Research Article

Searching assessment models in mental health: between risk factors and protective factors

*[1]Geilsa Soraia Cavalcanti Valente, [2]Elaine Antunes Cortez and [3]Carlos Alberto da Cruz Sequeira

[1]Department of Nursing, Administration of Nursing School Aurora Afonso Costa - Federal University Fluminense - Niterói (RJ) - Brazil
[2]Department of Maternal and Child and Psychiatry, Nursing School Aurora Afonso Costa - Federal Fluminense University - Niterói (RJ) - Brazil
[3]School of Nursing, Research unit -CINTESIS - Faculty of Medicine, University of Porto, Portugal

*Corresponding Author E-mail: geilsavalente@yahoo.com.br, nanicortez@hotmail.com, carlossequeira@gmail.com

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Abstract

Objectives: To identify existing evaluation models of risk factors and protective factors related to mental health; provide an overview of assessment and monitoring models of mental health contemplating the negative and positive aspects. Method: literature review, held in databases: Medline, Lilacs and Pubmed, using the descriptors: Mental Health, Psychometrics, Risk factors and Psychological adaptation, in order to answer the following question << What instruments are there published on the assessment of mental health, in terms of risk factors and protective factors? >> Results: One hundred and nineteen (119) potential studies were selected. Sixty (63) instruments were extracted that met the inclusion criteria, leaving Twenty six (26) instruments available online for free access. Conclusion: The objectives of this extensive survey in making descriptive and evaluation of the characteristics of the assessment instruments were achieved, since many validated studies can be found in the bibliography of guides and descriptions of the instruments mentioned in this article. It is noted that it was not always possible to obtain the original instrument available, which composes a limitation to the study. Thus, caution is recommended when comparing the individual characteristics of the instruments and it is recommended that a specific instrument is designed to assess the mental health of various human groups.

Keywords: Mental Health; Risk factors; Cost of illness; Violence; Psychometrics; Health vulnerability

INTRODUCTION

Scholars from different cultures define mental health differently, and relate that the concepts of mental health include, among other things, welfare subjective to perceived self-efficacy, autonomy, competence and self-realization of the intellectual and emotional potential of the person. Thus, in cross-cultural perspective, it is almost impossible to define mental health in a complete way. However, in general, it is agreed that mental health is more than the absence of mental disorders.

It is note worthy that according to the Law No. 8080, Article 2 (BRAZIL, 1990), health is a fundamental human right. In Article 3 of the same law, it is emphasized that health has constraints and determinants, such as work and leisure, and that people and the community should be ensured of conditions of physical, mental and social well-being. In Article 5 it is emphasized that the objectives of the Unified Health System are (UHS), among others, to identify and disclose the conditions and determinants of health, to formulate policies to promote health and to assist people through health promotion actions.

The WHO says there is no "official" definition of mental health since the cultural, subjective judgments, and related

competitors theories affect how the 'mental health' is defined. Thus, mental health is a term used to describe the quality level of cognitive or emotional life. So, mental health may include an individual's ability to enjoy life and seek a balance between the activities and efforts to achieve psychological resilience (SESA, 2011).

Since the seventies, a new period emerges and the promotion of mental health emerges as a new conception of health sustained by the idea of the complete look and not in blocks, understanding that mental, physical and social health are threads of life, closely intertwined and deeply interdependent. As it grows the understanding of this relationship, it becomes increasingly clear that mental health is essential to overall well-being of individuals and societies.

Defining that a person has a good mental health is complex, since the singularity and subjectivity directly influence this assessment. Thus, it is understood that it is necessary to develop an instrument to assess not only the negative side, which corresponds to the risk factors for mental health, but also an instrument that can measure the protective factors of individuals, the positive side, considering that life is a dynamic process in which the sometimes the person is more prone to risk, sometimes it is more protected from this. When referring to the psychosocial risk factors for mental health, Martins (2004) evidences that psychological variables are related to the social environment. Some studies show that the individual's behaviors and responses to the environment seem to relate to the risk of disease, but are embedded in a social context.

It is noteworthy that the term psychosocial has been used to refer to a wide variety of psychological and social factors that relate to health and mental illness (Binik, 1985). The author considers that there is no more appropriate term to describe the characteristics of the person such as personality traits, defense mechanisms, emotional and cognitive states, and socio-environmental factors such as the stress-inducing situations.

According to psychoanalyst Erick From (Hermeto and Martins, 2012) the ability to find meaning in life is characteristic of the human species and is what determines whether this will be a journey of joy and fulfillment or dissatisfaction and conflict. To From, pain is inherent in life, but one can make existence bearable, giving it meaning by seeking and building a genuine self. Life is full of emotional frustrations, because man lives in a state of conflict and is always trying to find the balance between its individual nature and the need to relate. For the same author, nothing is harder to bear than the feeling of not identifying with the group.

Thus, it is clear, according to From, that life is full of anguish and impotence, due to the separation between the individual and the nature and others, but these feelings can be overcome if there is an effort to discover its own ideas and skills, acceptance of personal uniqueness and development of the capacity to love. Moreover, knowing yourself is one of the key commands to bring strength and happiness to men, and understand that life has its own internal dynamism. Through this context, it is understood that life really is a dynamic process and that monitoring is something important so that one can think of nursing interventions and contribute to this process, to have good mental health. (Hermeto and Martins, 2012)

In the psychological literature, especially in the area of stress, it appears that some investigations on the influence of psychosocial factors on health and mental illness and the mechanisms that can lead these variables to contribute to the development and maintenance of damage have been done. Some authors suggest that psychological factors confer risk for maintaining mental health through behavior and emotion. However, despite emphasizing the importance of psychosocial dimensions of the person in its relationship to health and mental illness, one cannot ignore its biological aspect, since the susceptibility of the person, either genetic or acquired, is considered extremely important for mental health. This happens because, according to Martins (2004), psychosocial factors may interact with the biological dimension and contribute to the development of inappropriate behaviors.

In this sense, it is considered that, from the coexistence between the individual and the environment, there are risk factors for stress, caused by individual's mental vulnerability, that can cause crisis and trigger mental illness; and there are protective factors, which due to its mental health, lead the individual to emotional balance, resulting in positive mental health. This reasoning led to the development of a comprehensive model explained below:
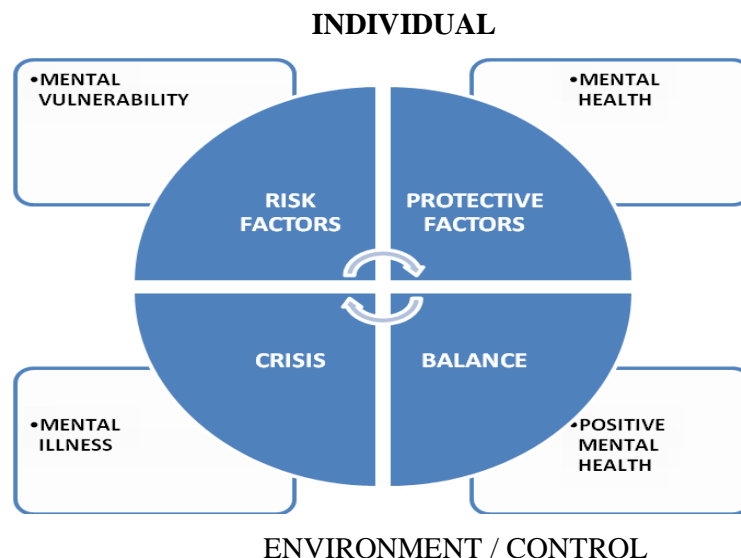
COMPREHENSIVE MODEL

INDIVIDUAL

Figure 1. Own elaboration - comprehensive model

It is note worthy that this study is the result of the first stage of a post-doctoral training in mental health, held at the Nursing School of Porto - Portugal, in partnership with the Federal University Fluminense - Brazil, sponsored by the National Council for Research and Technological Development - CNPq, in which researchers intend to develop a new instrument for assessing mental health, to assess since the negative conception - the risk factors, to the positive - protective factors for mental health. Thus, a survey of validated psychometric instruments on such factors was performed in the literature, to further subsidize the desired elaboration.

Vasco Uribe et al. (1994), in an approach to the influence of social factors on mental health reported that mental health is no longer the absence of disease, mental and psychological problems, but the perception and awareness of them, and personal and/or collective ability to resolve them, change them, and to intervene on them. In this sense, the development of this research aims to: Identify existing models of assessment of risk factors and protective factors related to mental health; provide an overview of models of assessment and monitoring of mental health, including the negative and positive aspects.

METHODOLOGY

Based on the developed reflections, by the obvious need to develop a model for assessing and monitoring the mental health of many human groups, and based on the authors surveyed, it was held a pursuit of knowledge about existing models. Thus, it was carried out a literature review, which according to Broome (2000), involves summarizing previous studies on a given topic, making possible a synthesis of existing knowledge, favoring a more organized analysis of the subject, resulting in understanding more about it.

This method includes analysis of relevant research that support decision making and improving the practical as consequence of this process, which enables the synthesis of knowledge of a particular subject and highlight possible gaps of knowledge about this theme, which still will require further studies. And yet it is important to note that from the literature review health professionals can obtain relevant data from a subject studied in various places and times, leaving them updated and changes can be provided in clinical practice as a result of research. (Mendes et al., 2008).

Through literature review it is possible to search for studies that address on the proposed subject, which is evaluation assessment for mental health, and thus find the number of studies that lecture on the topic in question. The review was divided into six steps: The first step was to identify the topic and develop the guiding question. The theme was made by conducting post-doctoral training and the preparation of a model that considered assessment of positive to negative mental health, understanding that life is a process of good and bad events and experiences. Thus, the elaborated question of research is: What are the existing models of mental health assessment related to risk and protective factors?

The second step was to establish the criteria for inclusion: studies published in the last five years in the period 2009 to 2013, texts in Portuguese, Spanish and English. Exclusion criteria were those that despite selected in the inclusion criteria after reading and analyzing were unsuited to the construction of the assessment model to be developed.

It was also established descriptors to search in LILACS, MEDLINE and PubMed: Mental Health, Psychometrics, Risk factors and Psychological adaptation. Descriptors selected for research in Medline and LILACS were searched in DeCS Data Base - Health Sciences Descriptors through http://decs.bvs.br/ link.

It was also used as an aid in conducting this study, the PICO strategy, where P means the patient or problem, which can be a single patient, a group of patients with a particular condition or a health problem, which in this study are risk factors and psychological adaptation. I would be the proposed intervention of interest, it includes an exhibition, which can be therapeutic, preventive, diagnostic, prognostic, administrative or related to economic matters, and in this study are the assessment models. C is control or comparison, but this study will not use this instrument. O is the outcome, meaning the expected result, which in this study was evaluation models = / psychometrics. (Noble et al., 2003, p. 445).

The third step was the selection of scientific papers to be used, according to their titles, which approached or not on the topic, the abstract, which sometimes did not respond to the objectives, and from the inclusion and exclusion criteria mentioned above, obtaining one hundred and nineteen (119) potential studies.

In the fourth step we carried out a review with a critical analysis of hundred and nineteen (119) selected studies, related to negative factors, the total of one in LILACS, sixteen (16) and ten (10) in PUBMED MEDLINE = twenty seven (27), of these, three (03) repeated. On the positive factors, we obtained a total of zero (00) in LILACS, ten (10) and seven (07) in PUBMED MEDLINE and one repeated, remaining sixteen (16). Instruments that measure both factors simultaneously are in total zero (00) in LILACS, six (06) in MEDLINE and two (02) in PubMed, with two (02) repeated = six (06), adding fifty two (52) instruments, remaining 46 to contribute to this work, and of these, only twenty six (26) are available online.

The titles and abstracts were carefully analyzed to identify items that could contain descriptive information on assessment tools of risk factors. It was observed that most of the articles did not report use of specific instruments in the abstract, and in result, the reading was performed in full, in order to select, according to the inclusion criteria. It was also searched on the references to the relevant literature in order to trace original descriptions according to the authors of the instruments adopted.

All instruments identified that included evaluation of risk factors were considered. Based on the characteristics of the instruments or their descriptions, individual instruments were grouped according to their methodological approach as questionnaires or observation instruments (including instruments that operate like questionnaires as part of a broader process of evaluation). Instruments designed only for use in disease and as/or specific situations, which are derived from instruments mother were excluded. Due to the large number of questionnaires only, it was also decided to exclude questionnaires elaborated to assess one or two factors.

For each of the remaining questionnaires, it was identified the main objective and measures, based on descriptions of the authors (and original instruments whenever possible). Versions, languages available (including translations) and website addresses were listed up. It was also noted national/international organizations recognized/approaches. Other notes about the main characteristics of the instruments (original purpose, etc.) were reported when considered useful. For objective instruments, it was also considered type and methodology.

In the fifth step the results were interpreted and discussed, and the in sixth and final stage, a review and synthesis of highlighted studies was performed by selecting the psychometric instruments used by the authors of each study and from them, in order to meet the objectives this study, the following thematic units emerged: 1) Evaluation Models of Mental Health in the perspective of risk factors; 2) Evaluation Models of Mental Health in the perspective of protective factors, and 3) Evaluation Models in two perspectives.

RESULTS

Initially, a total of sixty three (63) instruments (questionnaires) were identified, excluding those that were repeated, forty six (46) remained, and twenty six (26) were available online. The characteristics of instruments are individually summarized in Tables 1 and 2 (accompanied by quotes from instruments descriptions/guides), and the website. It is noteworthy that it was considered as general factors to be evaluated under the selected instruments that are used to diagnose stress the following points: a) indicators of stress (stress-related complaints; health status of individuals; life satisfaction); b) sources of stress (stress-inducing factors); c) factors of vulnerability or resistance (cognitive assessment standard of individuals, copping standard of individuals, quality of social support). In this sense, each instrument was carefully described in order to understand if the criteria were present.

To facilitate the description of each single instrument, new searches were then conducted on Google, Google Scholar and PubMed (inserting names of instruments/acronyms as search terms). After reading each instrument or specifications that the authors presented, the following methods and diagnostic tools were selected: interviews, questionnaires, observation techniques (measure instruments of physiological indicators, medical symptoms, physical and psychological health, Burn out, satisfaction with life) and document analysis and analysis techniques for

identification of stressors.

Of the twenty six (26) selected and available instruments, ten (10) are related to risk factors for stress seven (07) in MEDLINE, one (01) in PUBMED and two (02) in LILACS), twelve (12) related to protective factors (nine (09) in MEDLINE and three (03) in PUBMED) and five (05) ambiguous (two (02) in MEDLINE and three (03) in PUBMED), meaning they attend to the two aspects of factors. Among the surveyed instruments, that excelled in number of uses by the authors were: GHQ 12 (seven applications); RAND 36 (five), SF 36 (four) and IES R (three). This review, revealed the surprising fact that no methodology created in Spain was found, given that these, according to some authors, begin to assume as important methods of prevention of psychosocial risks in the European Union was not found. So, the surveyed models are presented as follows:

Table 1. Evaluation Models of Mental Health in the perspective of risk factors; Summary of questionnaires with references to a guide/description [and year of publication]

MEDLINE	
Tool 1: GHQ- 12 (GENERAL HEALTH QUESTIONNAIRE 12) Goldberg DP, Blackwell B: Psychiatric illness in general practice. A detailed study using a new method of case identification. *Br Med J* 1970, **1:**439-443.	
Objective(s)	To assess the mental health broadly, especially anguish.
Measure(s)	The questionnaire was originally developed as an instrument of 60 items, but today, a range of shortened versions of the questionnaire, including GHQ-30, GHQ- 28, GHQ -20, and the GHQ-12 is available. The scale asks whether the respondent has experienced a particular symptom or behavior recently. Each item is rated on a four point scale (less than usual, no more than usual, a little more than usual, or much more than usual).
Version	When using GHQ -12, it gives a total score of 36 or 12 based on the selected scoring methods. The most common scoring methods are bi-modal (0-0-1-1) and Likert scoring styles (0-1-2-3). The GHQ -12 is a simple search, easy to complete, and its application as a screening tool is well documented. There is evidence that the GHQ - 12 is a consistent and reliable tool when used in the general population samples.
Language(s)	Portuguese, Spanish, English, Persian, German, Indian, Australian, Chinese, Dutch
Available	http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=5035412&fileId=S0033291700021644
MEDLINE -	
Tool 2: GENERAL HEALTH QUESTIONNAIRE (Goldberg Hillier e 1979) Goldberg, D., & Hillier, V. A scaled version of the general health questionnaire. *Psychological Medicine,* 1979;*9:*139-145.	
Objective(s)	General Health Questionnaire is a measure of self-response universally used to assess nonpsychotic psychiatric disorders.
Measure(s)	The GHQ was designed to identify whether the inability to perform activities that are usual in a healthy person, or the emergence of new stressful phenomena. Not designed to detect stable traits, but rather breaks of the usual functioning. It is not a general health questionnaire, but an appropriate questionnaire to evaluate the mental health or psychological welfare.
Version	The main version includes 60 items, being popular versions with 30, 20, 12 and 28 items. The metric properties of the questionnaire are internationally well established.
Language(s)	English, Portuguese
Available	http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=5035412&fileId=S0033291700021644
MEDLINE	
Tool 3: CHECKLIST PARANOIA (Freeman et al, 2005).	
Objective(s)	To assess mental health regarding the paranoia.
Measure(s)	Frequency, degree of conviction and distress
Version	20 items
Language(s)	English
Available	http://www.nelft.nhs.uk/_documentbank/Paranoia_paper_2005.pdf
MEDLINE	
Tool 4: SYMPTOM CHECKLIST -90,	
Objective(s)	It is a semi-structured instrument for assessment of psychiatric symptoms and syndromes in F0-F6 categories of the ICD-10 clinical system.
Measure(s)	It allows the rapid determination of a preliminary diagnosis of a brief initial interview.
Version	CID 10
Language(s)	English
Available	http://www.mainehealth.org/mh_body.cfm?id=3018

MEDLINE	
Tool 5: STRENGTHS AND DIFFICULTIES QUESTIONNAIRE (SDQ), (Fleitlich, Cortázar & Goodman, 2000; Goodman, 1997).	
Objective(s)	Designed to be a short and simple questionnaire, clinically useful and well accepted by respondents, for tracking mental health problems of children and adolescents from 04 to 16 years.
Measure(s)	It comprises five subscales, each with five statements, namely: emotional symptoms, conduct problems, hyperactivity, peer relationship problems and prosocial behavior
Version	25 items (10 items on capabilities, 14 items about difficulties and one neutral item).
Language(s)	Available in more than 40 languages, including Portuguese.
Available	http://www.sdqinfo.com
MEDLINE	
Tool 06: ESCALA DE MOKKEN. APPRAISAL OF SELF-CARE AGENCY SCALE (ASA-A) Mokken RJ. A theory and procedure of scale analysis. The hague. Mouton: De Gruyter; 1971.	
Objective(s)	I t captures multiple domains of life; incorporatess objective and subjective indicators of inclusion; has psychometric properties, including responsiveness; facilitates benchmark comparisons with normative population and mental health samples [including common mental disorder (CMD) and groups of serious mental illness.
Measure(s)	Availability, willing and able to modify the life enhancing it; it also evaluates nutritional, hygiene, and weight care. Items still measure if individuals seek to make adjustments to improve their health and if they seek support network in case of difficulties with self-care procedures.
Version	24 items covering subjective and objective self-care.
Language(s)	English, Spanish, Portuguese, Chinese, Mexican.
Available	https://www.google.com.br/search?q=Escala+de+Mokken.&tbm=isch&tbo=u&source=univ&sa=X&ei=Spt3U8qONu avsQTqz4D4Bw&ved=0CEEQsAQ&biw=1366&bih=667
MEDLINE	
Tool 07: PERCEIVED STRESS SCALE (PSS). Stress Perceived Scale (PSS; Cohen, Kamarak, & Mermelstein, 1983).	
Objective(s)	To assess self-perceived stress, anxiety.
Measure(s)	Self-perception of stress.
Version	There are three versions of the PSS: one with 4, one with 10 and one with 14 items.
Language(s)	English, Spanish, Portuguese, Mexican.
Available	http://podcast.uctv.tv/webdocuments/COHEN-PERCEIVED-STRESS-Scale.pdf http://www.psy.cmu.edu/~scohen/globalmeas83.pdf
LILACS	
Tool 08: PICTORIAL CHILD BEHAVIOR CHECKLIST (P+CBCL) Achenbach T. M. (1991). *Manual for the Child Behavior Checklist/4-18 and 1991 profile.*	
Objective(s)	It assesses social competence and behavior problems in individuals from 4 to 18 years, based on information provided by parents.
Measure(s)	Anxiety/Depression, Isolation /Depression, Somatic Complaints, Social Problems, Thought Problems, Attention Problems, Rule Breaking Behavior /delinquent and Aggressive Behavior, the sum of which produces the Total Behavior Problems Scale.
Version	AP + CBCL contains 120 items on behavioral and emotional problems that are scored on a 3-point scale (0 = not true, 1 = somewhat or sometimes true, 2 = very true or often true). Factor analysis of this assessment tool produces eight scales of problems, of which three (anxious / depression, withdrawn/depression, and somatic complaints) of load for internalization, and two (rule breaking and aggressive behavior) of load to the scale of outsourcing. The other three scales of problems (social problems, thought problems, and attention problems) do not result differentially in scale.
Language(s)	Spanish, Portuguese, Mexican and 60 other languages.
Available	http://www.icpsr.umich.edu/icpsrweb/PHDCN/descriptions/cbcl-w1-w2-w3.jsp

PUBMED	
Tool 09: COPING ACOMODATIVA (ICQ) Evers AVM, Kraaimat, FW, Van Lankveld, W & Bijlsma, JWJ (1998). The Ilness Cognition Questionaire: ICQ. Gedragstherapie, 31, 205-220.	
Objective(s)	The ICQ was developed to measure three cognitions of generic illness that reflect different ways to reassess the inherently aversive character of a chronic condition, "helplessness" as a way of emphasizing the aversive meaning of the disease, "acceptance" as a way to decrease the aversive, and "perceived benefits" as a way to add a positive meaning to the disease.
Measure(s)	It indicates the maladaptive function of helplessness and the adaptive function for acceptance and perceived benefits for physical and psychological health of long-term patients with a chronic disease. The three-factor structure and the clinical utility of the subscales were supported in different groups of patients.
Version	Subscale of the Dutch version of ICQ: "acceptance" (eg, "I learned to accept my disability disease"). The questionnaire consists of 18 ICQ items and three subscales: "acceptance," "helplessness" and "sickness benefits" (6 items, each subscale). The items were scored on a 4-point scale, with a range of 1 to 4, with a maximum score of 24. Dutch version of ICQ is considered a reliable and valid instrument.
Language(s)	The use of the ICQ is free for healthcare professionals and researchers, and the questionnaire is available in Dutch, English, Hebrew and German [in articles in .pdf format]
Available	http://www.floriskraaimaat.nl/tests_icq.html
PUBMED	
Tool 10- PSYCHOSOMATIC RESEARCH (DCPR) 1995 DCPR- Fava GA, Freyberger HJ, Bech P, et al. Diagnostic criteria for use in psychosomatic research. Psychother Psychosom 1995; 63: 1.	
Objective(s)	DCPR is composed of 12 psychosocial syndromes involving prognosis and therapeutic value in the medical illness context. The DCPR is more sensitive than the DSM-IV for identifying subliminal psychological distress and characterizing physiological response of the patients to medical illness.
Measure(s)	The diagnostic criteria for Psychosomatic Research (DCPR) were introduced in 1995 by an international group of researchers to expand the traditional areas of disease model. The DCPR is a set of 12 "psychosomatic syndromes " that provide operational tools for the psychosocial variables with prognostic and therapeutic implications in clinical environments. Eight syndromes worry the main manifestations of abnormal illness behavior: Somatization, hypochondriacal fears and beliefs, and denial.'s disease. Other four syndromes (alexithymia, irritable mood and demoralization) refer to the domain of psychological factors affecting medical conditions.
Version	12 items
Language(s)	English
Available	https://www.karger.com/ProdukteDB/katalogteile/isbn3_8055/_98/_53/suppmat/p109-Appendix-A.pdf

Table 2. Evaluation Models of Mental Health in the perspective of protective factors; Summary of questionnaires with references to a guide/description [and year of publication]

MEDLINE	
Tool 1: QUESTIONÁRIOS DE AUTO-RELATO SOBRE A QUALIDADE DE VIDA (SF-36), or SELF-REPORT ON QUALITY OF LIFE QUESTIONNAIRE Ware JE, Kosinski M, Gandek B. SF-36 Health Survey: Manual & Interpretation Guide. Lincoln, RI: Quality Metric Incorporated, 2003.	
Objective(s)	The Medical Outcomes Study 36- Item short- Form Health Survey (SF-36) questionnaire is a generic tool used to assess broadly and complete the term quality of life.
Measure(s)	Physical aspects, bodily pain, general health, vitality, emotional aspects, functional capacity, social and mental health aspects.
Version	SF-36 consists of 11 questions and 36 items covering eight components (domains or dimensions), represented by functional capacity (ten items), physical aspects (four items), pain (two items), general health (five items), vitality (four items), social aspects (two items), emotional problems (three items), mental health (five items) and a comparative question about the current perception of health and a year ago. The individual receives a score in each domain, ranging from 0 to 100, 0 being the worst score and 100 the best.
Language(s)	English, Spanish and Portuguese.
Available	http://www.scielo.br/scieloOrg/php/similar.php?lang=en&text=%20SF-36%20Health%20Survey:%20Manual%20&%20Interpretation%20Guide

MEDLINE	
Tool 2: SHORT FORM SURVEY (SF- 12). A 12-Item Short-Form Health Survey Construction of Scales and Preliminary Tests of Reliability and Validate it. JOHN E. WARE, JR., MARK KOSINSKI, MA, AND SUSAN D. KELLER, 1996.	
Objective(s)	An abbreviated version of the Medical Outcomes Study SF-36 Health Survey, was developed from a need for brevity in health studies on a large scale that could not be met with higher SF-36.
Measure(s)	The 36-item short-form scales and summary measures were replicated for the 12 items of the Physical and Mental Component like - the physical severity presence and mental conditions, acute symptoms, age and aging, 1 year self-report, changes in health and recovery from depression.
Version	12 items from the Medical Outcomes Study 36-Item Short Form Health Survey (SF-36) to reproduce the Physical and Mental Component Summary. The Short-Form (SF -12) Physical Component Summary and the SF-36 Mental Component Summary respectively.
Language(s)	English
Available	http://www.grad.umn.edu/prod/groups/grad/@pub/@grad/documents/asset/multivariate_analysis_of_varia.pdf

MEDLINE	
Tool 3: QUESTIONÁRIO DE TRAÇOS DE PERSONALIDADE, OR QUESTIONNAIRE OF PERSONALITY TRAITS (NEO- FFI) (NEO Five-Factor Inventory - NEO-FFI – Costa, P. T. & McCrae, R. R., 1989, 1992)	
Objective(s)	To assess different dimensions of personality. The response scale is 5 points, ranging from "strongly disagree" to" strongly agree". The quotation is obtained by averaging the items in each domain.
Measure(s)	The five domains: Neuroticism - the tendency to experience negative emotions such as sadness, fear, embarrassment, anger, guilt and disgust. Extroversion / Introversion - quantity and intensity of interpersonal interactions, activity level, need for stimulation and ability to express joy. Agreeableness / Antagonism - quality of interpersonal orientation. Conscientiousness - degree of organization, persistence and motivation in a goal-oriented behavior. Openness to Experience / Conventionalism, active imagination, aesthetic sensitivity, intellectual curiosity and independent judgment.
Version	Shortened version of the NEO personality inventory, the inventory consists of 60 items answered according to a Likert scale. When measuring five domains, the NEO-FFI is built on 60 statements, using a 5 points Lickert scale to assess, from "strongly disagree" (1) to "strongly agree" (5).
Language(s)	English, Portuguese
Available	http://en.wikipedia.org/wiki/Revised_NEO_Personality_Inventory

MEDLINE -	
Tool 4: WAYS OF COPING QUESTIONNAIRE A Teoria transaccional de stress, proposta por Lazarus e colaboradores (Folkman e Lazarus, 1986; Folkman e Lazarus,1988; Folkman e Lazarus, 1991;Lazarus, 1993). LAZARUS, R.S.; FOLKMAN, S. (1984).	
Objective(s)	It highlights the interdependence between cognitions, emotions and behaviors. It is a perspective which highlights two types of processes, evaluation and coping, which refers to the relationship established between the individual and their environment.
Measure(s)	Primary evaluation (through which the person evaluates the importance of the event for its well-being) and a secondary evaluation (in which a person evaluates its ability to handle the situation); personal background characteristics as patterns of motivation (values, goals), beliefs about itself and the world around them, and personal coping resources.
Version	The questionnaire consists of 66 items with four response options, in Likert scale.
Language(s)	English
Available	http://www.share-pdf.com/e3a44f18af0d425ca07c79536102346a/Attachment%2024%20Ways%20of%20Coping%20Questionniare.pdf

MEDLINE -	
Tool 5: EUROQOL FIVE-DIMENSIONAL (EQ-5D) QUESTIONNAIRE. EuqoQol Group. EQ-5D: a standardised instrument for use a measure of health outcome EQ-5D translations. 1990.	
Objective(s)	To assess the quality of health and the profile of the state of life
Measure(s)	Mobility; Usual activities; Pain; Self-care; Anxiety / depression
Version	The EQ-5D-3L consists essentially of two pages - the EQ-5D descriptive system (page 2) and the EQ visual analogue scale (EQ VAS) (page 3). The EQ-5D-3L descriptive system comprises five dimensions: mobility, self-care, usual activities, pain / discomfort and anxiety / depression. Each dimension has three levels: no problems, some problems, extreme problems.
Language(s)	English, Spanish and 167 other languages
Available	http://www.euroqol.org/fileadmin/user_upload/Documenten/PDF/Products/Sample_UK__English__EQ-5D-3L.pdf

MEDLINE -	
Tool 6: HEALTH RELATED QUALITY OF LIFE AND HEALTH STATUS (HRQOL)	
Objective(s)	Assessing quality of life and health .
Measure(s)	Personality, depressive symptoms, social support, satisfaction with consultation and information, alcohol and tobacco consumption.
Version	
Language(s)	English
Available	www.healthmeasurement.org

MEDLINE -	
Tool 7: ESCALA DE SATISFAÇÃO COM A VIDA (SWLS) Satisfaction With Life Scale (SWLS). Diener E, Emmons RA, Larsen RJ, Griffin S: The Satisfaction with Life Scale. *J Personal Assess* 1985, 49:71-75.	
Objective(s)	To assess overall life satisfaction in various age groups and not to mention related constructs, such as loneliness or positive effect.
Measure(s)	Measures of subjective well-being, and correlating predictably with specific personality characteristics.
Version	A scale of five items designed to assess overall life satisfaction in various age groups. Each scale item is rated on a 7-point scale ranging from (1) strongly disagree to strongly agree (7), with higher scores representing greater satisfaction with life.
Language(s)	English, Portuguese, Spanish and 30 other languages
Available	http://internal.psychology.illinois.edu/~ediener/SWLS.html

MEDLINE -	
Tool: 8 EVENTO SCALE -REVISED (IES- R) Horowitz M, Wilner N, Alvarez W. Impact of Event Scale: a measure of subjective stress. Psychosom Med 1979; 41:209-18.	
Objective(s)	To track the symptoms of Post-Traumatic Stress Disorder and quantitatively verify the subjective report of psychological stress related to a specific stressor and its impact.
Measure(s)	Behavior, memory and anxiety.
Version	The IES-R contains 22 items divided into three subscales to assess avoidant behaviors symptoms (avoidance subscale - questions 5, 7, 8, 11, 12, 13, 17, 22), intrusive memories (intrusion subscale - questions 1, 2 3, 6, 9, 16, 20) and anxiety (subscale hyper stimulation - questions 4, 10, 14, 15, 18, 19, 21).
Language(s)	English and Portuguese
Available	http://www.scielo.br/pdf/csp/v28n3/19.pdf

MEDLINE -	
Tool 9: ESCALA DE AUTOESTIMA DE ROSENBERG (RSES) (1965) - Rosenberg Self-Esteem Scale- Rosenberg, M. (1965). *Society and the adolescent self image*. Princeton: Princeton University Press.	
Objective(s)	It is an instrument used for the evaluation of global self-esteem (Rosenberg, 1965).
Measure(s)	Self-esteem is a personal self-assessment, which implies a sense of value, and encompasses a predominantly affective component, expressing an approval/disapproval attitude about itself.
Version	The RSES consists of 10 items, with contents related to feelings of respect and acceptance of self. Half of the items are stated positively and half negatively. For each statement there are four answer choices, Likert type (strongly agree = 4, agree = 3, disagree = 2 and 1 = totally disagree). The sum of the responses to the 10 items provides the scale score with a total score ranging between 10 and 40, and getting a high score reflects a high self-esteem.
Language(s)	English, Portuguese
Available	http://personality-testing.info/tests/RSE.php

PUBMED	
Tool 10-.MEDICAL OUTCOMES STUDY SOCIAL SUPPORT – Sherbourne C. e Stewart A. The MOSS social support survey. 1991. 32:705-14.	
Objective(s)	Assessing social support.
Measure(s)	It has 20 items that assess the structural and functional social support in a Likert scale 0-5.
Version	Social support was measured with nine items from a widely used and validated instrument, and scores range from 9 to 45, with higher scores indicating greater social support.
Language(s)	English, Portuguese

Available	http://repositorium.sdum.uminho.pt/bitstream/1822/17442/1/MOS-SSS.PDF

PUBMED
Tool 11- HUNGARIAN VERSION OF KIDSCREEN-52 QUESTIONNAIRE

Objective(s)	The questionnaire takes 10-15 minutes to complete. KIDSCREEN -52 was developed within the framework of an international project "Screening and Promotion for HRQOL in children and adolescents - the European Public Health Perspective", with the participation of 13 countries (including Hungary).
Measure(s)	The questionnaire consists of 52 items in 10 subscales: physical well-being (5 items), psychological well-being (6 items), moods and emotions (7 items) Self-perception (5 items), Autonomy (5 items), Parents Relationships and Home Life (6 items), Financial Resources (3 items), Social Support and peers (6 items), Environmental School (6 items), Social Acceptance (Bullying) (3 items).
Version	Hungarian version of Kidscreen -52 questionnaire to assess HRQoL of children and adolescents.
Language(s)	English, Germany, Hungarian and 10 other languages
Available	http://www.kidscreen.org/english/questionnaires/kidscreen-52-long-version/

PUBMED
Tool 12-
The World Health Organization Quality of Life-Brief version (WHOQOL-BREF) The WHOQOL Group. Development of the World Health Organization WHOQOL-BREF quality of life assessment. Psychol Med 1998; 28: 551. 31.

Objective(s)	Created by WHO with the aim of evaluating the quality of life.
Measure(s)	WHOQOL-BREF- culturally validated questionnaire that measures four domains of quality of life: physical, psychological, social and environmental.
Version	Skevington SM, Lotfy M, O'Connell KA. The World Health Organization's WHOQOL-BREF quality of life assessment: Psychometric properties and results of the international field trial. A report from the WHOQOL group. Qual Life Res 2004; 13: 299.
Language(s)	English, Portuguese and many other languages
Available	http://www.ufrgs.br/psiquiatria/psiq/whoqol84.html

Table 3. Evaluation Models of Mental Health in the perspective of positive and negative risk factors; Summary of questionnaires with references to a guide/description [and year of publication]

MEDLINE
Tool 1: MASLACH BURNOUT INVENTORY MBI. Maslack & Jackson (1981). Maslach C, Jackson SE. Maslach Burnout Inventory. 2. Palo Alto: Consulting Psychologists Press; 1981a.

Objective(s)	The scale refers to the assessment of General Feelings of Pleasure and Motivation.
Measure(s)	Emotional exhaustion; depersonalization and personal accomplishment.
Version	22 items ranging from 0 (never) to 6 (every day). Three factors: emotional exhaustion (nine items), depersonalization (five items), and reduced personal accomplishment (eight items).
Language(s)	English
Available	http://www.psicologia-online.com/ebooks/riesgos/anexo13.shtml

PUBMED
Tool 2: HOMESICKNESS SCALE HQ DE FISHER (1998) Fisher, S. (1989). Homesickness, cognition, and health. London: Erlbaum.

Objective(s)	To assess the mental health of students away from home in search of strategies for prevention and treatment for homesickness.
Measure(s)	Risk and protective factors for the development of homesickness.
Version	It is a self-response questionnaire of 26 items. Likert scale.
Language(s)	English
Available	http://books.google.com.br/books?id=RHqrrwF8HhEC&pg=PR3&lpg=PR3&dq=Fisher,+S.+(1989).+Homesickness,+cognition,+and+health.+London:+Erlbaum.&source=bl&ots=v6lsiMHzWC&sig=gMGNFjmnnN87VIhHUSG9coz-HO4&hl=pt-BR&sa=X&ei=BpPSU5HYDdPLsASI_4G

PUBMED
Tool 03 BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS)

Objective(s)	It tests the association between behavioral risk factors and self-perception of health.
Measure(s)	It includes questions about demographic characteristics, as well as questions about current health behaviors, such as tobacco use and use of seatbelts. Response options including excellent, very good, good, fair and poor - in Likert type scale.
Version	The questionnaire has three parts: 1) the central component, which consists of the fixed core, rotating core and major emerging, 2) optional modules, and 3) state questions added by the research group.
Language(s)	English, Spanish
Available	http://www.cdc.gov/brfss/

PUBMED	
Tool 04- Behavior Assessment System for Children (BASC-2) Self-Report of Personality BASC 2 -(Reynolds and Kamphaus 2004).	
Objective(s)	
Measure(s)	BASC -2 has been used clinically for its ability to measure clinical dimension (mismatch) as well as adjustment (gain), and enables researchers to select the groups, the general clinical sample or standard.
Version	BASC 2 -(Reynolds and Kamphaus 2004).
Language(s)	English
Available	http://www.pearsonclinical.com/education/products/100000658/behavior-assessment-system-for-children-second-edition-basc-2.html
MEDLINE	
Tool: 5 Health Survey". (RAND-36),	
Objective(s)	Assessing the general state of health. One of the most used instruments, because of the large data possibility.
Measure(s)	Chronic illnesses or diseases that one may have. A chronic physical illness or mental illness that has lasted, or is expected to last for more than six months, it may come and go or be present all the time.
Version	It contains 62 pages with 299 items, corresponding to different types of problems related to physical and mental health, social and economic aspects. To use it, authors choose the items that meet the search, such as use of psychoactive substances, among others.
Language(s)	English
Available	http://www.health.govt.nz/system/files/documents/publications/questionnaire.pdf

DISCUSSION

Recent decades have seen the development of a variety of questionnaires and assessment tools for stress (Hasselhorn and Theorell, 2005). The summary of the range of questionnaires and instruments currently available for the evaluation of multiple stressors on individual, group and/or organization group can provide a useful tool in the early stages of the selection process, and also for researchers wishing to develop a new instrument (Murphy and Schoenborn, 1987).

This paper provides a schematic view of spectrum of instruments available, elaborated to assess psychosocial factors (with/without other stress factors). It was used a systematic search strategy in order to highlight the current general availability of instruments within the broadest international context possible. The preponderance of questionnaires is not surprising, according to Schaufeli and Kompier (2001), given its convenience in relation to the instruments of observation, which become much more expensive and time consuming, because usually require experts for their administration. These observations probably reflect the integration of tools in the prevention of wider public campaigns. Thus, it is believed that the awareness of how these instruments were elaborated for a broader approach to stress management may also be useful to facilitate effective implementation of an instrument adequately elaborated for the different human groups.

With regard to accessibility and dissemination of knowledge, it was observed that it was only possible provide partial access to the complete instrument (though having no access to the essential operating instructions), because not all of them are available online. For some instruments, only brief descriptions are provided, along with contact information for ordering. Still other instruments appear in the studies cited, but there is no more specific information or support site. It was not possible to find data access for all instruments, even in the contact information literature (for ordering, etc.). It is noted that much useful information about the instruments of the United States and some European selected that are also used to assess psychosocial risks can be found using the site's search engine Google Scholar, while the others are more restricted to their publication.

The premise of this work is the dissemination of information about the instruments and their characteristics, with the objective of developing an instrument for greater outreach of human groups to improve practice and research. Whereas the stress assessment instruments are widely used in some geographic regions (eg northern Europe), it is observed that the broadcast in other countries is quite limited, considering that it was not found in the performed search instruments developed in Spain, which have been widely studied, such as the positive mental health questionnaire (QSM) of Lluck (2003), Risk of psychosocial morbidity, Inventory of mental health (ISM) of Ribeiro (1999).

Limitations of the study

It should be noted that several categories of tool to assess stress were outside the scope of the inclusion criteria of this study: (a) those based exclusively on technical or physiological measures; (B) those intended to evaluate specific diseases which are derived from larger instruments (e.g. SF36, which has several specific derivatives); (c) instruments for certain social situations (such as natural catastrophes, when derivatives are used); (d) instruments less than three considering psychosocial factors.

CONCLUSIONS

The objectives of this extensive survey in making descriptive and evaluation considerations of the characteristics of the assessment instruments were achieved, since many validated studies can be found in the bibliography of guides and descriptions of the instruments mentioned in this article, which were also chosen to provide access to information on theoretical assumptions and contexts. It was used a strategy of systematic literature search along with existing studies in the literature, but it was not always possible to obtain the original instrument. Thus, caution is recommended when comparing the individual characteristics of the instruments.

Also, it is hoped that this article may facilitate the dissemination of knowledge of various instruments and their relationships with broader institutional approaches and initiatives to work stress management and the promotion of mental health in the various human groups and as a last recommendation, it is suggested the elaboration of a specific instrument, based on instruments found in the literature, that allows to evaluate the mental health of various human groups.

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