The Validity of Locus of Control Dimensions for Chicano Populations

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Summary: The multidimensional locus of control literature supported the tenability of five factorial dimensions: a) luck/fate, b) leadership/success, c) academics, d) politics, and e) respect. Contending that the contradictory locus of control findings involving Chicano populations may be due to methodological inadequacies, the purpose of the present study was to empirically determine the appropriateness of the five categories for comparing Chicano and Anglo populations. This was done by factor analyzing the responses of 203 Anglo and 244 Chicano undergraduates to Rotter's (1966) 1-E scale separately, and then comparing the corresponding factor pairs by using Cliff's (1966) congruence procedure. The luck/fate and leadership/success factors show substantial invariance across the two samples, whereas the cultural equivalence of the remaining three factors is somewhat questionable. The findings are discussed in relation to current knowledge of crosscultural differences between Anglo and Chicano populations.

Whether an individual perceives internal or external control of his behavior could very well be influenced by the values, perspectives, and socialization practices of the culture in which he or she lives. In one of his recent articles, Rotter (1975) syggests that members of cultures with fatalistic proclivities could be expected to manifest a great deal of externality in their locus of control orientation. It is therefore conceivable that some cultures foster the development of externality, while others promote greater internality. Several empirical investigations have indeed shown cross-cultural differences in locus of control orientation (Parsons, Schneider, & Hanson, 1970; Reitz & Groff, 1972; Tin-Y22 Hsieh, Skyhut, & Lotsof, 1969).

Fatalism and numerous other forms of passivity are cultural characteristics commonly attributed to Chicanos (e.g., Cabrera, 1964; Justin, 1970). Indeed, most ethnographic and anthropological accounts depict Chicanos as passive and controlled by the external forces of luck, fate, and chance. This stereotypic characterization is practically identical to that attributed to Mexican nationals. From Lewis (1959) to Diaz-Guerrero (1967, 1975), Mexicans have been consistently characterized by the traits of passivity and subjugation.

If fatalism and passivity are, indeed, salient characteristics of the Chicano culture, it would be expected that Chicanos would manifest a greater external locus

of control orientation than members of cultures without fatalistic, passive orientations (e.g., Anglos). Although it would seem tenable on the basis of most ethnographic and observational accounts, this contention has not received consistent support from empirical investigations comparing Chicanos and Anglos on locus of control. Some researchers report greater externality in Chicanos, while others report either no differences or greater internality. Graves (1961) found that Anglo adolescents and adults feel greater personal control than their Chicano counterparts. Using a sample of subjects who had spent years on the welfare rolls and who were virtually unemployable, Scott and Phelan (1969) reported that Blacks and Mexican-Americans were less internal than Anglos. On the other hand, Jessor, Graves, Hanson, and Jessor (1968) were not able to replicate the the findings reported by Graves (1961). These researchers found no differences between Chicano and Anglo adolescents. Using college students as subjects, and controlling for socioeconomic factors, Garza and Ames (1974) show that Chicanos are actually more internal than Anglos. More interestingly, by breaking down Rotter's (1966) I-E scale into various factorial categories, Garza and Ames were able to show that Chicanos are less external than Anglos in the luck/fate and interpersonal respect dimensions of locus of control, reporting no differences between the two groups on academics, politics, and leadership/success.

It is highly conceivable that the contradictory locus of control findings may be due to methodological inadequacies. Although some of the studies did employ instruments which have been subjected to appropriate validation and standardization procedures, none have attempted to test the cultural equivalence of the locus of control construct nor the validity of the instruments for Chicano polulations. Triandis (1972) notes that it is methodologically indefensible to compare two cultural groups on variables which may not be culturally equivalent. He further notes that instruments validated in one culture are inappropriate for crosscultural research unless substantial invariance in the factorial structure can be demonstrated across cultures. The crosscultural comparability of a personality instrument can be assessed by examining the factorial structure of the items in each population sample. This can be done by using the conguence procedure developed by Cliff (1969). The coefficient of congruence gives an indication of the extent to which two independently generated factors are similar (also see Cattell, 1966, p. 196). Thus, it is quite feasible to examine the factorial equivalence of a personality instrument across groups. The primary purpose of this study was to determine the appropriateness of Rotter's (1966) locus of control scale for Chicano populations. If substantial similarity in the factor patterns of scores for the Chicano and Anglo groups could be demonstrated, then the Rotter scale would appear to be an appropriate instrument for comparing these two groups on locus of control.

Several studies have attempted to identify the number of factorial categories which comprise Rotter's 23-item locus of control instrument (Collins, 1974; Mirels, 1970; Levenson, Note 1). Although not all researchers report the same number of factorial dimensions, a considerable consensus seems to suggest five general conceptual categories: a) beliefs concerning luck, fate, and chance; b) beliefs concerning respect and world justice; c) beliefs concerning political matters; d) beliefs concerning academic fairness;

and e) beliefs concerning power, leadership, and success. These dimensions seem quite similar to those conceptualized by Schneider and Parsons (1970), who found the five subscales useful in cross-cultural comparisons and predicting national stereotypes. Reitz and Groff (1972) used the five subscales to compare American. Mexican, and Thai workers. Garza and Ames (1974, 1976) recently used the Schneider and Parsons categories in their comparison of Chicano and Anglo college students. Since these five categories have been shown to be useful in cross-cultural comparison, the research strategy of the present study was to empirically determine the appropriateness of the categories for comparing Anglo and Chicano populations.

Method

Rotter's (1966) I—E scale was administered to 203 Anglo and 244 Chicano undergraduate college students enrolled in psychology and sociology classes at Texas A & I University. The Chicano subjects used in this study constitute a substantial bilingual and bicultural group from South Texas communities having large proportions of Chicano residents (above 50% in many instances). In terms of the typology proposed by Ramirez and Castaneda (1974), the Chicanos subjects would be considered Dualistic, although many of the cultural activities seem to differ substantially from both Anglo and Mexican traditions.

The data from the Anglo and Chicano subjects were factor-analyzed separately. In each case, the responses to the 23 scored I—E scale items were intercorrelated and. entering squared multiple correlations in the main diagonal, the principal-factor method was used to extract the factors from the resulting matrix. Kaiser's (1958) Varimax technique was used to rotate the components to an orthogonal simple structure. To test the similarity of the factorial structure, Cliff's (1966) congruence procedure was used to compare the factor patterns of the Chicano and Anglo groups. This procedure yields an index (coefficient of congruence) of the similarity of the corresponding factor pairs. The coefficient of congruence (r_c) gives an indication of the extent to which two independent generated factors are similar (Cattell, 1966, p. 196). The obtained coefficients are generally evaluated subjectively since no statistical test of significance is yet available. However, Evans (Note 2) has suggested a reasonable set of criteria for evaluating the congruence coefficients. Coefficients in the .90s indicate "good" correspondence, coefficients in the .80s demonstrate "fair" correspondence, coefficients in the .70s show "poor" correspondence, and coefficients lower than .70 indicate virtually no correspondence between a pair of factors. The Evans (Note 2) criteria was used to evaluate the congruence coefficients obtained in the present study.

Results and Discussion

The factor analysis results implied strong construct validity for the five conceptually-based factors. The anticipated factors emerged in almost the same order for the Chicano and Anglo samples. In the case of the Chicano sample, Factor I (luck/fate) accounted for 12.5% of the variance, Factor II (leadership/success) for 7.2%, Factor III (academics) for 6.7%, Factor IV (politics) for 6.0%, and Factor V (respect) for 5.4%. In the case of the Anglo sample, Factor I (luck/fate) accounted for 17.6% of the variance, Factor II (academics) for 7.1%, Factor III (politics) for 6.6%, Factor IV (leadership/success) for 6.0%, and Factor V (respect) for 5.5%. Table 1 presents the item loadings for the Chicano and Anglo samples on the five factors. The numbering of the items is as presented by Rotter (1966) and the filler items are omitted. Please note that the alphabetical factor sequence does not represent the same order of factor emergence for both samples. The corresponding factors are paired for clearer between-group comparisons. The coefficient of congruence for each factor pair are shown in the bottom row of Table 1.

Items loading high on Factor A(luck/fate) deal with the person's tendency to attribute greater or lesser importance to personal effort and ability relative to luck fate, or chance influences on behavioral outcomes. Each item in this factor poses a statement affirming a subject's control

over his/her own destiny against one which assigns control to external forces (e.g., "It is impossible for me to believe that chance or luck plays an important role in my life" versus "Many times I feel that I have little influence over the things that happen to me"). Items 9, 13, 15, 18, 25, and 28 load saliently (±.25 greater) on this factor for both Chicanos and Anglos. Using the same criterion, items 10 and 29 load on the luck / fate factor for the Chicano but not for the Anglo sample. Conversely, items 3, 4, and 17 appear to be more Anglo-specific. The coefficient of congruence for this factor pair is fairly high (.85), and hence an indication of factor invariance.

High item loadings for Factor B (leadership/success) are related to internalexternal control continuum on matters dealing with controlling others (e.g., "Who gets to be boss often depends on who was lucky enough to be in the right place first" versus "Getting people to do the right thing depends upon ability; luck has little to do with it"). Items 6, 11, 16, and 25 load \pm .25 or greater on this factor for both Chicanos and Anglos. Item 15 is more Chicano-specific, whereas items 2, 3, 5, 18, 21, and 29 are more Anglo-specific. The moderate size of the coefficient of conguence (.77) indicates some degree of factor correspondence.

The items loading on the Factor C (academics) are related to academic fairness and the extent of control a respondent perceive over such matters (e.g., "Sometimes I can't understand how teachers arrive at the grades they give" versus "There is a direct connection between how hard I study and the grades I get"). Using the ± .25 factor loading criterion, items 5, 10, 11, and 23 load on Factor C for both samples; item 21 loads for Chicanos only; and items 9 and 12 load for Anglos only. However, the coefficient of congruence of .68 is fairly low, suggesting weak agreement for this factor pair.

The internal-external continuum assessed by Factor D (politics) falls within the realm of world affairs and political justice (e.g., "With enough effort we can wipe out political corruption" versus "It is difficult for people to have control over the things politicians do in office").

Locus of Control Rotated Factor Loadings for Chicanos (n = 244) and Anglos (n = 203) Table 1

		_								
	(-)	Respect	Anglo	00:	90.	.03	05	.24	.37	06
	Ξ	Resp	Chicano	17	=	.10	.03	90	.22	.05
	D	Politics	Anglo	11	.32	02	60:	.18	.14	.05
ors		Poli	Chicano	.12	.23	.01	60	.04	.05	.00
Locus of Control Factors	၁	Academics	Anglo	91.	90:-	.12	.26	.17	.01	.31
cus of Co		Acad	Chicano	01	10	90:	.50	.03	.22	02
Loc	В	Leadership, Success	Anglo	.38	38	90:	.28	.25	.24	02
		Leade	Chicano	.22	17	.23	.07	.30	.02	.03
	A	Luck, Fate	Anglo	.13	84.	.36	-0.	.12	.05	.41
	7	Luck	Chicano	- 19	91.	.10		.03	.01	.29
				2. Many of the unhappy things in people's lives are partly due to bad <i>luck</i> .	3. One of the major reasons why we have wars is because people don't take enough interest in politics.	4. Unfortunately, an individuals worth often passes unrecognized no matter how hard he tries.	5. Most students don't realize the extent to which their grades are influenced by accidental happenings.	6. Without the right breaks one cannot be an effective leader.	7. No matter how hard you try some people just don't like you.	9. I have often found that what is going to happen will happen.

10. Many times exam questions tend to be so unrelated to course work that studying is really useless.11. Getting a good job depends mainly on
06
.10 .08
.49 .43
.33 .41
.22 07
.06 .29
.34 .28
.16 1.7
02
.0402

Table 1 (cont'd)

Each item is represented by the alternative scored for external control. Omitted items 1, 8, 14, 19, 24 and 27 are unscored fillers. Note:

The common items are 12, 17, and 22. Items 3 and 29 loaded saliently only in the Anglo sample, and there were no Chicano-specific items in this factor. The congruence coefficient of .74 for this factor indicates a modest degree of factor similarity.

High item loadings on Factor E (respect) are related to the extent of control a respondent feels he or she has over issues dealing with personal dignity and interpersonal respect (e.g., "People are lonely because they don't try to be friendly" versus "There's not much use in trying too hard to please people, if they like you, they like you"). The loading of items 20 and 26 are salient in both examples, as in the case of Factor D, no Chicano-specific items appeared on this locus of control dimension. However, item 7 did load saliently on this factor in the Anglo sample. The low congruence coefficient (.70) indicates somewhat weak factor similarity in this pair.

The fact that the factors contain a number of sample-specific items and disparate loadings on the same item can possibly be seen as differences in the meaning conveyed to Chicanos and Anglos by the various items. This can be readily seen by examining the factor loadings of item 11 in the Chicano and Anglo samples. The respondent is asked to choose (agree with) one of these two statements: "Becoming a success is a matter of hard work, luck has little or nothing to do with it" or "Gettinga good job depends mainly on being in the right place at the right time." As can be seen in Table 1, Chicano responses load highly on the leadership/success factor, whereas Anglo responses load the strongest on the academic dimension. In other words, while item 11 tends to convey "leadership" qualities for Chicanos, it apparently conveys more "academic" qualitiess for Anglos.

What can be concluded regarding the validity of the I—E dimensions for Chicano populations? The luck/fate factor shows substantial invariance across the two samples and, hence, can be tentatively regarded as meeting adequate standards for cultural equivalence. The cross-sample stability of the leadership/success factor also seems reasonable. However, the cultural equivalence of the remaining three dimensions is somewhat question-

able. The correspondence of the politics factor across the two samples is quite modest. The academics and respect dimensions show even less cultural equivalence. Hence, although the expected internal-external control factors emerge in both samples, the concepts do not appear to consistently convey the same meaning for Chicanos and Anglos. It would, therefore, be methodologically presumptuous to use this set of dimensions to compare the two groups on their locus of control beliefs without noting the potential problems in interpreting the results.

The fact that only two of the five factors showed an adequate degree of crosssample equivalence can shed some light on the contradictory locus of control findings with Chicano and Anglo subject populations. Although the luck / fate and leadership/success I-E dimensions of the Rotter scale seem appropriate for comparisons between Chicanos and Anglos, the validity of comparisons employing the full scale would appear to be in question. It is realized that showing the presence or absence of factorial invariance across two socioculturally different populations does not address the crucial question of predictive validity. However, it should be noted that most cross-cultural locus of control studies have tended to be of the "descriptive" variety and have not dealt with behavioral predictions. Do individuals scoring in the internal direction manifest comparable behavioral patterns across cultures? While the extent of predictive validity can not be adequately tested by the factor analytic methods employed in the present study, the empirical examination of the degree of cultural invariance of the various locus of control dimensions is clearly an essential part of any cross-cultural validation procedure (see Triandis, 1972). Future research should attempt to demonstrate the differential predictive validity of the I-E measure across Chicano and Anglo subject populations preferably by using an appropriate set of external criterion behaviors.

The implications of the findings of the present study extend far beyond the locus of control construct and Rotter's I-E scale. Much of the psychological research

literature on Chicanos has failed to consider the extent of cultural equivalence of psychological measures and operational definitions. This is unfortunate since most research on Chicanos is based on Anglo-American measures and ex-

perimental paradigms.

The problem of cultural equivalence of research measures is crucially important in the light of empirically unvalidated ethnographic analyses which are often used as post hoc explanations of psychological research comparing Mexicans and Americans or Chicanos and Anglos. Most ethnographic studies depict Chicanos as passive, fatalistic, and as lacking an internal sense of control over their destinies (Cabrera, 1964; Justin, 1970). Anthropological comparisons of Mexicans and Americans reveal quite similar characterizations. Mexicans have been consistently described as more passive and less assertive than Americans (Diaz-Guerrero, 1967, 1975; Fromm & Maccoby, 1970; Kluckhohn & Strodtbeck, 1961; Lewis, 1959).

While these cross-cultural depictions may be supported by intuitive and anecdotal sources of evidence, empirically investigations which have attempted to directly measure some aspects of the "activity-passivity" psychological dimension have failed to provide strong evidence for the alleged dichotomy between Mexicans Americans or between Chicanos and Anglos. This is especially true in the case of the locus of control construct (Cole & Cole, 1977; Garza & Ames, 1974). Research on cognitive styles (Buriel, 1975; Ramirez & Price-Williams, 1974) and on assertiveness (Kagan, 1974, 1975; Kagan & Carlson, 1975) does lend some support to the anthropological contentions. However, the degree of cultural equivalence of the research instrumentation has never been empirically assessed (see Kagan & Buriel, in press).

The findings of the present study underscore the intricate problems involved in assessing and comparing Chicanos and Anglos on a seemingly straightforward psychological dimension such as locus of control. The potential problems are much more complicated than most researchers are willing to admit. The use

of Anglo personality tests or Angloderived experimental manipulations without determining their appropriateness for Chicano populations is highly irresponsible and lacking in scientific validity and sociocultural objectivity. The problems of cultural equivalence is extremely complex and entails more than merely controlling for the obvious factors such as readability and language usage. As clearly indicated by the data presented in the present study, even simple statements regarding beliefs in internal as opposed external control may evoke totally different meanings for Chicanos in comparison to Anglos. It is quite conceivable that a great deal of the research literature comparing Chicanos and Anglos may be based on equivocal measurements of a given psychological construct, casting serious doubt on the validity of the findings.

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