The Relation of Early Adolescent Anxieties To Young Adults Occupational Self-concepts

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Abstract

This study examined the relation of 6th and 7th grade children's anxieties to their career self-concepts eight years later. Previous research suggest that anxiety is a persistent force in children's lives and occupational self-perception is a product of not only the high school and college years, but of childhood self-perceptions and self-efficacy.

Data presented here come from an ongoing, longitudinal (MSALT), which began in 1983. In this report, we use anxieties reported in grades 6th and 7th as Time 1 predictors (mean age=11.5 years, SD=. 74), and occupational self-concept measures as reported 2 years after the participants graduated from high school as the Time 2 outcome (mean age=20.5 years, SD=. 76).

The Time 1 predictors included academic anxiety, test anxiety, somatic anxiety, social anxiety and financial anxiety. Results show that anxious 6th and 7th graders perceive themselves less skilled at jobs requiring leadership, independence, intelligence and math/science capabilities and report higher value for jobs that require limited involvement as young adults even after controlling for indicators of school general competence level at Time 1.

Introduction

Although anxiety is assumed to be a fairly common and normal part of life, experiencing these anxieties in their extreme can have a negative effect on a variety of outcomes for both children and adults. Most of studies of anxiety focus on the relation of math and test anxiety of young school children to either their academic performance (e.g., Hill, 1980, Meece, Wigfield, Eccles) or self-esteem (e.g., Lord, Eccles, & McCarthy, 1994). In the college age group, studies of anxiety center mostly on achievement (e.g., Healy & Mourton, 1987), major selection (e.g., Betz, 1978) or career decision-making (e.g., Fuqua, Newman, & Seaworth, 1988). In general, these studies of anxiety are limited to short time effects such as before and after taking test for career selection or the transition to junior high-school (Lord et al., 1994).

According to Nicholls (1976), anxiety is consequence of poor self-evaluation and expectation. Individuals low in self-perceived efficacy and self-confidence are more likely to experience anxieties when confronted with challenges (Bandura, 1988b). The adolescent years are important for children's self-perception formation (Rosenberg, 1986) and anxieties in these years could have a profound effect on career planning because of their relation to confidence and self-efficacy. Yet very little work has focused on this. According to both Eccles et al. (1983) and Bandura et al. (1996), students' confidence in their ability to succeed (assessed as their expectation or self-efficacy) during childhood can shape future career aspirations. As early adolescents become more aware of the positive and negative aspects of their self-perceptions and anxieties, they may put less value for anxiety provoking setting and choose different paths to protect themselves from the disappointment of failure (see Wigfield &

Eccles, 1994; Eccles ,1984). To the extend that highly demanding careers get linked to performance anxieties, then early performance anxieties should lead adolescents to lower their career aspiration in order to avoid potentially anxiety provoking life pathway.

In this study, we focus on occupational self-perception as a developmental process and study the long-term relation of anxieties reported during early adolescence (6^{th} and 7^{th} grade) to self-concept of career skills, career efficacy and values in young adults (2 years after high school). Do individuals with high levels of anxiety at early adolescence differ from their peers in career self-concept, career efficacy and careers value, as they become adults. To minimize the effect of individuals' academic achievement on both anxiety formation and occupational self-perception, we control for total grade point average (GPA) in 6^{th} and 7^{th} grade.

Methods

The data presented in this study are part of an on-going longitudinal study of adolescent development (Michigan Study of Adolescent Life Transitions—MSALT). MSALT started in 1983 when the students were in 6^{th} grade (average age=11.5 years, SD=. 74). The Time-1 (1983-1984) Participants completed questionnaires twice in 6^{th} grade (waves 1 and 2) and twice in the 7^{th} grade (waves 3 and 4). Indices of different types of anxieties were constructed by factor analyzing the responses to 15 items in self-administered questionnaires in sixth and seventh grade. These indices are indices of (a) somatic symptoms of anxiety, (b) test anxiety, (c) social anxiety, (d) academic worry, and (e) concern about the financial future (see Table 1 for an overview).

Time-2 data come from responses to a survey of occupational self-concept and occupational efficacy measures (see Table 2 for an overview), mailed to the participants mailed 2 years after the graduated from

high school (wave 7, 1992; average age=20.5 years, SD=. 76). Average yearly math and English grades from the school record data at 6th and 7th grade were used as indicator of Time 1 academic performance. The total cases included in the final analyses were 920 young adults (576 females, 344 males).

Results

Table 3 presents the correlation between Time 1 and Time 2 indicators. All early anxieties were positively and significantly correlated to each other. Grade point average at Time 1 showed a significant negative correlation to (academic, somatic, financial and test anxiety). There were a significant negative relation between anxieties (academic, somatic, financial and test anxiety) and career self-concepts, career efficacy and level of education at Time-2 and a significant positive correlation Time 1 anxieties with valuing limited job involvement. Thus there was a general tendency for higher level of early anxieties to be associated with lower career related perceptions and educational attainment and higher valuing limited job involvement.

Using the Amos program, we tested the relation among general anxiety and Valuing limited job involvement, (a latent variable with 1 indicator), self concept of occupational abilities, (a latent variable with three indicators leadership, independence, intellectual), and self efficacy (a latent variable with two indicators efficacy for business, efficacy for science related jobs. We improved our final model by excluding financial and social anxiety from our model (see figure 1 for over view). The fit of final model to data with these indices (GFI=. 98 and NFI=. 97, CFI=. 98) suggests a very good fit of model. Time 1 anxiety was a predictor of Time 2 occupational self-concept/ occupational efficacy and limited job involvement value. Also as one would expect, there was a significant negative reciprocal causal relation

between Time 1 anxiety and Time 1 academic performance. Furthermore, using the multi-sample analysis method, a model of the equal structural parameters (i.e., casual effects) between gender was accepted.

Discussion

The purpose of the present study is to draw attention to the early adolescence anxieties and their effects on future career self-concept, career efficacy and value in job involvement. Our results support the hypotheses that 6th and 7th graders with high level of anxiety have (1) lower level of self-concept in occupations requiring independence, intelligence and leadership, (2) lower self-efficacy for fields related to math and science or business, and (3) high value for jobs that require limited involvement as young adults. Furthermore, their 6th and 7th grade GPA is a positive predictor of their occupational self-concept and efficacy, and a negative predictor of limited job value, two years after high school. Also their Time 1 anxieties are a stronger predictor of Time 2 occupational measures than Time 1 academic ability. Finally, these relations are equally true for females and males.

Although it is surprising to find such long-term effects of these early anxieties in a non-clinical population, in another study, Vida, et al, (1997), reported that anxious 6th and 7th graders achieved lower GPA's when they graduated from high school and reported lower physical and mental healthy two years after high school, compared to students with lower levels of anxiety. These long term effects of early anxieties indicate that anxious children develop general negative concepts of themselves and their ability, which influences their curriculum choices as adolescents, social relations, performances, mental health, career self-concepts and adaptation to the world in general (Rosenberg, 1979 ; Wigfield and Eccles, 1989). Consequently, this trend impacts their lives after adolescence and limits their career selection to occupations they believe are accessible and feel comfortable to pursue.

Even though parents and other significant individuals, who are in the position of supporting, encouraging and advising (teachers, counselors) can help children to cope with their anxieties, it can be difficult to develop effective strategies. For example, in an attempt to help anxious children cope, an adult might try to protect the child from anxiety creating situations, as opposed to helping the child understand how to handle anxiety. Parents and other significant adults may also become convinced themselves, by the child's under-evaluation of his/her self-concept of ability, that the child lacks ability or skill and inadvertently discourage the child from learning how to cope with the anxieties (Healy, 1991). Because of these misunderstandings parents and educators should be trained to recognize the signs of children anxieties and to be able to help them to cope. Furthermore, it is important that any intervention be based on the type of anxiety and child personal characteristics.

Table 1: Measures of Anxiety

Academic worry (alpha=0.78):
"How much do you worry about how well you are doing in math?"
"How much do you worry about how well you are doing in English?"
"If you are absent from school and you miss a math assignment, how much do you worry that you will be behind when you come back to school?"
"If you are absent from school and you miss an English assignment, how much do you worry that you will be behind when you come back to school?"
"When the teacher says he/she is going to ask you some questions to find out how much you know in math, how much do you worry that you will do poorly?"
"When the teacher says he/she is going to ask you some questions to find out how much you know in English, how much do you worry that you will do poorly?"
"How worried do you get about getting your schoolwork in on time?"

Financial future (alpha=0.78):
"Do you worry that your parents might not have a job in the future?"
"Do you worry that you will not be able to get a good job when you are an adult?"
"Do you ever worry that your family might not have enough money to pay for things?"

Social anxiety (alpha=0.67):
"How worried are you that maybe you're not as popular as you'd like to be?"
"How worried are you that maybe other kids don't really like to do things with you all that much?"
"When a friend gets mad at you, how nervous do you get that they might not want to be your friend anymore?"

Somatic anxiety (alpha=0.83):
"Does the hand you write with shake when you are taking a test?"
"Does your heart beat faster when you have to do a test?"
"When the teacher asks you to write on the blackboard, does the hand you write with sometimes shake?"

Test anxiety (alpha=0.90):
"While you are taking a test in math, how nervous do you get?"
"Do math tests scare you?"
"Before you take a test in English, how nervous do you get?"
"While you are taking a test in English, how nervous do you get?"
"Do English tests scare you?"

Table-2 Measures of Occupational Self-concept, Efficacy and Value.

Measure of perceived value of job characteristics

Value limited job involvement (alpha=0.67):
How important is it for you to have a job that:
Is easy and not very demanding
Let you forget about your work when the day is over
Is nothing more than a way of making a living

Measure of expected efficacy in jobs.

Efficacy for Math and Science-Related Jobs (alpha=0.75):
How well you think you would be in jobs such as:
Science or math related field (like engineer, architect, and science teacher)
Science (like scientist with Ph.D.).

Efficacy for Business (alpha=0.73):
Owner of a small business (like restaurant owner, shop owner).
Business manager or administrator, stocks broker.

Measure of self-concept of skills.

Compared to others how good are you at:
Leadership (alpha=0.82):
Supervising others
Being a leader

Independence (alpha=0.74):
Independence
Self-confidence
Decisiveness

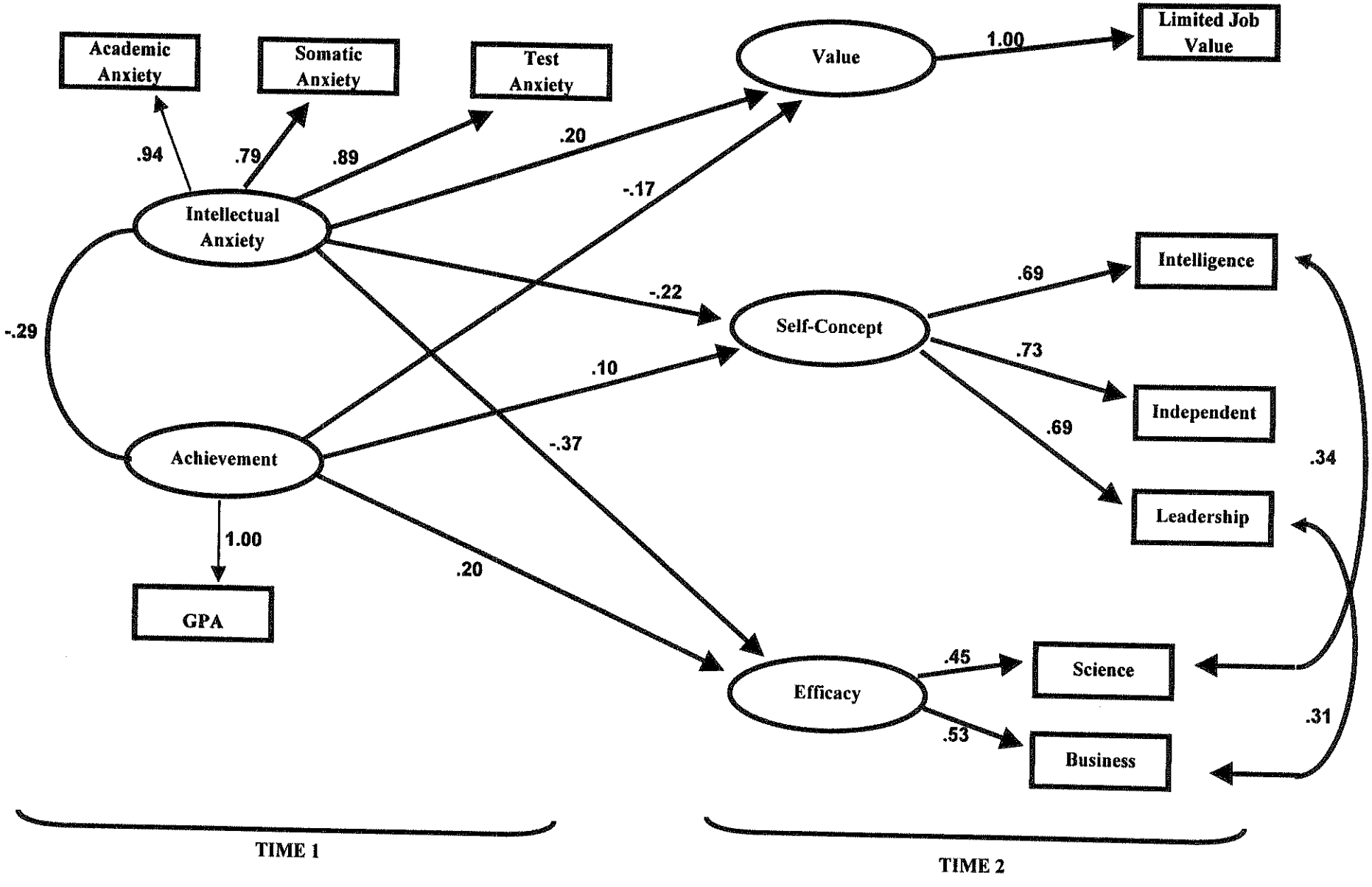
Intellectual (alpha=0.70):
Logical, analytic thinking
Intelligence

Table 3 Correlation between All Indicators of Theoretical Constructs.

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Academic Worry	1.000											
2. Somatic Anxiety	.74***	1.000										
3. Financial Anxiety	.37***	.31***	1.000									
4. Test Anxiety	.83***	.71***	.31***	1.000								
5. Social Anxiety	.40***	.28***	.26***	.34***	1.000							
6. GPA at Time-1	-.28***	-.25***	-.11***	-.24***	.04	1.000						
7. Leadership self-concept	-.12***	-.09**	-.14***	-.100**	-.09**	.06	1.000					
8. Independence self-concept	-.16***	-.12***	-.10**	-.16***	-.15***	.09**	.52***	1.000				
9. Intellectual self-concept	-.22***	-.17***	-.18***	-.20***	-.17***	.20***	.47***	.49***	1.000			
10. Efficacy for Business	-.19***	-.16***	-.15***	-.15***	-.20***	.15***	.44***	.27***	.29***	1.000		
11. Efficacy for Science-Related Jobs	-.26***	-.21***	-.10**	-.17***	-.13***	.18***	.20***	.18***	.44***	.26***	1.000	
12. Value Limited Job-Involvement	.23***	.22***	.15***	.22***	-.00	-.23***	-.15***	-.10***	-.19***	-.03	-.15***	1.000

*P<. 05. **P<. 01. ***p<.001

Figure 1: The Standardized Structural Paths of Early Anxieties and Occupational Self-Concept.



References

Bandura, A., Barbaranelli, C., Capara, G. V., & Pastorelli, C. (1996). Multifaceted impact of self-efficacy beliefs on academic functioning. Child Development, 67, 1206-1222.

Betz, N. E. (1978). Prevalence, distribution, and correlates of math anxiety in college Students. Journal of Counseling Psychology, 25 (5), 441-448.

Eccles (Parsons), J. S., Adler, T. F., Futterman, R., Goff, S. B., Kaczala, C. M., Meece, J. L., & Midgley, C. (1983). Expectancies, values, and academic behaviors. In J. T. Spence (Ed.), Achievement and achievement motivation (pp. 75-146). San Francisco: Freeman.

Eccles, J., Midgley, C., & Adler, T. (1984). Grade-Related Changes in the School Environment: Effects on Achievement Motivation. In J. Nicholls (Ed.), The Development of Achievement Motivation. (Vol. 3, pp. 282-331). Greenwich, CT: JAI Press

Fuqua, D. R., Newman, J. L., & Seaworth, T. B. (1988). Relation of state and trait anxiety to different components of career indecision. Journal of Counseling Psychology, 35 (2), 154-158.

Harter, S. (1992). Visions of self: Beyond the me in the mirror. In J. Jacobs (Ed.), Nebraska symposium on motivation. (Vol. 40),: Lincoln, NE: University of Nebraska Press.

Healy, C. C. (1991). Exploring a path linking anxiety, career maturity, grade point average, and life satisfaction in a community college population. Journal of College Student Development, 32, 207-211.

Healy, C. C., Mourton, Don L. (1987). The relationship of career exploration, college jobs, and grade point average. Journal of College Student Personnel, 28(1) 28-34.

Hill, K. T. (1980). Motivation, evaluation, and educational testing policy. In L. J. Fyans (Ed.), Achievement motivation: Recent trends in theory and research. New York: Plenum Press.

Lord, S. E., Eccles, J. S., & McCarthy, K. A. (1994). Surviving the junior high school transition, family processes and self-perceptions as protective and risk factors. Journal of Early Adolescence, 14 (2), 162-199.

Meece, J. L., Wigfield, A., & Eccles, J. S. (1990). Predictors of math anxiety and its consequences for young adolescents' course enrollment intentions and performances in mathematics. Journal of Educational Psychology, 82, 60-70.

Nicholls, J. G. (1976). When a scale measures more than its name denotes: The case of the Test Anxiety Scale for Children. Journal of Consulting and Clinical Psychology, 44 (6), 976-985.

Rosenberg, M. (1979). Conceiving of the self. New York: Basic Books

Rosenberg, M. (1986). Self-concept from middle childhood through adolescence. In J. Suls & A. G. Greenwald (Eds.), Psychological perspectives on the self (Vol. 3, pp. 107-136). Hillsdale, NJ: Erlbaum.

Super, D. E. (1985). Coming of age in Middletown, Career in the making. American Psychologist, 40 (4), 405-414.

Vida, Inglehart, & Eccles. (1997). Anxiety Verses Stress in Children: Change the Perspective-See the Consequences. Paper presented at the Midwestern Psychological Association Meeting in Chicago, Illinois, May 1997

Wigfield, A. & Eccles, J. (1989). Test anxiety in elementary and secondary school students. Educational Psychologist, 24(2), 159-183