

AN ABSTRACT OF THE THESIS OF

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Measure of Depression

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This study compared a projective technique with a self-report questionnaire to explore the validity of the projective method for assessing levels of depression in college students. The Kinetic Family Drawing (KFD), rated by the Family Drawing Depression Scale (FDDS), was compared with the Beck Depression Inventory-Second Edition (BDI-II) which research has found to be a valid instrument for the assessment of depression. The participants were 102 students at a midwestern state university. Each participant was individually administered the KFD projective assessment and the BDI-II self-report questionnaire. The KFD drawings were scored according to criteria of the FDDS by three trained raters who were blind to the purpose of the study. The resulting FDDS scores were statistically compared to the BDI-II scores. A correlation between the results of these two measurements would be a likely indication that both assessments were measuring levels of depression. No significant correlation was found between the assessments. The result of this study indicates the lack of validity of the KFD, measured by the FDDS and correlated with the BDI-II, as an assessment of levels of depression in college students. This lack of validity may be partially due to the low levels of depression in the students assessed, reflecting FDDS difficulty in detecting milder levels of depression. In addition, both assessments are based on somewhat differing criteria of depression.

This may have impacted the results. Another factor may be the substantial subjective content of the FDDS, resulting in rating difficulty. Future studies may address these and other questions, leading to the development of a valid projective assessment for depression.

CONCURRENT VALIDITY OF THE KINETIC FAMILY DRAWING
ASSESSMENT AS A MEASURE OF DEPRESSION

A Thesis
Presented to
the Division of Psychology and Special Education
EMPORIA STATE UNIVERSITY

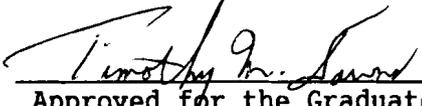
In Partial Fulfillment
of the Requirements for the Degree
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CHAPTER 1

INTRODUCTION

Although research exists regarding the separate topics of projective assessment techniques and depression assessment, the relationship between these two areas is relatively unexplored. Without a study of possible relationships between these topics, valuable information may be overlooked. Such information may contribute to the development of improved assessment techniques for identifying depression. Those individuals who suffer from symptoms of depression may also benefit from improved treatment approaches based on information gained from this and future research.

Statement of Problem

Many people, in all stages of life, suffer from varying levels of depression. This includes the stress-filled lives of college students. Depression, though common, may be difficult to recognize in mild forms. When severe, it can be more easily identified but more difficult to treat. There have been several instruments developed to assess the severity or level of depression. Using such an assessment tool, depression levels can be quantified and assessed to indicate potentially appropriate interventions.

Projective assessment techniques consist of a broad range of various procedures that require clients to contribute their own subjective feelings or interpretations to their responses, often through drawing or story-telling techniques. These procedures may provide information about the client unavailable through other sources or confirm information already provided by the client or another source.

Both of these topics relate to the mental health and well-being of individuals. Minimal research exists regarding additional relationships between a depression assessment and a projective assessment technique. To date, no known investigation has utilized a projective technique for assessing levels of depression in college students. Such a study would require a comparison with a depression assessment instrument already deemed reliable and valid to determine if the projective assessment was assessing levels of depression in college students.

Statement of Purpose

The specific research question addressed by this study was: What is the validity of a projective assessment technique compared with a valid depression inventory for assessing depression levels in college students? By comparing the results of a projective assessment technique with unknown validity with an existing depression inventory known to be valid to assess levels of depression in college students, the relationship between these two instruments was explored. Implications of this relationship were also addressed.

Literature Review

A review of the literature of a depression assessment instrument, a projective technique and its depression rating scale, and the general topic of depression in relationship to college students provided knowledge of these areas, giving a foundation for this research study. Literature about a depression assessment instrument was reviewed first, followed by literature on a projective technique and its depression rating scale and finally literature regarding depression relating to college students.

Depression assessment instrument. Although there are many assessment instruments which may be utilized to assess depression levels in individuals, the assessment method that was used in this study was the Beck Depression Inventory-Second Edition (BDI-II). This is the result of several factors, including the 1996 development of this assessment, incorporating the most current information available on depression. Previous versions of this assessment were utilized in an extensive research base of over 3000 research studies, indicating the usefulness and popularity of the assessment (Impara & Plake, 1998). However, few studies using the BDI-II have been published to date. Other factors influencing the selection of the BDI-II for this study included its ease of administration and ease of interpretation, as well as its documented reliability and validity for assessing depression. These and other factors are further expanded in the following section.

The Beck Depression Inventory (BDI) was first developed in 1961 as a 21 item questionnaire based upon the self-described typical symptoms of psychiatric patients (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). A revised version of the BDI was copyrighted by Beck and his associates and published in 1979 but Beck, Steer, and Brown (1996) stated that the original version continued to be cited in most research until a technical manual for the Amended Beck Depression Inventory (BDI-IA) was published in 1987 (Beck & Steer, 1987). A slightly revised version was published in 1993 which minimally modified scoring ranges for the severity of depression (Beck & Steer, 1993). The most recent revision resulted in the Beck Depression Inventory-Second Edition (BDI-II; Beck, et al., 1996). The Beck Depression Inventory-Second Edition

(BDI-II) is a self-report instrument, designed to be used "for assessing the severity of depression in diagnosed patients and for detecting possible depression in normal populations" (Beck et al., 1996, p. 1). The BDI-II assesses levels of depression based on specific criteria of depressive symptoms found in the American Psychiatric Association's 1994 Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition (DSM-IV).

The assessment consists of 21 questions to be answered by participants, aged 13 years and older, requiring 5 to 10 minutes to complete. It may be administered as either a written assessment or orally if reading or concentration difficulties exist on the part of the examinee. The test manual provides no specific criteria for the qualifications of a test administrator; only the ability to determine if the examinee can read and the ability to administer the test orally if so required. The BDI-II uses a four point scale for responses. This answer scale ranges from 0 to 3 with a maximum possible score of 63, indicating the most severe level of depression (Beck et al., 1996).

Research data on the BDI-II has shown statistical significance in test reliability, typically defined as consistency in measuring what the test measures time after time. The internal consistency of the BDI-II, using individual question correlation for a group of 500 psychiatric patients, was .92. Comparable results of .93 were found for a group of 120 college students. Stability of the BDI-II over time has been estimated by test results of 26 outpatients administered the BDI-II approximately one week apart, resulting in a significant test-retest correlation of .93 ($p < .001$) (Beck et al., 1996).

Validity is typically defined as a test's ability to measure what it is supposed to measure and may be demonstrated through several methods, including content validity and construct validity. The BDI-II's established validity follows.

The content validity of the BDI-II is based upon the DSM-IV criteria for depressive disorders. The DSM-IV entries for depressive disorders provide criteria which determines what constitutes depression, based on specific qualitative and quantitative symptoms, including a required time frame of the same two week period for symptom presentation (APA, 1994). The BDI-II incorporates these same depression symptoms in its 21 questions and also addresses the two week time frame in its instructions by asking the examinee to "pick out one statement in each group that best describes the way you have been feeling during the past two weeks, including today" (Beck et al., 1996, p. 8).

The construct validity of the BDI-II has been studied to determine the extent the construct, or abstract psychological trait, of depression is reflected in the assessment. Correlations between BDI-II total scores and scores on several other psychological tests indicate that the BDI-II evidences good construct validity. One example of this are the positive correlations the BDI-II has with the Beck Hopelessness Scale ($r = .68$; $p < .001$) and the Scale for Suicide Ideation ($r = .37$; $p < .001$). Both the constructs assessed by these two instruments, hopelessness and suicidal ideation, have been identified as potential components of depression and thus highly correlate with depression (Beck et al., 1996.) The Beck Anxiety Inventory and the BDI-II correlate .60 ($p < .001$). According to Beck et al., this result reflects correlations also

found between depression and anxiety in clinical evaluations. The BDI-II correlates .47 ($p < .01$) with the Hamilton Rating Scale for Anxiety and correlates .71 ($p < .001$) with the Hamilton Psychiatric Rating Scale for Depression. The stronger correlation between the BDI-II and Hamilton Psychiatric Rating Scale for Depression supports the validity of the BDI-II (Beck et al., 1996).

Projective technique assessment. Is there a projective assessment technique that can be used to measure depression levels? One potential projective technique is the Kinetic Family Drawing (KFD; Burns & Kaufman, 1970). This procedure was originally designed as a means to explore family relationships and family perceptions of disturbed children. The instructions for this test are "Draw a picture of everyone in your family, including you, doing something. Try to draw whole people, not cartoons or stick people. Remember, make everyone doing something-some kind of action" (Burns & Kaufman, 1972, p. 5). Although the test authors have provided interpretations of representative drawings, no objective scoring system or method has been found to be reliable and valid (Buros, 1978).

In 1983, Mostkoff and Lazarus conducted a study to determine if an objective scoring system could be developed for the KFD that would have high reliability. The results of their study stated it was possible with a reported 97% mean of interjudge agreement on the rating of 20 variables of the KFD drawings in a test-retest study (Mostkoff & Lazarus, 1983).

Tharinger and Stark also reported their research on evaluating the KFD (1990). They concluded that it is possible to evaluate the KFD

qualitatively and accurately, based on an integrative approach that assesses overall psychological functioning. In their study, there was a correlation ($r = .31$; $p < .01$) between the KFD results and self-reported self-concept (Tharinger & Stark, 1990).

These research studies establish the reliability and validity of the KFD. Although more validity and reliability testing of this instrument is needed, the face validity of the KFD continues to help it remain a popular clinical instrument (Wright & McIntyre, 1982).

Family Drawing Depression Scale. Although the Kinetic Family Drawing was not originally designed to be a depression assessment tool, Wright and McIntyre (1982) developed a method of scoring the KFD to assess depression levels. This scoring method is called the Family Drawing Depression Scale (FDDS) and is partially based upon the work of art therapist Harriet Wadeson (1971), who described several main themes in the artwork of depressed patients. These themes are the basis of the criteria the FDDS uses to rate KFD drawings. The FDDS consists of 15 subscales, such as number of colors used in the drawing, size of self, and sexual differentiation. Wright and McIntyre reported that the FDDS was able to "standardize the presentation and scoring of KFDs of depressed patients. Furthermore, the technique described...reliably discriminated KFDs of depressed and normal participants and detected treatment effects. Interrater reliability of the FDDS scores was extremely high" (p. 860).

Peek and Sawyer (1988) used the KFD and the FDDS with patients at the Spinal Pain Clinic in Dallas to assess the presence and changes in depression levels of pain patients. Patients were assessed pre- and

posttreatment to determine if depression levels changed. Peek and Sawyer reported significant correlations among three raters ($\underline{r} = .79$; $\underline{r} = .96$; $\underline{r} = .77$; $p < .001$) and stated "a comparison of the pre and post scores of the depressed patients revealed a significant improvement in FDDS ratings at the completion of the treatment ($p < .01$)" (p. 209). Further research was recommended to provide other FDDS applications.

Depression relating to college students. Although an abundance of research exists studying depression in other populations, limited research is available investigating depression relating specifically to college students (Vredenburg & O'Brien, 1988). Several questions have been addressed in the study of depression and college students including: What is the prevalence of depression for college students? What is the level of severity of depression for students on college campuses? Results of these studies follow.

The prevalence of depression addressed in one study found depression on college campuses to be the leading psychiatric diagnosis for that population, with successful suicide 50% more common among college students than non-college students the same age (Beck & Young, 1978). Another study addressed the severity of depression and found that although college students show a "mild" level of depression with a mean Beck Depression Inventory (BDI) score of 14.29, their depression is more severe and more frequent than depression experienced by non-students (Vredenburg & O'Brien, 1988).

Another study investigated the relationships of depression, psychological separation, gender, and college adjustment (Lopez, Campbell, & Watkins, 1986). There was a negative correlation between

psychological separation, as measured by the Psychological Separation Inventory (PSI), and depression, measured by the BDI, for female but not male college students. In other words, Lopez et al. found college women were more likely to be depressed if they were less psychologically separated from their parents. There was no significant relationship found by Lopez et al. between college adjustment and depression for men or women.

Instruments used to detect depression in college students have generally been self-report, often a version of the BDI (Tashakkori, Barefoot & Mehryar, 1989). Some research has argued the BDI measures "general psychopathology" in college students, not depression (Gotlib, 1984). However, construct validity research conducted by Tashakkori et al. concluded the BDI is valid for depression assessment in college students. Other research has found the BDI a valid instrument in assessing suicidal risk in college students (Westefeld & Liddell, 1994).

Summary

A need exists to look at depression assessment by a projective technique and its depression rating scale related to college students in one study to determine if levels of depression can be validly assessed by a projective technique. This study addressed that questions. By using the FDDS ratings of the KFD projective technique to assess levels of depression in college students, and correlating the assessment score with the scores from the valid BDI-II, an analysis can be made of the validity of the KFD as measured by the FDDS. This will provide a concurrent validity study of the KFD assessment.

It was hypothesized that there would be a positive correlation between the scores of the FDDS and the BDI-II, indicating similar levels of depression, or lack of depression, in the college students assessed. A positive correlation would indicate the likelihood that the Kinetic Family Drawing, as measured by the Family Drawing Depression Scale, is concurrently valid with the Beck Depression Inventory-Second Edition. This may allow for a projective method to assess depression, resulting in an additional assessment of depression and possibly interventions for milder levels of depression.

CHAPTER 2

METHOD

Participants

The participants of this study were student volunteers ($N = 102$) enrolled in Introduction to Psychology and Developmental Psychology courses at Emporia State University in Emporia, Kansas. Of this total, 74 (72.5%) were women and 28 (27.5%) were men. The mean age was 20.19 years ($SD = 5.58$). School classification was 69 (67.7%) freshmen, 16 (15.7%) sophomores, 7 (6.9%) juniors, 9 (8.8%) seniors, and 1 (.9%) graduate student. The sample consisted of 88 (86.4%) single, 8 (7.9%) married, and 6 (5.7%) undesignated students.

Design

The research design applied to this study was the descriptive concurrent validity correlation method. The objective was to correlate the results of a projective assessment technique, rated by a depression rating scale of unknown validity, with a valid depression inventory.

Instruments

The Family Drawing Depression Scale (FDDS) uses 15 subscales for rating the Kinetic Family Drawing (KFD). Four of these subscales are based on objective criteria of counting or measuring with a clear plastic ruler and grid: number of colors, size of figures, isolation of self-objective, and empty space. The remaining 11 subscales are based on the subjective judgement of the raters: organization, size of self vs. others, isolation of self-subjective, isolation of family-subjective, sexual differentiation, energy-self, energy-family, interest-self, interest-family, and hopelessness. All 15 ratings are reported on a five

point scale of 0 to 4, and then added producing a range of scores from 0 to 60, with 60 indicating the most severe level of depression. Wright and McIntyre (1982) recommend a cut-off score of 35 and above as indication of depression.

The Beck Depression Inventory-Second Edition (BDI-II) consists of 21 self report questions answered on a four point scale of 0 to 3. The 21 scores are added with a maximum possible score of 63 indicating the most severe level of depression. The scoring method for the BDI-II has "cut offs" for the total accumulation of response points indicating minimal, mild, moderate, or severe depression level ranges. A total score of 0 to 13 points represents a minimal level of depression, a total score of 14 to 19 points represents a mild level, a total score of 20 to 28 points represents a moderate level, and a total score of 29 to 63 points represents a severe level of depression. The 21 BDI-II items are labeled on the questionnaire as: sadness, pessimism, past failure, loss of pleasure, guilty feelings, punishment feelings, self-dislike, self-criticalness, suicidal thoughts or wishes, crying, agitation, loss of interest, indecisiveness, worthlessness, loss of energy, changes in sleeping pattern, irritability, changes in appetite, concentration difficulty, tiredness or fatigue, and loss of interest in sex.

Procedures

Approval from the Institutional Review Board for Treatment of Human Subjects (Appendix A) was first obtained. Once approval was received from this board, volunteer psychology students were contacted to participate in this research project. All participants signed a

consent form (Appendix B) and provided information requested on a demographic sheet (Appendix C) prior to receiving either assessment. All participants were individually administered the KFD projective assessment and the BDI-II in a counterbalanced method. Half of the participants received the KFD first followed by the BDI-II and half received the BDI-II first followed by the KFD. Regardless of order of administration, identical instructions were provided. All participants signed a consent form and provided information requested on a demographic sheet prior to receiving either assessment.

For the KFD assessment, each participant was given an 8 1/2" x 11" sheet of white paper and a set of eight colored "Crayola-type" broad tipped markers, consisting of red, orange, yellow, green, blue, purple, brown, and black colors. The use of colored markers was a change from the original FDDS as Wright and McIntyre (1982) used eight colored pencils when administering the KFD. All participants were given the following instructions: "Draw a picture of your family doing something. Label the figure 'SELF' that represents you, and give your picture a title." Questions asked by the participants were answered by the test administrator with "It's your choice."

For the BDI-II assessment each participant was given a standardized BDI-II questionnaire form and a black pencil. All participants were given the following instructions: "Please read the following instructions and complete the inventory."

Three raters, first year art therapy graduate students blind to the purpose of the study, were trained according to the criteria for scoring the FDDS. After each rater evaluated each KFD drawing according

to the FDDS criteria, interrater reliability was calculated. This reliability was calculated on the FDDS score for all 15 categories as well as for the four objective scores and the 11 subjective scores. The order effect of the administration of the assessments was also investigated through statistical analysis. Each rater's scores and the mean of the three rater's scores, were compared with each participant's totaled BDI-II score, resulting in correlation coefficients. It was hypothesized that there would be a positive correlation between the scores of the FDDS and the BDI-II, indicating similar levels of depression in the students assessed and thus concurrent validity between the two assessment instruments.

CHAPTER 3

RESULTS

It was hypothesized that there would be a positive correlation between the scores of the Family Drawing Depression Scale (FDDS), used to rate the Kinetic Family Drawing (KFD) projective assessment, compared with the Beck Depression Inventory-Second Edition (BDI-II), indicating similar levels of depression in the college students assessed. This result would reflect the validity of the projective assessment.

The BDI-II scores were totaled and averaged, resulting in a mean score of 10.41 ($SD = 7.80$) for all participants ($N = 102$), representing a minimal range of level of depression. The scores ranged from 1 to 37. The FDDS scores were analyzed also. The mean score for Rater 1 was 19.99 ($SD = 9.38$). The mean score for Rater 2 was 15.34 ($SD = 9.30$). The mean score for Rater 3 was 23.27 ($SD = 7.85$). The average of the three scores resulted in a mean of 19.73 ($SD = 7.72$). Interrater reliability was calculated for objective, subjective and total scores of the FDDS. Each rater's scores were also correlated with the totaled BDI-II scores. The mean of the three rater's scores also correlated with the totaled BDI-II scores.

For these procedures, the following interpretation was applied. As for all correlations, the larger the correlation number (regardless of the positive or negative value) the stronger the correlation, up to 1.00 which indicates a perfect correlation. In concurrent validity research, such as this study, a correlation coefficient of .70 or higher is desired to indicate reliability of scores. Coefficients of .50 or higher are desired when verifying validity of scores (Fraenkel & Wallen, 1996).

The order-effect of the assessment administration was also examined utilizing a t test for independent means. This analysis was computed to determine if a difference existed between the results of the assessments, administered in counter-balanced format with half the participants receiving the KFD followed by the BDI-II and half receiving the BDI-II followed by the KFD.

The correlations for the objective scores of the FDDS between Raters 1 and 2 ($\underline{r} = .84$), Raters 2 and 3 ($\underline{r} = .81$), and Raters 1 and 3 ($\underline{r} = .83$) were found to be significant at the $p < .01$ level (see Table 1). The interrater reliability for the subjective scores of the FDDS between Raters 1 and 2 ($\underline{r} = .56$), Raters 2 and 3 ($\underline{r} = .48$), and Raters 1 and 3 ($\underline{r} = .44$), was also significant at the $p < .01$ level (see Table 1). The correlations of total scores between Raters 1 and 2 ($\underline{r} = .61$), Raters 2 and 3 ($\underline{r} = .55$), and Raters 1 and 3 ($\underline{r} = .56$) were again significant at the $p < .01$ level (see Table 1).

The results of the t test for independent means indicated that there was no difference in the order the tests were administered, $t(100) = .71$. The mean score of the participants that received the KFD, followed by the BDI-II ($N = 51$) was 11.22 ($\underline{SD} = 8.39$). The mean score of the participants that received the BDI-II followed by the KFD ($N = 51$) was 10.12 ($\underline{SD} = 7.13$).

The three FDDS scores of Rater 1 (objective, subjective, and total) were each correlated with the BDI-II scores. The same procedure was completed for the scores of Rater 2 and Rater 3 (see Table 2). The scores of the three raters were averaged to provide three mean FDDS scores, one each for the objective, subjective, and total. These mean

Table 1

Interrater Correlations of FDDS Scores

Objective Questions

	Rater 2	Rater 3
Rater 1	.84*	.83*
Rater 2		.81*

Subjective Questions

	Rater 2	Rater 3
Rater 1	.56*	.44*
Rater 2		.48*

Total Questions

	Rater 2	Rater 3
Rater 1	.62*	.56*
Rater 2		.55*

Note: $N = 102$ * $p < .01$

Table 2

Correlation of Rater FDDS Scores with BDI-II Score

	BDI-II	p
Rater 1		
Objective FDDS	-.03	.77
Subjective FDDS	.05	.05
Total FDDS	.04	.60
Rater 2		
Objective FDDS	-.05	.61
Subjective FDDS	.04	.57
Total FDDS	.03	.67
Rater 3		
Objective FDDS	-.06	.39
Subjective FDDS	.02	.81
Total FDDS	-.01	.89
Rater Mean		
Objective FDDS	-.01	.86
Subjective FDDS	.01	.84
Total FDDS	.02	.77

Note: N = 102

scores were each correlated with the BDI-II total score. The results for the objective and subjective criteria scores were not significant with a correlation of $-.01$ for the objective scores and correlation of $.01$ for the subjective scores (see Table 2). The result of this procedure for the total score was not statistically significant with a correlation coefficient of $.02$ (see Table 2). The analysis revealed the Kinetic Family Drawing (KFD), as rated by the Family Drawing Depression Scale (FDDS), lacks concurrent validity with the Beck Depression Inventory-Second Edition (BDI-II) as a projective technique to assess depression in college students, thus the hypothesis was not supported.

CHAPTER 4

DISCUSSION

Previous research has indicated the Beck Depression Inventory-Second Edition (BDI-II) is a reliable and valid inventory to assess levels of depression in individuals, including college students (Beck, et al., 1996). While additional research has reported the Family Drawing Depression Scale (FDDS) as a reliable and valid rating scale for the Kinetic Family Drawing (KFD) to assess depression in pain clinic patients (Peek & Sawyer, 1988), no quantitative indicators are known to express the reliability or validity of this rating scale.

The present study investigated the concurrent validity of the FDDS as a rating scale for the KFD projective technique, by comparing FDDS results with BDI-II results, regarding levels of depression in college students. The study found the FDDS not to be a valid scale to assess depression in college students as compared with the valid BDI-II assessment.

While identifying the exact reason for the non-concurring results of this study is difficult, some components of this study may have contributed to these results. Previous research studying depression relating to college students specifically targeted students seeking help for depressive symptoms (Lopez et al., 1996; Vredenburg & O'Brien, 1988). Correlations between the FDDS and the BDI-II may have been greater in the present study if participants were experiencing and seeking help for more severe levels of depression. The FDDS rating scale may be more valid in assessing individuals with more severe levels of depression.

Another consideration is the different criteria used for the development of the FDDS and the BDI-II. The FDDS was developed based on Wadeson's observations of the artwork of individuals diagnosed with depressive disorders (Wadeson, 1971). The development of the BDI-II was based on the specific criteria for depressive symptoms found in the DSM-IV (APA, 1994). If the FDDS were more closely based on the DSM-IV criteria, there might be higher correlation, resulting in concurrent validity of the two assessment instruments.

An additional component of this study is the difference in the development dates of the two assessments. The FDDS was developed in 1982 (Wright & McIntyre, 1982) and based on Wadeson's (1971) criteria. The BDI-II was developed in 1996 (Beck et al., 1996). Would this 14 year difference have a significant impact on the result of a study such as this? Factors to consider in addressing this question include changes in how depression has been defined from 1982 to 1996. During this time frame, the DSM-III, DSM-III-R, and the DSM-IV have been published. A review of these definitions of the criteria for Major Depressive Episode reveals only minor wording changes. An example of this is the change from the DSM-III "recurrent thoughts of death, suicidal ideation, wishes to be dead, or suicide attempt (APA, 1980, p. 214) to the DSM-III-R "recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide (APA, 1987, p. 222).

The Beck Depression Inventory has also evolved since its original publication in 1961 (Beck et al., 1961). Several versions have been developed and these have each resulted in somewhat differing definitions

of depression. For example, changes that occurred from the BDI-IA to the BDI-II include the deletion of questions regarding weight loss, body image change, somatic preoccupation and work difficulty. These questions were replaced with agitation, worthlessness, concentration difficulty, and loss of energy (Beck et al., 1996). These changes in defining depression may impact the result of such a research study; however, the significance of such impact will remain undetermined until such a research study is done.

The preponderance of subjective categories of the FDDS has undoubtedly contributed to the difficulty in achieving desired interrater consistency. While interrater reliability for the objective scores was high, lower correlations existed for the subjective scores. This may be attributed to a variety of reasons including different rater interpretation of subjective subscales, ambiguous definitions of subjective subscales, or insufficient rater training. The future development of additional meaningful objective categories of criteria (e.g., additional counted or measured items, such as counting omissions of facial features or measuring distances from one figure to another) for evaluation might contribute to an increase in the interrater reliability of the FDDS.

As the FDDS was shown in this study to have low validity, one method of improving the scores of the FDDS might be through improved rater training. By providing additional explanations, practice scoring, and more specific written guidelines for the items being evaluated, the interrater reliability may be increased. This would improve the scores of the FDDS as a measure of the KFD for assessing levels of depression.

A potential future study might investigate comparable ranges of scores for FDDS with another reliable and valid depression assessment, such as the BDI-II. The development of such ranges might allow for better comparisons and thus increased concurrent validity for the FDDS and other assessments. In addition, reporting ranges for both objective scores and subjective scores may provide a clearer relationship, relative to the reporting of only one range of total scores.

It should again be noted that the present study altered one aspect of the FDDS from the original scale. Although Wright and McIntyre (1982) used colored pencils when administering the KFD and rating it with the FDDS, this study used "Crayola-type" broad tipped markers. This change was made for two reasons. First, color from the markers is less likely to mix together to the point of being indistinguishable for the raters of the study. Second, markers are the art media preferred over colored pencils and may be more likely used in mental health facilities where assessment occurs. This change from colored pencils to markers was not felt to have any adverse effect on the study.

In retrospect, one procedure change should have been implemented by the author. This change would be to review all BDI-II forms immediately upon completion by the participants, with the specific objective of checking the response to question 9, "Suicidal Thoughts or Wishes", so a high score response from a participant would initiate immediate attention to address the participant's suicidal ideation. Fortuitously, there were no high score endorsements of this question for the 102 participants of this study. If there had been, an immediate review of question 9 could have resulted in intervention action.

In conclusion, the FDDS does not appear to be a valid measure of depression of the KFD projective assessment. Increased objective criteria, and increased connection with the DSM-IV criteria may improve the validity of the Family Drawing Depression Scale (FDDS) as a rating scale for Kinetic Family Drawing (KFD) projective assessment for assessing levels of depression. Additionally, future research of depression may benefit from this study by reconsidering the college student population of this study. Directly accessing a population which evidences more severe depressive symptoms may allow researchers to study levels of depression instead of the presence or absence of depression. Future research may also study the development of ranges of FDDS scores representing levels of depression.

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APPENDIX A

APPLICATION FOR APPROVAL TO USE HUMAN SUBJECTS

This application should be submitted, along with the Informed Consent Document, to the Institutional Review Board for Treatment of Human Subjects, Research and Grants Center, Campus Box 4048.

1. Name of Principal Investigator(s) or Responsible Individuals:

2. Departmental Affiliation: _____

3. Person to whom notification should be sent: _____

Address: _____

4. Title of Project: _____

5. Funding Agency (if applicable): _____

6. Project Purpose(s):

7. Describe the proposed subjects: (age, sex, race, or other special characteristics, such as students in a specific class, etc.)

8. Describe how the subjects are to be selected:

9. Describe the proposed procedures in the project. Any proposed experimental activities that are included in evaluation, research, development, demonstration, instruction, study, treatments, debriefing, questionnaires, and similar projects must be described here. Copies of questionnaires, survey instruments, or tests should be attached. (Use additional page if necessary.)

10. Will questionnaires, tests, or related research instruments not explained in #9 be used? Yes No
(If yes, attach a copy to this application.)
11. Will electrical or mechanical devices be used? Yes No
(If yes, attach a detailed description of the device(s).)
12. Do the benefits of the research outweigh the risks to human subjects? Yes No This information should be outlined here.
13. Are there any possible emergencies that might arise in utilization of human subjects in this project? Yes No
Details of these emergencies should be provided here.
14. What provisions will you take for keeping research data private?
15. Attach a copy of the informed consent document, as it will be used for your subjects.

STATEMENT OF AGREEMENT: I have acquainted myself with the Federal Regulations and University policy regarding the use of human subjects in research and related activities and will conduct this project in accordance with those requirements. Any changes in procedures will be cleared through the Institutional Review Board for Treatment of Human Subjects.

Signature of Principal Investigator

Date

Signature of Responsible Individual
(Faculty Advisor)

Date

APPENDIX B

Informed Consent Document

The Department/Division of Psychology and Special Education supports the practice of protection for human subjects participating in research and related activities. The following information is provided so that you can decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time, and that if you do withdraw from the study, you will not be subjected to reprimand or any other form of reproach.

In this study, you will be asked to participate to the best of your ability. You will be asked to complete a written assessment and to draw a picture of your family on an 8 1/2" x 11" sheet of paper. This study is expected to benefit others involved in learning more about this drawing exercise. Upon completion of this exercise, questions may be asked about the research study and what is being measured.

"I have read the above statement and have been fully advised of the procedures to be used in this project. I have been given sufficient opportunity to ask questions I had concerning the procedures and possible risks involved. I understand the potential risks involved and I assume them voluntarily. I likewise understand that I can withdraw from the study at any time without being subjected to reproach."

Subject and/or Authorized Representative

Date

APPENDIX C

Demographic Information

Thank you for your time and participation!

This research project would not be possible without your cooperation.

Please provide the following information:

Your date of birth_____

Your age today_____

Your sex_____ (Male or Female)

School classification____ (Freshman, Sophomore, Junior, Senior, Graduate)

Would you like to be contacted with results from this research project?

No_____ Yes_____

If Yes, please provide your name, address, phone number and E-mail address and you will be contacted with the project results during the Spring of 1998.

Name_____

Address_____

Phone number_____

E-Mail address_____

Permission to Copy Page

I, Valerie J. Thorne, hereby submit this thesis to Emporia State University as partial fulfillment of the requirements for an advanced degree. I agree that the Library of the University may make it available for use in accordance with its regulations governing materials of this type. I further agree that quoting, photocopying, or other reproduction of this document is allowed for private study, scholarship (including teaching) and research purposes of a nonprofit nature. No copying which involves potential financial gain will be allowed without written permission of the author.

Valerie J. Thorne
Signature of Author

April 23, 1999
Date

CONCURRENT VALIDITY OF THE
KINETIC FAMILY DRAWING ASSESSMENT

AS A MEASURE OF DEPRESSION
Title of Thesis

Debra Cooper
Signature of Graduate Office Staff Member

May 13, 1999
Date received