nursing and lifestyle in another country</td>
</tr>
<tr>
<td>P.2</td>
<td>5.996</td>
<td>264</td>
<td>Motivation and routine of a registered nurse</td>
</tr>
<tr>
<td>P.3</td>
<td>16.900</td>
<td>456</td>
<td>Motivation, planning and study routine for nursing residency</td>
</tr>
<tr>
<td>P.4</td>
<td>2.659</td>
<td>144</td>
<td>Tips for studying and teaching in a fun way</td>
</tr>
<tr>
<td>P.5</td>
<td>10.000</td>
<td>267</td>
<td>Assistance to become a nurse in another country</td>
</tr>
<tr>
<td>P.6</td>
<td>8.440</td>
<td>814</td>
<td>Political defense of nursing and health professionals in general</td>
</tr>
<tr>
<td>P.7</td>
<td>1.941</td>
<td>66</td>
<td>Learning and teaching in nursing with a focus on wounds and dressings</td>
</tr>
<tr>
<td>P.8</td>
<td>1.567</td>
<td>84</td>
<td>A little bit of everything about nursing</td>
</tr>
<tr>
<td>P.9</td>
<td>15.400</td>
<td>581</td>
<td>Nursing care for humanized childbirth: monitoring from pregnancy to postpartum</td>
</tr>
<tr>
<td>P.10</td>
<td>15.000</td>
<td>351</td>
<td>Nursing curricula</td>
</tr>
<tr>
<td>P.11</td>
<td>3.685</td>
<td>196</td>
<td>Study, planning and stationery routine</td>
</tr>
<tr>
<td>P.12</td>
<td>2.560</td>
<td>215</td>
<td>Nursing for Faculty</td>
</tr>
<tr>
<td>P.13</td>
<td>9.798</td>
<td>340</td>
<td>Nursing with a focus on residency</td>
</tr>
<tr>
<td>P.14</td>
<td>4.887</td>
<td>156</td>
<td>Focus on residency approval, public examinations and master's</td>
</tr>
<tr>
<td>P.15</td>
<td>579</td>
<td>94</td>
<td>Preparation for entry into naval nursing</td>
</tr>
<tr>
<td>P.16</td>
<td>1.170</td>
<td>168</td>
<td>Resident nursing - mental health: summaries and study routine</td>
</tr>
<tr>
<td>P.17</td>
<td>84.200</td>
<td>844</td>
<td>Help to overcome the fear of the first day of work - assistance shift</td>
</tr>
<tr>
<td>P.18</td>
<td>9.457</td>
<td>1468</td>
<td>Nursing and politics</td>
</tr>
<tr>
<td>P.19</td>
<td>39.200</td>
<td>360</td>
<td>Appreciation of nursing and defense of the Health Unic System</td>
</tr>
<tr>
<td>P.20</td>
<td>69.800</td>
<td>1439</td>
<td>Influence people</td>
</tr>
<tr>
<td>P.21</td>
<td>5.418</td>
<td>147</td>
<td>Pharmacology applied to nursing</td>
</tr>
<tr>
<td>P.22</td>
<td>317</td>
<td>11</td>
<td>Public tender in the legislative area: seeking the highest level</td>
</tr>
<tr>
<td>P.23</td>
<td>1.304</td>
<td>49</td>
<td>Nursing research and extension; and entrepreneurial nursing</td>
</tr>
<tr>
<td>P.24</td>
<td>12.600</td>
<td>1445</td>
<td>Boosting the nursing career</td>
</tr>
<tr>
<td>P.25</td>
<td>50.000</td>
<td>404</td>
<td>Making Practices Easier: For Students and Health Care Professionals</td>
</tr>
</tbody>
</table>

Source: own authors (2021).

Based on the results presented in Table 1, it is noted that 60% of the profiles included had less than 10,000 followers and 80% had more than 100 posts in the social media feed. Regarding the scope of the profiles, it was noted that 36% of the profiles were mainly focused on sharing study routines and tips, as well as motivational content, for nurses studying for public examinations and selections and other students. Furthermore, 12% sought to share political content about the inclusion of nursing in political debates and valuing the profession. The other profiles (52%) had more diversified subjects focused on nursing practice and entrepreneurship in the field of Nursing.

Most of the analyzed profiles had less than 10 thousand followers. However, it was noticed that they are profiles with good engagement, having observed a high number of likes and comments in the publications of these profiles, even those with a smaller number of followers. Thus, it appears that Brazilian nursing is well present on Instagram®, substantially contributing to the dissemination of knowledge in the field of nursing and health in general. It is necessary, however, greater adherence and support from professionals who make up nursing and other users of the social network so that nursing content has more reach and can transform more realities within the scope worked by each of these profiles.

Profiles with more followers are generally more recognized, and may even be invited to promote brands and/or sell ideas and products. These types of pages are called digital influencers. Unlike small personal profiles that do not have as much support, these influencers usually, rely on financial and media support, so that what they expose on their pages gains greater notoriety, which can favor or distort the image of something or someone in a few minutes, even though a seemingly simple post (Silva & Tessarolo, 2020).

It is also noteworthy that virtual celebrities use this online platform as a means of work, creating links with different
companies after obtaining sponsorship (Mota et al., 2019). Thus, it can be insinuated that many professional nurses in Brazil created profiles on Instagram® with the aim of becoming known, recognized and even earning extra revenue from sponsorships to add to their main revenue. This does not mean that these objectives overlap with the interests that these same profiles have regarding the dissemination of their knowledge and ideas to inform the population and help or motivate other nurses. This is because among the advantages that electronic commerce has, in relation to the physical company, the greater visibility of its business and its products and services stands out, as Nunes et al., (2020) and Costa (2021) pointed out.

Most of the analyzed profiles seek to bring some educational content aimed at professionals in their own category, whether in the context of study tips, routine or motivation, mainly aimed at professionals who choose to prepare to take public and/or public examinations and/or selective processes in the area. Thus, this highly relevant role of these profiles within the scope of Instagram® is highlighted, as in addition to being a network that enables new friendships, it is also possible to use it to teach, learn and work - networking - as well as to motivate professionals in the field to seek better employment opportunities.

It has been noticed, more and more, the creation of profiles by nurses focused on the theme of studies and motivation for public examinations in the field of nursing. This may be associated with the fact that in recent years there has been a growing number of public examinations granted in the health area in Brazil, with the offer of vacancies and career plans and attractive salaries. In 2021, several municipal, state and federal, as well as private institutional examinations, contemplated numerous vacancies for nursing professionals, especially due to the COVID-19 pandemic that increased the demand for these professionals in the various health services (Almeida et al., 2022).

In addition, the implementation of the new labor reform, which resulted in the loss of labor rights with evident harm to nursing workers (Farias et al, 2021), may have contributed to these professionals seeking stability from the completion and approval of public tenders. Thus, nursing professionals in search of financial stability seek and rely on the support of nurses’ profiles on Instagram®, especially those who give tips and provide methods and materials that contribute to this long preparation process.

At the same time, this milestone may have contributed to the formation of more profiles of contemporary nurses focused on entrepreneurship. According to Colichi (2019), a range of different market niches is possible for the entrepreneurial nurse and, in this digital age, influencing entrepreneurial nurses can be important to encourage other professionals in the field to undertake profitable businesses.

In this scenario, a form of content produced on Instagram® by nurses is based on digital entrepreneurship, whether through the sale of e-books or improvement courses. In this case, it is up to the professional to decide in which area he wants to dedicate himself to the production of his digital content. The study by Prudencio and Fuzissaki (2021) points out that nurses have recognized entrepreneurship in the digital market as a possibility to conquer new work opportunities, recognition, appreciation and professional and personal satisfaction.

Continuing, many nurses profiles on Instagram® are also used to share subjects related to undergraduate and graduate degrees, at specialization, residency, master's and/or doctoral level. Survey carried out by Almeida et al. (2020), showed that this tool has become one of the main social media, enabling the engagement of students and teachers on digital platforms. Still, this author argues that such means enable the work of skills and abilities such as global citizenship, innovation and creativity, aptitude with technological resources, socio-emotional skills, and entrepreneurship and student initiative.

The use of these social networks has also provided a lot of visibility to teaching initiatives (Zeferino, 2022), research and extension activities, and scientific production within the graduate program (Monteiro et al., 2022). The use of these means has gained more prominence in the current context marked by the COVID-19 pandemic, since face-to-face research is unfeasible in the practical field, and nursing education has started to use educational technologies even more for the continuity of
of academic activities and improvement professional (Jansen et al., 2021).

Regarding the content produced by nursing professionals, it appears that this is very diverse. This has been responsible for opening more doors for debate so that other professionals in the category can also position themselves through social media, especially Instagram®. Some profiles of nurses in this social network have encouraged professionals in the category to be more participatory with regard to political dialogues, aimed at bills that seek to bring improvements to the profession. For example, there are the Law Projects that establish a decent wage floor and a workload of thirty hours for these professionals (Pedrolo et al., 2021). Therefore, it is important that more reflections on the work process of politically participating in the nurse are encouraged by these profiles on Instagram®.

Nurses to disseminate content to the general population have also used the Instagram® platform. A survey, carried out by nursing students, who developed educational activities through an Instagram® profile, revealed the public's high interest in the topics covered, with several interactions taking place through comments, which referred to doubts about the subject and praise for the publication (Galvão et al., 2021).

Alves et al. (2021) conducted a study on the use of Instagram® as a health education tool regarding sexuality; and Bernardes (2021), in turn, investigated the use of this same application as a health education tool on breastfeeding. These studies showed, in common, that health education through this social network configures itself as a space capable of providing the construction of knowledge. This is possible because this social network is an active virtual space present in the daily lives of millions of people who downloaded the application on their smartphones.

Thus, it is noted that nurses, when deciding to strategically position themselves through the production of public content on Instagram®, have a range of opportunities for their personal and professional development. It is, therefore, responsible for directing its content in the context in which it has greater expertise to carry out professional communication with assertive reach to the desired audience.

Among the limitations of the present study, the impossibility of analyzing and presenting all the profiles of nurses that exists in the Instagram® application stands out, as it would take long hours to carry out this search, analysis and presentation. A specific and rigorous standardization that could help researchers in search strategies and commands in this social network would still be necessary. These limitations reveal the need to produce and publish more direct observation research studies on the Instagram® application for specific areas within the great area of Nursing. The limitations also reveal the need to build and validate strategies and search engines on social networks and the like.

The results of this research can help contemporary nurses who like to be connected to the world through the internet, as the main contents that nurses have currently published in this tool were presented. This study provides subsidies mainly for nurses inserted in the environment of digital entrepreneurship and for those who wish to use Instagram to disseminate knowledge about some area of nursing.

4. Final Considerations

Public profiles of nurses on Instagram® are used for a variety of professional purposes, all of them with great relevance for the propagation of content in the field of Nursing. Most of these profiles produce content for the professional category itself, such as sharing routines, tips and study materials for registered nurses and undergraduate and/or graduate students, as well as content on the participation of nursing in the political environment and focused on nursing practice. Profiles of nurses who discuss entrepreneurship in the field of Nursing are also common.

Professional nurses have occupied spaces in social networks, mainly to disseminate general health knowledge based on scientific evidence. This has made people get to know more closely the attributes of nursing, which are so important for the improvement of this science. Profiles managed by nurses contribute to the mobilization of the class in favor of self-worth and
self-recognition that nursing has an immeasurable degree of importance for health care practices.

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