

THE MEASUREMENT OF SCHIZOPHRENIC CONCEPTUALIZATION USING A SPANISH TRANSLATION OF THE WHITAKER INDEX OF SCHIZOPHRENIC THINKING

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The Spanish translation of Form A of the Whitaker Index of Schizophrenic Thinking (WIST) was administered to 50 schizophrenic (25 acute; 25 chronic) and 50 (25 = depressives; 25 = normals) nonschizophrenic residents of the Commonwealth of Puerto Rico. Results suggest that this translation effectively discriminated between schizophrenics and nonschizophrenics on the WIST total score, time, and index. A cut-off of 25 on the WIST index correctly classified 98% of the schizophrenic volunteers.

Definitions of schizophrenic thinking date back to the early work of Kraepelin (1907). More recent efforts, such as those by Shakow (1969), Bleuler (1950) and Arieti (1974), have furthered Kraepelin's original thesis. However, these strides have occurred at the expense of arriving at a definition that accounts for the assessment of the behavior. In an effort to ameliorate this situation, Whitaker (1973) has suggested that schizophrenic thinking can be defined as illogical, impaired, and unwitting. According to Whitaker, these characteristics can be quantified easily by use of a reliable psychometric instrument.

This orientation gave rise to the development of the Whitaker Index of Schizophrenic Thinking or WIST (Whitaker, 1973). The WIST is a brief, objective, and easily administered and scored test of schizophrenic conceptualization. Although several studies have been published about the WIST since its publication (cf. Albott & Gilbert, 1973; Dobson & Neufeld, 1980; Fishkin, Lovallo, & Pishkin, 1977; Newmark, Simpson, & Jones, 1978; Puente & Sanders, 1981), several questions with regard to this instrument still exist. Of primary importance is Yaroush's (1982) concern that the WIST may not be based on concepts that are alinguistic and culturally nonspecific. This is especially critical in that if performance on the WIST can indeed be manipulated using linguistic or cultural variables, the test (and presumably Whitaker's conception of schizophrenia) may be of limited validity and reliability. In order to explore the generalizability of the WIST, Yaroush (1982) translated the instrument into German and administered this version to both schizophrenic and nonschizophrenic West German volunteers. This translation proved an effective discriminator between schizophrenics and nonschizophrenics (both hospitalized nonschizophrenics and normals). These preliminary results support the notion that the underlying aspects of the WIST—illogicality, impairment, and lack of awareness—are not mediated by linguistic or cultural variables.

In view of the fact that Yaroush translated the WIST into a Germanic language, we were interested in seeing whether similar results could be obtained in a Romance language. Because Hispanics comprise the second largest as well as fastest-growing

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Translation of the WIST was accomplished with the collaboration of several individuals, including the three senior authors, with the assistance of Drs. Marion A. Wennerholm, Maximo Beras Goyco, Juan Pabellon, and Evelyn Osorio, all of whom were associated with the Centro Caribeno de Estudios Postgraduado in Santurce, Puerto Rico.

minority group in the United States, it seems appropriate to examine the efficacy of the WIST in a Spanish translation. A Spanish translation standardized with Spanish-speaking subjects, however, would not be sufficient. We wanted to consider cultural variables as well. In order to do this, we chose to administer the Spanish translation to individuals who were living in a culture that differed from that found in a typically developed industrial nation.

METHOD

Subjects

One hundred residents of the Commonwealth of Puerto Rico volunteered for the study. Subjects were between the ages of 18 and 65 and had a minimum of a secondary education. In each case, no evidence of central nervous system or sensory deficits were noted. Subjects read, understood, and completed a consent form and the Spanish translation of the WIST.

Subjects were divided into four equal groups ($N = 25$; chronic schizophrenics, acute schizophrenics, depressives, and normals). The first three groups consisted of inpatients from the Hospital de Psiquiatria of San Juan, Puerto Rico. Diagnoses of schizophrenia and depression were made by a psychiatrist who used the Research Diagnostic Criteria (Spitzer, Endicott, & Robins, 1975). Schizophrenics hospitalized continuously for more than 1 year comprised the chronic group, while the acute sample was drawn from the population of schizophrenics hospitalized less than 1 month or who had not been hospitalized during the past year. The normal sample consisted of students from the Colegio Universitario del Turabo (Caguas, Puerto Rico) who did not have a psychiatric history. Biographical information is shown on Table 1.

Table 1
Sample Characteristics by Gender, Age, and Education

Group	N	Gender		Age M	Education M
		M	F		
Chronic schizophrenics	25	15	10	38	9
Acute schizophrenics	25	16	10	34	10
Depressives	25	12	13	27	10
Normals	25	12	13	28	14

Procedure

After subjects had been chosen for inclusion in the study, appropriate biographical data were obtained. Volunteers then were individually administered the Spanish translation from Form A of the WIST. Standard WIST instructions (see Whitaker, 1980) were used, including the posttest interview.

RESULTS

Results indicate that significant differences between groups were observed for total score, time, and index. In addition, the translation was effective in discriminating between schizophrenics and nonschizophrenics when a cut-off of index = 25 was used.

Significant between-group differences ($F = 51.13, p < .001$) were found when an analysis of variance was performed on total score measures. As Table 2 indicates, chronic schizophrenics scored higher than acute schizophrenics who, in turn, scored higher than depressed and normal subjects. A similar trend also was noted for index ($F = 59.83, p < .001$).

Table 2
Means and Standard Deviations for Score, Time, and Index

Group	N	Score		Time		Index	
		M	SD	M	SD	M	SD
Chronic schizophrenics	25	58.5	26.8	17.6	4.5	76.1	28.1
Acute schizophrenics	25	35.1	35.8	14.8	5.0	50.2	15.4
Depressives	25	15.2	7.9	16.0	4.9	31.2	9.6
Normals	25	4.7	2.8	10.5	2.0	15.9	4.7

Although significant between-group differences were noted for the time variable ($F = 31.09, p < .001$), chronic schizophrenics took 1.6 minutes longer than depressives, who took 1.2 longer than acute schizophrenics. Normal subjects trailed with a mean of 10.5 minutes or 4.3 minutes less than acute subjects. (See Table 2.)

In order to examine the discriminatory capacity of this translation, a cut-off score (Meehl, 1955) was used. The original cut-off values of Whitaker (1973) were used to construct a χ^2 table (see Table 3) relative to the RDC. When original cut-off values were used, original time cut-off did not differentiate adequately between groups. However, when the time cut-off was increased to 13 minutes, significant differentiation was achieved. Because time was increased by 5, the index was increased similarly by 5, or to 25. When this was accomplished, only one schizophrenic subject was classified incorrectly relative to RDC, although the hit rate for classification of nonschizophrenics only reached 48%.

DISCUSSION

The primary objective of this study, the translation and standardization of the WIST into Spanish, was accomplished successfully. These results support the notion that the WIST seems to be alinguistic and culturally non-specific, especially because the underlying concepts of the WIST could be adapted from a Germanic to a Romance language. Although the make-up of the normal sample prevented adequate matching across groups on education, group composition was matched on both age and gender. Nevertheless, when education was matched (i.e., across the three hospitalized groups), between-group differences still were found. Thus, while education may play an important role in the assessment of schizophrenic thinking, this Spanish translation appears robust enough to discriminate between samples.

In comparison to the norms published by Whitaker (1973), the present findings suggest that all subjects scored much higher on the WIST. For example, the mean index of chronic schizophrenics for the current sample was 76, while the United States sample had a mean of 26. This elevation is probably due to the sexual and emotional content found in Form A of the WIST. That is, in Puerto Rico sex is considered a taboo subject to those who exist in a culture of machismo and virginity (Fernandez Mendez, 1959). This hypothesis could be tested easily by replicating the present study with the more neutral Form B. That is, if the high scores on Form A were attributable to the sexual/emotional content, one would expect lower scores on the nonsexually or emotionally laden Form B. Another factor that could have accounted for the large differences between U.S. and Puerto Rican samples could be the overall educational level of the Puerto Rican population. It is important to note, however, that the elevated values found in this study follow the same trend reported by Yaroush (1982) in the German translation. Thus, while more culturally specific factors may have contributed to elevated scores

Table 3
Discrimination of Schizophrenics (S) and Nonschizophrenics (NS) Using Cut-off Scores For Score, Time, and Index as Compared to Research Diagnostic Criteria (RDC)

		Score Cut-off = 12		Time Cut-off = 13		Index Cut-off = 25	
		WIST		WIST		WIST	
		NS	S	NS	S	NS	S
S		1	49		50		50
NS		35	15	5	50	1	49
		36	64	39	61	32	68
		$\chi^2 = 50.06$		$\chi^2 = 9.44$		$\chi^2 = 41.34$	

RDC RDC RDC RDC RDC RDC RDC RDC

in each of these studies, a more cohesive explanation that would account for elevated scores with both German and Spanish translations should be considered. Whether the translations become more robust than the original version or whether the populations reflected the increase in scores needs to be explored.

While these findings are important in that they provide support for the notion that the WIST is not linguistically or culturally biased, the current study should be replicated, especially with other Spanish-speaking Hispanics. Additionally, education, intellectual, and drug variables should be considered carefully. Finally, although the current translation appears to be an efficient discriminator, more accurate translations (for example, ones that involve cross-translations) would ensure equality between English and Spanish versions.

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