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Adaptation of the smoking cessation program to online modality: a pilot study

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Abstract: Due to the recommendation of social isolation because of the COVID-19 pandemic, the Smoking Cessation Program (SCP) in the face-to-face group modality was suspended. The aim of this article was to describe the adaptation of the SCP to an online group modality and to analyze its application in a pilot study. The study was descriptive-exploratory and the adaptation of the program was carried out with methodological rigor, maintaining fidelity. 41 smokers were enrolled, of which 20 participated in the screening interview, and 15 actually attended the first session, carried out through the Google Meet platform. Adherence, dropout and cessation rates were similar to those found in the literature regarding the face-to-face application, suggesting a potential effectiveness of the online program. This was the first SCP adaptation study carried out in Brazil and, as it is a pilot group application, further studies in the online modality are necessary.
Keywords: Smoking Cessation Program; online; group.

Adaptação do programa de cessação do tabagismo para modalidade on-line: estudo piloto

Resumo: Devido ao isolamento social pela pandemia da COVID-19, o Programa de Cessação do Tabagismo (PCT) na modalidade presencial ficou suspenso. O objetivo deste artigo foi descrever a adaptação do PCT para modalidade grupal on-line e analisar sua aplicação em um estudo piloto. O estudo foi descritivo-exploratório e a adaptação do programa foi realizada com rigor metodológico, mantendo a fidelidade. Inscreveram-se 41 fumantes, dos quais 20 participaram da entrevista de triagem, e 15 efetivamente compareceram à primeira sessão. A intervenção foi realizada em grupo e por meio da plataforma Google Meet. As taxas de adesão, abandono e cessação foram similares às encontradas na literatura referentes à aplicação presencial, sugerindo um potencial de eficácia do programa on-line. Este foi o primeiro estudo de adaptação do PCT realizado no Brasil e, por se tratar de uma aplicação em grupo piloto, novos estudos avaliando o efeito do PCT na modalidade on-line são necessários.
Palavras-chave: programa de cessação do tabagismo, on-line, grupo.

Introduction

Smoking is the leading cause of preventable deaths, responsible for the death of 8.7 million people annually (World Health Organization [WHO], 2021). Active tobacco consumption and passive exposure to its smoke are associated with the development of a range of chronic diseases: various types of cancer; respiratory diseases; cardiovascular diseases; and a variety of conditions, such as cataracts, male sexual impotence, and female infertility (Brazil, 2022). Furthermore, because it impairs the body's defense mechanisms

and compromises an individual's lung capacity, smoking is considered a risk factor for COVID-19 (Brazil, 2020a).

With such alarming data, the pandemic nature of smoking demands the development of global measures to combat it that go beyond the scope of health (WHO, 2021). In November 2005, Brazil ratified the WHO Framework Convention on Tobacco Control (FCTC/WHO) - an international public health treaty for the global fight against smoking (Brazil, 2022). This treaty aims to standardize and globalize a series of resolutions on topics such as advertising control, taxation issues, packaging and labeling, awareness, and the provision of treatment for smokers. In 2021, three out of every four countries had at least one active Convention measure at an excellent level, but the only countries practicing all of them with excellence are Brazil and Turkey (Silveira, Assumpção, Andrade, De Micheli, & Lopes, 2021; WHO, 2021).

Since 2002, the Smoking Cessation Program (SCP) has been offered free of charge, and involves a group treatment modality, consisting of four weekly sessions, with pre-structured content, and is based on cognitive-behavioral therapy. In addition to the explicit therapeutic goal, the treatment also aims to educate and raise awareness among participants about health benefits, habits, addiction, relapse, and smoking itself. In the evaluation phase, the SCP uses scientifically validated instruments to collect and quantify data related to tobacco consumption and the level of dependence. Throughout the treatment, there is support from educational materials based on the guidelines of National Cancer Institute/Ministry of Health (INCA/MS). If the participant is interested and there is a medical recommendation, it is possible to test the feasibility of pharmacological treatment using transdermal patches for nicotine replacement (Brasil, 2020b).

The standard treatment format of the SCP was designed to be applied in-person, taking into consideration the possibility of using shared physical spaces for group sessions. However, from the first quarter of 2020 onwards, the world witnessed the rapid spread of the SARS-CoV-2 virus, the causative agent of COVID-19. As of March of the same year, Brazil declared a state of public calamity, and among the various measures to combat it, the need for social isolation and the prohibition of gatherings throughout the national territory is noteworthy (Law No. 13.979, 2020). As a consequence, in-person group activities like the SCP were prohibited.

Combined with the impossibility of conducting the SCP, there is a scenario in which fewer people successfully quit smoking, and, on the contrary, their consumption increases. During the pandemic period, 34% of Brazilian smokers reported an increase in

tobacco consumption, and this increase was associated with factors such as worsening sleep quality, loss of income, poorer health self-assessment, and feelings of isolation from family, sadness, depression, or anxiety (Galloni, Freitas, & Gonzaga, 2021; Malta et al., 2021). Thus, the number of people who potentially develop more severe cases of COVID-19 increases, and the treatment of comorbidities associated with tobacco consumption decreases. Due to the restrictions, many institutions and services had to adapt to an online format. As countermeasure to the growing health issues previously outlined, and to align with the global macro-scenario, the SCP must be offered in an online format.

While the development of online psychological intervention protocols can be complex, this is an international trend that has been increasingly used and has already demonstrated efficiency and efficacy similar to in-person modalities (Stoll, Müller, & Trachsel, 2020). In this regard, public policies offered in group settings need to be adapted to meet the physical and mental health demands, which have increased in recent years (Brasil, 2020). Thus, this study aims to describe the adaptation of a Smoking Cessation Program to the online group format and analyze its application in a pilot study.

Methods

This descriptive-exploratory study presents the adaptation of the SCP recommended by INCA/MS to the online format, and the results of its application in a pilot group of smokers who wanted to quit smoking during the COVID-19 pandemic.

Adaptation of the SCP to the online modality

The adaptation of the program to the online format was conducted with methodological rigor and followed all the steps, from the screening interview to the process follow-up interview. The SCP, recommended by INCA/MS, includes the stages of assessment, which involves the screening interview and the application of instruments before and after the intervention, and treatment, consisting of four structured sessions. INCA/MS recommends monthly follow-up with maintenance meetings for all groups to prevent relapse, until one year has passed (Brazil, 2020b).

In the standard program in-person, the initial assessment involves the screening interview, aiming to understand the participant's smoking history, such as quit attempts, age of initiation, medical history, potential smoking-related illnesses. It also includes the administration of the following assessment instruments: Fagerström Test for Nicotine

Dependence, and the assessment of the level of craving (strong desire, urge to smoke). This assessment enables the professionals to identify if the patients will require medication, in addition to participating in the four structured group sessions, and what the ideal alternative is. After the assessment stage, the intervention begins (structured sessions, with its goals described in Table 1), preferably conducted in a group setting and coordinated by one or two university educated healthcare professionals.

For the adaptations to the online format, we aimed to maintain the fidelity of the procedures employed in the assessment and treatment as much as possible. In the initial assessment stage, the screening interview was adapted for videoconferencing using the "Google Meet" platform. The assessment instruments, Fagerström Test and others described in the instruments section, were adapted for Google Forms and sent by e-mail to the study participants (see procedures section).

With regard to the intervention, which comprises the four structured sessions, the adaptations we made are described in Table 1. The main changes were the use of slides and short videos as visual aids to facilitate the understanding of psychoeducation elements, and the inclusion of cognitive and behavioral techniques, such as distraction, additional relaxation exercises, coping cards, and a schedule of activities with "substitutes" for tobacco in moments of craving. In all sessions, the research team was available to provide technical support regarding access to assessment instruments, homework, or the use of technologies (such as turning on the camera, using the chat, among others).

Table 1

Adaptation of the Intervention Stage

Sessions	Goals	Content	In-person SCP method	Adapted method for online SCP	Task (in-person)	Task (online) Sent by e-mail
Session 1	Understanding why I smoke and how it affects my health.	- Health damage caused by smoking; - Types of dependence - Ambivalence (why smoke and why quit) - Pattern and consumption	Roundtable discussion of the topics: - Strategies to quit smoking: abrupt, gradual, reduction and postponement. - The health damage caused by smoking.	Psychoeducation slides on the same topics as the roundtable discussion + Psychoeducation about: - 3 addictions exercise	- Choose a date to quit smoking - Read the participant's manual, session 1	- Decision Scale Exercise - 3 addictions exercise -Think about the D-day - Read the participant's manual, session 1.
Session 2	Living the first few days without smoking.	- Withdrawal syndrome; - Methods to quit smoking - Breathing and relaxation exercises - Definition of assertiveness and its relationship with quitting smoking	Roundtable discussion of the topics: - Withdrawal syndrome -Deep breathing for relaxation -Assertiveness and its relationship with "quitting smoking" -Constructive thoughts	Psychoeducation slides on the same topics as the roundtable discussion + Psychoeducation and practical exercises: - Techniques for Abstinence - Relaxation (fantasy and progressive) - Presence of a professional who specializes in relaxation techniques	- Do the four practical exercises: drinking water, eating low-calorie food, exercising and breathing deeply; -Choose a date to quit smoking - Read the participant's manual, session 2	-Abstinence exercise - Practice the learned relaxation techniques once a day; - Reaffirm the D-day - Read the participant's manual, session 2.

Session 3	Overcoming obstacles to remain smoke-free.	-Identifying the physical benefits after quitting smoking - Description of the causes and strategies for dealing with weight gain - The importance of interpersonal support to remain smoke-free	Roundtable discussion of the topics: -Benefits of quitting smoking -Causes of weight gain and how to control it - The importance of interpersonal relationships	Psychoeducation slides on the same topics as the roundtable discussion + Psychoeducation and practical exercises: - Distraction - Schedule; + Video about the benefits of quitting smoking for the body	- Do the four practical exercises: drinking water, eating low-calorie food, exercising and breathing deeply - Read the participant's manual, session 3	-Plan next week's activities using the schedule technique; -Do a relaxation exercise once a day and re-read the suggestion sheet; -Bring a photo or image related to your main motivation for quitting smoking to the next meeting;
Session 4	Feeling and enjoying the benefits of quitting smoking.	-Main avoidable pitfalls for staying smoke-free; -Long-term benefits of quitting smoking; -Follow-up plans to prevent relapse; - Guidance for those who have been unable to quit smoking.	Roundtable discussion of the topics: - Indirect benefits of quitting smoking -Main avoidable pitfalls for staying smoke-free -Long-term benefits of quitting smoking	Psychoeducation slides on the same topics as the roundtable discussion + Psychoeducation and practical exercise to create coping card + Video about resilience	-Exchange phone numbers - Read the participant's manual, session 4 - Contact the Program coordinator at any time if there are any questions -Attend maintenance sessions -Remind those who haven't been able to quit smoking that many who have succeeded once tried and failed.	- Create a WhatsApp group - Read the participant's manual, session 4 - Contact the Program coordinator at any time if there are any questions; -Attend maintenance sessions; -Remind those who haven't been able to quit smoking that many who have succeeded once tried and failed.
Maintenance	Relapse prevention	- The sessions are unstructured, as the main goal is to understand each smoker's difficulties and strategies for remaining smoke-free and to help them with guidance.	Roundtable discussion	Virtual roundtable discussion with the support of slides to summarize the strategies discussed in the group	Not applicable	Not applicable

Instruments

Screening interview

A semi-structured, individual, online interview aimed at understanding the participants' smoking history and other health-related information, and assess if they were eligible to participate in the group-based intervention. The interview script consisted of 5 open-ended questions, including inquiries about when the participants started smoking and why, the reason for currently smoking and for wanting to quit, any past quit attempts and methods, and finally, the reason for signing up for the program and their expectations from it. A psychologist and two psychology trainees (the first three authors) with training in smoking cessation conducted the interviews, which lasted approximately 20 to 40 minutes.

Fagerström Test for Nicotine Dependence: It was developed as a revision of the original Fagerström Tolerance Questionnaire (FTQ; Fagerström, 1978) and adapted for the Brazilian population in 2002 (Carmo & Pueyo, 2002). It assesses the severity of nicotine dependence. It contains six items, with four items having a score range from zero to one, and two items with a score range from zero to three, and the maximum score is ten points. Total scores between three and four indicate a low level of dependence, a score of five indicates a moderate level, and scores greater than six indicate high nicotine dependence.

Questionnaire of Smoking Urges Brief-QSU-B (Brazilian Version)

This scale was developed in Brazil by Araújo et al. (2007) to assess "craving" and consists of 10 affirmative questions, each with 7 response options. Individuals express how much they agree or disagree using a 7-point Likert scale, ranging from "strongly disagree" to "strongly agree". The cutoff points for the Brazilian version, based on the total scale points, are as follows: 0 to 13 points, minimum craving; 14 to 26, mild; 27 to 42, moderate; and 43 or more points, intense craving.

Process Follow-up Interview

A semi-structured, individual, online interview, not recorded, with the aim of assessing the participant's progress in the smoking cessation intervention. It took place one week and one month after the end of the SCP in online group modality.

Focus Group

With the goal of understanding the participants' experience in the online group, with the opening question: "How was your experience participating in the online group?". According to Gaskel (2002), discussions in a focus group involve the exchange of ideas and experiences, often expressed emotionally and without a logic. Group discussions represent the way opinions are formulated, expressed, and modified in everyday life (Flick, 2004).

Procedures

Data collection

Stage 1: Promotion and registration

SCP promotion took place in October 2020 through social media, the university's website, the Psychological Care Service of the same university, and on the blog of the newspaper "Folha de São Paulo". Those who were interested in participating in the program would send an email or a WhatsApp message expressing their interest, as indicated in the promotional folder. The initial contact with the participants was via email or WhatsApp (according to each participant's preference) to introduce the research and the Informed Consent Form, through which those who wished to participate authorized the use of their data for the research. Upon agreement, each participant received a link for registration, which was confirmed through the completion of the assessment instruments (described in the instruments section).

Stage 2: Screening Interview

After completing the instruments, the online SCP team contacted the participants to schedule the screening interview. We attempted to contact all 41 registered participants in the order of registration, but 19 did not respond to the messages. Therefore, 22 interviews were conducted, with 20 individuals referred to the SCP, considering that some might withdraw their participation before the program's start date and that the maximum number of participants for the SCP intervention indicated by INCA/MS is 15 people (Brasil, 2020b). Two individuals were referred for individual smoking cessation treatment due to psychiatric comorbidities. These individuals were excluded from this study and provided with free treatment for smoking cessation by team members who were appropriately trained for such treatment. To conduct the interviews, we used the video conferencing platform Google Meet.

Stage 3: Group Sessions

The intervention was conducted in group and online. In the first session, there were 15 participants, and in the last one, there were nine participants. The goal of the adapted SCP was to provide information about the risks of smoking and the benefits of quitting, as well as to encourage self-control or self-management of the addiction cycle, as recommended by INCA/MS (Brazil, 2020b). The meetings followed the "Coordinator Support Guide" (Manual de apoio para coordenadores) (Brazil, 2020b), using the Google Meet platform. There were four sessions, one per week, with an average duration of two hours. In each session, participants would report whether they had been smoking and the quantity. Participants had until the third session to make their quit attempt, and the chosen day for quitting smoking was referred to as the "D-Day". A psychologist and two co-therapists trained in Smoking Cessation Treatment were responsible for coordinating the groups. Each participant received the 'Participant's Manual' (Brasil, 2020b) via email after each session.

Stage 4: Evaluating the experience

At the end of the last session, the nine participants who were present were invited to participate in the focus group, and all of them accepted. With the group's consent, this moment was recorded for subsequent data analysis. The psychologist led the group and conducted the intervention, which lasted between 40 and 50 minutes. After the intervention, we sent a questionnaire to all participants via e-mail. This email, in addition to the instruments from the initial assessment, had the following question: "Comment on your experience of participating in the Smoking Cessation Group".

Data analysis

The data collected through the assessment instruments (Fagerström Test for Nicotine Dependence, Questionnaire of Smoking Urges Brief-QSU-B, and Contemplation Scale) were analyzed using descriptive statistics to assess the variables studied in terms of frequency distribution, median, scores, and standard deviation, with the assistance of PSPP version 1.12.3 from October 19, 2021. The data collected from the questionnaire, specifically from the question about the evaluation of the experience, and the focus group were analyzed through categorization and themes related to the online group modality SCP.

Ethical Considerations

This research was approved by the Human Research Ethics Committee under opinion number: 4.322.036.

Results

Among the 20 smokers who participated in the initial interview and were eligible for the program, 15 actually started the treatment (attended Session 1), which means there was a 75% adherence rate. The median age was 48 years (*SD* = 13.03), and most were women (*n* = 12). The participants smoked an average of 18 cigarettes per day (*SD* = 7.4) for 30 years (*SD* = 14.86); they started smoking at an average age of 18 years (*SD* = 3.9), with the earliest start at the age of 14, and the latest at the age of 25. Among the smokers who had already tried to quit (*n* = 14), the average number of attempts was three times (*SD* = 1.29). Although the average level of nicotine dependence was moderate (FTND = 5.1), six of them had a high level of dependence. Table 2 shows the frequencies of the variables related to smoking behavior before and after the intervention.

Table 2

Frequency of Variables Related to Smoking Behavior

		Before the Intervention			After the Intervention		
Participant	gender	no. cigarettes/day	FTND	QSU	no. cigarettes/day	FTND	QSU
1	M	20	5	31	0	0	11
2	F	20	8	38	-	-	-
3	F	20	8	62	20	7	23
4	F	23	7	38	10	3	17
5	F	20	3	45	20	4	10
6	F	30	7	45	0	0	15
7	F	15	3	35	10	2	30
8	F	30	6	56	-	-	-
9	F	4	1	52	0	0	10
10	F	3	4	45	-	-	-
11	F	20	9	60	-	-	-
12	F	20	5	27	20	4	21
13	F	10	0	22	10	0	15
14	M	20	7	50	-	-	-
15	M	20	4	52	-	-	-
Mean		18.3	5.1	43.86	10	2.2	16.88
SD		7.4	2.55	11.5	8.1	2.34	6.34

FTND = Fagerström Test for Nicotine Dependence; QSU = Questionnaire of Smoking Urges Brief-QSU-B (Brazilian Version).

The results for the 15 participants before the intervention showed that less than half (six) of the smokers had a high level of nicotine dependence; three had a moderate

level, four had a low level, and two had a very low level - measured by the FTND. As for the level of craving measured by the QSU, the majority (nine) of the smokers had a high level, five had a moderate level, and one had a low level. In terms of readiness to quit smoking (measured by the Contemplation Ladder Scale), the group had an average of 6.3 (*SD* = 1.29), indicating that the majority was contemplating quitting smoking within the next six months.

After the group intervention, four out of the nine participants who finished the SCP quit smoking, and five reduced their consumption. Considering only those who attended all four sessions, the average number of cigarettes smoked per day before and after the intervention decreased from 18 (*SD* = 7.4) to 10 (*SD* = 8.1) cigarettes. Furthermore, both the average nicotine dependence level and the average craving level decreased after the intervention. The average nicotine dependence level changed from moderate (FTND=5.1) to very low (FTND=2.2); and craving level changed from high (QSU=43.86) to minimum (QSU=16.88). Of the five participants who continued to smoke, three had a low level of nicotine dependence, one had a very low level, and one had a high level. Regarding the level of craving, out of the nine participants, five reported a mild level; three reported a minimum level, and one reported a moderate level.

In the focus group, the main benefits reported by participants who achieved abstinence were improved family and social relationships, as well as a sense of freedom and accomplishment. Furthermore, the participants who achieved abstinence and those who reduced tobacco consumption reported benefits related to improved health, reduced coughing, and increased energy for daily activities. Another factor was the convenience that the online modality provided to the participants. Moreover, all of them mentioned that if it weren't for the online format, they might not have attended the sessions due to the COVID-19 pandemic.

As for the evaluation of the experience, participants reported that the intervention was very enlightening, helping them understand their addiction and how to deal with it, as illustrated in the following excerpts: "It was extremely important for me to understand my addiction and how to cope with the dependence it caused in my body" (female participant, 42 years old, smoking for 18 years); "I ended up understanding the addiction better in its three forms and what to expect during the quitting process. This way, I was able to face the challenge, and so far, I'm winning." (Male participant, 37 years old, smoking for 22 years). It is evident that the participants were satisfied with the

intervention, and the knowledge they acquired contributed to the smoking cessation process.

Discussion

Healthcare programs offered by the SUS, such as the SCP, could not take place in-person due to the onset of the COVID-19 pandemic. The aim of this study was to adapt the SCP for the online group modality and analyze its application in a pilot study. Although the online SCP was designed within a specific context, it aimed to meet the fundamentals as much as possible, according to official guidelines of Brazilian public health organizations (Brazil, 2020b), maintaining fidelity. It is noteworthy that the people who participated in the program either quit smoking or reduced their tobacco consumption. They emphasized that the online format facilitated their participation in the SCP, and that the program provided them with new knowledge that significantly assisted in reducing or quitting smoking.

The official guidelines of INCA/MS not only aim to advocate a comprehensive and integrated treatment with a focus on physical, psychological, and behavioral addictions, but also intend to establish a general model for data collection and analysis to make the intervention more effective and increase participant adherence over time (Brasil, 2020b; 2021; Silveira et al., 2021). However, there is a considerable variation in results across different regions of Brazil, including adherence rates ranging from 33% (Figueiró et al., 2013) to 100% (Lopes, Peuker, & Bizarro, 2013); smoking cessation rates from 19% (Lopes, Peuker, Rech, Gonçalves, & Bizarro, 2014) to 83.5% (Mesquita, 2013); and dropout rates from 40.4% (Rocha, Vieira, & Schneider, 2021) to 84.6% (Santos et al., 2018). This variability can be attributed to a range of factors, including the lack of necessary infrastructure, limited access, resource shortages, and a shortage of qualified professionals for the program. Other factors can be data collection and analysis methods using different parameters, and even the demographic profiles of the participants.

Furthermore, there is an institutional variable, as these programs can be conducted in different settings such as school clinics, primary healthcare units, public hospitals, private organizations, universities, and many others. Naturally, there are particularities to each context of application. Thus, some groups are more focused on supporting and welcoming, while others are oriented towards physical health, often tailored for cancer

patients or those with respiratory issues, and there are also groups with a focus on prevention.

Some issues arise from these facts. As a public health policy, it is of utmost importance that the application of the treatment is as standardized and reliable as possible. This facilitates the macro evaluation of the intervention by eliminating variables that are not related to the intervention itself and by working with a homogeneous and regular database. If the procedures and instruments are not aligned, the results cannot be directly compared, and it increases the potential reasons for any issues that might arise. Within a universal healthcare system, a non-uniform intervention slows down development and progress, and increases inequality, thus contradicting the fundamental principle of the system (Garcia, Schneider, & Cruz, 2019).

In health interventions, the assessment of fidelity, that is, the degree to which the program was delivered as planned, is an important indicator of efficacy, by indicating whether the intervention worked, and of effectiveness, by identifying the essential aspects of the intervention that were responsible for the change in practice (Garcia et al., 2019b). In cultural adaptations of evidence-based interventions, it is recommended that fidelity to the core elements is maintained, while adjusting the format to the culture, context, and language of the target audience, thus making the content engaging, motivating, clear, understandable, pertinent, and relevant (Menezes & Murta, 2018).

While adapting the SCP to the online format, there was a careful effort to retain all the fundamental components of the program. While it was not a cultural adaptation, we added some elements to tailor it to the context and online modality. We introduced some elements, including the use of short, emotionally engaging videos on specific topics, presenting slides during psychoeducation sessions to provide both visual and auditory stimuli for improved content comprehension, and the inclusion of some cognitive and behavioral techniques, which shifted the format from the usual roundtable discussion approach commonly used in in-person models to a more structured format, following the principles of cognitive-behavioral therapy. It is clear, by analyzing the results of this study, that the participants had a positive attitude towards the structure of the program and good adherence to the online modality. They highlighted that it was possible to acquire new knowledge relevant to the quitting process, and the online format facilitated access to treatment.

Regarding the adaptation of in-person programs to the online modality, a study aiming to validate an online training program for healthcare professionals, to prepare

them to implement the "VAMOS" program in Primary Health Care, obtained favorable results. The program aims to motivate adults and elderly people to adopt an active and healthy lifestyle in terms of physical activity and nutrition. The suitability of the material and usability received high overall scores for the groups from evaluators. Thus, the remote training was validated for healthcare professionals to implement the program (Konrad, Ribeiro, Tomicki, & Benedetti, 2020). It is evident that it is possible to maintain the structure of in-person programs when adapted to the online group format and still achieve their goals.

The online modality has also obtained positive results in group interventions focusing on health for individuals experiencing anxiety and stress due to the COVID-19 pandemic (Neufeld et al., 2021). The adaptation of the SCP to the remote modality reflects this reality, as all participants in the pilot study reduced tobacco consumption (five out of nine) or quit smoking (four out of nine; 44.4%), resulting in a decrease in the average level of nicotine dependence from moderate to very low. Despite the small number of participants, which requires a cautious interpretation, this finding aligns with other studies that assessed the results of the SCP in the face-to-face format, which had similar quit rates, ranging from 37% to 55% (Figueiró et al, 2013; Garcia, Borges, & Tavares, 2019; Krinski et al., 2018; Longanezi & Alves, 2019; Lopes, et al., 2013). In this regard, we consider the COVID-19 pandemic period as a variable that may have influenced the quit rates achieved in this study, as the context of social isolation, loss of loved ones, and financial problems favored the exacerbation of mental health issues such as substance abuse, anxiety, depression, and stress (Serafim et al., 2021).

Regarding the adherence rate, measured by the number of people who attended the first session compared to those who attended the motivational interview, the rate achieved in this pilot study (15 out of 20 participants, 75%) was similar (Lopes et al., 2014) or higher to those identified in face-to-face implementations of the program (Figueiró et al., 2013; Garcia et al., 2019a). This may be an indicator, albeit modest, that motivational interviews in the virtual model may have a similar effect to face-to-face interviews in terms of motivating smokers to participate in the treatment. The dropout rate, measured by the number of people who attended the fourth session compared to those who attended the first session, was similar (6 out of 15 participants dropped out, 40%) to some rates identified in face-to-face implementations (Garcia et al., 2017; Longanezi & Alves, 2019), which indicates that the greater ease of access, logistics, and better use of time that the online modality provides did not seem to influence the

participants' retention in the program. The significant variability in dropout and smoking cessation rates identified in the application of the SCP face-to-face may be related to the diversity and complexity of factors involved in the smoking habit, such as ambivalence, motivation, the level of physical nicotine dependence, expectations, and other associated psychological issues, which, despite being the focus of the treatment, also depend on the psychosocial characteristics of each individual (Creswell & Skrzynski, 2021).

Also regarding adherence, but not specifically the topic of smoking, an experience report of a psychoeducation intervention on strategies for managing anxiety and stress in the face of the serious health crisis, carried out by video conferencing in group, also had a high adherence rate (82%). Furthermore, the results showed a decrease in anxiety levels, an increase in self-care behaviors, and the acquisition of skills to manage unpleasant emotions (Neufeld et al., 2021). Therefore, it seems clear that the pandemic has driven the creation of these new online group intervention spaces and has shown that adaptation is possible in situations where in-person contact is not allowed, achieving similar results to in-person interventions in terms of quality.

The convenience of the remote modality is another point to highlight. All participants who completed the SCP in the online pilot study emphasized this factor, mentioning that they might not have attended all sessions had they not been conducted in the virtual format. Studies have shown that, in addition to convenience, time and cost savings, the comfort of not having to leave one's home, the potential for broad reach, and the increased receptiveness of some patients due to the possibility of anonymity are some of the advantages of this modality (Bittencourt et al., 2020). It is noteworthy that the online modality facilitates access to healthcare programs and has become a new means of developing practices that benefit people's health.

In summary, the SCP adapted for the online modality was successful in maintaining the structure of the sessions and achieving the proposed objectives. All of the participants who completed the intervention reduced their tobacco consumption or quit smoking, which suggests a potential efficacy of the online program. Furthermore, when evaluating the program, they emphasized that the covered content contributed to the smoking cessation process and that the online format facilitated adherence to treatment. Since this was a pilot group application, further studies are necessary to evaluate the effectiveness of the online group SCP.

A limitation of this study is that it was conducted during the period of social isolation due to COVID-19. Therefore, we suggest further studies on adherence to online

health programs, as people were opting for isolation when the program took place. Thus, we recommend that future studies expand the analysis of the online modality to other contexts.

References

Araújo, R. B., Oliveira, M. S., Moraes, J. F., Pedroso, R. S., Port, F., & Castro, M. G. T. (2007). Validação da versão brasileira do Questionnaire of Smoking Urges Brief. *Archives of Clinical Psychiatry, 34*(4), 166- 175. Doi:10.1590/S0101-60832007000400002

Bittencourt, H. B., Rodrigues, C. C., dos Santos, G. L., da Silva, J. B., de Quadros, L. G., Mallmann, L. S., Bratkowski, P. S., & Fedrizzi, R. I. (2020). Psicoterapia on-line: uma revisão de literatura. *Diaphora, 9*(1), 41-46. doi:10.29327/217869.9.2-6

Brasil. Ministério da Saúde, Instituto Nacional de Câncer José Alencar Gomes da Silva. (2020a). Perguntas frequentes: Tabagismo e coronavírus (Covid-19). Recuperado de: inca.gov.br/perguntas-frequentes/tabagismo-e-coronavirus-covid-19.

Brasil. Ministério da Saúde, Instituto Nacional de Câncer José Alencar Gomes da Silva. (2020b). Protocolo Clínico e Diretrizes Terapêuticas do Tabagismo. Recuperado de: inca.gov.br/sites/ufu.sti.inca.local/files//media/document//protocolo-clinico-e-diretrizes-terapeuticas-do-tabagismo.pdf

Brasil. Ministério da Saúde, Instituto Nacional de Câncer José Alencar Gomes da Silva. (2022). O que é a Convenção-Quadro para o Controle do Tabaco? Recuperado de: https://www.inca.gov.br/en/node/1378

Carmo, J. T., & Pueyo, A. A. (2002). A adaptação ao português do Fagerström test for nicotine dependence (FTND) para avaliar a dependência e tolerância à nicotina em fumantes brasileiros. *Revista Brasileira de Medicina, 59*(1/2), 73-80. Recuperado de: https://pesquisa.bvsalud.org/portal/resource/pt/lil-319174

Creswell, K. G., & Skrzynski, C. J. (2021). The influence of smoking motivation on the associations among cigarette craving, attentional bias to smoking cues, and smoking behavior. *Nicotine & Tobacco Research*, *23*(10), 1727–1734. doi:10.1093/ntr/ntab028

Figueiró, L. R., Bortolon, C. B., Benchaya, M. C., Bish, N. K., Ferigolo, M., Barros, H. M., & Dantas, D. C. (2013). Avaliação de mudanças na dependência da nicotina, motivação e sintomas de ansiedade e depressão em fumantes no processo inicial de redução ou cessação do tabagismo: estudo de seguimento de curto prazo. *Trends Psychiatry Psychotherapy*, *35*(3), 212-220. doi:10.1590/S2237-60892013000300008

Galloni, L., Freitas, L. R., & Gonzaga, R. V. (2021). Consumo de psicoativos lícitos durante a pandemia de Covid-19. *Revista Brasileira De Ciências Biomédicas, 2*(1), e0442021-1. doi:10.46675/rbcbm.v2i1.44

Garcia, L. P., Borges, M. S. R., & Tavares, S. A. (2019a). Programa de Controle do Tabagismo em Goiás: resultados do 3º quadrimestre de 2017. *Boletim epidemiológico, 20*(1), 1-11. Recuperado de: https://docs.bvsalud.org/biblioref/2020/02/1045976/boletim-epidemiologico-v-20-n-1-2019.pdf

Garcia, D., Schneider, D. R., & Cruz, R. M. (2019b). Mensuração da fidelidade de intervenções em saúde mental baseadas na escola: uma revisão sistemática. *SMAD Revista Eletrônica Saúde Mental Álcool e Drogas, 15*(3), 1-9. doi:10.11606/issn.1806-6976.smad.2019.150238

Konrad, L. M., Ribeiro, C. G., Tomicki, C., & Benedetti, T. R. B. (2020). Validação de tecnologia educacional para implementar um programa comunitário na saúde pública. *Revista Brasileira de Atividade Física & Saúde, 25*, 1-6. doi:10.12820/rbafs.25e0155

Krinski, B. M., Faustino-Silva, D. D., & Schneider, M. (2018). Grupo de cessação de tabagismo na atenção primária à saúde: experiência de uma unidade de saúde de Porto Alegre/RS. *Revista de APS, 21*(1), 66-76. doi:10.34019/1809-8363.2018.v21.15867

Longanezi, V., & Alves, M.C.G.P. (2019). O programa de Tratamento do Tabagismo oferecido pelo Sistema Único de Saúde no Estado de São Paulo. *Boletim do Instituto de Saúde, 20*(1), 91-98. doi:10.52753/bis.2019.v20.34555

Lopes, F. M., Peuker, A. C., & Bizarro, L. (2013). Aplicação de um Programa de Cessação do Tabagismo com Rodoviários Urbanos. *Psicologia: Ciência e Profissão, 33*(2), 490-499. doi:10.1590/S1414-98932013000200017

Lopes, F. M., Peuker, A. C., Rech, B. E., Gonçalves, R., & Bizarro, L. (2014). Desenvolvimento, divulgação, adesão e eficácia de um Programa de Cessação do Tabagismo oferecido em uma universidade pública. *Cadernos Terapia Ocupacional da UFSCar, 22*, 5-15. doi:10.4322/cto.2014.025

Malta, D. C., Gomes, C. S., Szwarcwald, C. L., Barros, M. B., Silva, A. G., Prates, E. J., ... & Silva, D. R. (2021). Distanciamento social, sentimento de tristeza e estilos de vida da população brasileira durante a pandemia de COVID-19. Saúde em Debate, 44, 177-190. doi:10.1590/0103-11042020E411

Menezes, J. C., & Murta, S. G. (2018). Adaptação cultural de intervenções preventivas em saúde mental baseadas em evidências. *Psico-USF, 23,* 681-691. doi:10.1590/141382712018230408

Mesquita, A. A. (2013). Avaliação de um programa de tratamento do tabagismo. *Revista Brasileira de Terapia Comportamental e Cognitiva, 15*(2), 35-44. doi:10.31505/rbtcc.v15i2.601

Neufeld, C. B., Rebessi, I. P., Fidelis, P. C. B., Rios, B. F., Albuquerque, I. L., Bosaipo, N. B., Mendes, A. I. F., & Szupszynski, K. P. D. (2021). LaPICC contra COVID-19: Relato de uma experiência de terapia cognitivo-comportamental em grupo online. *Psico, 52*(3), e41554. doi:10.15448/1980-8623.2021.3.41554

Rocha, B. V., Vieira, D. S. R. & Schneider, I. J. C. (2021). Abandono do tratamento e cessação do tabagismo: análise dos dados de um programa de controle. *Revista de Enfermagem da UFSM, 11*(41), 1-18. doi:10.5902/2179769254535

Santos, S. R., Bitencourt, A. R., Engel, R. H., Silva, M. H., Stacciarini, T. S., & Cordeiro, A. L. (2018). Perfil e fatores associados ao sucesso terapêutico de tabagistas atendidos em um serviço público especializado. *Revista Enfermagem UERJ, 26.* doi:10.12957/reuerj.2018.17381

Serafim, A. P., Durães, R., Rocca, C., Gonçalves, P. D., Saffi, F., Cappellozza, A., Paulino, M., Dumas-Diniz, R., Brissos, S., Brites, R., Alho, L., & Lotufo-Neto, F. (2021). Exploratory study on the psychological impact of COVID-19 on the general Brazilian population. *PLOS ONE*, *16*(2), e0245868. doi:10.1371/journal.pone.0245868

Silveira, K. M., Assumpção, F., Andrade, A. L. M., De Micheli, D., & Lopes, F. M. (2021). Relação das dependências física, psicológica e comportamental na cessação do tabagismo. Contextos Clínicos, 14(2), 540-562. doi: 10.4013/ctc.2021.142.08

Stoll, J., Müller, J. A., & Trachsel, M. (2020). Ethical issues in online psychotherapy: A narrative review. *Frontiers in psychiatry, 10*, 993. doi:10.3389/fpsyt.2019.00993

World Health Organization (2021). Tobacco. Geneva; 2021. Recuperado de: https://www.who.int/news-room/fact-sheets/detail/tobacco

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