**Correction criteria for the qualitative analysis of the prison population**

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**Abstract**

There are many standardized tests to evaluate and detect language difficulties in adults in English. However, there are relatively few options in Spanish. Most of the research is conducted with children and adolescents. **Objetives:** to propose a reliable coding system for the correction and interpretation of narratives (essays and narratives) from the Battery for the Evaluation of Writing Processes (PROESC) in the prisoners. **Design:** The sample was composed of 287 men. **Main Outcome Measures:** They completed the Demographic, Offense, and Behavioral Interview in Institutions, the International Personality Disorders Examination (IPDE), and PROESC. **Results:** We found that the proposed coding system presented high concordance, that is, high inter-rater reliability. **Conclusion:** The classification system for the correction and interpretation of narratives was shown to be reliable.

**Keywords:** Qualitative analysis, Prison population, Language disorders, crimen, writing.

**INTRODUCTION**

 People with language difficulties cannot face challenges related to social skills. Fitzsimons & Clark (2021) state that language disorders affect academic, work environments, and social interaction, leading to maladaptive and aggressive behaviors. Along the same lines, Morken et al. (2021) highlight that young inmates are at high risk of experiencing unrecognized language deficiencies. It is, therefore, necessary to analyze linguistic pathologies that can influence criminal behavior.

Most standardized tests are currently focused on opaque languages such as English (Morken et al., 2021). However, there are barely any tests in Spanish that assess language in adults. In young adults, the Test de Evaluación de los Procesos de Escritura (PROESC; Cuetos et al., 2004) evaluates the main processes involved in writing. It has adequate dictation tasks to assess each writing processing module and dictation tasks record the number of errors and the type of error made for later analysis the dictation tasks record the number of errors and the type of error made for later analysis. Besides, it allows comparison between comprehension processes in the two modalities of written language. In this way, it is possible to determine whether writing impairments are dependent on the written form or whether they involve a more generalized impairment process (Afonso et al., 2015; Carreteiro et al., 2016; Davies et al., 2013; Guarnieri-Mendes & Domingos-Barrera, 2017; Gutiérrez-Fresneda & Díez-Mediavilla, 2017; Gutiérrez-Fresneda, 2017; Jiménez et al., 2010; Marques-de Oliveira et al., 2017; Martínez-García et al., 2019; Megino-Elvira, et al., 2016; Nigro et al., 2015; Rodríguez-Pérez et al., 2012).

This test constitutes a very structured evaluation procedure where the participant must respond according to the indications that appear at the beginning of the test and the instructions of the researcher. Paper and pencil tasks are inexpensive, flexible, and portable methods (Larrazabal et al., 2019). However, while these tasks are very objective and easily replicable procedures, tasks 5 and 6 require an analysis qualitative.

Qualitative research fills a gap in the analysis of certain problems by adopting various content or discourse analysis procedures. The main objective of this technique is to describe the qualities of a phenomenon as a whole using a flexible approach. This technique begins from a holistic perspective, i.e., it tries to examine a specific situation in detail (Busetto et al., 2020). It is based on the decomposition and classification of information collected through interviews, stories, observations, images, advertisements, news, and political discourse (Moser & Korstjens, 2017).

Qualitative aspects of language can also be evaluated, including the adequacy, precision, or magnitude of written expression. In some cases, it is possible to evaluate the ability to express the message correctly, often providing important additional information to help understand the written result (in the form of a narrative or essay). This type of study is mostly used in the prison population, particularly men convicted for drug offenses and violence (Heith et al., 2020). It has been shown that qualitative methodology is essential for studies with individuals belonging to these populations. Due to their characteristics and the type of experiences they present, this type of methodology allows for a deeper analysis, the results of which can inform the development of prevention and intervention processes.

Qualitative methodology uses a series of instruments that are not highly structured and standardized. Its scoring system is quite flexible, can be structured according to the objectives, and can be analyzed through qualitative procedures and transformed into quantitative data (Douglass et al., 2019).

Qualitative aspects of language such as planning, transcription, and revision can also be evaluated. In some cases, it is possible to evaluate more specific aspects, such as decoding errors and informal aspects. The qualitative method comprises a series of instruments whose items are relatively unstructured and standardized, with a scoring system that can be used flexibly depending on the objectives. Moreover, the results can be analyzed through qualitative and quantitative procedures, transforming qualitative information into quantitative information. It is necessary to establish a coding system that corresponds to a model that can serve as a guide for analyzing and coding the writing. Therefore, the objective of this study was to propose a reliable coding system for the correction and interpretation of narratives and essays from the Writing Process Evaluation Battery (PROESC) (Cuetos et al., 2004) in the prison population.

**Participants**

The sample consisted of 287 men mean age 37.69 (SD=8.84) from the Granada Penitentiary Center. First, participants were interviewed individually to check the inclusion criteria and, if eligible, were offered the opportunity to participate in the research. They then took part in an individual session in which they completed the measures listed below. Participants were reminded at the beginning of the session of their right to discontinue the procedure at any time, and their written consent was then obtained. Once the data collection process was completed, the data were corrected. This study was approved by the Ethics Committee of the Autonomous Community of Andalusia (PEIBA, 0766-N-21).

**Procedure**

 Regarding the correction and interpretation of the narratives and essays, Table 1 and Table 2 were used for coding. To calculate the inter-rater reliability, three evaluators (speech-language pathologist, linguist, and expert in quality and care management) coded the narratives and essays. Table 3 presents a proposal of correction criteria obtained considering Table 1 and Table 2.

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Insert Tables 1, 2 and 3

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**Instruments**

**Demographic, crime, and institutional behavior interview**. This interview was designed for this research study and consists of collecting information about sociodemographic data, type of offenses and their penalties, and sanctions within the prison according to the Prison Regulations (Royal Decree 1201/1981, May 8, Articles 107 and 108).

**Writing Processes Evaluation Battery (PROESC) (Cuetos et al., 2004).** This is an individual test that aims to evaluate the main processes involved in creating texts. It is composed of six tests, which are: 1) Syllable dictation; 2) Word dictation; 3) Pseudoword dictation; 4) Sentence dictation; 5) Writing a narrative and 6) Writing an essay. In this study, we used tests 5 and 6, which assess the ability to plan a narrative and an expository text. Although the instrument (Cuetos et al., 2004) has a high internal consistency of 0.82 (alpha coefficient) in the first four tests, it lacks quantitative criteria for the correction and interpretation of the writing tests (5 and 6). For this reason, in this study, we used only tasks 5 and 6.

**Data analysis**

Data analyses were conducted using the SPSS Statistics 22.0 program. The analysis of inter-rater concordance was performed by calculating the kappa index and Pearson correlations to address.

**Results**

**Inter-rater reliability analysis**

Regarding inter-rater reliability, the concordance analysis yielded very high coefficients (see Tables 4).

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Insert Table 4

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**Discussion**

 Analyzing language difficulties in the prison population through narratives (writings and stories) may be relevant to discover specific issues and identifying the differences in this population. For this reason, and according to the reviewed bibliography (tables 1 and 2), we have proposed a categorization system for the interpretation of the narratives of the prison population.

This study aimed to provide a reliable coding system for correcting and interpreting narratives and essays from the Writing Process Evaluation Battery (PROESC) (Cuetos et al., 2004). We found that the proposed coding system presented high concordance, that is, high inter-rater reliability. Furthermore, the degree of agreement was very high for all the proposed categories. This classification provides novel and useful information for the evaluation of writing processes. Furthermore, the context in which this study has been conducted — a prison setting — advances our understanding of the writing difficulties of inmates that have, until now, never been analyzed.

Therefore, this study is the first to propose a model for categorizing and correcting texts in both narratives and essays while confirming its reliability and effectiveness through a comprehensive inter-rater analysis.

**Conclusions**

 To identify the difficulty of writing in the prison population, the following categories should be considered: Words and Paragraphs, Errors Related to Formal Aspects, Decoding Errors, Grammar, Revision and Net Total, Main and Secondary Ideas, Vocabulary, Planning Errors, Words and Paragraphs, Errors Related to Formal Aspects, Decoding Errors.

Although individuals know phoneme-grapheme correspondence rules, language disturbances of a reiterative and persistent nature may appear in those who show compulsive behavior. This finding could be related to co-occurrences in the behavior of compulsive individuals and those with learning difficulties. Language therapy in patients with high levels of compulsivity could improve self-control and self-criticism, thereby enhancing the capacity to form social relationships and show empathy.

The authors report no declarations of interest

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