Validation of phone messages to promote health in people with HIV

Validação de mensagens telefônicas para promoção da saúde de pessoas com HIV

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Abstract

Objective: To evaluate the opinion of experts about the content of phone messages to promote health in people with HIV.

Methods: Methodological development study to validate 10 phone messages, with participation of 11 experts that assessed their clarity and relevance. The content validity index of each phone message was calculated and a minimum concordance of 75% was established.

Results: The messages were considered clear (79.1%) and very relevant (98.2%). The general content validity index was 0.98. Main suggested alterations: inclusion of a series of short questions about the subject at the beginning of every message; adjustment to a simpler and more interactive language; replacement of specific terms and exclusion of words or expressions related to HIV.

Conclusion: The experts considered the messages clear and relevant to promote health in people with HIV.

Resumo

Objetivo: Avaliar a opinião de *experts* sobre o conteúdo de mensagens telefônicas para a promoção da saúde de pessoas vivendo com HIV.

Métodos: Estudo de desenvolvimento metodológico direcionado à validação de dez mensagens telefônicas, com participação de 11 *experts* que avaliaram sua clareza e grau de relevância. O índice de validade de conteúdo relativo a cada mensagem foi calculado e estabeleceu-se uma concordância mínima de 75%.

Resultados: Foram consideradas mensagens claras (79,1%) e muito relevantes (98,2%). O índice de validade de conteúdo geral foi 0,98. Principais alterações sugeridas: inclusão de um questionamento sobre o tema no início de cada mensagem; adequação para uma linguagem mais simples e interativa; substituição de termos específicos e exclusão de palavras ou expressões relacionadas ao HIV.

Conclusão: Os *experts* consideraram as mensagens claras e relevantes para a promoção da saúde das pessoas vivendo com HIV.

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Introduction

Considering the stigma associated with the infection, the emotional repercussions of living with the virus, and the incipient social support received after the diagnosis,[1] it is a challenge to promote health in people living with HIV/AIDS (PLWHA). To reach effective results in clinical practice, the healthcare team needs tools that strengthen ties and potentialize health education, with the aim of maintaining the client's autonomy and offering resources to appropriately manage the health condition.[2]

The use of information and communication technologies focused on promoting health in PLWHA is considered promising for allowing support to self-care, incentives to the adoption of healthy habits, sharing of information, and emotional support. The telephone stands out as one of the most prominent technologies; it can be used to make phone calls and send messages with proven efficacy regarding adhesion to the treatment and a good cost-benefit ratio.[3]

Text messages with an emphasis on health education have advantages over phone calls, because the former can be read quickly, at any time and anywhere, and do not require much effort by the clients or the professionals sending the message.[4] Evidence points to the positive use of Short Message Service (SMS) to send text messages to boost health habits among clients with chronic conditions.[5-8]

With the expanded use of the Internet, smartphone apps such as WhatsApp Messenger have potentialized instant communication between client and professional regarding health communication, with a variety of resources of interaction,[9] increasing the possibilities of the use of text messages in health care.

The use of technologies to promote health in PLWHA is fundamental to improve the immune system, prevent comorbidities, boost quality of life, and stimulate adhesion to the treatment. However, these tools must be properly developed and validated to assure their efficacy and acceptance by the target audience.[10] Studies with this focus may offer professionals and research resources to increase access to healthcare educational actions in the context of this important chronic condition.

Taking this into account, the objective of the present study was to evaluate the opinion of experts about the content of phone messages to promote health in PLWHA.

Methods

The present study was methodological and developmental in nature, and carried out in August 2016 with the participation of 11 experts. "Expert" is defined as a professional that has great knowledge and skills in clinical practice, teaching, or research, with recognition in their field.[11] The present study was the initial step in an experimental research project to assess the effects of phone calls sent by WhatsApp to promote health in PLWHA.

The phone messages were designed according to the guidelines described in national manuals about assistance to PLWHA[12-15] and addressed the following subjects: adhesion to antiretroviral therapy; physical activity; social support; self-esteem; anxiety and depression; dietary habits; preventive behavior; and sexuality. Two additional messages were also evaluated, one concerning the presentation of the phone monitoring and another one about its ending.

The experts were selected through intentional and convenience sampling. The participants had to meet at least two of the following inclusion criteria: to have a master's or PhD in the health area; to have published papers about care to PLWHA; to be part of research groups or projects about this subject; to be a professor in a health school and teach about assistance to PLWHA; and to have professional experience in HIV/AIDS reference hospitals or clinics.

Selection of potential participants was performed with the information available at Lattes Platform, from the National Council for Scientific and Technological Development. Thirteen professionals were chosen. After an invitation by phone

call and/or e-mail, 11 experts expressed their interest in contributing to the validation. Thereafter, they received the free and informed consent form, the expert characterization form, and the phone messages and validation instrument by e-mail, and were informed that they had 15 days to send the evaluation back.

The evaluation instrument was used to investigate the perception of the expert regarding the clarity and relevance of the messages. The former was assessed through dichotomous items, such as yes or no, and the latter was analyzed through a Likert scale with the options: irrelevant; slightly relevant; and very relevant. The instrument had a field for inclusion of considerations and suggestions.

The information gathered through the application of the evaluation instrument was organized by the software Excel for Windows and analyzed with the Content Validity Index (CVI), which consists in the measure of the proportion of experts that agree on the evaluation of the messages.[16] The CVI value was calculated using three equations: S-CVI/Ave (mean of the content validity indexes for all the messages); S-CVI/UA (proportion of evaluated items that reach a score of 3-very relevant-unanimously); and I-CVI (content validity index for individual items).[17] It was established that a CVI of at least 0.90 was necessary for the messages to achieve excellence in their validity.[18]

In addition, the percentage of general agreement regarding the clarity of the messages was assessed through the application of the formula: number of items with the answer yes shared by the total number of evaluated items and multiplied by 100. The minimum agreement rate was set as 75%.[16]

The research project was approved by the Research Ethics Committee from the Federal University of Ceará (report 1.482.508).

Results

All of the experts were females, with ages between 26 and 57 years (38.1 years old, on average); there were 10 nurses and one medical doctor. Their graduate time varied from 4 to 32 years (14.8 years, on average). Four participants had a master's degree, six had a PhD, and one had a post-doctoral degree. All of them had been members of research groups, seven had around 10 years of experience as professors and eight had on average 11.6 years of clinical experience in assisting PLWHA.

Table 1 shows the phone messages and the experts' opinions on their clarity. Half of the texts had an agreement percentage higher than 75%, but the message about anxiety and depression reached the lowest value (63.6%). All of the messages with an agreement percentage lower than 75% were changed according to the experts' suggestions. It is important to stress that every message started with the greeting "Hello/Good morning/Good afternoon/Good evening!" The average number of characters in each message was 298.

Table 1. Experts' evaluation regarding the clarity of the phone messages

Subject	Clarity evaluation	
	Yes	No
	n(%)	n(%)
Presentation of the monitoring	10(90.9)	1(9.1)
Adhesion to antiretroviral therapy	8(72.7)	3(27.3)
Physical activity	8(72.7)	3(27.3)
Social support	10(90.9)	1(9.1)
Self-esteem	9(81.8)	2(18.2)
Anxiety and depression	7(63.6)	4(36.4)
Dietary habits	10(90.9)	1(9.1)
Preventive behavior	9(81.8)	2(18.2)
Sexuality	8(72.7)	3(27.3)
Ending of the monitoring	8(72.7)	3(27.3)

The general agreement percentage of the experts regarding the clarity of the messages revealed that 79.1% of the participants considered the texts clear. As for the relevance, most experts (98.2%) judged the chosen subjects to be very relevant to promote health in PLWHA. The assessment of CVI applied to the relevance of the messages that showed an I-CVI higher than 0.90 for most texts, an S-CVI/Ave of 0.98 and an S-CVI/UA of 0.80 (Table 2).

Table 2. Experts' evaluation regarding the relevance of the phone messages

Subject	Relevance evaluation			I-CVI
	Irrelevant n(%)	Slightly relevant n(%)	Very relevant n(%)	
Presentation of the monitoring	0	0	11(100)	1.00
Adhesion to antiretroviral therapy	0	1(9.1)	10(90.9)	0.90
Physical activity	0	0	11(100)	1.00
Social support	0	1(9.1)	10(90.9)	0.90
Self-esteem	0	0	11(100)	1.00
Anxiety and depression	0	0	11(100)	1.00
Dietary habits	0	0	11(100)	1.00
Preventive behavior	0	0	11(100)	1.00
Sexuality	0	0	11(100)	1.00
Ending of the monitoring	0	0	11(100)	1.00
			S-CVI/Ave	0.98

I-CVI - Content Validity Index for individual items; S-CVI/Ave - Mean of the content validity indexes for all the messages

The main changes were the inclusion of a series of short questions about the subject at the beginning of some messages and the adjustment of the texts to a simpler and more interactive language, with replacement of specific terms from the healthcare area-for instance, "medicine" as an alternative to "medication." In addition, the experts recommended the exclusion of words or expressions that could refer to the infection by HIV, such as "number of virus particles", "immunity," and "immune cells" (Chart 1).

Discussion

Phone messages are a way to encourage the adherence to and consolidation of a healthy lifestyle in people with chronic conditions[7] such as infection by HIV, because they allow clients to widen their knowledge about health.[19,20] Their use can help clients to make choices about their mental and physical health, have a positive view of life, and avoid risk behaviors.[8]

According to the experts' evaluations, the topics of the messages were considered very relevant to promote health in PLWHA, corroborating national guidelines focused on that audience.[15] In alignment with the present study, an investigation carried out with recently diagnosed patients showed that most participants considered it important to maintain a physical, mental, and behavioral equilibrium to have a healthy life. They expressed concern about health habits after the diagnosis, with a decrease in the consumption of alcohol and cigarettes, use of condoms, and an attempt to adopt a healthy diet and practice physical activities.[16]

An important issue in the design of the messages was to emphasize the benefits of healthy behaviors instead of focusing on the risks of not adopting

Chart 1. Description of the phone messages after validation by the experts

Subject	Message
Presentation of the phone monitoring	My name is (professional's name); I am the nurse responsible for sending you messages about health instructions every 15 days. I would like you to confirm that you received my messages by replying with a smiley emoticon. If you have questions about the subject, you can contact me by WhatsApp every day, at any time.
Adhesion to antiretroviral therapy	Did you know that taking your medicines every day, at the same time, according to your doctor's instructions, helps improve your health and your quality of life? Not missing appointments and having your medical examinations are important. Talk to your doctor about any difficulty with the medicine. Do not give up on your treatment!
Physical activity	Have you exercised today? Practicing exercises every day or at least three times a week for 30 minutes makes your body's defenses stronger, helps you to lose weight, and decreases the content of fat in your blood. You will feel well and your mind will get calm. You can choose a physical activity that you like, always under the supervision of your doctor.
Social support	Did you know that it is important to take some time to be with your family and friends? Talking to someone you trust about the difficulties helps in your treatment. You can ask questions and look for help from the healthcare team at your clinic whenever you need. Keep in mind that there are people and professionals that can help you overcome the challenges.
Self-esteem	Be aware that liking yourself helps in daily activities and improves your health. Think of today and value your achievements. Do something that makes you happy every day. It can be something simple, such as dancing, reading, taking some time off, listening to music, walking, or whatever you like. Keep in mind that you are unique, special, and valuable.
Anxiety and depression	Anxiety and depression may occur sometimes in our lives. Exercising, sleeping well, having a healthy diet, and keeping good relationships with family and friends help to prevent anxiety and depression. In some situations, medicines are necessary. Seek help from the healthcare team at your clinic.
Dietary habits	How is your diet? Did you know that a healthy diet gives you energy for daily activities and helps avoiding undesirable effects from the drugs? Also, an appropriate diet prevents diabetes, heart diseases, increases in bad cholesterol levels in your blood, and lipodystrophy (change in the distribution of body fat). You can make an appointment with a nutritionist to improve your dietary habits. Do not forget to drink at least two liters of water a day!
Preventive behavior	Use of alcohol, cigarettes, and illicit drugs may impair the action of the medicines and intensify their undesirable effects. It is important to avoid or decrease the consumption of these substances so as not to hinder your treatment. Anyway, be sure to take your medicine.
Sexuality	Sex is important in people's lives and helps them to feel well. During intercourse, it is important to use condoms to protect yourself and your partner from sexually transmitted diseases. Kisses, hugs, and caresses are ways to give and receive sexual pleasure without the risk of contracting these diseases.
Ending of the phone monitoring	Thank you for answering the messages. We are finished with the phone monitoring by WhatsApp now. However, you will continue to be assisted in the health service and may ask for help from the healthcare team if you need it. Our last meeting will be on the day of your follow-up (date of the appointment). I would like to count on your presence to perform the last evaluation of your health. We will ask your opinion about this experience and finish the survey.

the target behavior (*gain-framed appeal*), a guideline considered efficient to stimulate physical activity in a study with clients that developed coronary artery disease.[5]

Another point was the use of a language that motivated empowerment and freedom of choice and was not authoritarian. Preserving autonomy is crucial in the process of health education and evidence showed that recommendations for a healthy lifestyle are more effective when they stimulate decision-making using arguments that preserve the freedom of the clients.[21]

The experts did not mention the number of characters in the phone messages. The advocated number for messages sent through SMS is 160.[22] For messages sent through WhatsApp, there is no evidence suggesting the ideal number of characters. Future investigations may tackle this issue.

The participants also suggested adjustments in the language used in the messages to make them more direct and accessible and favor understanding, mainly by replacing technical terms. A research study carried out with hypertensive elderly people revealed an interest in receiving objective and simple phone messages that stimulated adhesion to the treatment.[6]

Regarding this fact, it is important to emphasize that effective communication between client and professional is fundamental in health care. To achieve this, it is necessary to provide information in a language suitable for the educational and cultural level of the client.[10] Substitution of plain language for technical terms may favor the understanding of the messages and make information more attractive.

The experts' suggestion to exclude words or expressions that refer to the infection by HIV was considered fundamental to assure the confidentiality of the diagnosis of future participants in the research.[23] This measure is related to the principle of nonmaleficence, that is, the intention of not causing harm and/or damage to the participants in the research.[24]

In addition, clients' fear of revelation of their serological status is an aspect that affects the quality of life of PLWHA;[1] this is a reason why the confidentiality of the diagnosis must be considered as a priority in phone interventions directed to promote health in this target audience.[3]

Conclusion

Overall, the experts judged the phone messages to be clear and relevant to promote health in PLWHA. The messages reached a CVI of 0.98. Some participants suggested alterations in the language of the messages to make the information more clear and objective. The present study offers a set of messages validated by experts that can be applied to other investigations and in the assistance to PLWHA in the services of specialized care. A limitation of the study design was the lack of experts from other professional categories and the absence of validation by the target public. Future research that uses the messages may raise the need to adapt them to new circumstances.

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Collaborations

Lima ICV, Galvão MTG, and Pedrosa SC contributed to the project design and execution, manuscript writing, and approval of its final version. Silva CAC and Cunha GH contributed to project execution and manuscript writing.

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