

Mental health and the Covid-19 pandemic: main topics published in Portuguese and Italian on Twitter

Saúde mental e a pandemia de Covid-19: principais tópicos publicados em português e italiano no Twitter

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Abstract: Aim: Analyze published topics about mental health and the Covid-19 pandemic in public posts in Portuguese and Italian on Twitter.

Methodology: Study of qualitative, cross-sectional approach, developed from the analysis of public Twitter posts in Portuguese and Italian language about mental health and the Covid-19 pandemic. The data were extracted, transcribed and the content were analyzed from Thematic Analysis. **Results:** A total of 430 Twitter posts were analyzed and five categories were created: Diverse criticisms about behavior and public policies; Restrictions and privations; The (in)attention to mental health care; Burnout, exhaustion, and emotional overload and Impact of the pandemic on education. **Conclusion:** The analyses showed impacts in different spheres of life of Twitter users in both countries, mainly in aspects related to mental health care in the virtual environment.

Keywords: Mental health; Social Media; COVID-19; Pandemic; Publications.

Resumo: Objetivo: Analisar os tópicos publicados sobre saúde mental e a pandemia de Covid-19 em postagens públicas em português e italiano no Twitter. **Metodologia:** Estudo de abordagem qualitativa, transversal, desenvolvido a partir da análise de postagens públicas no Twitter em língua portuguesa e italiana sobre saúde mental e a pandemia de Covid-19. Os dados foram extraídos, transcritos e o conteúdo foi analisado por meio da Análise Temática. **Resultados:** Um total de 430 postagens publicadas no Twitter foram analisadas e cinco categorias foram criadas: Críticas diversas sobre comportamento e políticas públicas; Restrições e privações; A (des)atenção ao cuidado com a saúde mental; Burnout, exaustão e sobrecarga emocional; e Impacto da pandemia na educação. **Conclusão:** As análises revelaram impactos em diferentes esferas da vida dos usuários do Twitter em ambos os países, principalmente em aspectos relacionados ao cuidado com a saúde mental no ambiente virtual.

Palavras-chave: Saúde Mental; Mídia Social; COVID-19; Pandemia; Publicações.

INTRODUCTION

Covid-19 is the name given by the World Health Organization (WHO) to the disease caused by SARS-Cov2 and, in March 2020, classified it as a

pandemic¹. The accelerated spread of the disease has potentiated the need for care and the establishment of strategies and measures to mitigate the virus worldwide². According to WHO estimates, Italy and Brazil were some of the most affected countries by the Covid-19 pandemic, with extensive public health repercussions³.

The biopsychosocial impacts related to the pandemic are extensive and include outcomes and experiences related to mental health⁴. The pandemic period has been associated with worsening mental health issues⁴. According to the WHO, the main impacts identified so far relate to increased rates of stress and anxiety, and increased levels of loneliness, depression, problematic alcohol and drug use, and suicidal or self-injurious behavior⁵⁻⁶.

The Covid-19 pandemic was also associated with unpleasant feelings and emotions such as fear, dread, anger, confusion, anxiety, and depression⁷. Studies that have linked the pandemic and population mental health issues have shown the existence of lasting negative psychological outcomes, many of them associated with experiencing social isolation, fear of infection, frustration, lack of basic supplies, difficulty accessing correct information about the current period, and financial problems^{2,8}.

Furthermore, the virtual environment becomes a safer space for interactions and the maintenance of the population's social life in the pandemic. Virtual social network established themselves as means of intense and continuous information exchange between government agencies, professionals, and the general public⁹. Social networks, such as Twitter, have been widely used to express feelings and needs, form opinions, interact with diverse audiences, as well as to disseminate ideas, content, and thoughts on various topics, including issues related to the pandemic and mental health¹⁰⁻¹².

In this context, Twitter is a promising resource to facilitate the in-depth understanding of experiences linked to current issues, such as those related to mental health in the Covid-19 pandemic. Thus, this study aimed to analyze published topics about mental health and the Covid-19 pandemic in public posts in Portuguese and Italian on the virtual social network Twitter.

METHODOLOGY

Study design

Study of qualitative, cross-sectional approach, developed from the analysis of public Twitter posts in Portuguese and Italian language about mental health and the Covid-19 pandemic¹³.

Study site

Twitter presents itself as a unique social network, with characteristics that allow the analysis of the feelings of its users concerning several themes, including issues that involve habits of daily life, beliefs, knowledge, and behaviors in real-time¹⁴. Over the past few years, Twitter has become a target for scientific research on various topics, including the approaches and impacts experienced by the population on the topic of mental health^{14,15}.

Data Collection

The study data were collected on Twitter through the advanced search tool, which allows public posts by network users to be accessed by anyone, free of charge and without restrictions. Through the advanced search, some filters can be selected, among them the definition of words to be searched (alone or together), besides the language, period of posts, use of hashtags, among others. For this study, two independent searches were conducted, the first focusing on the Portuguese language and the second on the Italian language. The filters words, language, and dates were used.

In Portuguese language posts that contained, simultaneously, the expressions "mental health" and "pandemic", dated from March 1, 2020 to March 31, 2021, were eligible. The posts identified in Portuguese were published on March 29, 30, and 31, 2021. In Italian, posts that contained both the terms "salute mentale" and "pandemia" dated from March 1, 2020 to March 31, 2021 were eligible. In Italian, the posts identified were published from March 11, 2020 to March 30, 2021.

A total of 430 posts were selected. In the Italian language, a total of 215 posts published in the period between March 2020 to March 2021 were identified. Thus, it was decided to select the same number of posts in the Portuguese language, however, this number was contemplated in a shorter period, in two analyzed days. This difference is justified because there is a higher

volume of publications in the Portuguese language when compared to the Italian language.

After the search, the data were extracted using the screen capture tool and then transcribed into two editable documents. All screenshots were taken on a single day, and the transcriptions were made within 15 days.

The first author of the study (born in Brazil and living in Italy) translated each of the posts into both languages so that the other researchers could participate in the data analysis. The transcribed posts were identified and categorized in ascending order from consecutive codes formed by the letter P (post) and the numbering from 1 to 215 (order of identification of the post), accompanied by the letters IT (for posts in the Italian language) and PT (for posts in the Portuguese language), in order to protect the anonymity of the authorship of the publications.

Inclusion and exclusion criteria

The posts identified in the advanced search strategies mentioned above were eligible for the study, only textual content was considered. Video, image, gif, poll, audio, and redirect link-type content were not analyzed. The identity of the profiles (photo or username) was not collected and/or analyzed, being removed from all the tweets selected in the search.

Data treatment and analysis

The collected Twitter posts were analyzed using Braun and Clarke's Thematic Analysis¹³. The steps of the analysis begin with familiarizing the data, describing and paying attention to the core data. Next, the creation of grouped codes is performed and they constitute the themes. Subsequently, the themes must be reviewed, defined, and named in order to produce a report of the results. The results are presented according to the last stage of thematic analysis, with the interpretation of social and subjective meanings and the production of the final report.

All posts were translated into both languages (Italian and Portuguese) to allow all researchers to participate in the analysis process. The writing of the data was done in the Portuguese language and periodically presented in the

Italian language during the discussions held with the Italian researcher involved in the study.

Ethical considerations

The study was conducted in accordance with the recommendations of CNS Resolution 466 of 12/2012 and the General Data Protection Regulation (EU/2016/679)¹⁶, which defines that scientific research developed based on public data, defined as free access, can be outlined without the need for submission to research ethics committees in Brazil and Italy.

RESULTS

The content analysis of the 430 Twitter posts on the themes of mental health and the pandemic (in Italian and Portuguese) resulted in the elaboration of five analysis categories, which are described below.

Figure 1. Description of the categories and subcategories developed from the analysis of the posts (n = 430) from the virtual social network Twitter in Italian and Portuguese. 2021.

Categories		Subcategories
I	Diverse criticisms about behavior and public policies	Other People's Behavior Government measures
II	Restrictions and privations	Social isolation Economic impacts
III	(In)attention related to mental health care	Importance of mental health care Psychological support actions
IV	Burnout, exhaustion, and emotional overload	Mental health problems: experiencing feelings and emotions The information pandemic: the edge of interactions
V	Impact of the pandemic on education	Educational challenges during the pandemic

Source: Elaborated by the authors (2021)

Category I - Diverse criticisms about behavior and public policies

This category brings together several criticisms related to the behavior of other individuals during the quarantine experience and the revolt against the actions taken by government agencies and criticism regarding gaps in public policies for mental health. We identified criticism directed to the denial of the existence, seriousness, or need for sanitary measures to control the

pandemic and the lack of empathy and understanding between people with divergent positions.

Other people's behavior

Twitter users showed indignation at the behavior of others regarding the noncompliance to the recommendations of social distancing imposed by the pandemic. In some cases, people were criticized for participating in leisure activities, such as travel and tours, for the maintenance of their own mental health, even in a period of restrictions. In addition, there are examples of famous people who have distanced themselves from the dangers related to the coronavirus by traveling to other countries (with a low risk of contagion).

People do a lot of nonsense in favor of "mental health" but they don't go to a psychologist, they prefer to travel to the beach in the middle of a pandemic - P.60.PT

I am exasperated, do you see? I feel useless right now. I've done so much, I haven't seen the sun for two months, putting my mental health at risk more than usual, and then these idiots come along and start going out again as if there isn't a pandemic going on. - P.13.IT

Some posts highlighted the annoyance of users with people who had not yet realized the seriousness of the Covid-19 situation. There were also statements about the impact of health recommendations (especially those for social isolation) on mental health.

Sadly, I am not able to deal with deniers due to my mental health. They want to deny the pandemic, they deny it at home, don't come to disturb the lives of those who are taking care of themselves(...) - P.176.PT

How much I hate those who underestimate the effect that the pandemic and especially the lockdown have on mental health - P.176.IT

Governmental actions

Government actions were mostly criticized in posts in the Portuguese language. Government institutions were criticized for the attitude taken in the fight against the pandemic, especially for positions that invalidate the recommendations of international health organizations for the containment of the virus, the use of protective masks, and the effectiveness of the vaccine. Strong expressions, like "genocide", were directed at the leader of the Brazilian nation. The gaps in the implementation of public policies aimed at the health care of the population were highlighted.

Folks, for God's sake, you can't afford to have mental health in the middle of all this confusion of pandemics, of negligence with the population, of a genocidal president. - P.118.PT

Mental health in Brazil is already difficult to maintain in pandemic conditions. But when you still have supporters of the genocide on the other side, it gets much more complicated. How tiresome it is to have to deny, day after day, so many lies! And even from the authorities! Man... It is not easy - P.15.PT

It seems clear to me that this pandemic has highlighted two things: one is the total inadequacy of much of the press, amidst constant leaks and alarmist headlines. The second is perhaps even more serious, the total lack of interest of those who govern us in the mental health of our citizens - P.108.IT

I need to research how the state government organized itself to meet the mental health demands as a result of the pandemic. - P.145.PT

Category II - Restrictions and privations

The consequences of the pandemic on daily life were considered impactful for the mental health of the population, especially regarding personal relationships, work-related restrictions, deprivation of leisure and entertainment activities, and the need for constant adaptation due to social isolation.

Social Isolation

With social isolation (strongly recommended in the initial period of the pandemic), people were forced to keep their distance and stay indoors. In addition to the various adaptations required, social isolation provoked worries about the future, varied reactions to the "new normal," and mental health impacts, which were highlighted in several posts on the web.

I will not endure a year of pandemic and social withdrawal. Not an ounce of mental health to go through certain situations again. - P.170.PT

The pandemic, besides damaging my mental health, is also eroding human relationships because I can no longer dialogue with my family without arguing - P.203.IT

The pandemic is wiping out the rest of my and my mother's mental health I have never seen my mother as out of patience as she is, and she is a fountain of patience. P.88.PT

Economic impacts

The possible economic impacts generated by the health actions to control the pandemic were the subject of controversial discussions related mainly to unemployment, increased inequality and poverty, and crises in various sectors. In both countries, some posts expressed support for the measures taken, while others highlighted the dissatisfaction and disagreement with the health recommendations due to the economic impact.

(...) I was frightened by how many things were closed, the pandemic destroying commerce, mental health, and family reunions, how long will this last?- P.150.PT

But it is useless to write that lockdown is effective in curbing the epidemiological curve. Good Morning! The goal after 1 year of the pandemic is to adopt measures that allow coexistence with the virus, protecting the economy and the mental health of the citizens - P.146.IT

From anxieties related to the transmission of #COVID19 to the psychological impact of confinement and self-isolation, the effects of unemployment, financial worries, and social exclusion will impact the mental health of the long-term pandemic - P.88.IT

Category III - The (in)attention to mental health care

The postings demonstrated recognition of the importance of mental health care. However, they revealed many gaps in care and the provision of resources and support services. Calls for improvements in the provision of support, concerns about risk groups, as well as the importance of mental health care in family relationships were noted.

The importance of taking care of mental health

The pandemic favored a clearer perception of the importance of taking care of mental health, due to the impact caused in several areas of life, feelings of hopelessness and helplessness, and the perception of gaps in the supply of resources to the population in the form of psychosocial support. The lack of a broader discussion about mental health was also portrayed in the posts.

I am mentally exhausted with this pandemic, the feeling of powerlessness affects my professional life, my family relationship, my daily mood, everything! The little joys of normal life become more difficult and nobody cares about anything with the mental health argument...- P.98.PT

Almost a year since the pandemic started and I have never heard a word about mental health and obviously, no one has ever thought to give concrete help to this problem - P.109.IT

It took a pandemic to make the world discover, that mental health is also important - P.15.IT

I hope that at least one thing has become a little clearer in this 2020 pandemic and lockdown: the fragility of our mental health, which is very often sacrificed or ignored completely. #WorldMentalHealthDay - P.47.IT

In my opinion, on a societal level, we are seriously underestimating the negative impact on people's mental health that the pandemic and lockdown are having - P.75.IT

The pandemic affected society as a whole, the posts portrayed a greater focus on the needs of younger audiences (children, adolescents, and young adults). Among the factors that impact the mental health of this public, the closing of educational institutions and its unfoldings linked to social relationships outside the family and the tensions in family coexistence (especially with parental figures) were highlighted.

Funny how we start talking about mental health only as a consequence of a global pandemic in people, and only because more and more adults are suffering from anxiety and depression. But they never listen to the young people crying out for help, right? - P.32.IT

It is extremely important the speech they are making about the mental health of young people (but not only) during the pandemic. The first time I hear from anyone, but it is a serious problem P.42.IT

During this pandemic, which we have been experiencing for over a year now, has anyone worried about us teenagers? About people from 13 to 18 years old, high school students, their mental and physical health that is going down the drain since March 2020? - P.201.IT

The fact that our, young people, mental health is taken as a joke gets me angry. The idea that if you are a teenage student and don't work yet, thus you must not have problems is unbearable. One year of pandemic, locked up at home and left on our own luck - P.206.IT

Psychological support actions

The mental health support for the experience of the pandemic was portrayed in the posts in different ways. Some users highlighted the importance of talking about and treating mental health in a committed way, mentioning psychological support actions by offering free services and open spaces for dialogue. Posts were also observed that ironized and questioned the health actions offered for the mental health of the population, especially in cases where their development was seen as ineffective.

#Goodmorningdf Unfortunately mental health during the pandemic has been a point to be faced, anxiety crisis, fear, and alcohol abuse are some points that worry (me the) most, and seeking help at this time is the most recommended. - P.129.PT

I would ask for a commitment from politics and institutions. There is a need for psychologists, therapists, and counselors. Mental health is as fundamental as physical health. One year of the pandemic was devastating for everyone, especially adolescents. We have strengthened the structures of care - P.152.IT

What is happening to public mental health in the pandemic times? It is the time when we most need these services. - P.146.PT

We need to talk about another pandemic: people's mental health. It is no secret that in today's world many people already suffer from this, now then... we need to normalize the care of mental health! Everyone should pay attention and care to their mental health. - P.32.PT

Italy's mental health is hanging by a thread. The pandemic has drawn attention to the importance of psychological health, but also to the lack of adequate responses in our country. NOW is the time to activate concrete programs for the emergency and the consequences - P.73.IT

If I think about how I was a year ago, I feel like screaming. I rarely vent on social media about serious things, but the pandemic has ruined my mental and physical health in all aspects. Therapy was my salvation, my only regret is that I didn't think of it sooner - P.199.IT

Category IV – Burnout, exhaustion, and emotional overload

In the analyzed posts, expressions indicating mental suffering on the part of Twitter users were observed. The consequences of this overload were expressed through burnout, exhaustion, and emotional overload.

Mental health problems: experiencing feelings and emotions

Emotional distress and experiencing mental disorders were associated with experiences of pressure for productivity, feelings of powerlessness, and failure. In some cases, users have published comparisons regarding the severity of COVID-19 and of mental disorders.

This is my venting about mental health and working during the pandemic. Follow the thread. Over the course of a year of home office in this calamity, I have had some experiences like burnout, imposter syndrome, and the like. I was not the only one on my team and that is sad. - P.83.PT

Anyone who can be productive in the middle of a pandemic and is in good mental health has my admiration, because I myself have given up. - P.182.PT
 We have been in a pandemic for 9 months and society expects everyone to be 100% productive every day since March, there is no time to take care of your mental health because you have to immediately turn on the computer and get busy, otherwise you are a failure - P.84.IT

A person with depression can also be hospitalized for seizures. So why do you think that in the pandemic not having mental health is not as dangerous as covid? Both are dangerous diseases and both kill. It is not a race about which is less or more important - P.149.PT

To tell you the truth, I admire those who have the mental health to do anything in the pandemic. literally anything. because I am too unmotivated for even the most basic things in life - P.163.PT

One should not even criticize those who are not productive in the midst of the pandemic, since for a year now certain situations affect mental health - P.188.IT

Several unpleasant experiences were expressed in the posts, such as anxiety (panic attacks, phobias, obsessive-compulsive disorders), changes in sleep pattern, feeling apathetic, depressed mood, worrying about the future, physical and mental exhaustion, and suicidal behavior.

Sometimes I catch myself thinking about what the pandemic will leave in terms of mental health the apathy takes over the days and it gets used maybe there will reach a point where going out will not be attractive because of the trigger for anxiety - P.125.PT

I went out for a few hours and felt very strange. I had a feeling of anxiety and wanted to go home. I am very worried about my mental health once this pandemic is over - P.91.IT

There is a clear impact of the pandemic on mental health in terms of perceived stress and the presence of anxious and depressive symptoms. Anxiety levels were found beyond the normal range in about half of the individuals tested. Higher Institute of Health - P.60.IT

This pandemic has only served to ruin my mental health and to show how dull my life is. P.213.PT

Suicide Tv. since the pandemic started, I have lost my job, had panic attacks, anxiety, derealization, depression, and suicidal thoughts. plus, I sleep a lot and don't want to do anything. I envy those who have excellent mental health - P.204.IT

This pandemic is ruining my mental health, if I used to feel lonely now it's worse, I stay in bed all day, I lose the

will to do everything and I feel like I'm throwing my life away, I feel like crying - P.95.IT

How to have mental health with this pandemic? I can't, I am afraid and sad. - P.119.PT

I am mentally exhausted with this pandemic, the feeling of helplessness affects my professional life, my family relationship, my daily mood, everything! The little joys of normal life become more difficult and I don't care about the mental health argument...- P.98.PT

I can't take this virus anymore, my mental health, which was already bad, is now having an even worse breakdown since the pandemic started. I can't take it anymore - P.107.IT

The excess of daily information in the various media provoked varied reactions from users. The way the news was received about the pandemic was considered a trigger for the exacerbation of symptoms so some people reduced their consumption of the pandemic information in favor of mental balance.

During this pandemic I have learned to be selective with news, I don't watch the TV news every day, and I try not to have too much information, for the sake of my mental health, I am always lost about what is going on.... - P.90.PT

I know that the media needs to talk about the real situation of the pandemic...but I think they should be more responsible with the way they do it. Sometimes, just focusing on the negative causes big triggers for people with mental health issues. - P.41.PT

I have been avoiding news about the pandemic in an attempt (almost in vain) to preserve my mental health. But every time I talk to someone it's just sad news. - P.48.PT

I can't read any more about #COVID19. Really. I want to preserve my mental health. So is there a way to block all tweets that mention the pandemic? I think I am on the verge of a nervous breakdown due to too much information on the subject - P.56.IT

The hope for better days appeared in some publications, as well as the encouragement to continue taking sanitary measures instead of searching for information that affects them, in order to imagine the end of the pandemic with projections about future life situations.

A co-worker of mine sent me a lot of data about the world, and since the pandemic is far from over, I'd rather do my part and keep hoping than dig for information every day, my mental health appreciates it. - P.39.PT

The only thing that keeps me with minimal mental health while I stay indoors is to imagine all the things I will be able to do after the pandemic "I will go to that concert" "I will take that trip", maybe I won't do any of those things, but the thought of being able to do them, keeps me going - P.171.IT

Categoria V - The impact of the pandemic on education

Education has been affected by several factors, at the most varied levels of education, with repercussions, especially on the most vulnerable populations.

Educational challenges in the pandemic

Distance education during quarantine gave visibility to the difficulties of time management, concentration, overwork, and adaptations as well as to distance learning strategies. The importance of family participation in the educational process was paramount, especially for the younger public, who had to develop technological resilience with the migration of schools to the online environment and the readaptation of human relations imposed by quarantine.

"How to sleep 8 hours a night, study for the SATs, exercise, eat well, have a social life, be mentally healthy, and do school stuff during a pandemic" *Google search*
- P.18.PT

Teacher: "yes, students celebrate this pandemic because it is comfortable for them to stay at home"
students: forced to use the computer 24/7, non-existent social life, ruined mental health, continuous headache, inability to plan for the future, etc.. - P.210.IT

University students suffered from this change, distance classes and exams generated stress and anxiety, and physical contact between students and professors was significantly altered.

Being a university student, working, doing extension projects, having time to do college stuff, time for relationships, time for my mental health, time to plan my personal and professional projects, creating content, pandemic... no one warned me it would be so hard. - P.113.PT

Honestly? Studying during this pandemic is really burdening me. I don't know if I will be able to continue with university. And I'm sorry, because I care. But I also care about my mental health - P.68.IT

I will have no time for anything this week. Work is getting more tiring every day, the mental health of people in the middle of this pandemic is none, and

education is another issue. College (demands) will drive me crazy until the end of this semester, HELP! - P.109.PT



Among the users' posts, there were mentions of the development of tests and assessment exams during the pandemic, especially, in Brazil, with many publications related to the National High School Exam (ENEM). In the year of data collection, ENEM had as the essay theme "mental health", which raised controversial discussions.

People terrified that 84,000 scored zero on the essay (in which) the topic was "mental health", in the middle of a pandemic, now say, how do you write about something that nobody has or is in good condition? - P.87.PT

To this day I wonder who was the genius who thought people would know how to talk about mental health IN THE MIDST OF THE *** OF A PANDEMIC. - P.94.PT

Students also considered it contradictory that a national exam focused on mental health as the theme of the essay while students' demands did not seem to be considered. They questioned the holding of the exam (ENEM) in a period that could bring losses for many students.

The same @inep_official who was so concerned about mental health, was the one who put at risk the lives of millions of students taking a test in the middle of a pandemic (...) - P.115.PT

What to expect from a year when everyone was terrified of a pandemic, schools closed, no classes, zero preparation for Enem or any other exam. I am not surprised by anything that comes from this government and education department. Congratulations Inep, an essay about "mental health" in a shitty year. P.140.PT

DISCUSSION

The analysis of the post themes published in the virtual social network Twitter emerges as an important strategy in the recognition of patterns and the use of the virtual environment by users, especially about approaches related to mental health and the Covid-19 pandemic.

In this scenario, social network analysis has been a tool for health surveillance, in particular, during the pandemic experience¹⁷. Taboos related to mental health are also assessed in the virtual environment. A study conducted in 2018 highlighted the existence of stigma regarding mental health on social media compared to physical conditions, although there was

more openness to discussion and approaches about some types of mental disorders by users¹⁸.

In this study, the selection of posts in Portuguese and Italian was established by choices made by the researchers involved in the project, in order to provide findings that could consider the experiences in two different countries, with sociocultural issues that directly influenced the processes of coping with the Covid-19 pandemic period. The characteristics of user engagement in the two countries showed significant differences, especially in the Italian language posts, which were collected over a longer period to meet the proposed methodological criteria.

These aspects are highlighted in the use of the social network, since the quantitative results indicated the most active use of Brazilian users on Twitter, through posts in the Portuguese language, when compared to posts in the Italian language. Data regarding the number of Twitter users corroborates this finding since Brazil is fourth in the ranking of countries with more active users on this social network¹⁹.

WHO estimates indicated the extent of the Covid-19 pandemic impacts in Brazil and Italy, with broad public health repercussions, high numbers of positive cases, and deaths²⁰. The biopsychosocial impacts have directly affected life in society, especially concerning mental health problems. Studies highlight increases in the incidence rates of mental disorders, with an increase in cases in healthy people and worsening in those with a previous diagnosis²¹.

The content of the analyzed posts showed relevant issues about the positions and behaviors of users of the network concerning the themes addressed, especially regarding the need for health care, attention to mental health, and experience of restrictions, among others. This reality directly influenced the approach of users to the social network, favoring its use for sharing information and content^{15,22}. A study that evaluated the mental health of 118 participants during the pandemic showed that the young adult population was the most affected by the misinformation disseminated on the networks²³.

The virtual connection that allows the sharing of similar experiences in these spaces strengthens users' sense of belonging¹⁰. The exchanges established are related to the improvement of perceptions and adherence to health care, and strengthening of protective factors, so as to delimit benefits for coping with the pandemic situation experienced. However, suffering and emotional overload were evidenced as a reality for Twitter users. Regarding the posts, the analyzed categories with greater repercussions were the "(Un)attention related to mental health care" and the "Burnout, exhaustion and emotional overload".

Health care aroused the interest of the network users, especially regarding complaints about the lack of active approaches and discussions about mental health, dissatisfaction about the support, and proposals for psychosocial support for mental health. Regarding emotional issues, expressions indicative of mental suffering from the public were observed, with emphasis on approaches to the impacts related to social isolation, feelings of loneliness, fear, sadness, anger, despair, and even diagnoses of mental disorders (panic attacks, anxiety, depression, and Burnout syndrome).

The experience of the Covid-19 pandemic showed that the repercussions on mental health impacted the population at different levels and in different ways²¹. Among the results, the socio-emotional impacts should be highlighted, especially due to the increase in levels of anxiety, stress, nervousness, depressed mood, sleep disturbances, substance abuse, and overeating were some of the perceived changes in the population²⁴. Besides emotional changes, the impact on social issues was also highlighted in the posts and dialogue with the results of studies, such as financial instability, unemployment, and changes in teaching processes²⁵.

In the analyzed posts there were also several reports in the form of criticism about the behavior of people who did not fully adhere to the recommendations of the responsible health agencies. Certain attitudes, such as the break of social isolation, were listed as negative ways to face the pandemic, however, studies have also highlighted factors related to economic and social issues for this break, especially in vulnerable and low-income populations²⁷. The economic impact of the pandemic was significant,

especially in Brazil, with rising unemployment rates, loss of income, and an increase in the number of informal workers²⁸.

Socio-cultural issues were widely addressed by Twitter users, especially regarding the positions and decisions of government agencies in the experience of the Covid-19 pandemic, which were criticized for their decisions. Moreover, the impacts caused the collapse of health systems in both countries, being this a period of great distress, fear, and overload for health professionals, but also, of protagonism^{25,29}. A local study on the Italian reality highlighted that the control of the pandemic should be based on behaviors beyond the assistance provided in health institutions, with the importance of recognizing broader issues of care and management of the pandemic situation²⁹.

Despite the policy gaps, it is worth noting that researchers and institutions around the world have actively mobilized to obtain results in research that established recommendations for mental health care. Initial recommendations focused on health surveillance actions with multi-professional work and the promotion of psychological first aid, with a focus on the recognition of the pandemic, self-care, and care for close peers²⁰.

Educational issues were also mentioned in the Twitter users' posts, with approaches to remote teaching carried out during the pandemic. It is worth noting that some of the strategies for distance education were strengthened by the adequacy of technologies in our daily lives. The use of digital tools enabled the continuity of teaching but evidenced implications and inequalities in the Brazilian and Italian contexts related to socio-educational processes, as well as access to the Internet, the main tool used. Students, teachers, and educational institutions had to adapt to the new times and challenges, in order to streamline learning and search for active methodologies practices³⁰.

The necessary adjustments in education carried out in an accelerated and compulsory way brought to those involved pressures and consequences not yet dimensioned, which gradually were being adapted to the reality experienced, as for example, by the establishment of hybrid education. It is worth mentioning that education had its development impaired at alarming

levels during the pandemic, with impacts that will be measured in the coming decades, in the most varied publics and nations, especially in the most vulnerable populations³⁰.

The mental health impacts caused by the Covid-19 pandemic were extensive and had repercussions in various areas of the life of the population around the world, which in turn used virtual social networks to address the factors associated with the experiences in this period. Among the limitations of the study, the sample analyzed is small and can be expanded in future research. The Italian language posts presented a significant restriction concerning the time of collection when compared to the Portuguese language posts. The translation of publications into Italian was carried out by one of the authors of the research who is fluent in the language, however, it was not reviewed by peers.

CONCLUSION

This study analyzed published topics about mental health and the Covid-19 pandemic in public posts in Portuguese and Italian on the virtual social network Twitter. The results obtained highlighted the engagement of the posts in the Portuguese language but posts referring to issues of the Covid-19 pandemic and mental health were present in both countries.

The content of the posts went through criticisms related to the behavior and socio-political issues related to the pandemic, and opinions in face of the restrictions experienced. The challenges for education were also portrayed in the publications by the need for the development and structuring of remote education.

Among the results, the users positions related to the importance of care and the performance of support actions in mental health during the Covid-19 pandemic. Burnout, exhaustion, and emotional overload were evaluated in several publications, especially by the experience of feelings and sensations such as anxiety, fear, and anguish, as well as mention of mental disorders and risk behaviors. Despite the significant socio-cultural differences, it was possible to observe that the experiences of the Covid-19 pandemic had common aspects for people who used virtual environments, especially

Twitter, to share opinions, positions, and ideas about mental health and the pandemic.



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