DOCUMENT RESUME

ED 030 918 CG 004 105

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University of Notre Dame, South Bend, Ind.
Pub Date [69]
Note-11p.
EDRS Price MF-$0.25 HC-$0.65
Descriptors-*College Environment, Correlation, *Measurement Instruments, *Sampling, *Student School Relationship, *Test Validity
Identifiers-Pace College and University Environment Scales

Pace's College and University Environment Scales (CUES) fails to consider the interdependency of the individual and his environment. A random sample of students (A) and two samples of general psychology students (B) and (C) were used to determine the legitimacy of CUES claims of freedom from: (1) sampling bias, and (2) correlation with individual characteristics. Items on the CUES instrument answered in the keyed direction by at least 66% of the students in at least one of the groups were used in scoring. Results show statistically significant differences on 74% of those items among the three samples, questioning the CUES claim of freedom from sampling bias. Computations of a rate of agreement index indicate a high degree of item endorsement agreement between samples (A) and (B), but a low degree among all three samples. Several correlations exist between CUES and the Edwards Personal Preference Schedule, which was administered to sample (A). Thus, CUES is questionable as a measure of campus climate, both in elucidating common orientations and responding to sub-group variation. (AE)

HOW OBJECTIVE ARE MEASURES OF CAMPUS CLIMATE?

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College faculty, administrators, student personnel workers, and, in many cases, student groups are vitally concerned about the environments within which the educational enterprise is transacted. No fewer than 14 hypotheses, for example, have been suggested (Halleck, 1968) to account for student unrest. It is interesting that each of these hypotheses acknowledges, implicitly or explicitly, the impact of the college environment, or climate.

The wide acceptance of the measures of college climate developed by Pace and Stern (1958) and, more recently, Pace's College and University Environment Scales (1962) is a function of the widespread need and interest in this area of study. Another factor in the acceptance of these scales is the claim of objectivity and representativeness of the content of the scales and of their potential usefulness for comparisons between different institutions.

The scales are designed "to describe the prevailing atmosphere or climate of the campus (Pace, 1962, p. 1)." The purported objectivity permits the use of relatively small samples with the attendant claim that the scales appear to be free of much of the sampling bias of other scales. It is reported in the CUES manual that "small and even presumably unrepresentative groups have been found from past experience to answer CUES statements in ways which do not differ very much from a larger more representative sample (p. 11)." This purported objectivity is placed into question by some of the empirical data presented in this report.

A second claim for the CUES instrument is that the scales are uncorrelated with the characteristics of individuals (McFee, 1961 and Pace, 1962). Again, empirical data presented in this paper, along with the results of an earlier study by Yonge (1968), place this claim into question.

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An assumption underlying the use of the CUES instrument seems to be that student and environmental characteristics are separate and distinct domains which, perhaps in their interaction, influence behavior. This separation does make it possible for researchers to talk about student mix and fit between college and student characteristics. But this assumption and, often, research focussing upon student and climate characteristics fails to acknowledge that a fundamental, reciprocal relationship exists between the individual and his environment.

Meanings, once they have been formed, tend to be self-reinforcing and enable the individual to conceive of his world as being reasonably stable despite the fact that new events are continually occurring. The relative stability of the person's orientation toward his world is a product human perception. Although it is generally assumed that what is experienced is a mirror-like reflection of what is "out there", and this is the assumption Pace apparently makes, in reality, all perception is selective, cumulative, and constructive. Perception is not only a reaction to "objective" stimuli but it is a process in which the individual notes and responds to cues to which he is already sensitized. The organization of the perceptual field is such as to maximize the possibilities of attending to stimuli that are relevant to the expectations and to minimize attending to stimuli that are not. Thus, as Shibutani points out, "perceiving is never just receiving, there is always discrimination and selection. The manner in which anyone perceives his environment depends upon the meanings that various objects have for him as well as upon what he is doing. Since meanings are products of past experience, people from different cultural backgrounds and/or personality structure should perceive identical situations in somewhat different ways (1961, p. 109)."

Yonge (1968), describes the interaction which exists as follows: "Assume that I am confronted with a problem I cannot solve. My lack of ability manifests itself in the light of this problem situation, and the environment is

difficult of problematic in the light of my inability to handle it. These are but two ways of expressing the same state of affairs. My characteristics (abilities) cannot be defined apart from some situation (problem), and my situation cannot be defined apart from my characteristics. From the above, one can say that my abilities are modes of being-in-the world, and, as such, they should not be conceived as static attributes analogous to the physical attributes of objects. A more radical way of stating the above thesis is that without an environment there is no individual and without an individual there is no environment. Each requires the other as part of its definition."

The purpose of this study was to determine whether the CUES is free from the limitations of sampling bias and whether "small and even presumably unrepresentative groups...answer CUES statements in ways which do not differ...from a larger more representative group." A second objective was to determine whether the CUES scales are, in fact, uncorrelated with the personality characteristics of the "reporters."

PROCEDURE

Three samples of students at a private Midwestern university were drawn for participation in this study. The first sample (N = 152) was a random, stratified sample of university undergraduates (freshmen excluded). The second sample (N = 52) was drawn from a population of general psychology students (which included sophomores, juniors, and seniors), and the third sample (N = 58) was drawn from the same population of general psychology students. The CUES was administered to each of the three sample groups and the responses scored and tallied according to the "66 plus method" advocated by Pace (1962, p. 5).

If the purported objectivity of the scales is valid, then the general null hypothesis of no difference in response tendency among the three samples, "reporters," to use Pace's term, would be supported.

The strategy for data analysis was to focus only upon the items which were

answered in the keyed direction by 66 percent or more of the students in at least one of the samples. This is consistent with the recommended "66 plus method" of scoring.

In addressing the question whether CUES is uncorrelated with the personality characteristics of the respondents, the Edwards Personal Preference Schedule was administered to the subjects in the random, stratified sample.

RESULTS

Of the 150 "climate characteristics," or items, on the Cues, 88 were answered in the keyed direction by 66 percent or more of the students in at least one of the samples. Of these 88 items, there were 23, or 26 percent, for which no statistically significant differences were found among the three samples. Thus, on 26% of the CUES items all students tended to describe the environment in the same way. On the other hand, there were 65, or 74 percent, for which statistically significant differences were found among the three samples. Using a Chi-square test with 2 degrees of freedom, three items were significantly different at the .05 level, six at the .01 level, and 56 at the .001 level.

These data would tend to place into question the suggestion that CUES is free from the limitations of sampling bias and that small and even unrepresentative groups answer CUES in ways which do not differ from a larger more representative sample. In fairness to the CUES instrument, it is essential to point out that while the statements cited above regarding sampling bias and unrepresentative groups appear in the CUES Manual (1962, p. 11), it is suggested that the CUES user "select a reasonably representative group of qualified reporters (p. 11)."

A second approach to data analysis yielded results which have relevance to the differential pattern of scale item endorsement which has been shown to exist among the sample groups. In order to ascertain whether the 5 scales produced differential rates of agreement, a ratio called the index of agreement

was computed for each of the five CUES scales, i.e., Practicality, Scholarship, Community, Awareness, and Propriety for all possible combinations of the three samples. These possible combinations include (1) the three samples (A, B, and C), (2) Sample A with Sample B, (3) Sample A with C, and (4) Sample B with C. Sample A was the stratified random sample (N = 152), Sample B was one group of general psychology students (N = 58), and Sample C was the second group of general psychology students (N = 52).

The index of agreement represents the ratio of item endorsement agreement among or between the sample combinations to the total number of items endorsed by the samples comprising the combinations. These ratios are presented in Table 1. Thus, for example, on the Practicality Scale there was a total of 17 items endorsed by one or more of the three samples in the "A, B, and C" group. Of these 17 items, however, on only 4 was there agreement among the three samples. This provided the fraction 4/17, or the ratio .222. Similarly, for the groups "A and B" on the Practicality scale, 15 items were endorsed by one or both groups. Of these 15 items, there was agreement on 10 of them. This provided the fraction 10/15 or the ratio .667.

PLACE TABLE 1 ABOUT HERE

Inspection of the data in Table 1 indicates that a high degree of item endorsement agreement exists between Sample A and B, i.e., the stratified random sample (N = 152) and the first group of general psychology students (N = 58). On the other hand, a low degree of item endorsement agreement exists among the three samples.

Data which tend to nullify the claim that CUES scores are not affected by student characteristics are presented in Table 2 which indicates the correlations between Edwards Personal Preference scores and CUES. A short definition of each of the scales on the Edwards and CUES follows:

DEFINITIONS

CUES

PRACTICALITY: Procedures, personal status, and practical benefits are important.

COMMUNITY: A friendly, cohesive, group-oriented campus--supportive and sympathetic.

AWARENESS: Emphasized in this environment is an awareness of self, society, and esthetic stimuli.

PROPRIETY: Caution and thoughtfulness are evident, and group standards of decorum are important.

SCHOLARSHIP: Competitively high academic achievement and a serious interest in scholarship are emphasized.

EDWARDS PERSONAL PREFERENCE

ACHIEVEMENT: To do one's best, to accomplish something very difficult or significant.

DEFERENCE: To let others make decisions, to conform to what is expected of one.

ORDER: To have regular times and ways for doing things, to keep things neat and organized.

EXHIBITION: To be the center of attention, to say witty things or talk about self.

AUTONOMY: To be independent of others in making decisions, to avoid responsibilities and obligations.

AFFILIATION: To be loyal, to participate in friendly groups, to share things with friends.

INTRACEPTION: To analyze one's motives and feelings, to observe and understand the feelings of others.

SUCCORANCE: To receive help or affection from others, to have others be sympathetic and understanding.

DOMINANCE: To persuade and influence others, to supervise others, to be regarded as a leader.

ABASEMENT: To feel guilty when one has done wrong, to accept blame, to feel inferior.

NURTURANCE: To help friends or others in trouble, to forgive others, to be generous with others.

CHANGE: To do new things, to meet new people, to take up new fads and fashions.

ENDURANCE: To keep at a job until it is finished, to avoid being interrupted while hard at work.

HETEROSEXUALITY: To go out with or be in love with one of the opposite sex, to tell or listen to sex jokes.

AGGRESSION: To attack contrary points of view, to become angry, to make fun of others or tell them off.

PLACE TABLE 2 ABOUT HERE

Inspection of Table 2 indicates, for example, that a high negative relationship exists between the tendency to be independent of others in making decisions (Edwards' autonomy) and the tendency to perceive the environment as being friendly, cohesive, supportive, and sympathetic (CUES' community).

In Yonge's paper, "Personality Correlates of the College and University Environment Scales," (1968) CUES scales were compared with OPI scales. There are striking parallels in the results of the data presented here and Yonge's earlier results.

DISCUSSION

This paper focussed upon the serviceability of CUES as a dependable measure of campus climate. The data presented tend to bring into question the purported objectivity of the scales and the efficacy of using 'small and presumably unrepresentative groups" to describe a given campus climate. A secondary consideration was whether CUES scales are uncorrelated with personality measures.

The data presented in this study would support the conclusion reached by Berdie (1968, p. 775) that "an instrument such as CUES can be used to generalize about parts of a University, but only to a lesser extent can it be used to generalize about the entire University." Indeed the fact that the two samples of general psychology students used in this study differed so greatly may be used, in the presence of additional empirical data, to support a stronger conclusion which would bring into question the objectivity of CUES even for

sub-group description and analysis. Data of this nature are crucial to the issue of the adequate description of the campus environment. If the researcher takes the position articulated by Becker (1966, p. 64) that "all students are subject to the discipline of the college's system of grades, credits, and degree requirements," i.e., that the common orientations that result are the important ones, then a measure of campus climate that elucidates these common orientations but which may be insensitive to sub-group differences is necessary. On the other hand, along with Clark and Trow (1966), if the researcher is impressed by sub-group variation and regards it useful to consider a finer set of distinctions which point to several different sub-cultures, then a measure of campus climate capable of eliciting sub-culture differences is necessary. It would seem that CUES falls short of both marks.

REFERENCES

1. Becker, H. S. "Student Cultures as an Element in the Process of University Change." In R. J. Ingham (Ed.), Institutional Backgrounds of Adult Education: Dynamics of Change in the Modern University. Cambridge: Center for the Study of Liberal Education for Adults, 1966.

2. Berdie, R. F. "A University is a Many-Faceted Thing," Personnel and Guidance Journal 1968, 45, 768-775.

3. Clark, B. R.; Trow, M. "The Organizational Context." In T. M. Newcomb and E. K. Wilson (Eds.), College Peer Groups. Chicago: Aldine, 1966.

4. French, J. W. The Relationship of Problem Solving Styles to the Factor Composition of Tests New Jersey: Educational Testing Service, 1963.

5. Halleck, S. L. Hypotheses of Student Unrest, a paper presented at the 23rd National Conference on Higher Education, the American Association for Higher Education, March 4, 1968.

6. McFee, A. "The Relation of Students' Needs to Their Perceptions of a College Environment." Journal of Educational Psychology, 1961, 52, 25-29.

7. Pace, C. R. College and University Environment Scales New Jersey: Educational Testing Service, 1962.

8. Pace, C. R.; Stern, G. G. "An Approach to the Measurement of Psychological Characteristics of College Environments," Journal of Educational Psychology, 1958, 49, 269-277.

9. Shibutani, T. Society and Personality: An Interactionist Approach to Social Psychology. Englewood Cliffs, Prentice-Hall, Inc., 1961.

10. Yonge, G. D. "Personality Correlates of the College and University Environment Scales," Educational and Psychological Measurement, 1968, 28, 115-123.

TABLE 1

RATIOS OF ITEM ENDORSEMENT AGREEMENT FOR THE CUES SCALES BY THE VARIOUS SAMPLE COMBINATIONS

Scales	Sample Combinations			
	A+B+C	A+B	A+C	B+C
Practicality	.222	.667	.267	.250
Scholarship	.263	.625	.368	.333
Community	.238	.813	.300	.250
Awareness	.105	.800	.167	.111
Propriety	.090	.500	.200	.111
Average of Ratios	.184	.681	.260	.211

TABLE 2

CORRELATIONS BETWEEN EDWARDS PERSONAL PREFERENCE SCORES AND CUES

(N = 150)

	Practicality	Community	Awareness	Propriety	Scholarship
Achievement	-23**	-11	02	-01	10
Deference	-11	16	12	23**	13
Order	03	-01	05	17*	18*
Exhibition	-01	06	03	-06	02
Autonomy	-18*	-36**	14	-16*	-21**
Affiliation	08	20*	19*	10	12
Intraception	02	+21**	09	-01	04
Succorance	-01	17*	19*	-03	18*
Dominance	13	02	-10	-04	04
Abasement	00	03	10	-02	07
Nurturance	-07	20*	19*	09	14
Change	-28**	-09	13	-22**	-06
Endurance	-08	-01	03	11	08
Heterosexuality	05	07	-01	-05	-27**
Aggression	15*	-11	-18*	-25**	-23**

* Significant at the .05 level.
** Significant at the .01 level.