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Techniques to promote motivation for physical activity in the context of primary healthcare

Estratégias para promover motivação para a atividade física no contexto da atenção primária à saúde

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ABSTRACT

Health promotion and physical activity behavior change involve affective and cognitive aspects such as motivation. Thus, greater attention is needed to individuals' motivation to adhere to and maintain physical activity in the Primary Health Care context. This essay aims to present the initial step of a theoretical-methodological intervention model for physical activity behavior change (based on basic psychological needs support) in the Primary Health Care context. The overall research project was organized under three steps: development (discussed in this essay), validation, and evaluation/application. From the literature analysis, 17 strategies were abducted to promote motivation for physical activity. We offered ways to implement such strategies in the context of Primary Health Care. This work set education to democratize and encourage the appreciation of motivational regulations of physical activity by professionals, researchers, and policymakers interested in health promotion.

Keywords: Motivation; Public health; Psychological theory; Exercise; Aged.

RESUMO

A promoção da saúde envolve aspectos afetivos e cognitivos para mudanças de comportamento, assim destaca-se a necessidade de maior atenção voltada aos aspectos motivacionais relacionados à adesão e manutenção das pessoas à prática de atividade física no contexto da Atenção Primária à Saúde (APS). Este ensaio tem como objetivo apresentar a etapa inicial de um modelo teórico-metodológico de intervenção para a atividade física no contexto da APS, que considerem os processos regulatórios da motivação. O macroprojeto foi organizado sob três processos: desenvolvimento (foco exclusivo deste ensaio); validação e avaliação/aplicação. A partir da análise bibliográfica foram extraídas 17 estratégias para promover motivação para a atividade física. Após, foi sugerido formas de implementar tais estratégias no contexto da atividade física da APS. Este trabalho visa democratizar e encorajar a apreciação dos aspectos afetivos e cognitivos por profissionais, pesquisadores e gestores interessados na promoção da prática de atividade física para a saúde no contexto da APS.

Palavras-chave: *Motivação; Saúde pública; Teoria psicológica; Exercício físico; Idoso.*

Introduction

Regular physical activity decreases the risk of non-communicable diseases (NCD)[1]. Thus, the discourse of physical activity promotion with messages linked to preventing these diseases is currently a dominant narrative[2]. Consequently, through physical activity programs, public health policies have evidenced the importance of active lifestyles in decreasing NCD-caused mortality[1].

Through the approval of the National Policy for Health Promotion, which has among its commitments the promotion of empowerment and autonomy of subjects and collectivities[3], Primary Healthcare became a privileged context for developing actions linked to the physical activity promotion[4]. However, despite social recognition and the inclusion of physical activity in the Primary Healthcare scope, the consolidation of physical activity in the population's daily life is still a challenge, given that individuals have difficulty initiating and maintaining physical activity within health programs[5].

For adults and older adults, the public which most engages in the Primary Healthcare spaces, the challenge seems even more significant, considering that they are less prone to practice physical activities compared to younger individuals[6]. Thus, affective factors such as motivation have been pointed out as an impor-

tant barrier to physical activities in these populations[5,7].

Contemporary theories such as the Unifying Theory of Physical Activity (UTPA) draw attention to this complex relationship between the motivational determinants in behavior change processes and physical activity[8]. The UTPA observes that the human expression of physical activity, before any other contingent (such as acting to avoid disease), is oriented by inherent reasons and essences to the human being (the urges). Those urges (feeling, exploring, transforming, and connecting) precede psychological needs, motivations, and potential health outcomes. Animating with quality those urges is the primordial base of an integrated and significant experience of physical activity[8].

In addition, this notion of meaning has been potentially neglected in promoting physical activity in the Primary Healthcare context[5]. Physical activity is primarily a constitutional aspect (generates existence, awareness about us, others, and the world) in the embodied relationship between the individual and the environment. Thus, the attention to the most fundamental elements in the physical activity promotion (such as the urges and basic psychological needs) is a way to favor people so that they act purposefully (in opposition to acting by fear or guilt), satisfying their interests, exercising their capacities, seeking a sense of community and cultural integration actively, and being capable of integrating effort, emotions, ideas, and interests within a unified system[8].

In this context, the literature points out the following current challenges: (1) physical activity in the context of Primary Healthcare seems not to intentionally value urges, psychological needs, autonomous behavior, and the affective/cognitive aspect of acting[5]; and (2) there is an emergent need to better understanding how to create strategies and support more intrinsically motivating environments (ones that make sense to the individual, and not just an environment that works to avoid adverse health outcomes)[9-11].

Questions such as, "Why do people, even aware of the importance of physical activity for health, do not exercise regularly?", make us reflect that the motivational contingents to face the challenges of keeping an active routine go beyond a health-related rationalization (e.g., avoiding death); people seem to require other meanings, which potentially are more linked to personal and collective interests (e.g., making friends).

The present research highlights processes that regulate the behavior with strategies aimed at supporting competence and favoring social support and autonomy, which seem to offer more meanings so that people adhere to and keep active behavior[11]. The Self-Determination Theory (SDT)[12] helps distinguish behavior that individuals perform freely from that carried out by some type of influence. Studies have shown that adherence to physical activity is dependent upon individuals' different motivational regulations (ranging between a continuum from more intrinsic to more extrinsic) but primarily upon that more intrinsic motivational loci[13]. These regulations are built when physical activity programs intentionally value and create strategies for supporting basic psychological needs (competence, relatedness, and autonomy)[9-11].

Thus, the present research aims to present the initial stage of a theoretical and methodological intervention model for physical activity in the Primary Healthcare context, considering essential regulatory processes of physical activity and motivation, in an attempt to favor the population's adherence to and maintenance in physical activity programs.

Self-determination theory

The SDT is a general human motivation theory and offers support for understanding how the adoption and maintenance of behavior, such as healthy ones, happen[11]. It is guided by the idea that behavior is oriented by a range of regulations, which vary throughout a *continuum* of autonomy. The behavior can be oriented by an affective/cognitive dimension that may differ from the most self-determined to the least self-determined, according to the fulfillment or not of basic psychological needs (BPN)[10] (Table 1). One of the extremes (less self-determined) is the amotivation regulation, an impersonal state characterized by the lack of intention for the behavior. In this case, the person does not perceive reasons to begin or continue an activity[12]. At the other extreme (more self-determined) is intrinsic regulation, a state in which the behavior is carried out by internal contingents, such as pleasure and satisfaction[10], a more autonomous form of motivation[11]. Between the extremes of this process of internalization of motivation, one finds extrinsic motivation and its following four forms of regulation: external (motivated by rewards, fears, and punishments); introjected (social approval, generally implied by internal pressures); identified (there is acceptance of the behavior because of its importance for something specific); and integrated (more autonomous form of extrinsic motivation, for example,

Table 1 – Basic Psychological Needs description.

Autonomy	Competence	Relatedness
It deals with the need to participate actively (intentionally) in activities in which there is the possibility of choice when performing the behavior.	It deals with feeling capable and confident in performing a given behavior's environment/ activity interaction.	It deals with the need to perceive oneself as socially connected, close, and dear to other people. Therefore, it values friendship and companionship.

Adapted from Matias[10].

the practice of physical activity aimed at improving the quality of life)[10,13].

Method

The present work is a theoretical and methodological study, which had its macro-project organized under the following three processes: (a) development, production, and construction of tools (the exclusive focus of this essay); (b) validation of tools; and (c) assessment and/or application of tools[14]. The present essay reports the initial phase of this project, which concerns the primary development of a theoretical and methodological intervention tool with physical activity that supports BPN and increases the self-determination of individuals for physical activity maintenance in the Primary Healthcare context.

This stage involved bibliographic research and the creation of the preliminary matrix of implementation strategies. The bibliographic bases were supported by the meta-analysis of Gillison et al.[11] and the consensus of specialists in Teixeira et al.[9]. Both studies were based on SDT and aimed to summarize strategies that could be implemented in intervention contexts in health (including the physical activity context) to support the BPN.

In the meta-analysis of Gillison et al.[11], after analyzing 74 clinical studies (including studies with a control group, studies with pre-and post-intervention assessment reports, and age groups involving children to adults), 18 practical strategies to promote motivation and the fulfillment of BPN for behavior change were described. Teixeira et al.[9] used the consensus of 18 specialists to select 21 techniques for behavior change. Teixeira et al.[9] work was used to give theoretical and conceptual support in the present essay and describe the strategies observed in Gillison et al.[11]. The extraction of the motivational strategy was restricted to the research of Gillison et al.[11] because it is the best level of evidence.

The consensus of specialists in Teixeira et al.[9] observed that developing a formal classification of techniques for interventions aiming at behavior change provides researchers and health professionals with a standard set of terms and the possibility of putting them into practice. Thus, despite the theoretical characteristic of the present research, the strategies' qualitative unity is based on theoretical content widely consolidated by the literature[9]. Furthermore, examining techniques helps construct lasting and conscious environments for practicing systematized physical activity.

Relatively to this essay, firstly, the strategies observed in Gillison et al.[11] were summarized and described. The "Motivational Interviewing" strategy was not listed because, in many cases, it depends on a particular technique or demands specific training. Subsequently, we offered preliminary suggestions on operationalizing these strategies in the Primary Healthcare context. The authors are professionals in Physical Education with professional and technical-scientific experience in Physical Activity and health, including intervention processes with physical exercises in several contexts. In addition, two authors understand motivational theories and behavior change processes. For delineating the suggestions, the authors interactively carried out the initial version of practical suggestions until there was a consensus. Afterward, the strategies were distributed so that all authors individually gave their opinions or made adjustments and changes. One of the authors analyzed tendencies of adjustments and dissonant thoughts and returned this analysis to the group for a new round of refinement. Finally, the group gathered to discuss the final version and/or propose minor adjustments such as choice of terms and semantic analysis.

Results

Seventeen motivational strategies for organizing practical interventions with physical activity in Primary Healthcare, which aim to meet the BPN, were selected, eight oriented to autonomy support, six to competence support, and three to the need for relatedness. For autonomy, strategies are associated with encouraging choices, participants' educational process, facilitation of intrinsic aims, and environmental facilitation (Table 2, Panel A). Concerning competence, strategies are linked to providing challenges, feedback, encouragement; identification of barriers; and facilitation of goals (Table

2, Panel B). Finally, strategies about relatedness were linked to cooperation, social support, and the involvement and connection of/with participants (Table 2, Panel C).

Discussion

The adherence to and maintenance of a healthy lifestyle by way of the practice of a regular physical activity is complex and depends on intra-individual aspects, environmental, social factors, and opportunities (including the support from others); synergies between these factors reflect affective and emotional responses relative to the practice of physical activity[5,10].

Appreciating the physical activity concept under the psychology episteme facilitates overcoming barriers to physical activity maintenance by promoting more self-determined motivations; this episteme should be intensely recognized and strengthened[9,10]. Unfortunately, the assumed theoretical constraint, because the biomedical paradigm, holds sway in the conduction of physical activity programs and the justifications for people to exercise (e.g., the discourse of prevention or disease control). In this direction, advocating in favor of physical activity for avoiding negative health outcomes (avoiding ways of punishment) seems to have little effect on the overall population's levels of physical activity[2], which have frustrating researchers and policymakers around the world[15].

Polo et al.[5], for example, sought to understand the

Table 2 – Strategies to promote motivation for behavior change relative to physical activity.

Panel A – Strategies for supporting the basic psychological need for Autonomy		
Strategies	Description	Intervention
Provision of choice	The participant receives options of choice.	- Favoring that the participant has and perceives option of choice in the conduction of all stages relative to the program of physical activity.
Recognition of the participant's perspective	The professional expend efforts to understand the participant's perspective and his objectives.	- Considering participants' reasons to exercise, such as preferences, expectations about health outcomes, and the cognitive and affective relationships established in the context of physical activity.
Provision of justification	Professional provides a reason for adhering to an activity.	- Reflecting on reasons (internal and external) for adhering to the programs of physical activity. - Assessing and reassessing long-term aims.
Language style	The professional language used emphasizes the participant's right to choose.	- Opting for language that ensures choice about what to do, such as different types of exercise, about how to adapt the activities. - Ensuring that the discourse is not mandatory, that it does not blame the other, or that it is not unidirectional about the professional's desire and not the participant's.
Orientation with intrinsic objective	The professional encourages the identification in conjunction with the participant of the intrinsic objective.	- Recognizing internal reasons relative to physical activity, such as satisfaction and pleasure. - Tracing short-term goals. - Rationalizing the role of physical activity for reasons such as building a sense of friendship, improvement of skills, energy gain, and a better lifestyle.
Structural facilitation	The professional defines parameters inside which choice and performance may occur and provide support for initiating the activity.	- Recognizing the environmental potential for exercising by ensuring multiple potentials. - Adjusting the level of demand for the participant's capacity to respond to the task. - Adapting and building environmental alterations that ensure the beginning of the activity.
Emphasis on responsibility	The professional encourages the participant to assume decision-making and/or leadership responsibility.	- Raising the participant's awareness about the need for advancing in the dynamics involved in the program of physical activities. - Making the participant conscious of the importance of assiduity. - Recognizing leadership profiles in the group and using them for mobilizing the group.
Explore reasons to behave	The professional explores the participant's reasons for the behavior change.	- Valuing the conceptual and attitudinal dimension of the exposure to physical activity practices.
Panel B – Strategies for supporting the basic psychological need for Competence		
Strategies	Description	Intervention
Facilitation for completing processes relative to goals	Facilitation focused on achieving a goal from its standards according to the participant's degree of ability (functional, cognitive, psychological).	- Centering goals in the process. - Different conditioning forms of achieving the goals. - Valuing self-comparison as opposed to comparison with peers.
Provision of challenges	The professional adapts the level of the task to the participant's capacity to respond to it.	- Creates challenges to break the routine of the exercise sessions, whether for carrying out an exercise in a more challenging manner or carrying out activities in other environments. - Situations that culminate in gamified processes.

Continue...

Continuation of **Table 2 –** Strategies to promote motivation for behavior change relative to physical activity.

Panel B – Strategies for supporting the basic psychological need for Competence		
Strategies	Description	Intervention
Provision of feedback	The professional provides feedback containing information on how the participant reaches or not the desired result, instead of some criticism or compliment made generically.	- Recognizing the improvement reached by the participant and remembering the "path" taken to reach it. - Reflect with participants on aspects that still need improvement; visualize how to proceed/continue.
Promotion of education	The professional provides the participant with information relevant to his needs and evolution.	- Systematically controlling the participant's evolution. - Providing educational material containing multidisciplinary information pertinent to the physical activity and health relationship.
Barriers acknowledge	The professional works with the practitioner to identify barriers to behavior change.	- Recognizing the stages for behavior change of each participant. - Identifying systematically interpersonal and environmental barriers and indicating ways of overcoming them.
Provision of encouragement and support	The professional provides support and encouragement to the participant.	- Providing positive feedback to the class and individually, whether recognizing an effort of the participant or complimenting his attitude. - Discuss other forms of support from the multidisciplinary team's opportunities.
Panel C – Strategies for supporting the basic psychological need of Relatedness		
Strategies	Description	Intervention
Involvement and connection	The professional expresses personal interest in the participant and takes the time to develop a relationship.	- Considering knowing the participant's life story. - Engaging actively in activities, including doing and playing together. - Valuing group activities.
Social support	The professional encourages the participant to seek social support.	- Encouraging the participant to invite friends and family to carry out/participate in the programs of physical activity. - Creating situations that essentially culminate in the participation of family and friends in activities. - Encouraging the group's cohesion in the activities and resolution of problems.
Cooperation group	The professional establishes interdependency within a group and encourages cooperation between peers.	- Creating groups in virtual environments for experience exchange, facilitating the communication between participants. - Personalizing groups by creating names, customized t-shirts, etc. - Carrying out culminating events.

Note: Based on Gillison et al.[11] work.

BPN-related emotional antecedents through the participants' perceptions of a group of physical activity in the Primary Healthcare context. Results of the focal group demonstrated that the participants felt frustrated with the BPN of autonomy and competence just before initiating the program. Consequently, the participants' discourse suggested that intrinsic motivations would not regulate the behavior (the program of physical activity). Polo's work illustrates a set of pressures (e.g., mandatory messages to exercise, fear of disease, excessive valorization of the health outcome) that people may feel by initiating an exercise program and signalizes that these people will give up the program in the short term.

When the perception of others (e.g., friends, family, health professionals) on the reasons to exercise is conveyed in a controlling way, this attitude may negatively influence the needs for competence and autonomy, not sustaining self-determined motivation[9-11]. In this sense, the literature has observed that threats, blaming the other, pressures, and even rewards may negatively interfere with the subject's intrinsic motivation[10] and, consequently, lead to the abandonment of the activities. By contrast, an environment of support for the autonomy and competence of BPN (e.g., non-controlling language, promotion of choices, cooperative activities) is essential for motivating an individual[11].

The theoretical hypothesis is that the BPN are conditions essential for the adoption and positive maintenance of behavior. In realizing and experiencing the BPN's synergic support, people start to internalize motives to exercise. Individuals' perceptions most linked to external elements (e.g., fear of dying, improving health, a better quality of life) start to gain contours of effects more internal (e.g., satisfaction and pleasure). The idea is that the additions of internal perceptions in the adoption of health behavior favor the exercise maintenance throughout life and reflect positively on mental well-being[10].

More autonomous motivations are facilitated while people feel they have opportunities to choose, which is reflected in the need to experience a sense of property and responsibility for their actions. Distancing oneself from controlling languages (e.g., silencing the participants'

complaints) and, being able to recognize and accept affective expressions, even negative ones, showing patience are some manners pointed out to strengthen autonomy[9,11].

The competence support infuses participants' perception that they can perform with efficiency, fluidity, and autonomy the behavior; in this case, the professional must create clear expectations and guidance on "how to do", in addition to constructive and positive feedback. The evaluation of individuals' skills must be considered before one traces the objectives to be reached, in addition to aiming at sources of success in their performance of the activities[9].

As regards the relatedness support, the group work in carrying out tasks may facilitate because it tends to generate the perception of affiliation and belonging toward the group; it means that the exercise's primary focus is moved to the pleasure of group coexistence, in the satisfaction in sharing and dividing conquests, and in the feeling of belonging to something. Belonging increases intrinsic motivation, which can favor better psychological disposition and the maintenance of the practice of healthy behavior[9-11]. It is necessary to stress that individual motivation strategies were not predictive of supporting basic needs. Gillison et al.[11] concluded that promoting more self-determined motivations requires the combination of such strategies.

The present research is the initial stage in the theoretical operationalization of strategies to animate more self-determined motivations in behavior change processes relative to physical activity in Primary Healthcare. It is limited to a theoretical essay in which neither empirical tests nor more robust validation processes were used. Yet, the study uses the most current literature on the theme, including a meta-analysis. Its immediate aim is to democratize and encourage the appreciation of affective, cognitive, and behavioral aspects of physical activity by professionals, researchers, and policymakers involved in promoting physical activity in the Primary Healthcare context.

The research presents an epistemological and ontological position (suggesting expansion in our understanding) about the human expression of movement that considers physical activity as the nature of our existence[8]. Therefore, we are active beings oriented toward exploration[12]; this human virtue is oriented by essential reasons that are in the soul of the physical activity, such as the need to integrate our feelings, our curiosity, our ability to learn, and our quest to understanding (about us, the others, and the world)[8].

The evidence shows us that the strategies described here can already be implemented. However, this research points out the need to investigate the premises of those causal chains in the Primary Healthcare context. Also, it is assumed as a limitation in the present report that the current essay considers the lack of a stricter methodology for validating practical intervention suggestions.

Conflict of interest

The authors declare no conflict of interest.

Author's contributions

Matias TS idealized the proposal. Sandri A, Delavatti RS, Matias TS wrote the document and performed a critical review of the content. All authors approved the final version of this manuscript.

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