

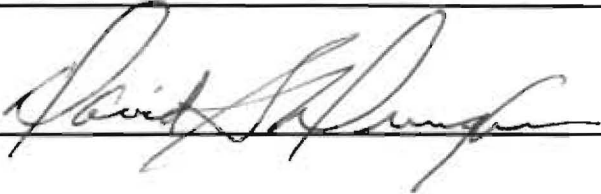
AN ABSTRACT OF THE THESIS OF

William G. Masten for the Master of Science

in Psychology presented on July 16, 1982

Title: CORRELATION OF DEPRESSION AND ACCULTURATION IN

MEXICAN-AMERICAN FEMALES

Abstract approved: 

It has been postulated that the result of the Mexican woman's inability to live up to the stiff requirements of her culture should show itself in depressive trends. These theories are often applied to the Mexican-American female as well. Some studies show higher depression rates in Mexican-American female clinic populations. However, not all clinical investigations have reached the same conclusion. In the research on non-psychiatric populations of Chicano women, there is also no consensus regarding depression. The purpose of this study was to determine if acculturation is related to depression in Mexican-American females. A second goal was to determine if Mexican-American women are depressed when compared to Anglo-American females when the variables of age, education, and occupation of the head of the household are controlled. Subjects were drawn from two universities, Parent-Teacher Associations, church

groups, and a Hispanic social service agency. Depression was measured by the CES-D, and acculturation was measured by an acculturation scale designed for Mexican-Americans. Results showed no significant relationship between depression and acculturation and that the Chicano females had significantly higher depression scores than the Anglo-American females. This research was in agreement with the latest studies that have also found Mexican-Americans to show higher depression scores. These higher depression scores may be a result of discrimination, prejudice, exclusion from the decision-making process, awareness of the powerless position of Chicanos, or an inability to achieve a desired standard of living. Higher depression scores may also be the result of cultural differences between Anglos and Chicanos. However, for this sample, higher depression scores were not related to acculturation.

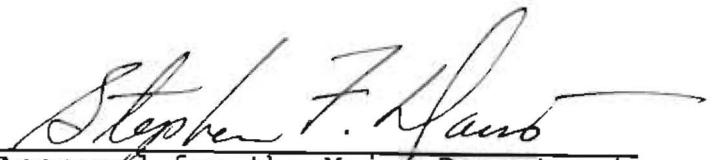
CORRELATION OF DEPRESSION AND ACCULTURATION
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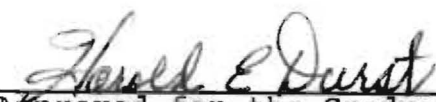
A Thesis
Presented to
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In Partial Fulfillment
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Master of Science

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CONTENTS

CHAPTER	Page
1. INTRODUCTION.	1
2. METHOD.	23
Subjects.	23
Apparatus	24
Procedure	24
3. RESULTS	26
4. DISCUSSION.	28
REFERENCE NOTES	31
REFERENCES.	33

CHAPTER 1

INTRODUCTION

Mental health research concerning Mexican-Americans or Chicanos generally started with an examination of their underutilization of mental health services (Jaco, 1959). Later articles discussed the reasons for underutilization (Torrey, 1970). Research then moved to examine the Chicano clients who presented themselves for treatment (Heiman & Kahn, 1974). Since that time research has expanded to many areas such as psychotherapy (Herrera & Sanchez, 1976), psychological testing (Mercer, 1977), and the psychology of the Chicano female (Senour, 1977). Recently, complete books have appeared on the psychology of the Chicano (Martinez, 1977; Baron, 1981; Hernandez, Haug, & Wagner, 1976). The most recent trend seems to be translating and standardizing psychological tests with Mexican-Americans (Roberts, 1980; Lubin, Schoenfeld, Rinck, & Millham, 1981).

This increase in research has many causes. Some of these include: an increase of 62% in the Census count of Chicanos in the U.S. (U.S. Bureau of the Census, 1980); the Chicano movement for civil rights; a number of newly formed research centers to research Hispanic issues; and the recognition by psychologists and other mental health professionals that the Mexican-American has a culture different from the Anglo-American culture and,

therefore, has different mental health needs.

Diaz-Guerrero (1975) postulated that the result of the Mexican women's inability to live up to the stiff requirements of her culture should show itself in depressive trends. Research in Mexico City (Diaz-Guerrero, 1975) revealed that when asked, "Do you often feel very depressed?", 57% of the women sampled responded "yes". There is some data to suggest higher depression rates of Mexican-American women in clinical populations. Jaco (1959) studied new psychotic cases for the two year period of 1951-1952 in Texas. Jaco found the Chicano female had a rate more than twice that of non-white females for manic-depression and psychotic depression (Jaco, 1959). In a study where child guidance clients were matched on income, differences between Mexican-Americans and Anglo-Americans showed depression in the Mexican-American girl exceeded depression in the Anglo-American girl by a rate of three to one (Stoker & Meadow, 1974). Heiman and Kahn (1974) report the patients in a mental health center designed to reach high risk Mexican-Americans were mostly young women with marital problems, somatic complaints, and depressive symptoms.

A background of the traditional Mexican family structure is an important prerequisite to understand the Chicano because the Mexican-American is closely tied to Mexico. Diaz-Guerrero (1975) described the Mexican family as being founded upon two fundamental propositions: absolute supremacy of the father, and absolute self-sacrifice of the mother. The Mexican mother is supposed to deny all possible selfish aims. The Mexican father is to be obeyed and respected in all matters.

There is a specific set of role expectations for both sexes (Diaz-Guerrero, 1975). The male is supposed to only play games like cowboy or soldier. He should not and cannot do housework. He is expected to be aggressive and ready to fight at all times. During adolescence, virility is expressed by talk or action in the sexual sphere. The girls who were once avoided are now pursued. The future wife must be chaste, delicate, homey, sweet, maternal, and beautiful. Once the wife has been chosen, all other women become objects for sexual conquest. Male virility is measured by sexual potential and activity, strength, courage, audacity, and success in science or other intellectual fields. After marriage the male must work and provide for his family. He demands obedience from the entire family. The father does not know or care to know what goes on in the home. After work he may go out with his friends as he did before marriage.

A girl, on the other hand, must play dolls and house and must not engage in the rough games of boys. While boys play outside, girls help their mothers with housework and learn "feminine" activities like embroidery, lace making, painting, music, poetry or literature. She is expected to be neat, graceful, and coquettish. An education is not important or necessary for the female. A female child is supposed to satisfy the most menial needs of her brothers. They, in turn, must guard her chastity. The happiest period in the female's life is adolescence because she is honored and showered with poems, songs, serenades, and tenderness. After marriage she passes from queen to slave. Later she is considered the dearest being in existence by her children and is valued highly.

Within the family the first few children ought to be boys. A girl is a bad economic break. The family must guard her honor, and her marriage would bring a stranger into the family. If she does not marry, it is feared she will become a neurotic old maid. The birth of a girl is only desirable after several brothers so she can assist her mother, thus allowing her mother more time to care maternally for the father.

Based on these ideas, Diaz-Guerrero believes the Mexican family is a favorable setting for the development of neurosis. This is especially so with the female because Mexican women may have problems in living up to the strict cultural demands. Her inability to live up to these demands could show itself in self-belittlement, depressive trends, an old-maid complex if she does not marry, and more psychosomatic ailments than men. Males could have problems of submission, conflict and rebellion against authority, preoccupation and anxiety regarding sexual potency, conflict and ambivalence regarding the maternal and tender roles versus the sexual and virile roles, difficulties superseding the maternal state, problems giving love to another woman besides the mother, problems with the Oedipus complex, and guilt regarding deviations from the female pattern.

There appears not to be one specific type of Mexican-American family. Instead, there are thousands of Chicano families, each one being different along regional, historical, political, socio-economic, acculturation and assimilation factors (Murillo, 1976). Results of studies of acculturation of Mexican-Americans revealed that acculturation has separated the Chicano family from the Mexican prototype (Martinez, 1977). What can be

said of the Chicano family is that the family structure may be very "Mexican", very "Anglo", or somewhere in between.

While some clinical investigations (Jaco, 1959; Stoker & Meadow, 1974) have shown the Chicano female to be depressed when compared to other groups of females, not all research has come to the same conclusion. In a study comparing Mexican-American in-patients to Anglo-American in-patients, Meadow and Stoker (1965) studied a random sample of 120 Mexican-Americans and 120 Anglo-Americans. Each group had 60 males and 60 females. A comparison of Mexican-American and Anglo-American females revealed affective symptoms such as crying spells, hyperactivity, irritability, depression, and temper tantrums were greater in the Chicano female, while there were slightly more manic-depressive and depressive reactions in the Anglo female.

Other studies have compared Chicano females to other groups of females in the general population. To compare depression levels of Mexican-American and black females in a Southwest city, Quesada, Spears, and Ramos (1978) studied a random sample of eleven census tracts in the west side of the city. Four hundred seventeen Mexican-Americans and 97 blacks were administered the Zung's Self-rating Depression Scale (SDS) (Zung, 1965) and were asked questions on age, income, alienation, marital status, education, occupation, and social-economic status (SES). Results showed a slightly higher incidence of depression in blacks than in Mexican-Americans. Age showed a curvilinear relationship with depression. This curvilinearity was more pronounced among blacks because there was a higher concentration of depressed blacks aged 60 or over. An inverse relationship was found between monthly

income and depression, with individuals with lower incomes showing higher depression incidences. Among all educational categories, both the mean depression and the percentage of high-depression individuals were higher for blacks than Chicanos. A slight inverse relationship was found for occupational ratings and depression for both blacks and Mexican-Americans. At the time of the interview those who were unemployed showed the highest incidence of depression. Among Chicanos, alienation and SES were significant predictors of depression.

To test if Mexican-American students were more depressed and alienated than Anglo-American students, Cardona (1977) tested 60 Mexican-American and 60 Anglo-American students. Two self-report measures were used for both depression and alienation. Results showed the Mexican-Americans were not more depressed or alienated than Anglo-American students. Unexpectedly high rates of depression and alienation were also found among Anglo-American students.

These studies raise more questions than they answer, and there is no consensus of opinion regarding depression in the Chicano female. While the ideas of Diaz-Guerrero (1975) are widely accepted for the Chicano, there is no research to suggest that the non-clinically involved Chicano female is depressed. If the Mexican-American woman, in trying to live up to the cultural demands, develops depressive trends, data in a study designed to correlate the level of acculturation and the level of depression should support this assumption. To see if the Mexican-American female is more depressed than other female groups, a study must control for the factors of social-economic status, age, and

education. Another important aspect overlooked in past studies is using a depression scale that was designed for use in the general population and that has reliability for Mexican-Americans.

The problem of defining depression has been clearly stated by a number of authors. Blinder (1969) stated,

Perhaps the greatest problem is that the phenomena lumped together under the term depression are a 'mixed bag' containing some essentially physiological and psychic disturbance, and some unconscious, habitual patterns of behavior that may bring the patient repeatedly to grief. Any schema of classification attempting to assimilate such an odd assortment is apt to be unsatisfactory as a guide to either diagnosis or treatment. (p. 9)

Mendelson (1959) also pointed out the difficulties in defining depression by saying, "there is not widespread agreement about what phenomenon is actually being described, no consensus as to the internal psychic atmosphere implied by this expression and no unanimity about the relationship of depression to applied psychic states" (p. 183). Depression has been described by Levitt and Lubin (1975) and by Mendels (1970) as a mood, a symptom, a syndrome, and a discrete disease entity. Finally, Beck (1973) offers a more precise definition of depression by stating,

Depression may now be defined in terms of the following attributes: 1) a specific alteration in the mood: sadness, loneliness, apathy; 2) a negative self-concept associated with self-reproaches and self blame; 3) regressive and self-

punitive wishes: desires to escape, hide or die; 4) vegetative changes: anorexia, insomnia, loss of libido; 5) changes in activity level: retardation or agitation. (p. 6)

A comprehensive review of the literature on depressive symptoms was completed by Levitt and Lubin (1973). In this review, a total of 38 symptoms were noted in at least two sources. The symptoms most frequently noted were: suicidal thoughts and threats, sadness, pessimism, loss of sex drive, insomnia, anorexia, weight loss, inability to concentrate, minor aches and pains, and guilt feelings. In this research, depression was defined as including "...depressive mood, feelings of guilt and worthlessness, feelings of helplessness and hopelessness, psychomotor retardation, loss of appetite, and sleep disturbance" (Radloff, 1977, p. 386).

The Center for Epidemiologic Studies-Depression Scale (CES-D) is a 20 item self-report scale designed to measure depressed mood in community settings (Markush & Favero, 1973). The 20 items were taken from the previously developed scales of Beck (Beck, Ward, Mendelson, Mock & Erbaugh, 1961), of Raskin (Raskin, Shulterbrandt, Reatig, & McKeon, 1969), the depression scale of the Minnesota Multiphasic Personality Inventory (Dahlstrom & Welsh, 1960), and the depression scale of Gardner (Note 1). The CES-D was used because it was designed to be used in community settings and because it has reliability with Chicanos.

The subject is asked to respond to 20 items by reporting how often during the preceding week he felt as described in each item. The following scale is used: 0, for less than 1 day; 1, for 1 to 2 days; 2, for 3 to 4 days; and 3, for 5 to 7 days. The

CES-D has a range of from 0 to 60. A score of 16 or more is considered a case of depression. Four questions, numbers 4, 8, 12, and 16 are scored in reverse (Comstock & Helsing, 1976).

The original study using the CES-D with community populations was done in Kansas City, Missouri and Washington County, Maryland in 1971 (Comstock & Helsing, 1976). A random sample of 5,172 persons was selected from Kansas City and Washington County. Of these 5,172 subjects, 3,845 were interviewed. The response rates were 72% for Kansas City and 78% for Washington County. Refusal, illness, prolonged absence from home, and language difficulty were the reasons for failure to respond. Of the total sample all subjects were 18 or over, 295 were black, and 3,550 were white. All black subjects were from Kansas City. A little more than two-thirds of the sample were between 25 and 65 years of age. About 60% of the group was employed. In Kansas City the median household income for blacks was \$6,000 per year, and for whites the median was \$10,050 per year. In Washington County the median yearly income was \$9,800. Twenty-six percent of the Kansas City blacks had scores of 16 or higher, while 20% of the Kansas City whites and 17% of Washington County whites had similar scores. Kansas City blacks had the largest proportion of high depression scores. Washington County whites had the smallest proportion of high depression scores. Within both white samples, more females than males had high depression scores. About 30% of the 18 to 25 year old group had high depression scores. Among married persons, high depression scores were lowest. An inverse relationship of schooling to depression was found among whites. Of those currently employed, the lowest

proportion of high depression levels were found. Household income was inversely related to high depression scores, with the higher income having the lower scores.

Radloff (1977) reported results of field testing to demonstrate the test-retest repeatability of the CES-D across two equivalent samples and across two tests on essentially the same sample. The samples used were 4,996 whites from the general population of Kansas City, Missouri and Washington County, Maryland, and 70 psychiatric patients from a private hospital in Washington County. The CES-D scale was acceptable for both general and clinical populations with the average nonresponse rate to single items less than 0.2%. Two items had responses of "don't know" or "not applicable" more often than average. These items were "I felt I was just as good as other people" (1.6%) and "I felt hopeful about the future" (2.2%). The entire scale was considered missing if more than four items were missing. Results showed higher inter-item and item-scale correlations in the patient sample than in the general population samples. Internal consistency as measured by the coefficient alpha and the Spearman-Brown split-half method was high in the general population sample, about .85, and higher in the patient sample, about .90. Since the CES-D is designed to measure current level of symptomatology, changes over time may not be monotonic. Test-retest correlation varied with the time interval between administrations with shorter test-retest on the average producing higher correlations. These correlations were between .45 and .70. Those general population subjects who had no negative life events during the year prior to the first interview also had the highest

test-retest correlation. Subjects with negative life events at both administrations had the lowest test-retest correlation. Radloff also found the CES-D discriminated well between community and patient samples with patients scoring significantly higher than general population subjects. Seventy percent of the patient group scored at or above the cutoff of 16 while only 21% of the general population sample scored 16 or higher. When compared to other scales the CES-D had the highest correlation with scales designed to measure depression. These were the Depressive Adjective Check Lists (Lubin, 1967), and the Bradburn Scale (Bradburn, 1969). The CES-D also had moderate correlation with interviewer ratings of depression. The subjects were asked if they "need help" or not. Those saying they "need help" had significantly higher mean depression and moderately high correlation with the Bradburn Positive Affect Scale (Bradburn, 1969). The patterns of correlations with the Bradburn Positive and Negative Affect Scales can be considered in terms of discriminant validity. Research has shown an association of life events and mental illness. The more negative the event experienced by the subjects in the past year the higher their CES-D score. Factor analysis produced four factors: depressed affect, positive affect, somatic and retarded activity, and interpersonal. The high internal consistency of the scale found in all samples argues against the use of separate factors. The total score is recommended for use as an estimate of the degree of depression. In all subgroups such as age, sex, race, levels of education, and "need help" vs. "not need help" self-report, the CES-D had a coefficient alpha of .80 or higher. This points

to the usefulness of the CES-D across demographic subgroups. Although the CES-D has high internal consistency, acceptable test-retest reliability, evidence of construct validity and concurrent validity with self-reports and other depression scales, Radloff suggests it should not be used as a clinical diagnostic tool, and individual score interpretations should not be made.

To test the validity of the CES-D in psychiatric populations (Weissman, Sholomskas, Pottenger, Prusoff, & Locke, 1977), a comparison of various community samples and psychiatric patients was made using the CES-D, the Hamilton Rating Scale (Hamilton, 1960), the Raskin Depression Scale (Raskin, Schulterbrandt, Reatig, & Rice, 1967) and, the Symptoms Checklist (SCL-90) (Derogatis, 1973). The community sample of 3,845 randomly selected adults and the 406 psychiatric patients were divided into five groups. One hundred forty-eight were acutely depressed, 87 were recovered depressed patients, 60 were drug addicts, 61 were alcoholics, and 50 were schizophrenics. Results showed the CES-D scores for psychiatric patients was considerably higher than the community sample. The acutely depressed patients scored highest 38.10, alcoholics scored 22.97, recovered depressives scored 14.85, schizophrenic patients scored 12.98, drug addicts scored 17.05, and the community sample scored 9.10. These scores indicate the CES-D is not merely measuring overall psychiatric impairment. Correlations between the CES-D total means and the Hamilton, the Raskin and the SCL-90 were all highly significant. Significant correlations were found between social class and the CES-D with schizophrenic patients, with higher social class

having higher CES-D total scores. In addition, female addicts had high total CES-D scores. Apart from these two correlations, there were no other significant correlations between CES-D scores, age, social class, and sex in the patient sample. A score of 16 or higher was satisfactory to detect depression in all but the drug addicted subjects. Concurrent validity was shown since the CES-D differentiated psychiatric patients from community normals, acutely depressed patients scored higher than other psychiatric groups, depressed subgroups within the psychiatric patients scored higher than nondepressed patients, recovered depressives scored lower than acutely depressed patients, and correlations between the CES-D and other depression scales were high. Discriminant validity was demonstrated by the high correlations of the CES-D and the depression factor of the SCL-90 and the low correlation of the CES-D with variables of age, sex, and social class. The CES-D can detect high risk groups with depressive symptoms; however, it cannot differentiate between acute depressive symptoms in the absence of other psychiatric diagnoses and depressive symptoms in association with other psychiatric or medical conditions.

To examine the presence and persistence of depressive symptoms in community and outpatient samples and to discover which symptoms best discriminate among depressed in-patients, nondepressed in-patients and community respondents, Craig and Van Natta (1976a) studied 65 in-patients, 30 of whom were depressed, and 1,614 subjects who were community residents. The instrument used to measure depression was the CES-D. Presence was defined as experiencing a symptom for 1 to 7 days during the week prior

to the interview, and persistence was defined as experiencing the symptoms for 5 to 7 days during the week preceding the interview. Results indicated that for all the depressive symptoms items of the CES-D, except the item "people were unfriendly", the depressed in-patient group showed significantly higher persistence at the .05 level than the community sample. The depressed patients also reported significantly higher presence of all depressed symptoms except "bothered by things" and "people were unfriendly" than the community sample. The nondepressed in-patients had significant presence percentages when compared to the community respondents on the symptoms of "felt like a failure", "felt fearful", "felt depressed", "felt lonely", "had crying spells", and "felt sad".

To study the level of concordance between nurses' ratings of depression in psychiatric in-patients and the level of internal agreement among self-report depression scales, Craig and Van Natta (1976b) studied 65 in-patients. Forty percent of the patients were diagnosed as depressive neurotics, 19% were affective psychotics, 19% were schizophrenics, and 20% were other diagnoses. Nurses were asked to rate each patient on the Depression Rating Scale (DRS) (Rockliff, 1971). Patients filled out the CES-D and the Depression Adjective Check Lists (DACL) (Lubin, 1967). Results showed significant correlations of the CES-D and the DRS for depressive neuroses, and for affective psychoses, but no correlation for the schizophrenic group. Correlations between the total CES-D score and the DRS sub-items revealed the depressive neurotic and other groups showed positive correlations for all items, with verbal behavior items giving higher levels of

correlation than nonverbal behavior items. The affective psychosis group showed significant correlations on all items except agitation and somatic complaints. The schizophrenic group showed significant correlations for agitation and expressed feelings of guilt and negative significant correlation for somatic complaints.

To test the psychiatric impairment and delineate the correlates of that impairment in a rural population, Husaini, Neff, and Stone (1979) administered a questionnaire to a random sample of 713 residents of nine rural counties in the mid-Cumberland region of Tennessee. The questionnaire included items regarding demographic characteristics, stressful life events (Holmes & Rahe, 1967), medical problems and personal competence (Campbell, Converse, Miller, & Stokes, 1960), the Health Opinion Survey (HOS) (Leighton, Harding, Macklin, MacMillan, & Leighton, 1963), and the General Well-Being Schedule (GWB) (Dupuy, 1973), and the CES-D. The average educational level of the rural population was nine years, and about one-fifth of the families were below the poverty level. Results indicated 11.9% of the Tennessee sample was depressed as measured by the CES-D, 11.6% were in need of treatment as measured by the HOS, and 10.6% of the sample saw themselves as having definite problems as measured by the GWB. A standardized partial regression coefficient for prediction of CES-D scores by demographic variables indicated those with less education, and those who were separated, divorced, or widowed were more depressed. No relationship was noted for income level or sex. Age was inversely related to depression, and neither race nor occupational status was related to depres-

sion. Product-moment intercorrelations among the indices indicated a significant correlation between the CES-D and the GWB. A significant relationship was found between the CES-D and the HOS, showing the three indices were fairly constant in their estimates. A regression analysis demonstrated that age was inversely related to depression. The significant zero-order relationship between race and depression did not appear in a multiple regression analysis.

To develop validity for the CES-D with a rural population, Husaini, Neff, Harrington, Hughes, and Stone (1980) sampled 200 rural outpatients, aged 18 through 60, and 713 rural community respondents. The outpatient sample had 20% divorced, separated, and widowed individuals while the community sample had 10%. Ninety percent of both samples were white. The majority of both samples were female, between 25 and 44 years and had 8 to 12 years of education. The patient sample had the following diagnostic breakdowns: neuroses, 20%; functional psychosis, 18%; depression, 16%; transient situational problems, 16%; personality disorders, 10%; alcohol and drug problems, 6%; and marital maladjustment problems, about 10%. Results indicated the patient group had a mean score of 27.01, while the community sample had a mean score of 6.88. For each demographic subgroup, race, sex, marital status, age, income, and education, the mean patient CES-D scores were significantly higher than mean community sample CES-D scores. The only significant demographic variable for the clinical sample was sex, with females showing higher depression scores. Patients with neurotic and psychotic depression and those with other depressive symptoms such as drug abuse, marital

maladjustment and transient situational problems had significantly higher means than all other diagnoses, indicating the CES-D was sensitive to depression and not merely measuring general psychiatric impairment. Significant differences were found among diagnostic groups. The ability of the CES-D to discriminate between patients with varying problem severity was demonstrated by the significantly higher mean, 29.60 versus 19.70, between patients rated as having no or mild problems and those rated as having moderate to very severe problems.

The ability of the CES-D to sense changes in patients' psychological state was demonstrated by the significant difference between administration of the CES-D at admission and administration later, 31.9 versus 24.49, and by the progressive decline of the mean CES-D score after three months of treatment to 17.00. A new cutoff point for a case of depression was developed for rural populations. This score is 17 for "possible" cases and 23 for "probable" cases. These new scores were arrived at by choosing the scores that fell at 1.0 and .5 SD below the mean of the depressed group ($M=29.71$, $SD=12.55$).

To develop reliability of the CES-D with Mexican-Americans, Roberts (1980) administered the CES-D to 181 Mexican-Americans. The subjects were from a follow-up study of three sample surveys conducted in Alameda County, California. The total sample included 254 Anglos, 270 blacks and 181 Chicanos. The Chicano subjects were offered the option of completing the interview in English or Spanish, and 21% opted for the interview in Spanish. Examination included ethnic differences in survey response rates, item nonresponse, internal consistency reliability, and confirm-

atory factor analysis to determine if the factor structure could be observed across the three ethnic groups. Results showed significant differences in survey response rates, with Chicanos showing a much lower rate. Roberts (1980) concluded that while the response rate was lower for Chicanos, the quality of the data provided was not significantly different from the other groups. Item nonresponse was reasonably low in the three groups. There were no significant differences between the three groups in item nonresponse and no significant differences between those Mexican-Americans interviewed in English and those interviewed in Spanish. Coefficients used to measure internal consistency reliability ranged from 0.85 to 0.91. The measures used were Cronbach and Spearman-Brown coefficients. The little variation among the three groups suggests the CES-D was reasonably consistent for these three ethnic groups. The CES-D has been divided into four factors: I. Depressed Affect, II. Positive Affect, III. Somatic and Retarded Activity, and IV. Interpersonal (Radloff, 1977). A multiple group factor-analytic procedure revealed a positive correlation among the four factors and Roberts (1980) concluded that undue emphasis should not be placed on the separate factors because all items relate to depression. The CES-D provides a reliable screening test for Chicano subjects.

To develop a practical inventory that would provide a quantitative measure of acculturation for Chicanos Olmedo, Martinez, and Martinez (1978) sampled 254 Chicano and 670 Anglo high school students. The instrument consisted of potency items from the Semantic Differential (Osgood, Suci, & Tannenbaum, 1957)

and background items concerning the subject, his family, the head of the household, and the language spoken at home. Acculturation was defined as the "linear combination of semantic and socio-cultural variables which provides the best least square estimate of that individual's score on a dichotomous variable in which Chicanos are assigned a value of 0 and Anglos a value of 1" (Olmedo et al., 1978, p. 165). Results of the correlation coefficients showed "only English spoken at home" accounted for 40% of the variance and was the most important predictor of ethnicity. The acculturation score has a mean of 50 and a standard deviation of 10. Results showed Anglo subjects scored substantially higher, with a mean of 54 for Anglos and 38 for Chicanos. Chicanos exhibited considerably more variability in their scores, and but there were practically no sex differences in the scores. The distribution of scores was positively skewed for Chicanos and negatively skewed for Anglos. Test-retest reliability was determined using 129 Chicano and Anglo college students. Significant reliability coefficients were reported for Chicanos, Anglos, and the entire sample. A double crossvalidation procedure demonstrated validity coefficients of between .66 and .88. A factor analysis indicated three orthogonal dimensions: a) nationality and language; b) socioeconomic status; and c) potency given to the concepts of father and male. It seems that not highly acculturated Mexican-Americans live in homes where the only language is English and where the head of the household is an American citizen and a white-collar worker.

To validate the acculturation scale of Olmedo et al. (1978) on a population different in terms of age and geographic location

from the original normative population and to establish the construct validity by comparing first- and third-generation Mexican-Americans, Olmedo and Padilla (1978) selected 26 Anglo-Americans as well as 16 first-generation and 26 third-generation Mexican-Americans. All subjects were asked to fill out the acculturation scale. Results showed a mean of 34 for first-generation Chicanos, 38 for third-generation Mexican-Americans and 54 for Anglos. A one-way completely randomized analysis of variance revealed significance between group differences. An a priori orthogonal t -test showed third-generation Mexican-Americans scored significantly higher than first-generation Chicanos. A posteriori Tukey's H.S.D. revealed significantly higher scores in Anglos when compared to third-generation Chicanos ($p < .01$), and in Anglos when compared to first-generation Chicanos ($p < .01$). Empirical validity was demonstrated by the correlation coefficients between group membership and acculturation scores for Anglos versus first-generation Chicanos, and for Anglos versus third-generation Chicanos. Seventy percent of the variance in ethnic group membership was accounted for by the acculturation scores, and this points to the practical significance of the scale. Added construct validity of the scale was provided by the significant relationship between the variables of ethnic self-identification, religion, and household type and the acculturation level. A chi-square test revealed education, occupation, household type, religion, and ethnic self-identification are significantly related to acculturation level. In general, less acculturated individuals identified themselves as Mexican and Catholic, lived in nuclear

households and had lower educational and occupational levels.

To devise a Spanish language version of the acculturation scale of Olmedo et al. (1978) and establish the lower limit of the test, Cortese and Smyth (1979) reported work completed on the scale. The scale was translated into Spanish and then translated back into English by a second translator. Problematic words, phrases or sentences were resolved and the translators agreed on the linguistic equivalence of the two versions. The tests were administered twice within a two-week period to 21 advanced students in a bilingual teacher education program. Five of the students were of Mexican background, four were Hispanic, 11 were Anglo, and one was black. The scale was divided into two parts, and combinations of the English and Spanish versions were randomly divided so that half of the subjects received the Spanish-English order and the other half received the English-Spanish order for the first administration. For the second administration subjects were given the scale in the opposite order of the first administration. The difficulty in translating equivalents for blue and white collar was resolved by asking the subject to write in his occupation. Other problems in translation were resolved by decentering the original English version of the scale. The test-retest correlation was significant at the .01 level, and the Spanish-English test correlation was also significant at the .01 level. Both of these versions should be particularly useful in experimental designs where acculturation is a significant variable and where either Spanish or English monolingual subjects will be used.

For this study acculturation was defined as, "the degree to

which a given individual possesses characteristics typical to the dominant, Anglo society" (Olmedo et al., 1978, p. 168). The purpose of this research was to determine if acculturation is related to depression in Mexican-American females. A second goal was to determine if Mexican-Americans are depressed when compared to Anglo-Americans when the variables of age, education, and occupation of head of the household are controlled.

CHAPTER 2

METHOD

Subjects

The sample for this study was drawn from undergraduate bilingual education classes at Pan American University, Edinburg, Texas, from undergraduate psychology classes at Emporia State University and from Parent-Teacher Associations, church groups, and a Hispanic social service agency in the metropolitan Kansas City area. The total number of subjects was $N = 106$; $n = 53$ Anglo-American females and $n = 53$ Mexican-American females. Seventeen of the Chicano women were from Pan American University. Of the Mexican-American group, 26 were first-generation and 27 were third-generation. The sample ranged in age from 18 to 72. The median age was 28.

Of the 26 first-generation Chicanos, 18 reported that the head of their household was a blue collar worker and eight were white collar workers. Under education, eight reported having 0-8 years, 10 reported completing 9-12 years, six reported 1-4 years of college and two were college graduates. Of the 26 first-generation Mexican-Americans, two refused to answer the item concerning annual family income, 12 reported annual family income of \$2,999 or less, three reported income of \$3,000 to \$5,999, two reported income of \$6,000 to \$9,999, three reported income of

\$15,000 to \$19,999 and four reported family income of \$25,000 or more.

Of the 27 third-generation Mexican-Americans, 19 reported the head of their household to be a blue collar worker, and eight reported white collar workers as head of their household. For years of education, seven reported 9-12 years of education, 12 reported 1-4 years of college and 8 reported being college graduates. Under annual family income, one reported income of \$2,999 or less, one reported income of \$3,000 to \$5,999, one reported income of \$6,000 to \$9,999, five reported income of \$10,000 to \$14,999, six reported income of \$15,000 to \$19,999, four reported income of \$20,000 to \$24,000, and nine reported income of \$25,000 or more.

Apparatus

All testing instruments were presented in a single questionnaire booklet. Depression was measured by the CES-D (Markush & Favero, 1973), and acculturation was measured with the acculturation scale developed by Olmedo and Padilla (1978). Subjects were asked their ethnic status, year of birth, level of education and occupation, as well as where they, their parents, and their grandparents were born, the occupation of the head of the household, and educational level of their parents.

Procedure

The CES-D, acculturation scale, and background information questionnaire were given to a sample of Mexican-American females. Twenty-six first- and 27 third-generation Mexican-American females were selected. The instruments were then given to a sample of Anglo-American females. Fifty-three Anglo-American

females were matched on the variables of age, education, and occupation of the head of the household to the selected 53 Mexican-American females. The CES-D, acculturation scale, and background information questionnaire all have instructions that were read to the subjects before they began to complete them. All materials were presented during the same administration. The questionnaires at the universities were administered by the instructors. All other questionnaires were administered by a graduate student in clinical psychology. Administration of the test battery required from 20 to 40 minutes. All subjects were encouraged to participate but were allowed to decline if they wished. Participants were instructed that all material collected would be considered confidential. All subjects who indicated interest were debriefed on the purpose and results of the study after it was completed.

Subjects were grouped into age categories. Each category had an age range of five years. All subjects were asked to indicate their education level as 0-8 years, 9-12 years, 1-4 years of college, or college graduate. The occupations of the heads of the households were grouped into seven categories adapted from the occupational scale of Hollingshead (Note 2). In addition, a category for students and a category for the unemployed were added. Subjects were matched one for one such that each Chicano subject had a corresponding Anglo subject that was in the same age and educational category, and who reported the same occupational category for the head of the household. Once the Mexican-American subjects were matched to the Anglo-American subjects, all questionnaires were scored.

CHAPTER 3

RESULTS

Mean depression scores were 12.57 for the Anglo-American sample and 16.91 for the Mexican-American sample. Standard deviations were 10.20 for the Anglo group and 9.89 for the Chicano group. A t-test to compare the depression scores of the Mexican-American and Anglo-American subjects demonstrated significantly higher depression scores for the Mexican-American group. A one-way analysis of variance between Anglo- and all Mexican-Americans indicated a significant difference in depression scores, $F(1, 104) = 4.94, p < .05$. There was no significant difference when Anglos, first- and third-generation Chicanos were compared using a one-way analysis of variance. A t-test comparing mean depression scores for first- and third-generation Chicanos showed no significant differences.

The means and standard deviations for the acculturation scores were $\underline{M} = .80, \underline{SD} = .17$ and $\underline{M} = .20, \underline{SD} = .30$ for the Anglo- and Mexican-Americans respectively. The means and standard deviations for the acculturation scores were $\underline{M} = .06, \underline{SD} = .26$ for first-generation Mexican-Americans and $\underline{M} = .31, \underline{SD} = .30$ for third-generation Chicanos. A one-way analysis of variance of acculturation scores between Anglos, first- and third-generation Mexican-Americans revealed a significance between the three

groups, $F(2, 103) = 97.04$, $p < .01$. A Scheffe's test to determine where the significant differences were showed Anglos scored significantly higher than first-generation Mexican-Americans, $p < .01$, and significantly higher than third-generation Chicanos, $p < .01$. The first-generation Mexican-Americans also had significantly higher acculturation scores, $F(2, 103) = 7.47$, $p < .01$ than third-generation Chicanos.

A Pearson product-moment correlation of depression and acculturation scores of all Mexican-Americans revealed a non-significant relationship. A Pearson product-moment correlation for depression and acculturation scores of all Anglo-Americans subjects showed no significant relationship. A Pearson product-moment correlation of depression and acculturation scores for first-generation Chicanos showed no significant relationship. The same lack of a significant relationship was found between acculturation and depression scores for the third-generation group.

CHAPTER 4

DISCUSSION

This study was designed to determine if a relationship exists between depression and acculturation in Chicano females and to determine if Chicanos showed higher depression scores than Anglos matched for age, education, and occupation of head of household. Results showed that for this sample of Mexican-American females, no significant relationship existed between depression and acculturation and Mexican-American women had significantly higher depression scores than the Anglo females.

Women were included to have a more homogeneous population and because women generally show higher depressive incidence than men (Phillip & Segal, 1969). In addition, although Diaz-Guerrero (1975) has demonstrated that Mexican women have depressive trends, no study has shown any relationship between acculturation and depression in Chicano females. CES-D was employed because it had been shown to have validity with Chicanos and because it was designed for use with community samples. First- and third-generation Chicanos were used because generation has an important effect on acculturation (Olmedo & Padilla, 1978; Keefe, 1980) and because acculturation scores have been found to be lowest for first-generation Chicanos, highest for Anglos, with third-generation Mexican-Americans in between (Olmedo & Padilla, 1978).

The acculturation score of Olmedo et al. (1978) has also been found to be related to marital status, education, and age (Kranau, Green, & Valencia-Weber, 1982).

The results of cross-cultural studies may be a result of the methodology employed, and the role of response bias may also be present. However, research with the CES-D and Mexican-Americans has indicated that the quality of the data was not significantly different from that of other ethnic groups (Roberts, 1980). Research into interviewing has demonstrated that data can be attained with the same degree of reliability from Mexican-Americans as from any other group (Welch, Comer & Steinman, 1973). In addition, past research with Chicanos has shown that Mexican-Americans appear as willing as other groups to submit to interviews, that cultural differences do not appear to be so great as to bar the study of Anglos and Chicanos with the same procedures, and that non-citizens are not likely to object to being interviewed (Freeman, 1969).

This research also found significantly higher depression scores for Chicanos when compared to Anglo females even when the subjects were matched on the variables of age, education, and occupation of head of the household. This finding agrees with the latest data on the prevalence of higher depressive scores among Mexican-Americans (Roberts, 1981; Vernon & Roberts, 1982). Roberts (1981) found that the Mexican-American sample was significantly more depressed and that adjustment for the effects of age, sex, education, family income, marital status, and physical health status reduced but did not eliminate the Anglo-Chicano differences. While Vernon and Roberts, (1982) did not report

controlling for social class, they found Mexican-Americans had higher lifetime major and minor depression rates than Anglos and higher current major and minor depression rates.

While this sample of Mexican-American women reported higher depression scores, it is not clear why this is so. Different rates of inter-racial depression have been explained as a function of the perceptual differences of the Anglo diagnosticians (Hanson & Klerman, 1974). Since the Mexican-American faces powerful forces such as discrimination, prejudice, and exclusion of policy and program decisions (Cervantes, 1972) these forces may result in higher depression scores. The "mask of survival" (Quesada et al., 1978), which forces Chicanos to display a second identity to the outside world, may make the individual aware of how powerless she is in the world. Chicanos see around them a higher standard of living, but often are not able to experience this higher standard. This is confirmed by Census data that reports 18.6% of Chicano families are below the poverty level compared to 8.6% of non-Spanish-origin families (U.S. Bureau of the Census, 1980) and that median income for Hispanics is \$14,711 compared to \$20,840 for whites (U.S. Bureau of the Census, 1982). Therefore, they may have higher depression scores because it is beyond their resources to achieve their desired standard of living (Quesada et al., 1978). Finally, the higher depression scores found in the Chicano women of this study may be a function of the cultural differences between Anglos and Chicanos. However, cultural differences in the manifestation of higher depression scores were not related to the level of acculturation in this sample.

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