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LOYOLA UNIVERSITY CHICAGO

THE RELATIONSHIP OF SELF-EFFICACY AND OUTCOME EXPECTATIONS IN RELATION TO INTERESTS IN SCIENCE CAREERS

A THESIS SUBMITTED TO THE FACULTY OF THE GRADUATE SCHOOL IN CANDIDACY FOR THE DEGREE OF MASTER OF ARTS

DEPARTMENT OF COUNSELING PSYCHOLOGY

BY

DEEPIKA C. REDDY

CHICAGO, ILLINOIS

MAY 1996

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Abstract

This study explored the relationship of self-efficacy and outcome expectations to interests in science careers. The purpose of the study was to validate the interest component of the model of career choice activity developed by Lent, Brown, & Hackett (1994). Subjects were 96 sophomore females in high school. Results supported that a relationship does exist between outcome expectations and interests. Outcome expectations was found to be a larger predictor of interests in science careers than self-efficacy. Implications for future studies are discussed.

CHAPTER I

INTRODUCTION

During the last decade increasingly more women have pursued science careers.

Although the opportunities are seemingly vast and unlimited, women have continued to be underrepresented in most scientific and technical fields. Many factors influence a women's career decision making and many of these are formed during early adolescence (Erb & Smith, 1984). Early adolescence is an age when early choices and decisions are made toward career choices and has been identified as a important age at which to attempt to influence career choices (Erb & Smith, 1984). Achieving an understanding of the factors that influence early decisions of female adolescents will provide the foundation for increased participation in science career choices for women.

An important contribution to the study of career choice activity has been a social cognitive model developed by Lent, Brown, and Hackett (1994) on how basic career interests are formed. A component of the model called the model of interest development presents the relationship of self-efficacy, outcome expectations, and interests in career related behavior based on concepts from Bandura's (1989) social cognitive theory. The three components of the model of interest development form the foundation of this study which focuses on the relationship between these three variables towards women's participation in science careers.

Many of the components of Bandura's social cognitive theory have been the central concept of much research on career choice activity. Hackett & Betz (1981) applied Bandura's self-efficacy theory to study the career self-efficacy of males and females. As a result of socialization experiences, women lack strong expectations of self-efficacy in relation to career related behavior which results in their inability to fully realize their capabilities in career pursuits (Betz & Hackett, 1981, 1986). Studies have shown that women demonstrate interest in careers in which they have high efficacy expectations (Betz & Hackett, 1981). Women who score high in self-efficacy tend to be more willing to engage in career related activities of nontraditional occupations (Neville & Schlecker, 1988). More recent studies on gender differences in self-efficacy have supported the early findings of Betz and Hackett (Post-Kammer & Smith, 1985, 1986).

Research has established a link between the level of self-efficacy of women toward participation in nontraditional occupations such as math and science related careers. Betz and Hackett (1983) and Lapan, Boggs, and Morrill (1989) had similar findings which found that females who had low mathematic self-efficacy expectations tended to avoid math related courses which are prerequisites for science careers. Lips (1992) found females placed more importance than males on self-efficacy towards scientific careers.

Research has also established a link between self-efficacy and interests. Many studies have found that self-efficacy tends to be positively related to interests (Lent, Brown, & Larkin, 1986, 1987; Rotberg & Ware, 1987; Lent, Larkin, & Brown, 1989; Post, Stewart, & Smith, 1991; Chartrand, Camp, & McFadden, 1992). Studies have also

found that self-efficacy is a predictor of interests (Rotberg & Ware, 1987; Post, Stewart, & Smith, 1991).

The present study is based on the model of career choice activity by Lent, Brown, & Hackett (1994) on career interests. The model of career choice activity hypotheses that self-efficacy and outcome expectations combine to influence the formation of interests. Findings by Lent, Lopez, and Bieschke (1991, & 1993) have supported this hypothesis and found significant relationships between self-efficacy beliefs, outcome expectations, and interests towards science-related career choices. Due to prior research being focused on college populations, this study's focus will be on a adolescent population. The study hypothesis's that self-efficacy and outcome expectations towards science careers will be positively related to interests in science careers of female adolescents. In the following literature review, women's career self-efficacy, the relationship between self-efficacy and interests, and the relationship between self-efficacy, outcome expectations, and interests is reviewed.

CHAPTER II

LITERATURE REVIEW

Women's Career Self-efficacy

Self-efficacy expectations are beliefs about a person's confidence in their ability to attain a goal or choice (Lent et al., 1991). Self-efficacy beliefs can affect thought patterns which may aid or hinder a person's decisions (Bandura, 1989). Self-efficacy beliefs are concerned with one's response capabilities such as "can I accomplish this" (Lent et al., 1994). Bandura (Lent et al., 1991) found that people develop interest in activities at which they feel confident in. Many studies have explored the relationship between self-efficacy beliefs and career choices.

Betz and Hackett (1981) investigated the career self-efficacy of males and females. Subjects were 134 female and 101 male undergraduates were asked their perceptions of successfully completing educational requirements and job duties of 10 traditionally female and 10 traditionally male occupations. Subjects also indicated their degree of interest and extent of consideration of each occupation. Results found that young women expressed high interest in careers for which they had high efficacy expectations and low interest in careers in which they could not succeed. Females reported significantly higher levels of self-efficacy towards traditional occupations and significantly lower levels of self-efficacy

toward nontraditional occupations while males reported equivalent self-efficacy toward both classes of occupations. For women, it was founds that career self-efficacy was a much stronger predictor of perceived career options than academic ability.

Neville and Schlecker (1988) had similar findings of Betz and Hackett. They studied women's willingness to engage in traditional and nontraditional career activities. Data for this study was obtained by administering the career decision-making scale and the assertive behavior assessment for women scale to 122 female students attending a large Southeastern university. A two-way analysis of variance for assessing willingness to engage in career-related activities of nontraditional occupations showed significant main effects for self-efficacy. Women who scored high in self-efficacy were more willing to engage in career related activities of nontraditional occupations.

Betz and Hackett (1983) studied the relationship of mathematics self-efficacy expectations to the selection of science-based college majors of males and females. Subject were undergraduate students consisting of 153 females and 109 males. Subjects completed a mathematic self-efficacy scale, the Bem Sex Role Inventory, an adapted version of the Fennema-Sherman Mathematics Attitudes Scales, and a questionnaire on college major choices. A stepwise multiple regression analysis showed that students who reported stronger mathematics self-efficacy expectations were more likely to select science-based college majors. Results also showed that math-related self-efficacy expectations of college males were significantly higher than college females. Findings showed that it was characteristic of females that low mathematic self-efficacy expectations

lead to the avoidance of math related courses which are prerequisites for science careers.

Thus leading to an underrepresentation of women in science careers.

Self-efficacy and Interests

The social cognitive model by Lent, Brown, and Hackett (1994) define vocational interests as patterns of likes, dislikes, and indifferences toward career-related occupations. Interests are likely to be formed towards activities in which people view themselves to be efficacious. The social cognitive model hypothesized that there will be a positive relation between occupationally relevant self-efficacy beliefs and vocational interests (Lent et al., 1994). Studies have found positive relationships between self-efficacy and interests which has supported the hypothesis stated in the social cognitive model.

A study by Lent, Brown, and Larkin (1986) explored the relationship of self-efficacy to academic performance and perceived career options. Subjects were 105 undergraduate students who were participating in a career planning course on science and engineering majors and careers. Subjects completed measures of self-efficacy, career indecision, self-esteem, expressed vocational interests, and range of perceived vocational options in technical/scientific fields. Correlations were calculated to assess the relationship between self-efficacy and vocational interests. Results found that self-efficacy expectations are positively related to vocational interests. Findings support that self-efficacy is related to career-relevant behavior.

Another study by Lent, Brown, and Larkin (1987) had similar findings which studied the contribution of self-efficacy, interest congruence, and consequence thinking in

explaining career-relevant behavior in students considering science and engineering fields. Subjects were 105 undergraduate students enrolled in a career/educational planning course on science and engineering majors and careers. Subjects completed measures of self-efficacy, career indecision, range of perceived vocational options in technical/scientific fields, expressed vocational interests, self-esteem, and the Strong-Cambell Interest Inventory. Correlations were calculated to assess the relationship of the three predictor variables. Findings showed that there is a significant relationship between self-efficacy and an index of Holland theme congruence derived from the Strong Cambell Interest Inventory.

Lent, Larkin, and Brown (1989) explored the relationship of self-efficacy beliefs to inventoried vocational interests. Subjects were 70 students enrolled in a career/educational planning course for undergraduates considering science and engineering fields at a large Midwestern university. Subjects completed measures of self-efficacy and the Strong Cambell Interest Inventory. Correlations were calculated to assess the relationship between self-efficacy and corresponding vocational interests on the SCII.

Results indicated a pattern of moderate correlations between self-efficacy and corresponding vocational interests on the SCII.

Chartrand, Camp, and Mcfadden (1992) had findings which did not support the previous findings on the relationship between self-efficacy and interests. A study was conducted which compared self-efficacy, interest congruence, and student commitment to academic adjustment and career indecision related to psychology courses. Subjects were

98 undergraduate students enrolled in career planning course at a large Southeastern university. Subjects completed measures of self-efficacy, career indecisions, academic adjustment, and satisfaction. Correlations between the variables were calculated. Results showed that unlike previous research, self-efficacy was not related to interest congruence. These findings may be a result of the diversity in psychology as opposed to science and engineering careers.

Studies have also found self-efficacy to be a predictor of interests and interests to be a predictor of self-efficacy. Post, Stewart, and Smith (1991) examined the relationship of self-efficacy and interests to the consideration of math and science careers among Black freshman. Subjects were 111 undergraduate students at a large Midwestern university. Subjects were given a math and science self-efficacy questionnaire. Findings showed that subjects reported lower self-efficacy and interest in math and science occupations than non-math and science occupations. A regression analysis was conducted to assess the relationship between self-efficacy and interests. With the total sample, the only significant predictor of interests in math and science careers found was math and science self-efficacy regarding educational requirements. When males and females were analyzed separately, the only significant predictor of math and science interests was in the male sample. Non-math and science self-efficacy regarding job duties and non-math and science confidence regarding educational requirements were predictors of math and science interests.

Rotberg, Brown, and Ware (1987) found interests to be a predictor of self-efficacy. A study was conducted which studied career self-efficacy expectations in

relation to perceived range of career options. Subjects were 153 students at a community college. Measures used consisted of instruments on demographic information, career self-efficacy scale, career interest scale, career range scale, and the BEM Sex-Role Inventory. A univariate analysis showed that there is a significant relation between career self-efficacy and career interests. Results indicated that career self-efficacy expectations and career interests significantly predicted range of perceived career options as well as career interests were found to predict self-efficacy expectations.

Self-efficacy, Outcome expectations, and Interests

Outcome expectations have been found to complement self-efficacy (Bandura, 1989). Outcome expectations are beliefs that a certain behavior will result in certain outcomes. Outcome expectations involve the imagined consequences of performing certain behaviors such as "if I do this, what will happen?" (Lent et al., 1994).

Lent, Brown, and Hackett's (1994) model of career choice activity incorporated Bandura's theory of self-efficacy and outcome expectations and hypothesized that relevant self-efficacy and outcome beliefs will relate positively to measures of vocational interests. In a review of previous studies, correlations from these studies were calculated for the variables in the interest model. Total sample sizes ranged from 339 to 1829. Correlations between measures of self-efficacy and interests were calculated based on 13 studies and correlations between measures of outcome expectations and interests were calculated based on 3 studies. Results found significant correlations between self-efficacy and interests and between outcome expectations and interests. Also hypothesized was that the

combination of self-efficacy and outcome expectations will predict career interests better than either of them alone. Data from this hypothesis was too limited to obtain significant results.

Lent, Lopez, and Bieschke (1991) found significant findings to support the hypothesis made by Lent et al. that the combination of self-efficacy and outcome expectations will predict career interests better than either of them alone. A study was conducted with introductory psychology students which explored the relation of self-efficacy beliefs to outcome expectations, academic interests, and science-based occupational choice. Subjects were 138 students enrolled in a introductory psychology courses at a large Midwestern university. Subjects completed measures of demographic characteristics, mathematic self-efficacy and outcome expectations, mathematics-related course interests, career choice, and perceived sources of mathematics self-efficacy at group testing sessions. Both self-efficacy (r=.60, p<.001) and outcome expectations (r=.61, p<.001) were positively related to interests. Regression analysis found that outcome expectations added unique variance (R square change = .15) over and above self-efficacy in predicting math-related course interests.

Lent, Lopez, and Bieschke (1993) conducted another study which had similar results with introductory psychology students which explored the relationship of prior achievement, self-efficacy, outcome expectations and interests in predicting students choice and performance in math related college courses. Subjects were 166 students enrolled in introductory psychology courses at a large Midwestern university. Subjects

received measures of demographics, mathematics self-efficacy, mathematics course interests, outcome expectations, and mathematic course intentions, choices, and performance. Findings showed that self-efficacy (r=.61, p<.01) and outcome expectations (r=.67, p<.01) were positively related to interests. Regression analysis also found that outcome expectations added unique varience (R square change = .16) over and above self-efficacy in predicting interests.

The present study involves three variables of self-efficacy, outcome expectations, and interests towards science careers of adolescent females. Self-efficacy is defined in this study as the degree to which a person believes they can successfully obtain a particular career. Outcome expectations refers to beliefs of certain outcomes associated with obtaining a particular career. The final component of interests refers to the degree a person is interested in a particular career.

The purpose of this study is to gather empirical data to support the model of career choice activity proposed by Lent, Brown, & Hackett (1994). This study hypotheses that self-efficacy and outcome expectations towards science careers will be positively related to interests in science careers of adolescent females.

CHAPTER III

METHOD

Participants

Two hundred high school girls at a private catholic school served as participants for a academic simulation intervention program. All subjects were sophomores with a small range of difference in demographics. As part of a larger study, the 200 participants were randomly assigned to one of 3 interventions or a control group. For the purposes of this study, only participants from the control group (n=47) and from the intervention group who received both a self-efficacy and outcome expectations intervention (n=49) were used. Consent for participation in the study was given by the parents/guardians of the students.

Materials

Three measures were given to the subjects which tested their degree of self-efficacy, perceived outcome expectations, and interest in science careers. The self-efficacy measure consisted of thirty statements. The statements asked the subjects to rate the degree to which they felt they could successfully obtain a particular career, the degree to which they could complete course work for a particular career, and the degree to which they felt they could graduate with a certain degree. Sample careers include: Chemistry,

Engineer, and Actuary. The rating ranged from 1 being unable to complete successfully to 10 being able to complete successfully. The internal consistency reliability using Cronbach's coefficient alpha was estimated to be .93.

The outcome expectations measure consisted of thirty statements which described outcomes of certain careers. The subjects were asked to rate the degree to which they agreed with each statement. Sample statements include: A degree in Chemistry will allow me to obtain a well paying job and with a degree in Economics I will be respected by others. The scale ranged from 0 (strongly disagree) to 9 (strongly agree). The internal consistency reliability using Cronbach's coefficient alpha was estimated to be .94.

The interests measure consisted of twenty-five names of occupations. Subjects were asked to rate the degree to which they liked each of the occupations. The list consisted of science and nonscience related occupations. Sample items include Lawyer, Secretary, and Chemist. The scale ranges from one (not at all interested) to 7 (very interested). Participants were given a description of each occupation which they could refer to when completing the interest survey. The internal consistency reliability using Cronbach's coefficient alpha was estimated to be .81.

Procedure

Subjects in the intervention groups (n=49) received a self-efficacy intervention and an outcome expectations intervention. The self-efficacy intervention provided the subjects a experimental set of exercises which utilize three sources of efficacy information which consists of mastery experiences, vicarious experiences, and verbal persuasion experiences.

Mastery experiences are the strongest source of self-efficacy because they involve the individual performing a given skill area. Vicarious experiences are a secondary source of efficacy information. This involves learning a particular skill through observing others. Verbal persuasion is a source of efficacy when encouragement is linked to insight by the participant that they have performed the task successfully in the past.

The outcome expectations intervention provides information for the subjects about the financial windfall associated with a college education and the additional windfall associated with a science career. The intervention begins by students receiving information about types of careers. Afterwards participants played a game where they received money according to one of four groups. These four groups consist of high school dropout, high school graduate, college graduate, and college graduate with a science major. The game provides a reference from which to evaluate the amount of money associated with a given career. Subjects will have the opportunity to buy a house, a car, and other things depending on the salary given. During the game subjects will be going through a given month and making decisions on what they like to buy.

Two weeks following the interventions all subjects completed surveys relating to self-efficacy, outcome expectations, and interests. Control group participants did not receive the interventions but did receive the surveys.

CHAPTER IV

RESULTS

Data was gathered on the measures of self-efficacy, outcome expectations, and interests for the control and treatment groups. Two simultaneous multiple regression analyses were run to determine how self-efficacy (independent variable) and outcome expectations (independent variable) predict interests (dependent variable) in both control and treatment groups. The variables had different descriptive for each of the regression procedures (See Table 1 & 2).

For the control group, the correlation matrix showed a non-significant correlation between self-efficacy and interests (r=.14, p=.180) and a significant relationship between outcome expectations and interests (r=.36, p=.006) (See Table 3). The treatment group had a non-significant correlation between self-efficacy and interests (r=.24, p=.051) and a significant correlation between outcome expectations and interests (r=.33, p=.011) (See Table 4).

Data from the control group was analyzed to test the hypothesis of the social cognitive model. Lent at al. (1994) hypothesized that both self-efficacy and outcome expectations would predict interests. Simultaneous multiple regression analyses indicated that self-efficacy and outcome expectations combined to account for 13% of the variance

in math and science interests. However, examination of the standardized beta values indicated that outcome expectations was the only significant predictor (See table 5). Outcome expectations yielded a stronger effect size than self-efficacy with outcome expectations being seven times greater than self-efficacy. These findings suggest that outcome expectations may be a stronger predictor of math and science interests.

The data from the treatment group was assessed in order to evaluate whether changing self-efficacy and outcome expectations was associated with changes in interest. Simultaneous multiple regression analysis indicated that combination of self-efficacy and outcome expectations was found to be approaching significance with an R square of .12, F(2, 46) = 3.06, p=.056. Although non-significant, the beta weight of outcome expectations is approximately three times as much as self-efficacy as a predictor of interests (See Table 6).

Table 1

MEANS AND STANDARD DEVIATIONS OF SELF-EFFICACY, OUTCOME

EXPECTATIONS, AND INTERESTS VARIABLES OF THE CONTROL GROUP

| Variable | Mean | SD |
|----------------------|------|------|
| Self-efficacy | 5.28 | 1.44 |
| Outcome Expectations | 5.09 | 1.26 |
| Interests | 3.13 | .65 |
| | | |

Note. n = 47

Table 2

MEANS AND STANDARD DEVIATIONS OF SELF-EFFICACY, OUTCOME

EXPECTATIONS, AND INTERESTS VARIABLES OF THE TREATMENT GROUP

| Variable | Mean | SD |
|----------------------|------|------|
| Self-efficacy | 5.29 | 1.49 |
| Outcome Expectations | 5.52 | 1.21 |
| Interests | 3.19 | .87 |
| | | |

Note. n = 49

Table 3

CORRELATION MATRIX OF SELF-EFFICACY, OUTCOME

EXPECTATIONS, AND INTERESTS VARIABLES OF THE CONTROL GROUP

| Variable | 1 | 2 | 3 |
|----------------------|------|-------|---|
| Self-efficacy | | | |
| Outcome Expectations | .236 | | |
| Interests | .136 | *.363 | |
| | | | |

^{*} p<.05.

Table 4

CORRELATION MATRIX OF SELF-EFFICACY, OUTCOME

EXPECTATIONS, AND INTERESTS VARIABLES OF THE TREATMENT GROUP

| Variables | 1 | 2 | 3 |
|----------------------|------|-------|---|
| Self-efficacy | | | |
| Outcome Expectations | .462 | | |
| Interests | .237 | *.329 | |
| | | | |

^{*} p<.05.

Table 5
SIMULTANEOUS MULTIPLE REGRESSION ANALYSIS
FOR SELF-EFFICACY AND OUTCOME EXPECTATIONS
X INTERESTS VARIABLES OF THE CONTROL GROUP

Multiple R

.37

R Square

.13

Adjusted R Square

.10

Standard Error

.62

Analysis of Variance DF Sum of Squares Mean Squares

Regression 2 2.64 1.32

Residual 44 17.01 .39

F = 3.42 Significant F = .04

| Variable | В | SE B | Beta | Т | Sig T |
|----------------------|------|------|------|-------|-------|
| Self-efficacy | .02 | .07 | .05 | .372 | .7113 |
| Outcome Expectations | .18 | .18 | .35 | 2.428 | .0193 |
| (Constant) | 2.07 | .46 | | 4.51 | .00 |

Table 6
SIMULTANEOUS MULTIPLE REGRESSION ANALYSIS
FOR SELF-EFFICACY AND OUTCOME EXPECTATIONS
X INTERESTS VARIABLES OF THE TREATMENT GROUP

Multiple R .34 R Square .12 Adjusted R Square .08 Standard Error .84 Analysis of Variance DF Sum of Squares Mean Square Regression 2.13 2 4.27 Residual 46 32.09 .70 Significant F = .056F = 3.06Variable Sig T В SE B \mathbf{T} Beta Self-efficacy .09 .69 .06 .11 .49 Outcome Expectations 1.79 .20 .11 .28 .08

1.75

.60

2.93

.01

(Constant)

CHAPTER V

DISCUSSION

The purpose of this study was to validate the model of interest development presented in the social cognitive model by Lent, Brown, and Hackett (1994). Significant findings were found for the relationship of outcome expectations and interest. This finding validates the interest model's hypothesis that there is a positive relation between occupationally relevant outcome expectations and expressed interests. Although non-significant, findings did show there was some correlation between self-efficacy and interests. This weak relationship does support somewhat the interests model's hypothesis that there will be a positive relation between occupationally relevant self-efficacy beliefs and vocational interests.

Also, the variance accounted for by the prediction equation in the control group was 13 percent and although non-significant, 12 percent of the variance was accounted for in the treatment group. Although both had non-significant T score values with the exception of the T score of outcome expectations in the control group, some variance was accounted for which shows that a relationship does exist between these three variables.

The beta weight of outcome expectations in the control group was found to be seven times greater than the beta weight of self-efficacy as a predictor of interests and three times greater in the treatment group. This suggests that outcome expectations may have a larger effect and are better predictors of interests. Results supported this finding with the control group having a significant T score value for outcome expectations.

In comparison with the findings of Lent, Lopez, and Bieschke (1991, & 1993) findings were consistent with high correlations between outcome expectations and interests although the correlations between self-efficacy and interests tended to be lower.

This finding shows that for adolescents outcome expectations may play a larger role than self-efficacy when choosing interests in science careers. The outcome expectations intervention was more interesting for the subjects which may have influenced the findings. Although it is important to note that outcome expectations was a better predictor of interest in the control group as well.

Due to non-significant findings, the self-efficacy and outcome expectations intervention can not be evaluated appropriately. Many factors lead to this finding as well as to the non-significant findings with the relationship of self-efficacy, outcome expectations, and interests towards science careers of adolescent females.

Limitations

This study did not have enough power which may have influenced the findings of this study. The small N in both groups has a large effect on the results of the study. Not having a larger sample size was a limiting factor which may have lead to the non-significant findings. Within group variability is also a limiting factor which may have resulted from the combining of two control groups.

Implications

Implications for future study include increasing the power of the study through using a larger sample size to increase significance as well as to provide a proper assessment of the self-efficacy and outcome expectations intervention. Decreasing within group variability is also needed to establish a more valid data set to work with.

In sum, the present findings provide mixed support for the social cognitive model's (Lent et al., 1994) hypothesis that self-efficacy and outcome expectations will be positively related to interests. With the use of larger sample sizes, further investigation needs to be made on the relationship between outcome expectations and interests in science careers with adolescents. Future research with adolescent populations will aide counselors when assisting adolescents with career choices.

APPENDIX

PERMISSION LETTER

Deepika C. Reddy 850 N. State St. Apt. #14D Chicago, IL 60610

V. Scott Solberg University of Wisconsin - Milwaukee Department of Educational Psychology Enderis Hall #745 P.O. Box 413 Milwaukee, WI 53201

January 1, 1996

Dear Dr. Solberg,

I am completing a thesis at Loyola University Chicago entitled "The Relationship of Self-efficacy and Outcome Expectations in Relation to Interests in Science Careers." I would like your permission to reprint in my thesis measures used in your academic simulation intervention program. The measures to be reprinted are the self-efficacy measure, outcome expectations measure, and the interests measure. The requested permission extends to any future revisions and editions of my thesis, including non-exclusive world rights in all languages, and to the prospective publication of my thesis by University Microfilms, Inc. These rights will in no way restrict republication of the material in any other form by you or by others authorized by you. Your signing of this letter will also confirm that you own the copyright to the above-described material.

If these arrangements meet with your approval, please sign this letter where indicated. Thank you very much.

Sincerely,

Deepika C. Reddy

PERMISSION GRANTED FOR THE USE OF REQUESTED ABOVE:

V. Scott/Solberg/

Date

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The author of this thesis was born in India and immigrated to America where she was raised in Port Huron, Michigan. In May, 1994 she graduated from Loyola University Chicago with a B.S. in psychology. During her undergraduate education she was actively involved in community service activities such as volunteering in a shelter for victims of domestic violence. In September, 1994 she entered a master's degree program in community counseling at Loyola University Chicago. During her graduate training she was actively involved on research teams and the graduate student organization. Her practicum placement is at Youth Guidance which is a social service agency that provides services at various public schools in the city of Chicago. The author's goals are to work in a agency or hospital setting providing effective adolescent and family therapy counseling.

THESIS APPROVAL SHEET

The Master's Thesis submitted by Deepika Reddy has been read and approved by the following committee:

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The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the thesis is now given final approval by the committee with references to content and form.

The thesis is, therefore, accepted in partial fulfillment of the requirements for the degree of Master of Arts in Community Counseling.

Date

Director's Signature