82 - TRANSCULTURAL ADAPTATION OF THE PREGNANCY PHYSICAL ACTIVITY QUESTIONNAIRE - PAQ TO PORTUGUESE: A TOOL FOR EVALUATION OF PHYSICAL ACTIVITY IN PREGNANCY BRAZILIAN

FRANCISCO TRINDADE SILVA[1];
FABRÍCIO DA SILVA COSTA[2];
[1]Programa Euro-americano de pós-graduação *Strict Sensu* em Saúde - Medicina do Esporte
Universidad Católica Nuestra Señora de la Asunción - UC, Asunción, Parguai
[2]Mestrado Acadêmico em Saúde Pública, Programa de Doutorado em Saúde Coletiva
UECE/UFC, Fortaleza, Ceará, Brasil
lko1@terra.com.br

INTRODUCTION

Currently there seems to be a growing global concern for quality and style of life, but also in terms of consequences and harm to health that physical inactivity can cause. The practice of regular physical activity is associated with reduction in premature deaths, heart disease, stroke, cancer of the colon, breast and type II diabetes. It also interferes in a positive way in the prevention or reduction of hypertension and obesity, helps in the prevention or reduction of osteoporosis, promotes the well-being by reducing stress, anxiety and depression (WHO, 2008).

Currently, as compensation for their condition sedentary, women are encouraged to do some kind of physical activity, adopting a healthy lifestyle, including the gestational period (BACIUK, 2006). In recent years women have joined the practice of physical activity, including the sporting spirit has reached women of all ages, including pregnant women who are close to completing the delivery (ARTAL; WISWELL, 1987). Finally, pregnancy is considered a change in the state of women's health more than a state of illness and more women are seeking programs of physical activity throughout their pregnancy (true, 2006).

However, the level of physical activity in pregnant women appears to be a starting point for understanding and prescription of this practice. In epidemiological studies measuring instruments are used subjective, as the questionnaires. Do not be invasive are advantages pointed, others are its practicality and acceptability, making them reliable and valid. Realizing the need for an instrument for assessing the physical activity during pregnancy, researchers from the Department of Biostatistics and Epidemiology, School of Public Health and Health Sciences at the University of Massachusetts in the United States built and validated in the English language for a specific questionnaire assessment of the level of physical activity in pregnant women, called Pregnancy Physical Activity Questionnaire - PPAQ (CHASAN-TABER *et al.*,2004).

The purpose of this study demonstrates the initial stages of Transcultural adaptation of PPAQ into Portuguese, with the aim of having an instrument for assessing the physical activity level of Brazilian women.

METHOD

Following the model developed by (HERDMAN; FOX-RUSHBY; BADIA, 1998), and used in national surveys by (REICHENHEIM; MORAES; HASSELMANN, 2000); (REICHENHEIM; MORAES, 2003), and (FISZMAN et al., 2005) So that there is the equivalent of a transcultural tool we need to run through this process of successive steps of assessment of equivalence. The study involved four of the six steps cited by authors mentioned above, assuming the posture of "universal" and included the following phases: conceptual assessment of items, and operational semantics.

Evaluation of the conceptual equivalence and items and focused on the discussion of the original instrument and its applicability as a way to assess the level of physical activity in Brazilian women. At this stage of the evaluation were discussed different areas incorporated into the original instrument as the concepts of interest for relevance, context and clarity to the new instrument that has been adapted. In size "relevance" trying to capture the equivalence of items, based on available literature. In addition to the participation of experts and authors, were captured through interviews and reviews perception of the participants.

Evaluation semantic equivalence involves the ability to transfer meanings of the concepts contained in the original instrument to version, allowing a similar effect on respondents in both cultures and it is assumed that there is a correlation between the literal terms and their meaning with a reference both in and in their original version (REICHENHEIM; MORAES, 2007). Some steps were necessary to follow the roadmap for assessing these aspects of equivalence. Initially, there were two translations of the English version of PPAQ, containing 36 questions, two Brazilian translators, aware of the goals of scientific research and fluent in English. Here was requested to American two translators fluent in Portuguese language with which the original did not know a back translation, the Portuguese into English (back translation). The translation was compared with the first text in English, and especially emphasized, the translation conceptual rather than strictly literary. The two translations were compared by translators and researchers of the study, and changes were made when there were differences to obtain consensus on the translation. Still, considering some questions in the questionnaire that are inserted in the context of the United States, was chosen for its appropriateness, making it more understandable to our reality. To this end, the original questionnaire was translated already presented, individually, to six health care professionals with recognized scientific knowledge. The group met a professor of physical education, two medical epidemiologists, a nurse, a nutritionist and a statistic, all doctors. On this occasion, were asked to each of these professionals who judge the assertions made in the questionnaire, using the variables explained below and / or through tips from fitness to be made in the formulation of questions: context (check on the appropriateness of assertive to our reality), Clarity of assertive (ease and understanding by the reader) and relevance (importance of assertive and to measure participation of pregnant women in physical activities).

In relation to the variables above, is asked to evaluate the professional assertions using a scale of the Likert scores (Likert, 1932) with values of 1 to 5 (1 - Totally irrelevant, 2-Irrelevant, 3-Neutral, 4 -Relevant, 5-Extremely important). Were obtained this way, the understanding of professionals on the 36 questions of the questionnaire PPAQ. A synthetic version was developed in a pilot study, and applied to 40 pregnant women, to adjust the translation of the instrument and train the applicators of the questionnaire translated, QAFG. Some items have been adjusted, a deleted by the group, while two others resulted in the addition of a single issue. These initiatives aimed to better meet the criteria for semantic equivalence. Further interviews were conducted in 305 pregnant women, resulting in a final version.

Before starting the study, remained the main contact with the researcher who prepared the instrument. This is a search for methodological design of cross section. The interviews occurred in the days of consultations. For the criterion of exclusion to those which had been insulin dependent diabetes, hypertension or heart disease that required medication, chronic kidney disease, twin pregnancy and prematurity or were outside the age range of 16 to 40 years. In the case of pregnant women, the entire sample was female and the choice of patients, although they form part of one of the twelve municipal health units, the sample was purely coincidental, the entire collection was done in-hospital environment.

Evaluation of operational equivalence Objectively compare operational characteristics of the sample source and original, bringing greater reliability and validity of the instrument, like ensuring that the same modus operandi is not the same (REICHENHEIM; MORAES, 2007). The study found the average time of the questionnaire that was given in twelve minutes, their shape, type and location of the instrument and levels of abstraction in time spent by women in the pursuit of physical activities.

The work was submitted to the Research Ethics Committee of UECE of No. 06193205-1 and 91,909 FR-July 5, 2006, term Compromise free and clear - CNS, 1996-96.

RESULTS

Table 2 lists the categories relevant to QAFG, divided into 31 activities / inactivity, including: Homemaking (5 activities), Caring for others (6 activities), Occupational (5 activities), Sports and Exercise (9 activities), Transportation (3 activities) e Downtime (3 inactive) reflects the physical activities, as its intensity. As the levels of physical activity the table shows the classification and the issues that capture these conditions during the implementation of the questionnaire QAFG.

Tabela 2 Adaptação das categorias, níveis de atividade física e questões relacionadas no QAFG.

Categorias	**Questões**
Tarefas domésticas	3, 13, 14,15,16
Cuidar de outra pessoa	4, 5, 6, 7, 8, 9
Ocupacional	29, 30, 31, 32, 33
Esportes/Exercício	20, 21, 22, 23, 24, 25, 26, 27, 28
Transporte	17, 18, 19
Inatividade	10, 11, 12
Níveis de atividade física	**Questões**
Sedentária	10, 11, 19, 29
Leve	3, 4, 6, 13, 14, 15, 17, 31 e questões 27 e 28 são atividades em aberto [< 2,9 METs]
Moderada	5, 7, 8, 9, 12, 16, 18, 20, 21, 24, 25, 26, 30, 32, 33 e questões 27 e 28 são atividades em aberto [? 3 e < 6 METs]
Vigorosa	22, 23 e questões 27 e 28 são atividades em aberto [? 6 METs]

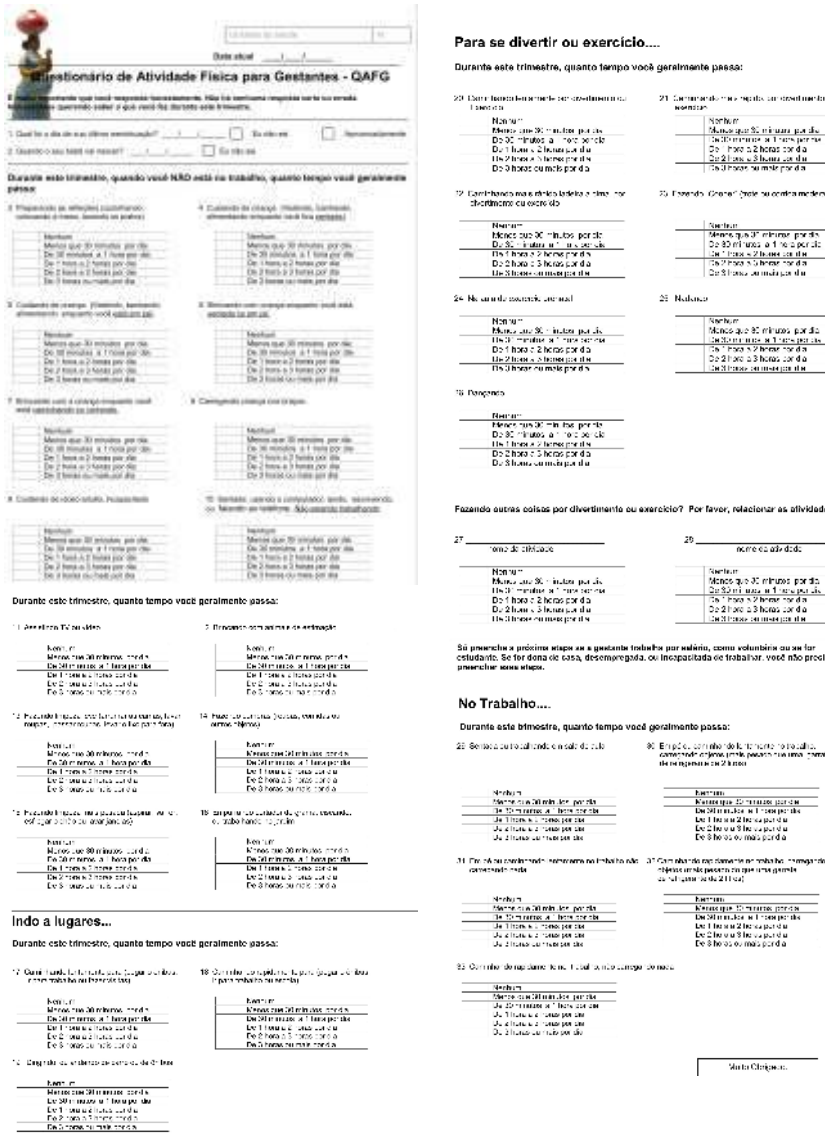
Fonte: PPAQ instructions Prof. Dr. Lisa Chasan-Taber, Sc.D.- orientação por e-mail para os autores

Figure 1 shows the final version of the instrument, after phases of the study, involving pilot with 40 pregnant and later to collect more happened in 305 pregnant women.

Figura 1

Final Version of the Instrument

***Questionário de Atividade Física para Gestantes* - QAFG.**



DISCUSSION

There seems to be in literature, so far, a clear indication of the appropriate methods for carrying out transcultural adaptations involving energy expenditure and physical activity. Even where there is consensus on some guidelines are necessary procedures to adapt to new tools for measuring contexts, cultures or languages (REICHENHEIM; MORAES, 2007), (MORAES *et al*., 2002). Historically were adopted strategies that range from a simple translation of the original instrument by researchers or, in particular, to compare this with its literal translating, until more detailed proposals (REICHENHEIM; MORAES, 2007); (MORAES *et al*. 2002). Some time ago, researchers from different fields of knowledge are suggesting that the assessment semantics compose only one of the steps needed to process the CTA (HERDMAN et al., 1997); (REICHENHEIM *et al*., 2007); (BADIA, ALONSO, 1995); (BERKANOVICH, 1980); (BRAVO, 1991); (BUCQUET, 1990); (GUILLEMIN, 1993).

However, we recommend its use for transcultural adaptation adjustment in the target population. In the version developed in the United States, is self-administered questionnaire; in Brazil could be chosen the option of the interview. In individuals with low understanding, as this population of the study in question, worked best way to the implementation of assisted interview.

The first objective of an epidemiological questionnaire for applications is the individual classification. Emphasized (CHASAN-TABER *et al*., 2004) that the majority of questionnaires to measure the level of physical activity were developed and validated for men with emphasis on the participation of moderate intensity and vigorous in sports, missing, however, include home or work load children and determine patterns of physical activity in pregnant women. Important to note, too, which should be considered the metabolic cost during pregnancy, In the case of physical inactivity, the impact on pregnant women by the various aspects of reduction in protection of health could be minimized by identifying the level of physical activity.

The review of literature and participation of experts indicated that the concepts related to physical activity during pregnancy used in the preparation of the original instrument are relevant to the context of Brazilian culture. However, we chose to adapt some words to offer more clarity to the terms used.

The final version, Evaluation Questionnaire of Physical Activity for Pregnant women - QAFG shown in Figure 1 will have 33 questions. In general, both versions were shown to be similar. The first assertion on the "current date", is now a part of the header in the questionnaire, so will be identified by anyone collect the information. In the original version, the second assertion, "last day of menstruation" and the third, "anticipating the birth of the baby", they now constitute the issues of numbers 1 and 2 in the final version. The assessment of experts indicated hits needed: the question number 18 of the original has been removed, by presenting low clarity and show up outside the context of Brazil, "How much time do you spend using a tractor cutting grass". Question number 11 of the original, "Sitting and using the computer or writing while not working" with little clarity has been condensed with the number 13, "Sitting and reading, talking on the phone while it is not working", now "Sitting, using the computer, reading, writing, or talking on the phone. Not working" Now occupy the question number 10 in QAFG.

The assertion seems to have improved the clarity, have been merged, because both had the same energy expenditure and the tasks they could not compete with each other, also to display similar characteristics, thus enabling a better understanding of the assertion. Question number 19 of the original, after the translations, "Cutting grass, using machinery to cut standing", when adjusted in the study, has enabled better understanding about the context and relevance, resulting in issue 16 of QAFG, "pushing lawn-mower, Cisco, or working in the garden. On the issue of number 30, before the original 33; "By standing or walking slowly at work, carrying objects (heavier than a bottle of soda, 2 liters) and number 32, before the original 35 "Walking quickly at work, carrying objects (heavier than a bottle of soda, 2 liters)," both related to transportation of additional cargo, were exchanged, the 2 liters of soda The more common to our culture that "a jar of a gallon of milk" collected from the questionnaire after the original translations. To the question 23, before the original 26 "Jogging", after discussion it was suggested "Doing Cooper, (trot race or moderate)", a term that denotes the best physical activity that increases energy expenditure over the state of rest, but so moderate. In the original question of the number 10, current issue 9, translated as "Caring for older person" was too vague to understand in our culture, opting to be in their adjustment to "Caring for elderly adults, disabled." Another issue that brings the same observation was the original question number 9, currently number 8, translated as "Caring for Children" which was set to "Loading child in her arms." These, and the questions 6, 10, 19, 20, 21, 33 and 35, again it was appropriate under question according to the indication of the experts participating in the phase of the process, besides the study of the roadmap (Farinatti, 2003).

The original questionnaire with 36 questions was completed with 33 points. It is important to mention that the numbers now no longer coincides with the original version of the questionnaire, with the changes because the numbers of the questions take a different relationship. All questions put pregnant women facing situations that often are part of their day-to-day search and identify energy expenditure during the physical activities performed by them. The assertions that appeared as (Totally Irrelevant and Irrelevant), after adjustments mentioned above, were over (Neutral, Relevant and highly relevant) version of the QAFG. In assessing the dimension "relevance" trying to capture the equivalence of items and took on a review of the literature, besides the participation of experts and authors.

The meaning of each instruction or assertion goes beyond the literal meaning of the correspondence of terms and takes into account its impact on the cultural context of the study population. It is therefore important to assess, because even if there is correspondence literally, does not mean that there is a subjective meaning in different cultures.

The Physical Activity Questionnaire for Pregnant women - QAFG presented in Table 3 and finished with 33 points, two are from the header, and 31 were presented as alternatives to the option to answer: None, less than 30 minutes a day, from 30 minutes to 1 hour per day, from 1 hour to 2 hours per day, 2 hours to 3 hours per day, 3 hours or more per day and will be reported only one answer.

Featuring even items that were not included in this questionnaire, as this process sets up another questionnaire, where its properties, especially those of psychometric nature, are not necessarily those of the original instrument (REICHENHEIM; MORAES, 2003).

FINAL CONSIDERATIONS

The study supported the current assessment of conceptual equivalence of items, and operational semantics between the PPAQ and QAFG. The instrument was shown to be applicable to the target population and has an excellent acceptability. Indicate a first version in Portuguese. However, important steps should be followed so that it can be recommended in the Brazilian population. Thus, tests for the evaluation of psychometric properties and validity and reliability should be performed, reason for another study, currently under development.

Key words: Physical Activity; Hand; Questionnaire; Adaptation

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Rua Vicente Leite, 793 Meireles, Fortaleza, Ce, Brasil, Cep: 60.170150
Fone:(85) 32642066 - iko1@terra.com.ce
Fabriciouece@hotmail.com

ABSTRACT

This article sought to demonstrate the initial phases of the transcultural adaptation to the Brazilian reality of the Pregnancy Physical Activity Questionnaire PPAQ tool, developed in the English language, in order to measure the level of physical activity among pregnant women. The original questionnaire was translated and adapted, according to the following phases: evaluation of the conceptual equivalence, item, semantics and operational. The adaptation involved the participation of expert professors in the health field, who evaluated the tool in these aspects: context, clarity and relevance. After the application of a pilot model in Portuguese among 40 pregnant women, new necessary adjustments were made, resulting in a version denominated Evaluation *Questionário de Atividade Física para Gestantes* QAFG, applied now in a sample of 305 pregnant women. A good conceptual equivalence of the assertive and semantics among the original and final versions in Portuguese and also an excellent acceptability of the adapted tool was verified. However, to indicate QAFG among the Brazilian population, the evaluation of the psychometric properties should be carried out; a reason for another study being developed nowadays.

RESUME

Cet article vise à démontrer les étapes initiales de tranculturalle adaptation à la réalité de la grossesse instrument brésilien *Pregnancy Physical Activity Questionnaire* PPAQ, développé en anglais, pour mesurer le degrée d'activité physique chez les femmes enceintes. Le questionnaire original a été traduit et adapté, en prenant les mesures suivantes: évaluation de l'équivalence conceptuelle des questions, les items et les aspects opérationnels de la sémantique. L'adaptation fait appel à la participation des enseignants dans le domaine de la santé experts qui ont évalué l'instrument dans les aspects: le contexte, la clarté et la pertinence. Après mise en œuvre d'un pilote en portugais dans 40 des femmes enceintes, de nouveaux ajustements ont été nécessaires, résultant en une version appelée *Questionário de Atividade Física para Gestantes* QAFG, maintenant appliquée dans un échantillon de 305 femmes enceintes. Il a été une bonne équivalence conceptuelle d'affirmations et de la sémantique entre l'original et la version finale en portugais et aussi une excellente acceptabilité de l'instrument adapté. Toutefois, pour alerter la population bresilienne de QAFG, devraient être menées pour évaluer les propriétés psychométriques, raison pour laquelle une autre étude actuellement en cours de développement.

RESUMEN

Este artículo pretende demostrar las fases iniciales de la adaptación trancultural a la realidad brasileña del instrumento *Pregnancy Physical Activity Questionnaire* PPAQ, desarrollado en el inglés, para medir el nivel de actividad física en mujeres embarazadas. El cuestionario original fue traducido y adaptado, mediante la adopción de los siguientes pasos: evaluar la equivalencia conceptual, de los itemes, y de semántica, y los aspectos operativos de. La adaptación contó con la participación de los docentes en el ámbito de la salud, los cuales evaluaron el instrumento en los aspectos: contexto, claridad y pertinencia. Después de la aplicación de un piloto en portugués en 40 mujeres embarazadas, nuevos ajustes han sido necesarios, echo que resultó en una versión denominada *Questionário de Atividade Física para Gestantes* - QAFG, aplicado ahora en una muestra de 305 mujeres embarazadas. Se constató una buena equivalencia conceptual de las asertivas y la semántica entre el original y su versión final en portugués y también una excelente aceptabilidad del instrumento adaptado. Sin embargo, para indicación en la población brasileña de QAFG, debe llevarse a cabo para evaluar las propiedades psicométricas, la razón de otro estudio actualmente en desarrollo.

RESUMO

Este artigo buscou demonstrar as fases iniciais da adaptação transcultural à realidade brasileira do instrumento *Pregnancy Physical Activity Questionnaire* PPAQ, desenvolvido no idioma inglês, para mensurar o nível de atividade física em gestantes. O questionário original foi traduzido e adaptado, seguindo as seguintes fases: avaliação da equivalência conceitual, de itens, semântica e o aspecto operacional. A adaptação envolveu a participação de professores especialistas na área da saúde, que avaliaram o instrumento nos aspectos: contexto, clareza e relevância. Após aplicação de um piloto em português em 40 gestantes, novos ajustes fizeram-se necessários, resultando em versão denominada de *Questionário de Atividade Física para Gestantes* QAFG, aplicado agora em amostra de 305 gestantes. Constatou-se uma boa equivalência conceitual das assertivas e semântica entre as versões original e final em português e também uma excelente aceitabilidade do instrumento adaptado. No entanto, para indicação na população brasileira do QAFG, deverá ser realizada a avaliação das propriedades psicométricas, motivo de outro estudo atualmente em desenvolvimento.

Palavras-Chave: Atividade Física; Gestantes; Questionário; Adaptação