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Assessing digital content in the TeenPower project: development and validation of a questionnaire

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BMC Health Services Research 2018, **18(Suppl 2):**P146

Background
The TeenPower project aims to develop a program to promote healthy behaviours and prevent obesity in adolescents. It is a multidisciplinary project with an important e-Health component. Therefore, including valid digital content may help to maximize and optimize the impact of the program. Given that over the years digital resources had a great evolution, there is a growing concern regarding the acceptance of the digital content by the target public. Thus, to assess the digital resources of the TeenPower project, there was the need to develop and validate a questionnaire that could accurately assess the quality and adequacy of the digital content of the TeenPower mobile app.
Objective
Develop and validate a questionnaire to assess the quality and adequacy of the videos and posters of the TeenPower.
Methods
Two scales were developed based on the questionnaire created by Junior and colleagues [1]: one for adolescents (12-16 years old) and one for health-professionals. The questionnaire for adolescents comprised 18 items answered on a 5-point Likert scale and 2 open questions (to assess the video content); as well as 11 items answered on a 5-point Likert scale and 2 open questions (to assess the poster content). The questionnaire for health-professionals comprised 17 items answered on a 5-point Likert and 2 open questions (to assess the video content); as well as 11 items answered on a 5-point Likert scale and 2 open questions (to assess the poster content). The sample included adolescents with the sociodemographic characteristics of the future users of the mobile app, and specialized health-professionals. Exploratory factor analyses and analysis of internal consistency through Cronbach's alpha were performed.
Results
Data regarding the concept idea, the construction of scenes and characters, the dialogues, visual and audio style and the quality and relevance of the information was obtained. Data regarding the acceptance and comprehension of the content and digital form of the app was obtained from adolescents. The quality and rigorousness of the scientific information was validated by health-professionals.
Conclusions
The questionnaire presented good psychometric qualities with adequate values for internal consistency and factorial analysis. Given that nowadays there is a vast offer of digital content related to health, there is a concern to use not only appealing content for future users, but also valid and scientifically correct information. This questionnaire may be an important tool to understand the acceptability and quality of the scientific content of the videos and posters.

Acknowledgements
The current abstract is being presented on behalf of the research group of the project TeenPower: e-Empowering teenagers to prevent obesity, co-funded by the FEDER (European Regional Development Fund), under the Portugal 2020 Program, through COMPETE 2020 (Competitiveness and Internationalization Operational Program). We acknowledge the Polytechnic Institutes of Leiria, Santarém and Castelo Branco, the Municipality of Leiria (City Hall), and also other members, institutions and students involved in the project.

Keywords
Adolescents, e-Health, Validation, Questionnaire, Digital content.

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Implementation process of "Engaging Clients Who Use Substances" guideline in a nursing school curriculum

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BMC Health Services Research 2018, **18(Suppl 2):**P147

Background
Nursing research has led to knowledge which has contributed to improving health care and to reduce costs. The implantation of guidelines ensures the transfer of the best evidence for clinical practice [1]. Substance-related problems can occur at any age, but usually begin in adolescence [2]. The Guideline Engaging Clients Who Use Substances developed by the Registered Nurses' Association of Ontario (RNAO), provides evidence-based recommendations related to the assessment and interventions for people over 11 years of age, who use substances, may be at risk of, or have a substance use disorder [3].
Objective
To present the experience of the guideline implementation process of the RNAO's Engaging Clients Who Use Substances, in the *curriculum* of the nursing degree (CLE) of the Atlantic Health School (ESSATLA).
Methods
Implementation procedures indorsed by the RNAO were followed, involving teachers, students and nurses from several clinical practice contexts. First, an analysis and reflection were made considering ESSATLA's CLE *curriculum*, Unit Sheets and the Engaging Clients Who Use Substances guideline recommendations. Afterwards, a guideline implementation plan was designed to fit the CLE, based on structure, process and outcome indicators. Teachers and clinical tutor train was performed and some guideline topics were included in several units: establishing therapeutic relationships [4] and person- and family-centred care [5].
Results
To date, guideline implementation process results include several outcomes: seminar meetings held with all stakeholders involved in the guideline's implementation process; a partnership training project - Partnership training seminars; a workshop scheduling plan; Portuguese translation of the "Engaging Clients Who Use Substances" in process (teacher and nursing expert stakeholder collaboration); didactic materials to support content implementation in the nursing *curriculum*; student evaluation tools and instruments; three students included the topic of substance use in their end-of-course monograph project; some students in the clinical practice of the elderly did a in-service training session on this subject.
Conclusions
The implementation of this guideline in the CLE curriculum has empowered students to become more confident and competent to care for substance abusers, namely regarding screening, the assessment process and intervention in substance use disorders. It also

meets the expectations of the stakeholders involved, empowering their performance based on scientific evidence.

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Keywords
Substance-Related Disorders, Evidence-Based Nursing, Nursing Education.

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An overview of vitamin B in food supplements

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BMC Health Services Research 2018, **18(Suppl 2):**P148

Background
Over last decade, sales of vitamins have had a significant increase worldwide. Besides the growing of self-diagnosis and self-medication by consumers, these products are also often consumed without any control or medical supervision, during extended periods of time, due to the general misperception that natural indicates harmless. Despite its beneficial effects, excess intake of vitamin is not innocuous. Although vitamin B6 is a co-factor for several enzymatic reactions, involved in numerous metabolic and physiological processes, overdoses may produce neurological disturbances, including sensory neuropathy.
Objective
The aim of this study was to check food supplements (FS) labels in terms of vitamin B (vitB) dosages, compared to the recommended daily allowances (RDA) defined by European Union Directive for these vitamins. A total of 80 FS sold in Portuguese pharmacies, supermarkets or health shops and on the internet were examined for indicated daily intake and dosage of vitamin B1, B2, B3, B5, B6, B7 and B12. Selection criteria included: oral solid pharmaceutical forms for adults, containing vitB in its composition, as stated in the label, regardless of the purpose of the FS.
Results
Results showed FS label doses above RDA: 70.0% (vitB1), 75.0% (vitB2), 67.4% (vitB3), 51.1%, (vitB5), 74.3% (vit B6), 45.7% (vitB7) and 60.3% (vit B12). Thirty-three (33) FS contained all the studied VitB, six of which with all vitamins above RDA. Four (4) FS (5.7%) indicated a daily dose of vitB6 ≥ the tolerable upper intake level defined by EFSA (UL=25 mg/day).
Conclusions
The majority of FS presented vitB far above defined RDA. Although reports of toxic events due to vitamins are scarce, it is crucial that the daily doses present in FS are reviewed ensuring for the safety of these products. Authors also consider that FS should be under the same quality control of pharmaceuticals, safeguarding the health of the consumers.
Keywords
Vitamin B, Food Supplements, Recommended Daily Allowances.

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Is the International Physical Activity Questionnaire (IPAQ-sf) valid to assess physical activity in patients with COPD? Comparison with accelerometer data

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BMC Health Services Research 2018, **18(Suppl 2):**P149

Background
The International Physical Activity Questionnaire short form (IPAQ-sf) is primarily designed for physical activity (PA) surveillance, presenting good psychometric properties in people with an age range of 15-69 years. However, studies conducted in older people have shown conflicting results, suggesting that it may not be adequate for this population. Therefore, the use of the IPAQ-sf for the assessment of PA in patients with chronic conditions such as chronic obstructive pulmonary disease (COPD), in which patients are frequently older, remains unclear.
Objective
To preliminary evaluate the validity and test-retest reliability of the IPAQ-sf in patients with COPD.
Methods
This exploratory cross-sectional study included 10 patients with COPD (71.6 ± 7.3 years old, 7 males, FEV1=77.2 ± 20.7% predicted). Participants completed the IPAQ-sf on two occasions separated by 1 week and wore an accelerometer (Actigraph GT3X+) for 7 consecutive days. The following statistical analyses were conducted: 1) Pearson's correlation coefficient (r) to assess correlations between the results obtained from the IPAQ-sf (PA in METs-min/week; sitting time in min/day) and the accelerometer (PA: total moderate-to-vigorous physical activity [MVPA] per week and recommended MVPA per week – i.e., MVPA conducted in bouts of at least 10-min as internationally recommended [1]; sedentary time in min/day); 2) percentage of agreement (%agreement) and Cohen's kappa to assess the agreement between categorical scores obtained from the two measures (*i.e.*, 'sufficiently' and 'insufficiently' active patients); 3) Intraclass Correlation Coefficient (ICC2,1) and 95% limits of agreement (LoA) to assess test-retest reliability and agreement.
Results
Significant correlations were found between IPAQ-sf METs-min/week and total MVPA (r=0.729, p=0.017), but not between METs-min/week and recommended MVPA (r=0.346, p=0.327) or between IPAQ-sf sitting time and accelerometer-based sedentary time (r=-0.383, p=0.308). Agreement between the IPAQ-sf and accelerometer-based data, in identifying 'sufficiently' and 'insufficiently' active patients, was low (total MVPA: kappa=-0.538, %agreement=20%; recommended MVPA: kappa=-0.087, %agreement=50%). Test-retest reliability of the IPAQ-sf was poor to moderate (PA: ICC2,1=0.439 [-0.267→0.838]; sedentary time: ICC2,1=0.511 [-0.178→0.864]) and the agreement was low (PA: LoA: -10361→4548 METs-min/week; sedentary time: LoA: -194→148 min/day).
Conclusions
Findings suggest that the IPAQ-sf has limited validity and reliability in the assessment of PA in patients with COPD. Further research with a larger sample is needed to support these findings.

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