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Assessment tools for the measurement of the self-efficacy of drug users: protocol for a systematic review

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ABSTRACT

Introduction The abuse of alcohol and other drugs is a worldwide problem, the treatment of which poses a challenge to healthcare workers.

Objective This study presents a proposal for a systematic review to analyse the psychometric properties of assessment tools developed to measure the self-efficacy of drug users with regard to resisting the urge to take drugs in high-risk situations.

Methods and Analysis The guiding question was based on PICOS (Population Intervention Comparator Outcome Setting), and the report of the methods of review protocol was written in accordance with the Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P). Searches will be performed in the PsycINFO, Cochrane, Pubmed, Web of Science, SCOPUS and CINAHL databases, followed by the use of the 'snowball' strategy. The inclusion criteria for the articles will be (1) assessment tool validation studies; (2) assessment tools developed to measure self-efficacy; (3) quantitative measures; (4) measures designed for use on adults; (5) data from self-reports of the participants; (6) studies involving a description of psychometric properties of the measures; and (7) studies that explain how the level of self-efficacy is scored. The search, selection and analysis will be performed by two independent reviewers. In cases of a divergence of opinion, a third reviewer will be consulted. The COSMIN checklist will be used for the appraisal of the methodological quality of the assessment tools and the certainty of the evidence in the articles (risk of bias) will be analysed using the GRADE (Grading of Recommendations Assessment, Development and Evaluation) approach.

Ethics and dissemination This protocol does not require ethical approval. However, this protocol is part of the thesis entitled *Drug-Taking Confidence Questionnaire* for use in Brazil, presented for obtaining a doctorate in neuropsychiatry and behavioural sciences from the Federal University of Pernambuco, and has received approval from the human research ethics committee of the Federal University of Pernambuco (reference number: 1.179.162). The results will be disseminated to clinicians and researchers through peer-reviewed publications and conferences.

PROSPERO registration number CRD42017068555.

Strengths and limitations of this study

- ► The article will recommend a gold standard among existing assessment tools for the measurement of self-efficacy related to resisting the urge to take drugs in high-risk situations.
- ► The study will involve the use of quantitative methods for appraising the strength of the evidence encountered.
- ► This will be the first review on assessment tools for measuring self-efficacy related to resisting the urge to take drugs in high-risk situations.
- ► The study will be developed at a single research centre.
- ► Grey literature will not be included.

BACKGROUND

Dependence on alcohol and other drugs is characterised by behaviour aimed at maintaining use as well as the loss of pleasure in habitual activities. It is a maladaptive way to cope with stressful situations and is considered a serious public health problem throughout the world.[1–3] Cognitive and behavioural alterations are among the harmful effects of substance abuse,[4–6] affecting personal, familial and social relations as well as compromising an individual's self-efficacy with regard to resisting the urge to take drugs in high-risk situations.[7]

Bandura (1977)[8] conceives self-efficacy as a belief or personal confidence in one's ability to perform a specific action for one's own benefit. Thus, self-efficacy is a mental process that guides behaviour and exerts an influence on the establishment of goals, one's motivation level, perseverance in the presence of setbacks and resilience in the face of adversity.[8–11]

Different subtypes of self-efficacy are described in the literature[12] and several assessment tools have been developed to measure this construct among individuals who are

dependent on alcohol[13–16] and/or other drugs,[17–21] and in situations of combined use.[22–25]

Self-efficacy with regard to resisting the urge to take drugs in high-risk situations is considered a strong predictor of abstinence or a reduction in drug use and is related to the results of treatment.[26–28] Considering the importance of this subtype, the number of assessment tools developed to measure this phenomenon and the lack of recommendations regarding the most robust assessment tools, there is a need to evaluate the psychometric properties of available measures and recommend an assessment tool that can serve as the gold standard.

The proposed systematic review will be able to assist healthcare professionals in the choice of the most adequate assessment tools for their clinical practice with the aim of monitoring levels of self-efficacy to resist the urge to take drugs in high-risk situations.[29] The guiding question of the study will be 'Do assessment tools designed to measure self-efficacy with regard to resisting the urge to take drugs in high-risk situations have adequate psychometric properties?'.

Thus, the aim of this protocol is to propose a systematic review to analyse the psychometric properties of assessment tools developed to measure the self-efficacy of drug users to resist the urge to consume these substances in high-risk situations.

METHOD/DESIGN

Design and registration of the study

This proposal for a systematic review is registered with the International Prospective Registry of Systematic Reviews (PROSPERO) in CRD 42017068555 (https://www.crd.york.ac.uk/PROSPERO/register_new_review.asp). The report of the methods of review protocol was written in accordance with the Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P).[30] The report of the methods of the systematic review article will follow the guidelines of PRISMA.[31]

Inclusion of articles

All methodological articles developed for the validation of assessment tools with a quantitative approach for adult drug users (≥18 years of age) based on self-reported data and that describe psychometric properties, the clinical usefulness of which consists of the measurement of self-efficacy in users of alcohol and/or other drugs with regard to resisting the urge to use such substances in high-risk situations, will be included. No restrictions will be imposed with regard to language or publication date. Review studies will be excluded.

Search strategy

The guiding question was based on the PICOS strategy[32] (Population Intervention Comparator Outcome Setting). Electronic searches will be conducted in the PsycINFO, Cochrane, Pubmed, Web of Science, SCOPUS and CINAHL databases. After the retrieval of articles from the databases, the snowball strategy will be employed.[33] Grey literature will not be considered.

To reduce the risk of bias in this step, two independent reviewers will perform the searches and preselect articles based on an analysis of the titles and abstracts for potentially eligible articles and assessment tools. Preselected articles will be submitted to full-text analysis for the determination of the studies that will make up the final sample. The level of agreement between the two reviewers will be calculated. In cases of divergences of opinion, the reviewers will discuss the article in question until reaching a consensus. A third reviewer will be consulted, if necessary.

The entire process will be stored in a data bank to ensure access to the records of the initial search strategy, the snowball strategy as well as the excluded articles and the reasons for exclusion. Duplicate articles will only be counted once. The following MeSH terms and combinations will be employed in the searches: 'self-efficacy', 'coping', 'validation studies', 'drug users', 'scale', 'instrument', 'questionnaire' and 'outcome assessment'. Adjustments to the keywords may be made during the execution of the systematic review.

Tracking, data extraction and content comparison analysis

The data extracted from the articles selected will be organised on a chart specifically designed for the systematic review, which will contain the following:

- General characteristics of the study: Authors, date of publication, country of origin, objective, sample size and main outcomes.
- Description of assessment tools: Name and acronym; objective; domains, dimensions or subscales; description of high-risk situations; number of items; method of collecting self-reported data; description of scoring and classification of levels of self-efficacy; administration method; cut-off points; and psychometric properties validated by the authors.

When necessary, the author of the articles and assessment tools will be contacted to obtain further information.

A flowchart will be created illustrating the selection and analysis methods. Relevant data from all articles will be summarised in tables and/or charts. Thus, the systematic review will offer a general overview of all available instruments for measuring the self-efficacy of drug users for resisting the urge to take these substances in high-risk situations.

Appraisal of methodological quality of selected articles and measures

To evaluate the risk of bias, the articles included in the final sample will be analysed with regard to methodological quality and the strength or certainty of the evidence offered using the GRADE approach (Grading of Recommendations Assessment, Development and Evaluation).[34]

The appraisal of the methodological quality of the assessment tools will follow the COSMIN

(COnsensus-based Standards for the selection of health Measurement INstruments) criteria, using only the A-H boxes on the checklist to rate the quality of each property.[35] The checklists for interpretability and generalisation will not be used because these lists are only related to data extraction.

The 4-point COSMIN scoring system will be used to classify the assessment tools as excellent (adequate methodological quality), good (missing information, but quality could be considered fair) or poor (inadequate quality). Assessment tools with varied results (some points considered excellent and others considered poor) will be classified based on the lower scores.[35–39] Two reviewers will analyse the risk of bias and classify the assessment tools in an independent manner.

Evaluation of clinical usefulness of assessment tools

The analysis of clinical usefulness will follow the criteria proposed by Tyson and Brown (2014)[40] related to interpretability and viability, with the aim of quantifying the practical aspects of the measures based on factors that can influence the decision-making process of health professionals in clinical practice.[41] These criteria are listed below:

- Total time required for the administration, analysis and interpretation of the data obtained using the measure: <10 min (three points); 10–30 min (two points); 30–60 min (one point) and >1 hour (zero points).
- Cost of assessment tool: < £100 (3 points); £100–500 (two points); £500–1000 (one point); £1000 (zero points).
- Need for specialised equipment and training for use: none (two points); yes, but simple and clinically viable (one point); yes and not clinically viable/unknown (zero points.
- Portability of the assessment tool (can it be taken to the patient?): yes, easily (fits in pocket) (two points); yes (fits in a carrying case) (one point); no or very difficult (zero points).
- Accessibility of the tool (are detailed instructions for use available?): yes (complete operating procedure/instruction manual can be obtained in article or site) (two points); no, but the operation can be performed simply based on the description in the article (one point); no available instructions for use (zero points).

Data synthesis

The assessment tools will be described in tables and/or charts highlighting the general characteristics, application contexts, applicability and information on the evaluation methods of the measures. At the end of the analyses, assessment tools with the following qualities will be considered adequate for measuring self-efficacy with regard to resisting the urge to consume drugs in high-risk situations:

- Those with a methodology considered 'good' or 'excellent' based on the COSMIN checklist;[35–39]
- Those with a score of 10 or more points on the clinical usefulness evaluation scale proposed by Tyson and Brown (2014).[40]

DISCUSSION

Special care will be taken regarding the storage and adequate use of the data produced in this study. Self-efficacy is considered an important component of the treatment process for drug users and many assessment tools have been developed to measure this phenomenon, which justifies the need to identify which of these assessment tools could be considered the gold standard for this purpose.

The proposed study will present the psychometric data of assessment tools developed to measure self-efficacy with regard to resisting the urge to take drugs in high-risk situations in order to identify a gold standard for the analysis of this construct.

Therefore, the proposed review will investigate the psychometric properties and clinical usefulness of assessment tools developed to measure the self-efficacy of drug users with regard to resisting the urge to take drugs in high-risk situations. The aim is to recommend a gold standard among the different assessment tools used to measure self-efficacy in this context and offer a discussion on the strong points and limitations of the measures through an analysis of the general characteristics, psychometric properties and clinical usefulness of the measures as well as the methodological quality of the studies.

The review intends to be clear and specific with regard to methodological rigour, employing a replicable systematic approach for the search strategy, screening, evaluation and data extraction of the studies retrieved from the available databases. Validated instruments for measuring given phenomena, such as self-efficacy, offer valid and reliable results that can guide health professionals with regard to interventions for drug users and assist in the adoption of adequate strategies for the promotion of self-efficacy and the minimisation of the harm caused by substance abuse.

Contributors All authors made substantial contributions to the concept and study design and participated in the drafting of the submission request. SCV and TPSS conceived the study, developed the inclusion criteria, performed the search and selection of the studies, and wrote the present systematic review protocol article. ISF, EBS, SLS and MDCL guided all phases of this systematic review protocol article and performed a critical review of the manuscript. All authors read and approved the final version.

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