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Psychological Health in the PALOP: Survey Methodology for Diagnosis and Community Intervention

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Saúde Psicológica nos PALOP: Estratégias de Inquérito para Diagnóstico e Intervenção Comunitária

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ADMINISTRATIVE INFORMATION

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 19 February 2025 and was last updated on 19 February 2025.

INTRODUCTION

Study aim This project aims to adapt and validate the PCL-5 (Post-Traumatic Stress Disorder Checklist) and NSESSS (National Stressful Events Survey Acute Stress Disorder Scale) questionnaires in different populations, including civilians, military personnel, and, more broadly, former combatants of the Angolan civil war. In the case of Cape Verde, the application of the surveys will be primarily directed at the civilian population, focusing on the identification and understanding of the impact of traumatic events associated with sociocultural, economic, and environmental challenges.

Through repeated applications and adaptive modifications, these instruments will be optimized to reflect the cultural and contextual specificities of Angola and Cape Verde, ensuring that the particularities of each country are considered in the assessment of post-traumatic stress and the impact of adverse experiences.

The collected data will be analyzed at the University of Beira Interior (UBI) and compared with international data, contributing to the scientific literature in the fields of clinical and health psychology. This research will enhance the accuracy of diagnosis and monitoring of post-traumatic stress in these populations, providing a scientific foundation for the development of intervention strategies adapted to local realities. Thus, the study may have a direct impact on the formulation of public policies and the design of psychological support programs tailored to the communities of Angola and Cape Verde.

Background This study aims to validate and adapt the PCL-5 and NSESSS questionnaires for the general population and specific groups in Angola and Cape Verde. The need for this adaptation arises from the psychological impacts of traumatic events, historical conflicts, and socioeconomic challenges, requiring instruments tailored to local cultural realities.

In Angola, the study will cover civilians, military personnel, and former combatants of the civil war due to their distinct exposure to trauma. In Cape Verde, the target population will be exclusively civilian, focusing on the psychological impacts of economic, social, and environmental factors.

The literature extensively documents post-traumatic stress assessment, but most clinical instruments were developed in Western contexts and may not adequately reflect the specificities of Angola and Cape Verde. The experiences of former combatants and Angolan civilians affected by war necessitate methodological adjustments to clinical instruments. In Cape Verde, economic challenges, social instability, natural disasters, and migration significantly impact mental health, requiring a differentiated approach.

The cross-cultural validation of these questionnaires will enable a more precise and sensitive application, ensuring their effectiveness in clinical diagnosis and the formulation of public health policies. The study will also contribute to the international scientific literature, allowing comparisons between Angola, Cape Verde, and other contexts.

The main objectives of the study include: (1) adapting and validating the PCL-5 and NSESSS questionnaires for Angola and Cape Verde, ensuring their reliability and psychometric validity; (2) comparing the collected data with international studies; (3) dynamically adjusting the questionnaires based on the obtained results; and (4) generating an impact on the formulation of clinical interventions and public mental health policies.

The study will be conducted at the University of Beira Interior (UBI), which will be responsible for data analysis and comparison with international studies. The research is part of an effort to deepen mental health studies in PALOP countries, fostering collaboration between academic institutions in Portugal, Angola, and Cape Verde.

The methodology will involve the translation and cultural adaptation of the questionnaires, ensuring semantic and conceptual equivalence. The instruments will be repeatedly applied to assess their validity and reliability over time, adjusted as necessary, and compared with international data. Statistical analysis will include advanced methods to ensure the psychometric robustness of the instruments.

The results of this study will contribute to the advancement of clinical psychology and health, influencing public health programs in Angola and Cape Verde. The validation of these instruments will have a direct impact on clinical practice, assisting psychologists, psychiatrists, and other professionals in assessing and intervening with

vulnerable populations. Collaboration between institutions reinforces the importance of mental health research in PALOP countries and its academic and clinical relevance.

Rationale Post-traumatic stress disorder (PTSD) is widely studied in the scientific literature, but most assessment instruments have been developed in Western contexts, which may limit their applicability in countries with different sociocultural realities. Angola and Cape Verde have specific historical and social characteristics that justify the need for validation and adaptation of the PCL-5 and NSESSS questionnaires for a more accurate assessment of PTSD in their populations.

In Angola, the civil war (1975-2002) left deep scars on the population's mental health, especially among civilians, military personnel, and former combatants. Prolonged exposure to conflict and its socioeconomic consequences has increased the prevalence of PTSD symptoms, making it essential to use psychometric assessment instruments adapted to the country's reality. Without this adaptation, there is a risk of underdiagnoses or inaccurate diagnoses, which could hinder the planning of clinical interventions and public mental health policies.

In Cape Verde, factors such as economic instability, forced migration, and natural disasters significantly affect the population's mental health. The literature indicates that socioeconomic and environmental adversities can trigger PTSD, even if its manifestation may differ from the patterns observed in Western countries. Currently, the lack of validated instruments makes it difficult to assess the impact of these factors on the mental health of Cape Verdeans.

The cultural adaptation of the PCL-5 and NSESSS questionnaires is crucial because the expression of PTSD symptoms may vary across different cultures. In some African societies, trauma may be predominantly described through physical symptoms (such as fatigue and body pain) rather than typical psychological symptoms like anxiety and nightmares. Therefore, ensuring that the instruments adequately reflect the trauma experience in Angola and Cape Verde is essential to improving diagnostic accuracy and clinical intervention.

Beyond the impact on clinical practice, this study has direct implications for public policy formulation. The availability of psychometrically reliable instruments will enable mental health professionals to make more accurate diagnoses and develop more effective treatment strategies for vulnerable populations. Additionally, robust data on PTSD prevalence may guide government actions

aimed at promoting mental health and preventing the worsening of psychological disorders on a large scale.

The study will be conducted in collaboration with the University of Beira Interior (UBI) and will follow a rigorous methodology, including translation, cultural adaptation, and validity and reliability testing of the questionnaires. Statistical analyses will assess the accuracy of the instruments, ensuring their suitability for clinical use in Angola and Cape Verde.

Finally, this research will contribute to the international scientific literature by generating unprecedented data on PTSD in PALOP countries, strengthening collaboration between academic institutions in Portugal, Angola, and Cape Verde. The validation of these instruments represents a significant advancement in PTSD assessment and treatment, with direct impacts on public health and the quality of life of the studied populations.

METHODS

Strategy of data synthesis This research adopts a systematic and rigorous approach to identifying, selecting, and analyzing relevant scientific sources, ensuring that the PCL-5 (Post-Traumatic Stress Disorder Checklist) and NSESSS (National Stressful Events Survey PTSD Short Scale) questionnaires are robustly validated for the populations of Angola and Cape Verde. The search strategy aims to encompass a wide range of empirical and theoretical studies, ensuring that the project's foundation is based on current scientific evidence relevant to the specific sociocultural contexts of these nations.

1. Databases and Academic Repositories

The research will be conducted across several internationally accessible scientific databases to ensure a comprehensive survey of the existing literature. The selected data bases include:

- PubMed (National Library of Medicine): For identifying studies in clinical psychology and mental health, particularly in the domain of post-traumatic stress.
- Scopus (Elsevier): For a broad and interdisciplinary search of publications in psychology, public health, and social sciences.
- PsycINFO (American Psychological Association): To locate articles specific to the field of psychology related to the validation of psychometric instruments.
- SciELO (Scientific Electronic Library Online): For access to studies published in Portuguese-speaking countries, including relevant investigations conducted in Angola, Cape Verde, and Portugal.

- Web of Science (Clarivate Analytics): To ensure a comprehensive approach based on high-impact studies.

2. Search Terms and Query Construction Strategy

To maximize the retrieval of relevant studies, search terms combined with Boolean operators will be used. The primary keywords to be employed include:

- "Post-Traumatic Stress Disorder" OR "PTSD" OR "PCL-5"
- "Emotional Stress Scale" OR "NSESSS"
- "Validation" OR "Psychometric Properties"
- "Angola" OR "Cape Verde"
- "Cross-Cultural Adaptation" OR "Instrument Translation"
- "Mental Health" OR "Trauma in Post-Conflict Societies"

The search will be refined as necessary to ensure the inclusion of specific studies on cross-cultural adaptation and instrument validity in African and Lusophone contexts.

3. Inclusion and Exclusion Criteria

To ensure the relevance and quality of the analyzed publications, rigorous inclusion and exclusion criteria will be applied:

Inclusion Criteria:

- Studies published in the last 20 years, between 2004 and 2024.
- Empirical studies validating psychometric instruments related to post-traumatic stress and emotional stress.
- Studies conducted in Angola, Cape Verde, or in similar populations with comparable data.
- Articles in English and Portuguese to maximize the review's scope.
- Publications with robust methodologies, including psychometric analysis and longitudinal studies.

Exclusion Criteria:

- Purely theoretical studies without empirical validation of instruments.
- Non-systematic narrative reviews.
- Studies with inadequate or non-representative samples of the target populations.
- Works without access to the full text.

4. Review and Data Extraction Process

The review process will follow a structured and standardized approach to ensure the methodological integrity of the research:

1. Initial Screening:

- o The titles and abstracts of articles identified in the databases will be reviewed by two independent researchers to eliminate irrelevant studies.
- o Duplicate studies will be removed using specific reference management software (Mendeley or EndNote).

2. Full Reading:

o Articles selected in the initial screening will be read in full to assess their suitability for the study's objectives.

o Researchers will adopt a consensus approach to decide on the inclusion or exclusion of articles in case of disagreement.

3. Data Extraction:

o A standardized form will be used to collect information on studies, including authors, year of publication, country, studied population, employed methodology, assessed psychometric measures, and key findings.

4. Quality Assessment of Studies:

o Methodological quality will be analyzed based on established criteria for psychometric studies, such as:

Internal consistency (Cronbach's Alpha ≥ 0.70).

Construct validity (exploratory and confirmatory factor analyses).

Test-retest reliability (intra-class correlation coefficients ≥ 0.75).

Sample selection bias and adequacy of sample size for statistical analyses.

5. Synthesis and Analysis of Results

The literature review will result in a critical synthesis of the main trends and existing gaps in the validation of the PCL-5 and NSESSS instruments for populations in Angola and Cape Verde. Extracted data will be analyzed qualitatively and quantitatively, as needed, to:

- Compare the psychometric characteristics of the questionnaires in the different studied contexts.
- Identify necessary cross-cultural adaptations to ensure the ecological validity of the instruments.
- Assess the applicability of the questionnaires in post-conflict and socioeconomically vulnerable contexts.

6. Conclusion and Implications of the Search Strategy

The search strategy adopted in this project aims to ensure scientific excellence in the adaptation and validation of the PCL-5 and NSESSS instruments for the contexts of Angola and Cape Verde. The systematic process of identifying and analyzing studies will solidly underpin the future applications of the questionnaires in these populations, ensuring that the instruments reflect the cultural and social specificities of the investigated individuals. Additionally, the review will serve as a basis for future research on mental health in Lusophone populations, contributing to the production of relevant knowledge for public policies and more effective clinical interventions.

The systematic literature search, combined with the rigorous analysis of selected studies, will ensure that the questionnaires are validated scientifically and in a culturally sensitive manner, expanding the possibilities for diagnosis and

intervention in mental health in African contexts. This approach, by emphasizing methodological precision and cross-cultural adaptation, will allow a significant contribution to the scientific literature and clinical practice in the field of health psychology and trauma in Angola and Cape Verde.

Eligibility criteria Defining eligibility criteria is a crucial component in designing a scientific study, as it ensures that the selected participants are representative of the target population and that the data obtained are robust and generalizable. In the context of this project, which aims to validate the PCL-5 (Post-Traumatic Stress Disorder Checklist) and NSESSS (National Stressful Events Survey PTSD Short Scale) questionnaires, the eligibility criteria have been established to ensure the inclusion of individuals who can provide relevant responses for the cross-cultural adaptation of these instruments in the populations of Angola and Cape Verde.

1. Target Population

This study is intended for adult individuals residing in Angola and Cape Verde, belonging to different social strata and with diverse life experiences, to ensure the necessary representativeness for the validation of the questionnaires. The inclusion of participants from both nations will enable intercultural comparison, assessing the psychometric adequacy of the instruments in distinct sociocultural contexts while sharing Portuguese as a common language.

2. Inclusion Criteria

The inclusion criteria determine which individuals may participate in the study. To ensure the validity and relevance of the research, the following criteria have been established:

- Minimum age of 18 years: The research focuses on the adult population, as the PCL-5 and NSESSS instruments were developed to assess symptoms of post-traumatic stress and emotional stress in adults.
- Residence in Angola or Cape Verde: Only individuals who have lived in one of these countries for a minimum period of five years will be included, ensuring that they are immersed in the cultural and social context under analysis.
- Exposure to potentially traumatic events: To validate the questionnaires in assessing post-traumatic stress and emotional stress, participants must have experienced or witnessed traumatic events, such as armed conflicts, urban violence, natural disasters, among others.
- Fluency in Portuguese: Since the questionnaires have been translated and adapted into Portuguese, participation requires fluency in reading and understanding the language to ensure the quality of responses.

- Informed consent: All participants must sign a free and informed consent form, agreeing to participate in the research and understanding their rights and responsibilities.

3. Exclusion Criteria

The exclusion criteria aim to eliminate factors that could compromise the quality of the collected data and interfere with the validity of the instruments. The following criteria have been established:

- Previous diagnosis of severe, unstable psychiatric disorders: Individuals with psychotic disorders, dementia, or other conditions that impair their ability to reliably respond to the questionnaires will be excluded.
- Use of psychoactive substances at the time of questionnaire administration: Recent consumption of alcohol or drugs may affect response clarity, compromising data validity.
- Significant cognitive impairments: Individuals with severe cognitive disabilities or difficulties in understanding the language will not be included, as this could distort the evaluation results.
- Prior participation in similar studies: Individuals who have recently participated in studies involving the same instruments may have responses influenced by familiarity with the questionnaires, which could compromise research validity.

4. Scientific Justification for Eligibility Criteria

The selection of inclusion and exclusion criteria is based on the need to ensure a sample that is both representative and reliable. Setting the minimum age at 18 years aligns with international studies on post-traumatic stress in adults, ensuring that the questionnaires are applied as originally designed. The requirement of a minimum five-year residency in Angola or Cape Verde is justified by the need for participants to be fully immersed in the sociocultural context of the studied countries.

Additionally, the inclusion of individuals exposed to traumatic events is essential for assessing the instruments' ability to adequately measure trauma-related symptoms. Fluency in Portuguese ensures that participants can comprehend the questionnaire items and provide reliable responses, avoiding linguistic bias that could compromise the cross-cultural adaptation of the instruments.

On the other hand, the exclusion of individuals with severe, unstable psychiatric disorders aims to prevent potentially distorted responses due to active clinical symptoms. The use of psychoactive substances can affect cognitive clarity and influence response accuracy, justifying their exclusion. Severe cognitive impairments would hinder the correct interpretation of the questions, while prior participation in similar studies could lead to response bias due to familiarity with the instruments.

5. Implications for the Generalization of Results

The eligibility criteria were designed to balance the need for a representative sample with the requirement for methodological rigor. By ensuring the inclusion of individuals with different life experiences in Angola and Cape Verde, the study seeks to maximize the applicability of the results, enabling the validated questionnaires to be used in future investigations and clinical interventions in these countries.

The comparative approach between the two countries will allow for an evaluation of potential cultural differences in the manifestation of post-traumatic stress and emotional stress symptoms, contributing to a deeper understanding of regional specificities. The findings of this study may support public policies and interventions aimed at mental health, particularly in post-conflict contexts and socio-economic vulnerability.

6. Conclusion

The eligibility criteria established for this study aim to ensure the quality and validity of the collected data, guaranteeing that the PCL-5 and NSESSS questionnaires are reliably adapted for the populations of Angola and Cape Verde. The precise definition of inclusion and exclusion criteria allows for the selection of a representative sample while respecting the cultural and methodological specificities involved in the cross-cultural adaptation of psychometric instruments.

The careful selection of participants not only reinforces the scientific robustness of the study but also enhances its potential impact in the field of clinical psychology and public health. The results obtained may provide valuable input for future research and mental health interventions, significantly contributing to the advancement of knowledge on post-traumatic stress and emotional trauma in the Angolan and Cape Verdean contexts.

Data extraction Data extraction refers to the systematic process of collecting, organizing, and coding the information obtained throughout the research. This procedure is essential to ensure the integrity, validity, and reliability of the data used in the analysis of the PCL-5 and NSESSS questionnaires in the context of Angola and Cape Verde.

1. Data Extraction Procedures

The data will be extracted from the responses of participants in the questionnaires applied to both target populations. The process will include:

- Digitization of the questionnaires to minimize manual transcription errors.
- Coding of the data into a structured database using statistical software such as SPSS or R.

- Quality verification, ensuring that inconsistent or incomplete responses are identified and adequately addressed.

2. Data Categorization and Organization

The data structuring will follow these guidelines:

- Identification of key variables, including demographic data, exposure to traumatic events, and psychometric scores from the questionnaires.
- Strategies for handling missing data, applying appropriate statistical methods to minimize bias in the analysis.
- Grouping of data by country (Angola and Cape Verde) to enable comparisons between sociocultural contexts.

3. Ensuring Reliability and Security

Data security will be ensured through:

- Encryption-protected storage.
- Restricted access to authorized researchers.
- Maintenance of auditable records to track any modifications.

Rigorous data extraction will enable robust comparative analyses between the populations of Angola and Cape Verde, contributing to the cultural and scientific validation of the studied instruments.

Outcome definitions Outcome definitions refer to the criteria used to evaluate the study results, ensuring precise measurement of impacts and comparability of data between Angola and Cape Verde. In this project, the outcomes are defined based on the validity and reliability of the PCL-5 and NSESSS questionnaires, allowing for a rigorous analysis of post-traumatic stress and emotional stress symptoms in the studied populations.

1. Primary Outcomes

The study's primary outcomes include:

- Psychometric validity of the questionnaires: Assessment of internal consistency, test-retest reliability, and construct validity of the instruments.
- Prevalence and severity of post-traumatic stress and emotional stress: Measured based on the scores obtained from the questionnaires applied to participants in Angola and Cape Verde.

2. Secondary Outcomes

The secondary outcomes address contextual factors and the impact of psychosocial conditions on the evaluated symptoms:

- Influence of sociodemographic variables: Comparison of outcomes among different age groups, genders, and socioeconomic conditions.
- Intercultural differences between Angola and Cape Verde: Analysis of response patterns variations considering cultural, historical, and environmental influences.
- Impact of specific traumatic events: Identification of events associated with the worsening of post-traumatic stress and emotional stress symptoms.

3. Analysis Strategy

Outcome analysis will be conducted through descriptive and inferential statistics, including multivariate regression to assess the main predictors of symptoms. This approach will help understand the applicability of the questionnaires and provide insights for future clinical interventions and public health policies related to mental health in Angola and Cape Verde.

Strategy of data synthesis / Statistical analysis

The strategy for data synthesis and statistical analysis is designed to ensure rigorous evaluation of the validity and reliability of the PCL-5 and NSESSS questionnaires in the contexts of Angola and Cape Verde. The analysis will employ a combination of descriptive and inferential statistics to assess the psychometric properties of these instruments and identify key patterns in post-traumatic stress and emotional stress symptoms.

1. Data Synthesis Approach

Data synthesis will follow a structured process, including:

- Descriptive statistics to summarize demographic characteristics and questionnaire responses.
- Exploratory and confirmatory factor analysis to assess construct validity and the dimensional structure of the instruments.
- Reliability analysis using Cronbach's alpha and intraclass correlation coefficients to evaluate internal consistency and test-retest reliability.

2. Statistical Analysis Strategy

Inferential statistics will be applied to compare outcomes across different groups and evaluate predictors of symptom severity:

- Comparative analyses (t-tests, ANOVA, or non-parametric tests) to examine differences between Angola and Cape Verde.
- Multivariate regression models to identify sociodemographic and clinical predictors of post-traumatic stress and emotional stress symptoms.
- Missing data handling using multiple imputation techniques to ensure data integrity and minimize bias.

3. Interpretation and Implications

The statistical findings will provide insights into the applicability and cross-cultural adaptation of the instruments in both countries. This will facilitate the development of evidence-based mental health interventions tailored to the specific needs of populations in Angola and Cape Verde, supporting future research and policy making in these regions.

Country(ies) involved This systematic review in Portugal focuses on adapting and validating PTSD assessment tools for Angola and Cape Verde within their specific sociocultural contexts.

Other relevant information This study will be disseminated through academic, clinical, and institutional networks in both Angola and Cape Verde, ensuring that the findings contribute to evidence-based mental health interventions. The research findings will be integrated into local and international scientific forums, facilitating the exchange of knowledge on post-traumatic stress disorder (PTSD) and emotional stress within Lusophone African contexts.

In Angola, dissemination efforts will target institutions specializing in psychological care for former combatants, as well as organizations addressing civilian mental health in post-conflict settings. In Cape Verde, where economic and environmental stressors significantly impact mental health, collaboration with local healthcare providers and academic institutions will ensure effective application of the study's insights.

Additionally, this research will be publicized through the Psychological Health Support Program (Programa de Apoio à Saúde Psicológica) supported by the Order of Portuguese Psychologists (OPP). This initiative will facilitate knowledge transfer to psychologists and mental health professionals operating in Portuguese-speaking countries, enhancing their clinical skills and diagnostic accuracy when assessing PTSD and emotional stress symptoms.

By engaging stakeholders from academia, healthcare, and policy-making, this study aims to foster a sustainable impact on mental health research and intervention strategies within the PALOP (Países Africanos de Língua Oficial Portuguesa) region.

Keywords Post-Traumatic Stress Disorder (PTSD); Emotional Stress Symptoms; PCL-5 Questionnaire Validation; NSESSS Questionnaire Validation; Psychometric Properties; Cross-Cultural Adaptation; Mental Health Assessment.

Dissemination plans This dissemination plan ensures the study's impact on scientific knowledge and public health in Angola and Cape Verde. Findings will be shared through peer-reviewed publications and conference presentations, targeting African and Lusophone research communities. Workshops and seminars will engage local psychologists, healthcare professionals, and policymakers, while collaborations with universities will integrate results into academic curricula.

Policy briefs will support mental health interventions, and findings will be presented to health ministries to inform public strategies. Key results will be published in open-access repositories and shared via digital platforms, including institutional websites and social media.

The Psychological Health Support Program, backed by the Order of Portuguese Psychologists, will further disseminate findings to enhance professional training and public awareness. This strategy ensures broad engagement with academia, healthcare, and government stakeholders.

Contributions of each author

Author 1 - Luis Barreiros - Luís Barreiros mediates protocols between the University of Beira Interior (UBI) and institutions in Angola and Cape Verde. He analyzes data and is the author of the postdoctoral project focused on data collection through survey methodology for this research.

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