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Original Article

Barriers for physical activity in overweight adults

Barreiras para atividade física em adultos com excesso de peso

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Abstract

The aim of this study was to identify the barriers to physical activity in overweight adults. We used the technique of focus groups in adults between 20 and 55 years old (n=36; 52.7% women) in four homogeneous groups according to gender and stage of change behavior for physical activity. The most common barriers among adults with overweight were those that constituted the intrapersonal category (51.3%), such as feelings of negative body image, lack of confidence in performing physical activity, lack of time, lack of financial resources, and having a disease. The environment category represented 32.1% of the reported barriers (bad weather, lack of security and lack of places and lack of structures for physical activity) whereas interpersonal category showed 16.6% of the barriers (lack of support from friends, family and professionals). In conclusion, the intrapersonal barriers were the most frequently reported and there were no differences of barriers in relation to the stage of behavior change.

Keywords

Motor Activity; Obesity; Adults; Barriers; Motivation.

Resumo

O objetivo deste estudo foi identificar as barreiras para a prática de atividade física em adultos com excesso de peso corporal. Utilizou-se a técnica de grupos focais em adultos entre 20 e 55 anos de idade (n=36; 52,7% mulheres), em quatro grupos homogêneos de acordo com o gênero e estágio de mudança de comportamento para atividade física. As barreiras mais frequentes entre os adultos com excesso de peso corporal foram as que constituíam a categoria intrapessoal (51,3%), tais como, sentir-se com imagem corporal negativa, falta de confiança em realizar atividade física, falta de tempo, falta de recursos financeiros, presença de doenças. A categoria ambiente apresentou 32,1% das barreiras relatadas (clima desfavorável, falta de segurança e falta de locais/estruturas para realizar atividade física) e a interpessoal apresentou 16,6% (falta de apoio dos amigos, familiares e profissionais). Pode-se concluir que as barreiras intrapessoais foram as mais relatadas e que não houve distinção das barreiras em relação ao estágio de mudança de comportamento.

Palavras-chave

Atividade motora; Obesidade; Adultos; Barreiras; Motivação.

Introduction

Promoting physical activity (PA) for people with overweight is one of the challenges of programs and interventions in health promotion, especially due to poor adherence to these initiatives [1]. Evidences show that half of the adults who start a physical activity program, regardless of whether or the weight status, quit within the first six months [2] and one third of those who begin regular practice has partial or complete relapse after 12 months [2]. This difficulty appears even more pronounced among people with overweight [3], which may be associated with the perception of a greater number of barriers for physical activity [4-6].

Several barriers for physical activity have been reported in the literature and among the most common are lack of time, lack of motivation, poor access to places for physical activity, and lack of financial resources [4-6]. However, overweight adults may have different perceptions of these barriers since they suffer from social stigma [7] and depressive symptoms [8], more often than people who are not in this condition.

Thus, it becomes important to understand what are the barriers for physical activity reported by overweight adults, as this is an important aspect to start and maintain a routine in physical activities. Moreover, this is one of the most prominent aspects in the different approaches and behavioral theories of physical activity [9,10]. For example, in the trans theoretical model [11,12], the perception of barriers is a key con-

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struct to explain behavior changes, including relapse. The objective of this study was to analyze barriers for physical activity in overweight adults.

Methods

Design and participants

We applied a qualitative method with the technique of Focus Groups [13]. This method provided a discussion between the participants about the research topic [13] and allowed us to identify aspects of the reports, or barriers, that affect the adoption and maintenance of routine physical activity in this group of adults.

The sample included 220 adults, aged 18-55 years, who attended outreach projects, at the State University of Ponta Grossa, Parana. Activities included stretching, weight lifting, gymnastics, cultural activities, and dental care, among others. All participants were attending the activities for at least one year at the time of the data collection. At this stage, sociodemographic information (age, sex and socioeconomic status), stages of behavior change (SBC) to physical activity (Precontemplation/Contemplation and Action/Maintenance), body mass and height were collected. SBC was assessed using an instrument with five questions and appropriate to this population [14].

The focus group technique requires the formation of homogeneous groups with respect to sociodemographic and behavioral characteristics in order to enhance the discussions on the topic [13]. It is further recommended that each group is composed of six to twelve adults, so everyone has the opportunity to participate in discussions [13]. Therefore, 36 subjects with body mass index (BMI) ≥ 25 kg/m² [15] and medium and low average economic status (B1, B2=medium; C1, C2, D, E=low)[16] were intentionally selected, with following distribution: a) women in stages of pre-contemplation and contemplation for physical activity (n=10); b) women in stages of maintenance/action for physical activity (n=9); c) men in stages of pre-contemplation and contemplation for physical activity (n=9); d) men in stages of maintenance/action for physical activity (n=8). Adults in preparation stages were excluded from the sample in order to make groups similar in relation to SBC. The subjects were informed about the purpose of the study and voluntarily agreed to participate. All procedures were approved by the Ethics Committee on Human Research of the State University of Ponta Grossa, Brazil (process nº 152/2011).

Focus group development

The dynamics was conducted according to the protocol previously tested in a pilot study. All discussions were moderated by a single researcher with experience in the area of physical activity and application of the technique. Initially we proceeded to the presentation of the moderator, the participants and the study objective. The second half was characterized by encouraging discussion through guiding questions and pictures on the theme. The question presented was *"which makes you to start or maintain a routine in physical activity*. Furthermore, images of overweight people in situations involving physical activity were shown and subjects were asked about *similarities or differences to their routine*. The discussions lasted on average 74 minutes (sd=12 minutes). All reports and discussions were recorded and transcribed by a researcher who was not a part of the focus group. The audio has been obtained with the permission of the participants and codes were used to identify adults in their speech to ensure the anonymity of participants. Then, two researchers read the transcripts and compared with the audio in order to ensure

consistency of the transcripts.

Data Analysis

Qualitative data were analyzed. In order to do so, we used the content analysis of the reports [17], considering the negative comments as barriers to the adoption and maintenance of physical activity. The reports were coded and grouped into three categories: intrapersonal, interpersonal and environmental. These categories were used based on the socioecological approach which considers that different levels of influence may affect physical activity [9]. Intrapersonal barriers are related to feelings, intrinsic conditions that may difficult or facilitate physical activity, such as lack of motivation, lack of knowledge about the benefits of physical activity and lack of time. Interpersonal barriers are related to inter-personal relationships, lack of companionship or a network of support for physical activity. Environmental barriers refer to the conditions of the physical environment (lack of places, lack of structure and poor street lighting), social environment (sense of insecurity in the neighborhood) and organizational environment (local policies such as the regulation of the use of sidewalks and access to public spaces). Quantitative analysis was employed to observe the absolute and relative frequencies of the number of barriers reported according to the categories of analysis through the program SPSS 16.0.

Results

The study included 36 adults (52.7% women), overweight, distributed in four focus groups. The sample was composed predominantly of obese adults (61.1%), with low socioeconomic status (58.3%) and over 41 years of age (61.1%), distributed evenly by sex and SBC (Table 1).

TABLE 1 – Sociodemographic and health characteristics of the study participants, according to the Stage of Behavior Change for Physical Activity (Ponta Grossa, 2013, N=36).

Variables	Stages of Change for Physical Activity			
	Precontemplation/Contemplation (n=19)		Action/Maintenance (n=17)	
	Focus Group 1 Women (n=10)	Focus Group 2 Men (n=9)	Focus Group 3 Women (n=9)	Focus Group 4 Men (n=8)
	n	N	n	n
Age (years)				
20-40	4	5	4	4
41-59	6	5	5	4
SES				
Low	6	6	4	5
Medium	4	3	5	3
BMI				
25-29,9 kg/m^2	3	4	4	3
≥ 30 kg/m^2	7	5	5	5

SES: socioeconomic status (Low: class C, D and E; Medium: Class B). BMI: body mass index.

One hundred and fifty six reports classified as a barrier to physical activity (PA) were identified (Table 2). There were more reports in intrapersonal (n=76, 49%) and environmental categories (n=56, 36%), followed by those classified as interpersonal barriers (n=24, 15%). There was little disagreement among reports in accordance with SBC. Adults in precontemplation/contemplation reported lack of

confidence for physical activity (19.3%), lack of safety related to crime (15.4%), lack of social support (11.5%) and lack of structures/equipment for physical activity (11.5%) as major barriers. Adults already in the maintenance/action stages reported that the main barriers for physical activity were lack of structures/equipment for physical activity (16.8%), lack of social support (15.4%), lack of confidence for physical activity (11.5%) and lack of security related to crime (11.5%).

TABLE 2 – Analysis of the number of reported barriers for physical activity (PA) in overweight and obese adults according to the stage of behavior change and the dimensions of analysis. (Ponta Grossa, 2013, n=36).

Level	Barriers Reported	Stage of Behavior Change			
		Precontemplation/ contemplation		Action/maintenance	
		n	%	n	%
Intrapersonal					
	Lack of confidence in performing PA	15	19,3	9	11,5
	Discomfort with PA	-	-	2	2,6
	Lack of knowledge about PA	-	-	1	1,2
	Not enough Money	4	5,1	6	7,7
	Lack of time	4	5,1	2	2,6
	Advanced Age	2	2,6	-	-
	Dissatisfaction with body image	5	6,4	6	7,7
	Occupational obligations	5	6,4	3	3,8
	Presence of diseases	5	6,4	7	8,9
Interpersonal					
	Lack of support from professionals	4	5,1	-	-
	Lack of social support (family/friends)	9	11,5	12	15,4
Environmental					
	Unfavorable weather	2	2,6	3	3,8
	Lack of safety related to crime	12	15,4	9	11,5
	Lack of safety related to traffic	2	2,6	3	3,8
	Distance to places for PA	-	-	2	2,6
	Lack of structures/equipment for PA	9	11,5	13	16,8
Total		78	100	78	100

PA: physical activity.

In the categories of analysis (Table 3), the most cited intrapersonal barriers were lack of confidence for physical activity, discomfort and lack of knowledge about physical activity, lack of money, lack of time, dissatisfaction with weight/body image, occupational requirements and the presence of diseases.

Interpersonal most cited barrier was lack of support from friends and family. Moreover, the lack of support from a professional was reported as a barrier for physical activity among adults in maintenance/action stages. The most cited environmental barriers were unfavorable climate, lack of security related to crime and traffic, lack of infrastructure/equipment for physical activity and distance to places for physical activity practice.

Discussion

The results obtained in this study confirm that there are many different levels of barriers for physical activity in overweight adults. However, the intrapersonal barriers (such as feeling with negative body image, lack of confidence in performing

Intrapersonal barriers

Lack of confidence in performing PA

"...until such time ago ... we were getting there, you will a week where he talked to will not .... There you go two more days ... then you speak Oh ... well, then you will not and already abandoned once..."

Discomfort with PA

. "...I could not run anymore, I have knee problem knows, would make surgery more I do not want surgery. A friend of mine who has worked four times the knee and was not good, I do not want to do, never had surgery and I do not..."

. "...I started the gym twice and stopped, and I have back problems..."

Not enough Money

"... The weight I stopped at the time because of the financial, I was not able to pay, I stopped there ..."

. ".... It is not expensive you know, but that is only one thing that we can spend money on other things and not with the gym ...."

. "... Have to pay, you know, sometimes the guy wants to do, then he is already thinking of his daughter or son you know ..."

"... I think the financial side is what weighs more. Everything nowadays has to pay .... "

Lack of time

"... If I had more time to do physical activity I would do, is the lack of time even ..."

. "... Only it's complicated, that there we come home and is so much to do, and is the son, has a husband, a son, dog, parrot ... a woman's responsibility ..."

. "... We will reaching a stage in life that work and study do not have time for these things right ..."

Advanced age

. "... The age draws near, the weighing Januarys go, this without a doubt ...."

. "... Young is another conversation, you know, I talked to my mother-young is another conversation ... (referring to practice) ..."

Dissatisfaction with body image

"... And also, we go there and all women "saradinhas" and people with everything falling right ..." (referring to the barrier to go to the gym).

. "... The problem of the person you're obese is so difficult as exercise, thus the difficulty of her size and the embarrassment of people. I see that one of the factors that makes it difficult ... "

. "... Another thing, the guy has no shame, if he is really overweight guy has no shame, becomes a shy guy to society, people who are really obese who are fat, they feel embarrassed, do not feel the will in the midst of others, it is obvious ... "

Interpersonal barriers

Lack of social support

. "... What stopped me was not to be partners, not having a friend to come along. And then went alone, but alone is boring to do .... "

. "... Suppose playing basketball, if you do not have a partner like you do not have to play and it's something that I liked ..."

. "... I've tried to do exercise at home, alone also does not give, because everyone bothers us, have to make food on time, no support ..."

. "... I've tried twice gym, gave up for lack of company ..."

Environmental barriers

Unfavorable weather

"... For me the exercise has to be done well, with more chill, more cloudy, heat it in the morning bothers me a lot ..."

. "... But gave a sloth, and when cooled, wet day and then have thought, ah will not. Then you will give up the things .... "

Lack of safety

. "... For you to walk alone is already somewhat complicated, it is dangerous to walk around here, I'm one that does not walk alone ..."

. "... It has a few times so when it is square and such that only this the" piazada crack ", and then you no longer will you prefer to go somewhere else ..."

. "... One day I was cycling up a lottery, never, almost got hit twice, pushing back the bike has no condition ...."

. "... Have those gym there. The academies outdoors! More you note that you will always have people there probing is very complicated especially for women, so people already leave for this reason "

Distance to places for PA

. "... I have not attended the academy for lack of money and is far away"

Lack of structures/equipment for PA

. "... The street you can not walk, the park is far away, and for you to walk up there, you know, it's exhausting, gets there do not want to walk more, and on the street does not. Oh, it's very moving, and the street is very spoiled ... "

. "... I think the question that occurs in neighborhoods is that you do not have a place to walk, then you have to walk through the cars in driveways that are not regular ....

FIGURE 1 – Selection of major reports related to barriers for physical activity (PA) in overweight and obese adults according to the dimensions of analysis (Ponta Grossa, 2013, n=36).

physical activity, lack of time, lack of financial resources, and having a disease) were the most frequently reported. These results converge with the literature[4,18-20] and confirm that the individual aspects are those most commonly reported in different population groups[4,18-20]. Another important result was the significant number of reported environmental barriers (bad weather, lack of security and lack of places and structures for physical activity) for physical activity, indicating that the promotion of physical activity for this group should consider the multitude of factors that can influence the levels of physical activity.

Barriers such as lack of confidence, lack of social support, lack of safety related to crime and lack of structure/safety equipment for physical activity were more frequent. However, there was no difference in the reported barriers regarding SBC. Lack of confidence for physical activity may be related to the lack of experience with physical activity or negative experiences related to it. On Table 3, it is possible to identify some reports of adverse experiences, for example, *"... At the gym, the teacher only helps the "girls".. puts me on a treadmill and forgets about me ... (report of*

a participant)". Corroborating with this report, evidence emphasizes that negative experiences related to physical activity may reduce the confidence and interest in adopting this behavior [21]. In addition, *"dissatisfaction with body image"* may depart adults from traditional facilities (e.g., clubs, gyms), reducing the possibilities of positive and successful experiences, which can inhibit the perception of self-efficacy, resulting in reduced adherence and maintenance of physical activity [21].

Lack of social support was the most reported interpersonal barrier, similarly to other studies [22,23]. Receiving support from friends and/or family members can facilitate physical activity for adults with excess weight as means of positive emotional reinforcement (e.g., praise) or instrumental (e.g., take on tasks so that a friend/partner can practice physical activity). Furthermore, greater social support is associated with physical activity indirectly through the influence on confidence for physical activity [24]. Thus, programs to promote physical activity in overweight adults should consider social support as a key element, e.g. include activities involving friends and family and also the participation of professionals specialized in exercise prescription [25].

The lack of safety related to crime was the most reported environmental barrier by participants. The insecurity due to crime and traffic has been associated with lower levels of physical activity [26], confirming the findings in our study, of the importance of this aspect of the environment. For example, the occupation of public spaces by drug users and graffiti, which can decrease the perceived safety of a site, are frequently reported as reasons not to use the spaces for physical activity [18,27]. Greater investment in lighting, safety and supervision of sites for physical activity are needed to increase access and sense of security in these places [26]. Therefore, the use of safe public spaces can assist on the adhesion of overweight adults to a routine of physical activity.

This is one of the first studies on barriers for physical activity in overweight people in Brazil with the use of focus groups. The focus groups technique is strength of the study because it allowed to spontaneously identifying barriers for physical activity. The composition of homogeneous groups with respect to sex and stage of behavior change also empowered the discussions. The study population has important features, since it is the most common profile in the adult population [28]. Moreover, the reports were extracted and validated by two trained researchers and independently, allowing for greater consistency in the classification of barriers. Finally, we used a conceptual approach taken in the literature related to studies of the determinants and correlates of physical activity. The main limitation of the study relates to inclusion of adults of higher social class and in the preparation stage, which limits the understanding of what the barriers for physical activity are in such groups.

The results of this study may help design programs to promote physical activity for overweight population. Initially, it reinforces the importance of identifying the barriers for physical activity, so that interventions are most effective for this population. It also shows the need to consider different levels of influence (intrapersonal, interpersonal and environmental) [29] in the programs. For example, family and community environments should be inserted in programs to strengthen social support and sense of security that were important barriers reported. Furthermore, to identify affordable and safe places for physical activity and access to trained professionals still are elements that can be inserted in the promotion of physical activity programs to mitigate the barriers for this population. We conclude that among adults who are overweight, there is a high number of intraper-

sonal and environmental barriers and there are no consistent differences between the different stages of behavior change for physical activity.

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Author´s Contribution

Cassiano R. Rech and Edina M. de Camargo were responsible for design, data collection, and analysis and critic review of the text. Milena Almeida and Renata S. Bronoski participated in data collection, literature review and final review of the study. Nilo Okuno and Rodrigo S. Reis attend the final review of article.

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