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Translation, adaptation and validation of the "Measure of older adults sedentary time" questionnaire in Brazilian older adults

Adaptação transcultural e validação do questionário "Measure of older adults sedentary time" em idosos brasileiros

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Abstract – Modern lifestyle is associated with prolonged exposure to sedentary behavior (SB), especially in older adults; however, there is a lack of validated questionnaires to measure SB in Brazilian older adults. The aim of this study was to adapt and validate the Brazilian version of the "Measure of Older Adults Sedentary Time" (MOST) questionnaire in Brazilian older adults. Content validity, clarity and concurrent validity of the adapted MOST were examined. Fifty-seven participants (68.7 ± 3.47 years) answered the adapted version of the MOST questionnaire and wore an ActiGraph wGT3X-BT accelerometer for seven days. After this period, participants answered the adapted MOST again and the accelerometer was collected. MOST answers were summed over for calculating self-reported time spent in SB. A cutoff point of < 100 counts/min was applied to accelerometer data for estimating time spent in SB. The relationship between SB estimates from MOST and accelerometer was verified by Pearson correlation, reproducibility was verified by intra-class correlation coefficient (ICC), internal consistency by Cronbach's alpha (α) and concordance by Bland-Altman. Significance was set at P <0.05. Content validity index and clarity index were 100% and 98%, respectively. ICC was 0.72 (95% CI: 0.56-0.82) for total time in SB assessed with the MOST questionnaire. The correlation between SB estimates from MOST and accelerometer data was 0.37 (95% CI: 0.13-0.58). The adapted MOST systematically underestimated SB compared to accelerometer (measurement bias: -732.8 min/week [2087.6; -3553.2 min/wk]). The adapted MOST questionnaire presents adequate validity for assessing SB in the Brazilian older adults.

Key words: Health in the elderly; Inquiry and questionnaire; Validation studies.

Resumo – *O estilo de vida moderno está associado a maior exposição ao comportamento sedentário (CS), sobretudo em idosos, entretanto, há uma carência de questionários validados para medida do CS em idosos brasileiros. Objetivou-se adaptar transculturalmente e validar a versão brasileira do questionário "Measure of Older Adults Sedentary Time" (MOST). Adotou-se para adaptação e validação os critérios de validade de conteúdo, clareza e concorrente. Responderam ao MOST adaptado e utilizaram acelerômetro ActiGraph wGT3X-BT por sete dias, 57 idosos (68,7 ± 3,5 anos). Após esse período, o MOST adaptado foi reaplicado e o acelerômetro recolhido. Realizou-se o somatório dos tempos das questões do MOST, download dos dados do acelerômetro em counts/min e reintegração dos dados brutos para counts em epochs de 60 segundos no software ActiLife 6.0. Foi utilizado o ponto de corte <100 counts/min. A relação entre CS através do MOST e acelerômetro foi verificada pela correlação de Pearson, reprodutibilidade pelo coeficiente de correlação intraclasse (CCI), consistência interna pelo alpha de Cronbach (α) e concordância pelo Bland-Altman. Adotou-se p ≤ 0,05 para significância estatística. O índice de validade de conteúdo foi de 100% e clareza 98%. O CCI foi de 0,72 (IC95%: 0,56-0,82) para o tempo total em CS pelo MOST. A correlação entre o CS do MOST e do acelerômetro foi de 0,37 (IC95%:0,13-0,58). Houve tendência de subestimação do CS pelo MOST adaptado comparado ao acelerômetro (viés de medida: -732,8 min/sem [2087,6; -3553,2 min/sem]). O questionário MOST adaptado apresenta parâmetros psicométricos adequados para avaliação do CS em idosos brasileiros.*

Palavras-chave: *Estudos de validação; Inquéritos e questionários; Saúde do idoso.*

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INTRODUCTION

In the last decade, the interest of researchers in studying sedentary behavior (SB) has increased, as a positive association of this behavior with the risk of morbidities and mortality has been evidenced[1-3]. SB is characterized as activities performed in the sitting or lying position, with energy expenditure ≤ 1.5 METs in various contexts of everyday life, including leisure activities, communication, commuting, work, and daily activities[4-6].

SB measurement can be performed by indirect methods such as diaries, interviews and questionnaires, or by direct methods such as accelerometers[7]. Although motion sensors are more accurate than self-report instruments, their high costs make it difficult to apply to large-scale studies, and is even more limited in developing countries, such as Brazil. Thus, questionnaires are methods still used for SB evaluation in large-scale studies.

Older adults are the population segment most likely to be exposed to SB. A recent systematic review examined 22 observational studies (16 cross-sectional, 6 cohort studies) associating SB to health outcomes in older adults (> 60 years). The review pointed out that 74% of studies used self-report instruments to estimate SB. No study included in the review was performed with Brazilian older adults[8].

Among the existing SB measurement questionnaires, the "Measure of Older Sedentary Time" (MOST) stands out by measuring the time spent in SB over the last seven days. MOST was first developed and validated in Australia, consisting of seven questions that estimate SB. Questions relate to the following activities: "watching television"; "using the computer"; "reading"; "socialization"; "commuting"; "hobbies"; and other activities such as "feeding." These activities are measured by self-report through interview, including questions on time spent in sitting or lying position, computing the time in hours and minutes of the last seven days[9].

SB measurement from specific instruments that provide contextual information may allow the collection of information to establish its prevalence and its association with adverse health factors in Brazilian older adults and, therefore, proposals for intervention strategies. Therefore, the aim of the present study was to perform cross-cultural adaptation and test the reproducibility and validity of the MOST questionnaire for application in Brazilian older adults.

METHODOLOGICAL PROCEDURES

This was an observational study with methodological design for the development, validation and evaluation of a research instrument. This study was approved by the Human Research Ethics Committee of the Federal University of Triângulo Mineiro (UFTM) under protocol No. 948.990 / 2015.

Cross-cultural adaptation

The cross-cultural adaptation procedure was conducted according to rec-

ommendations and guidelines by Beaton et al.[10] and Hill and Hill[11]. The original version of the questionnaire was translated from English to Portuguese by two independent translators. Consensus of both translations was made by a researcher from the Physical Activity and Health area, resulting in the first Portuguese version. Subsequently, a third translator performed back-translation, and similarity with the original instrument was verified.

After this procedure, content evaluation was performed by four specialists from the Physical Activity and Health area. Researchers rated the content of each question as: "agree", "partially agree" or "disagree". For questions rated as "partially agree" and "disagree", researchers made suggestions for textual revision or adaptation to Brazilian culture. In order to calculate the content validity index (CVI), the following formula was used (number of agree and partially agree / total number of answers) x 100. The research team analyzed and discussed the suggestions for producing the second version of the questionnaire.

Seven older adults answered (68.7 ± 3.5 years) the second version of the questionnaire to verify the questionnaire clarity. Individuals assessed each question using the following scale: "1 - not clear"; "2 – little clear"; "3 - clear"; "4 - very clear"; "5 - totally clear". To calculate the clarity index (CI), the following formula was used (number of clear + very clear + totally clear / total number of answers) x 100.

Reproducibility and concurrent validity

The second version of the MOST questionnaire was answered by 57 older adults of both sexes, aged 65-75 years, recruited by convenience, residents of the municipality of Uberaba, Minas Gerais, who signed the Free and Informed Consent Form. Exclusion criteria were: score <24 points in the Mini Mental State Examination (MMSE)[12]; score <7 points in the Short Physical Performance Battery (SPPB)[13], and schooling <4 years.

To assess instrument reproducibility, the adapted MOST questionnaire was answered in two occasions (test and retest), with a seven-day interval. For assessing concurrent validity, an accelerometer was delivered to participants on the day of the application of the adapted MOST questionnaire (test).

Data collection protocol

In the initial approach of participants, sociodemographic information was collected (sex and schooling), followed by the application of MMSE and SPPB. Body mass (kg) and height (m) were measured with a digital scale with coupled infrared stadiometer (WISO, W-721 with accuracy of 100g). Body mass index (BMI) (kg/m^2) was calculated according to the body mass (kg)/height^2 (m^2) formula. BMI was categorized as low weight (<18.5 kg/m^2), eutrophic (18.5 kg/m^2 - 24.9 kg/m^2), overweight (25.0 - 29.9 kg/m^2) and obese (>30 kg/m^2) according to the World Health Organization (WHO)[14].

Subsequently, participants answered the adapted MOST and received an accelerometer and instructions for using it. After seven days, partici-

pants answered the adapted MOST again and returned the accelerometer. Besides SB, the accelerometer was also used to assess physical activity as time spent (hours and minutes) in light, moderate, vigorous and very vigorous physical activity. Physical activity data were interpreted according to recommendations of the American College of Sports Medicine (ACMS)[15].

Measurement of sedentary behavior by self-report - MOST

The MOST[9] questionnaire is composed of seven questions to measure SB in the sitting or lying position from the statement "During the last week (last seven days), how much time in total did you remain in sitting or lying position"? Participant answers the question according to activities in different contexts (watching television, using the computer, reading, socializing, commuting, hobbies, and other activities - e.g. feeding). The time spent is computed in hours and minutes in the last seven days. The MOST questionnaire was originally developed as a self-report instrument in English. However, after the process of cross-cultural adaptation to Brazilian Portuguese, the MOST was adapted for a face-to-face interview instrument.

Measurement of sedentary behavior by motion sensor

SB was measured using the ActiGraph wGT3X-BT accelerometer (ActiGraph Corp, LLC, Pensacola, FL), which was initialized at 80 Hz sampling rate. Participants were instructed to use the accelerometer on the right iliac crest, attached to an elastic band for a period of seven days, except during bathing, water-based activities, and habitual sleep[17]. Upon returning the device, raw acceleration data were downloaded and processed in the ActiLife 6.0 software. Raw acceleration data were first reintegrated into counts in epochs of 60 seconds (counts / min). Subsequently, the Choi algorithm was applied to determine the time of non-use of the accelerometer by detecting the consecutive 60 minute periods of 0 counts / min with tolerance of up to 2 minutes of <100 counts / min. Daily wear time was automatically calculated by the Actlife software, subtracting the non-use time from the 24-hour period. Estimates of time spent in SB were then obtained by applying the cutoff point of <100 counts / min [16] to wear time data. The following criteria were used for the inclusion of accelerometer data: a minimum of three days of use during the evaluation period (two weekdays and one weekend day) and at least 10 hours / day of valid data (valid day).

Statistical procedures

Data were tabulated in the Epidata software version 3.1, analyzed in SPSS version 20.0 and Medcalc version 11.1. Descriptive statistics were used to characterize the sample (relative and absolute frequency, central tendency and dispersion measure), adopting $p \leq 0.05$ for all analyses. Data normality was verified using the Shapiro-Wilk test. The test-retest reproducibility was calculated by the intra-class correlation coefficient with 95% confidence interval (ICC: 95% CI). Concurrent validity was evaluated by Pearson correlation (r), as well as associations between SB estimates from the MOST

and SB estimates from the accelerometer. To determine the agreement level (95% CI) between MOST- and accelerometer-derived SB estimates, a Bland-Altman agreement plot was used. For interpretation of the results from the Pearson and Intra-class correlations, the criteria of Landis and Koch, (1977) were considered as follows: a) almost perfect: 0.80-1.00; b) substantial: 0.60-0.80; c) moderate: 0.40-0.60; d) regular: 0.20-0.40; e) discrete: 0-0.20; f) poor: -1.00-0.

RESULTS

Cross-cultural adaptation

After translation and translation consensus, the first version of the MOST questionnaire was produced. The back-translation showed similarity between the adapted version and the original version. The CVI was 100%, with 19 "agree" and nine "partially agree" answers, out of a total of 28 answers.

After content assessment, researchers suggested changes in the grammatical concordance of instructions to participants. As for the different items, changes were made for most them in terms of grammatical concordance and adaptations to the Brazilian culture. Only the first item "watching TV or videos / DVDs" obtained perfect concordance and no changes were necessary after the first version of the translation.

In six items (2, 3, 4, 5, 6 and 7), adaptations to the Brazilian context with changes of some words and insertion of examples were suggested (Ex: Item two, add the type of reading material - newspaper, book, magazine) to assist individuals in reminding the sedentary activities performed. In item seven, reviewers recommended the insertion of examples of activities (feeding, counting the time spent during breakfast, lunch, snack and dinner) and a reminder for individuals to record the time in sedentary activities for each of the seven days, during morning, afternoon and night periods. The authors then deemed reasonable to insert the reminder in all items. After analyzing all the suggestions, the consensus of the second version of the questionnaire was reached. During the assessment of instrument clarity, seven participants (68.7 ± 3.46 years) evalued the final version of the MOST. The CI was 98.2%, with 25 "totally clear", 25 "very clear", five "clear" and one "little clear" answers from a total of 56 answers.

Reproducibility and concurrent validity

The initial sample consisted of 87 participants, of whom 15 were excluded for not reaching the required score in the MMSE, one for not reaching the SPPB score, four for refusing to use the accelerometer, six for not using the accelerometer correctly and four for refusing to participate in the retest. This resulted in a a final sample of 57 participants.

Participants were mostly women (73.7%), with a mean age of 68.7 ± 3.4 years, and 7.3 ± 3.8 years of schooling. Regarding BMI, 31.6% were classified as eutrophic, 45.6% as overweight, and 22.8% as obese. Only 35.1% complied with physical activity recommendations (150 min of moderate

to vigorous physical activity / week). Sociodemographic, anthropometric and behavioral characteristics are presented in table 1.

Table 1. Sociodemographic, anthropometric and behavioral characteristics

	General	
Variable	%	n
Sample		
Sex		
Male	26.3	15
Female	73.7	42
Schooling		
4 to 7 years (primary school)	42.2	24
8 to 10 years (elementary school)	24.5	14
11 to 13 years (high school)	24.5	14
≥ 14 years (higher education)	8.8	5
BMI		
Eutrophic	31.6	18
Overweight	45.6	26
Obese	22.8	13
Level of physical activity (moderate / vigorous)		
≥150 min/week	35.1	20
<150 min/week	64.9	37

Note. BMI: Body Mass Index.

Table 2 shows that time spent in SB was highest for "watching television", followed by "other activities", "hobbies", "socialization", "commuting", "reading" and "computer". The mean time of self-reported SB was 2291.4 ± 173.7 min / wk and 3515.6 ± 505.5 min / wk for accelerometry. On average, 6.2 ± 1.1 days of accelerometer data were considered valid based on daily accelerometer wear time (10 hours or more), which averaged 13.9 hours / day on days considered valid.

Table 2. Time spent in sedentary behavior by the adapted version of MOST and accelerometer (min / wk).

	n	Minimum - Maximum	Mean – SD
Watching television	57	0 – 3240	1041.3 ± 781.2
Using the computer	57	0 – 840	59.7 ± 131.2
Reading	57	0 – 720	86.2 ± 173.3
Socialization	57	0 – 840	215.7 ± 233.6
Commuting	57	0 – 840	149.2 ± 163.8
Hobbies	57	0 – 3360	240.6 ± 500.8
Other activities	57	0 – 980	324. 9 ± 189.4
Total Time – Test	57	25 – 4840	2168.8 ± 1054.8
Total Time - Retest MOST	57	330 – 6115	2414.2 ± 1135.5
Total Test-retest MOST	57	-	2291.4 ± 1017.6
Accelerometer	57	2512.8 – 4463.4	3515.6 ± 505.5

Table 3 presents the results for Pearson correlation (r) and intra-class correlation coefficient (ICC) between test and retest estimates.

Table 3. Pearson correlation coefficients and intra-class correlation between test and retest estimates of the adapted MOST version

Variables	Test and Retest (T1 vs T2)			
	r (95% CI)	P	ICC (95% CI)	P
Watching television	0.70(0.54-0.81)	< 0.001	0.71(0.55-0.81)	< 0.001
Using the computer	0.60(0.41-0.75)	< 0.001	0.58(0.39-0.73)	< 0.001
Reading	0.61(0.41-0.75)	< 0.001	0.61(0.41-0.75)	< 0.001
Socialization	0.53(0.32-0.69)	< 0.001	0.41(0.18-0.60)	< 0.001
Commuting	0.65(0.47-0.78)	< 0.001	0.65(0.47-0.77)	< 0.001
Hobbies	0.72(0.57-0.82)	< 0.001	0.72(0.57-0.83)	< 0.001
Other activities	0.55(0.35-0.71)	< 0.001	0.55(0.34-0.71)	< 0.001
Total Time	0.74(0.59-0.83)	< 0.001	0.72(0.56-0.82)	< 0.001

Note. r = Pearson's correlation; CI = Confidence Interval; ICC = Intra-class Correlation Coefficient.

The correlation between test and retest was moderate for the questions "using the computer", " socialization", "other activities", and substantial for "watching television", "reading", "transportation", "hobbies", and total time spent.

Regarding ICC, the total SB estimates presented substantial reproducibility. This was also the case for some of the individual questions, namely "watching television", "reading", "commuting", "hobbies". For "using the computer", "socialization", and "other activities" reproducibility was moderate. Internal consistency was acceptable for the items "watching television", "using the computer", "reading," "commuting", "hobbies," "other activities," and total MOST time. For "socialization", internal consistency was low.

Pearson correlation coefficients between time spent in SB between MOST and accelerometer data were r = 0.37 (p = 0.005) and r = 0.24 (p = 0.75) in the test and retest occasions, respectively.

Figure 1A displays the agreement between SB estimates (min / wk) obtained with MOST and accelerometer. Measurement bias was -732.8 min / wk (2087.6, -3553.2 min / wk). Figure 1B displays the agreement between test and retest SB estimates (min / wk) obtained with the MOST questionnaire. Test-retest measurement bias of the MOST was -245.7 min / wk (1315.1 ± 2 and -1806.4 ± 2 min / wk).

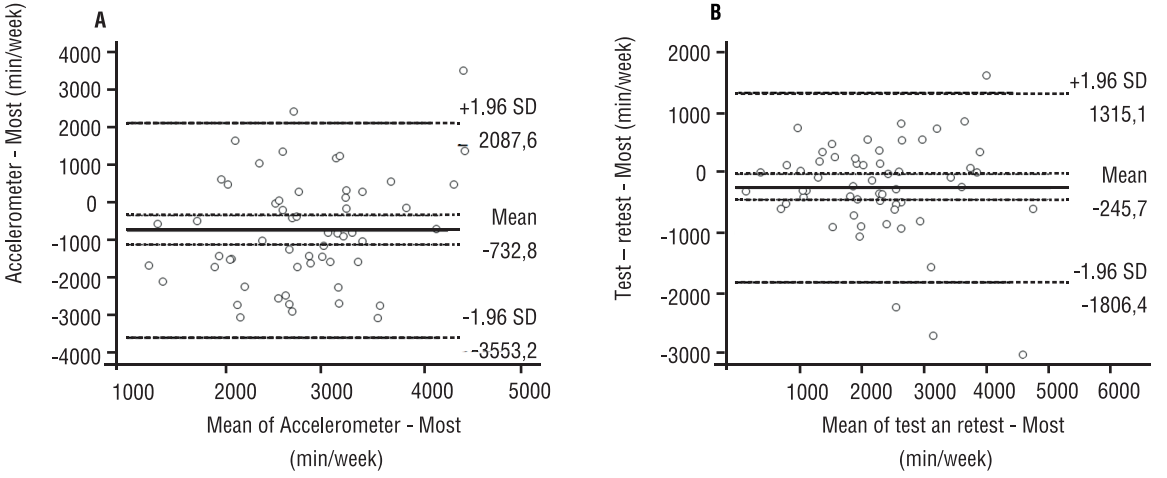

Figure 1. Bland-Altman plot of time spent in sedentary behavior (minutes / week). A - MOST and accelerometer estimates; B - Test and retest estimates.

DISCUSSION

This study presented the process of translation, cultural adaptation, content and clarity validity of the MOST questionnaire, demonstrating satisfactory results for these measures, indicating that the instrument is valid for use with Brazilian older adults (Supplementary file 1). The MOST questionnaire adapted for Brazilian older adults resulted in lower estimates of time spent in SB in the current study compared to the original study, which showed an average of 2898 min/wk[9]. This indicates that Brazilian older adults possibly spend less time in SB. In another validation study with American older adults, time spent in SB (2188.2 min/wk) was lower than in the present study[18].

Among the questions from the adapted version of the MOST, "watching television" was the one identifying the longest exposure to SB, 1041 min/wk, which is similar to the study that developed the original version of the MOST (1218 min/wk)[9]. When comparing adapted and original versions, lower SB estimates for "socialization", "reading", "using the computer" were observed. Similar SB estimates for "hobbies" and "commuting" and higher SB estimates for "other activities" were also observed.

However, it is noteworthy that in question seven ("*performing other domestic activities, at work and/or leisure that were not mentioned in previous questions*"), there was a discrepancy between the adapted version and the original version, which may be due to translation of the question, which included examples of activities closer to the Brazilian context (domestic, work and leisure). The original questionnaire contains of a more specific question (other activities) and the adapted questionnaire contains a more comprehensive question, allowing the researcher to acquire more information.

The time spent in SB measured by the accelerometer presented an average of 3.515.6 ± 505.5 min/wk, substantially lower than the original study (4284 min/wk). When examining other validation studies such as those by Grimm et al.[19] and Van Cauwenberg et al.[20], higher SB estimates (4180.2 and 4062.6 min/wk, respectively), were observed.

The adapted MOST presented substantial reproducibility, especially for "watching television", "reading", "commuting", "hobbies" and total time spent in SB. The general reproducibility index of the adapted version was higher compared to the original version (0.52)[9]. Studies that tested the reproducibility of estimates of time spent in SB by older adults presented lower correlation coefficients than the present investigation, as in the studies of Gennuso et al.[21] (0.58) and Visser and Koster[22] (0.71), or higher, as in the studies of Schuler et al.[23] (0.74). This variation suggests that the adjustments to the instrument facilitated the understanding of the activities required as well as their recall, resulting in satisfactory levels of measurement stability.

In relation to concurrent validity, expressed by correlation coefficients (r), the present study presented a low-to-moderate correlation (0.37). This is similar to other validation studies, which reported low to moderate values (0.06-0.35) when comparing questionnaires with measurement

obtained through motion sensors[9,18,21-23]. A possible explanation for the low correlation values obtained in this study is the fact that SB time is spent in several domains, and also due to the limitations of measurements obtained by motion sensors, such as not identifying the type of activity being performed and/or the posture (standing, sitting or lying) in which activities are performed [24].

There was a positive difference between MOST test and retest estimates, which shows higher concentration in the lower limit of the graph, suggesting a trend of underestimation in SB time, which can also be observed when comparing the estimates of time spent in SB between the adapted MOST and accelerometer. It was observed that the questionnaire underestimated time spent in SB by presenting values lower than those of the criterion measure (accelerometer), which may be due to the fact that the accelerometer is not a gold standard method for measuring SB, as this device does not detect posture[9].

Both self-report methods and motion sensors have limitations in assessing SB; therefore, the use of combined measures is recommended, as they can be complementary, favoring the achievement of better results. However, due to the high cost of motion sensors, self-report instruments to estimate SB remain a commonly used method in large-scale studies. This highlights the importance of adapting instruments that allow for assessing SB consistently in free-living conditions[25].

The adoption of a minimum of four years of schooling and the study scenario limits the generalization of results for the general Brazilian population of older adults. The use of the cross-sectional design is a limitation in establishing causal relationships, which would require the examination of the predictive validity of the adapted MOST. Self-report instruments are prone to oscillations by respondents and may be imprecise. However, we sought to ensure high internal validity, by adopting a minimum schooling time, as well as selecting individuals by convenience. Moreover, assessing predictive validity may require longer time, making it difficult to respond quickly to advances in more effective instruments in monitoring SB exposure. To minimize the common oscillations of respondents to self-report instruments, researchers underwent prior training. The bias observed in the test and retest is a common measurement bias in self-report instruments. This may be exacerbated when recalling information of the past 7 days in older people is required.

CONCLUSION

The adapted MOST questionnaire is an instrument that has satisfactory psychometric indicators and is useful to obtain SB measures in older adults, allowing the identification of time spent in SB and, in this study in particular, providing more research data on SB in older adults of the municipality of Uberaba. Further studies should be performed, taking into account the characteristics of older adults from different regions of Brazil.

COMPLIANCE WITH ETHICAL STANDARDS

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Ethical approval

Ethical approval was obtained from the local Human Research Ethics Committee – Federal University of Triangulo Mineiro (No. 948.990/2015), and the protocol was written in accordance with standards set by the Declaration of Helsinki.

Conflict of interest statement

The authors have no conflict of interests to declare.

Author Contributions

Conceived and designed experiments: FALM, JHJ, JES and JSVJ. Performed experiments: FALM, JHJ, JES and JSVJ. Analyzed data: FALM, JES and JSVJ. Contributed with reagents/materials/analysis tools: FALM, JHJ, JM, JES and JSVJ. Wrote the paper: FALM, JHJ, CLML, KRP, JM, JES and JSVJ

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SUPPLEMENTARY FILE 1

Brazilian version of the "Measure of Older Adults Sedentary Time" (MOST) questionnaire

Instruções aos participantes:
Eu lhe perguntarei a respeito das atividades que o(a) Sr.(a) realizou ao longo dos **últimos 7 dias**, enquanto estava sentado(a) ou deitado(a). Não conte o tempo de sono noturno habitual que passou na cama dormindo.

Hoje é _____. Eu quero que o(a) Sr.(a) pense a respeito do tempo (horas e minutos) em atividades realizadas desde a última _____ até o dia de ontem _____.

Para atividades simultâneas, considere somente o tempo da principal. Por exemplo, se o(a) Sr.(a) estava assistindo televisão e alimentando-se, considere apenas a atividade principal e não inclua as duas.

Considere o **enunciado** a seguir para todas as perguntas:

Durante a semana que passou (últimos 7 dias), quanto tempo no total o(a) Sr.(a) ficou sentado(a) ou deitado(a)...

ATIVIDADES SEDENTÁRIAS		TEMPO
1	**Assistindo televisão ou vídeos/DVDs?**	____ h ____ min

Tempo (minutos)		Dia da Semana						
Turno	Manhã							
	Tarde							
	Noite							
Total (minutos)								

2	**Usando o telefone, computador ou tablet, para comunicar, escrever, ler, acessar internet ou jogos?**	____ h ____ min

Tempo (minutos)		Dia da Semana						
Turno	Manhã							
	Tarde							
	Noite							
Total (minutos)								

3	**Lendo jornal, livro ou revista?** (Não contabilizar o tempo de leitura em tela, a exemplo do computador, tablet ou celular)	____ h ____ min

Tempo (minutos)		Dia da Semana						
Turno	Manhã							
	Tarde							
	Noite							
Total (minutos)								

4	**Conversando com amigos ou familiares no domicílio, em visita à casa de amigos, igreja, praça, clube, shopping, bar, etc?**	____ h ____ min

Tempo (minutos)		Dia da Semana						
Turno	Manhã							
	Tarde							
	Noite							
Total (minutos)								

Durante a semana que passou (últimos 7 dias), quanto tempo no total o(a) Sr.(a) ficou sentado(a) ou deitado(a)...

5	**Estando de passageiro/carona em carro, táxi, ônibus, barco, trem ou metrô?**	____ h ____ min

Tempo (minutos)		Dia da Semana						
Turno	Manhã							
	Tarde							
	Noite							
Total (minutos)								

6	**Realizando atividades que gosta, a exemplo de atividades manuais (tricotar, bordar, costurar...), palavras cruzadas, jogos de cartas e jogos de tabuleiro (dama, xadrez...)?**	____ h _____ min

Tempo (minutos)		Dia da Semana						
Turno	Manhã							
	Tarde							
	Noite							
Total (minutos)								

7	**Realizando outras atividades domésticas, no trabalho e/ou no tempo livre que não foram mencionadas nas questões anteriores?**	____ h _____ min

Tempo (minutos)		Dia da Semana						
Turno	Manhã							
	Tarde							
	Noite							
Total (minutos)								

8	**Durante a semana que passou (últimos 7 dias), quanto tempo de sono realmente o(a) Sr.(a) teve?**	____ h _____ min

Tempo (minutos)	Dia da Semana							
								Total
Total (minutos)								

Tempo (minutos)	Tempo total por cada questão							
	1	2	3	4	5	6	7	Total

Entrevistador (a): _____ **Data:** ____/_____/_____