

Competency, Coping, and Contributory Life Skills Development of Early Adolescents

Jeffrey P. Miller, Coordinator of Evaluation
National 4-H Council
Blannie E. Bowen, Professor
The Pennsylvania State University

The mission of the Cooperative Extension System as related to 4-H programming is to enable youth to acquire knowledge, develop life skills, and form attitudes which will enable them to become self-directing, productive and contributing members of society (ES-USDA, 1990). The objectives of the 4-H program are often categorized into three major "life skills" areas: 1) competency--developing knowledge and subject matter skills, 2) coping--dealing with stresses, and 3) contributory--increasing social skills which allow self and others to overcome situational and/or personal barriers (USDA, 1986; Weatherford & Weatherford, 1987).

In the early 1900s, the major emphasis of 4-H youth development programming was the teaching of production agriculture and home economics skills. Although the teaching of subject matter is still a major component, 4-H programming has evolved to include an emphasis on developing the individual or the formation of broader skills that help youth cope with a changing world that is full of new social pressures (Lang & Gerwig, 1989). The research has tended not to keep pace with the programmatic changes. For example, Weatherford and Weatherford (1987) analyzed the limited number of studies about 4-H programming and wrote: "There appeared to be considerable research in the 4-H program within the coping domain. Some research was found under the competency domain, and the least amount of research was found within the contributory domain" (p. 21). Excluded from the Weatherford and Weatherford analysis were recent studies which addressed the life skills development of 4-H participants (Hanna, 1988; Waguespack, 1988; Ladewig & Thomas, 1987; Schlutt, 1987; Heinsohn & Cantrell, 1986; Collins, 1984; Mueller, 1989). The findings of these studies indicate that 4-H programming has a positive influence, to varying degrees, on the development of life skills.

The value of a program like 4-H is in its impact on adolescents' developing into competent, productive, and satisfied adults (Hamilton, 1981). Although the literature indicates that the overall perception of 4-H is favorable, little is known about the effectiveness of 4-H programming with younger members. Most of the research has focused on 4-H members in late adolescence or on program alumni. Few studies have examined the development of life skills by early adolescent members. Furthermore, few studies have compared 4-H and non-4-H participants.

Purpose and Objectives

The purpose of this study was to examine the self-perceived competency, coping, and contributory life skills development of early adolescents. The three objectives were to determine:

The extent to which 8th graders enrolled in public schools perceived that they have developed competency, coping, and contributory life skills.

If significant differences exist between 4-H and non-4-H members' self-perceived development of competency, coping, and contributory life skills.

Which variables explain the self-perceived development of competency, coping, and contributory life skills of 8th grade youth enrolled in public schools.

Procedures

This study utilized a descriptive correlational research design with the scope limited to 8th grade students enrolled in Ohio public schools. The Campbell and Stanley (1966) one-shot case study design was used in conducting the investigation.

A three-part questionnaire was used to collect data for the study. Section One of the instrument elicited data relative to the self-perceived development of competency, coping, and contributory life skills. The Life Skills Development Instrument (LSDI) developed by Waguespack (1988) was utilized to collect data relative to these three constructs. The instrument yielded Cronbach's reliability coefficients ranging from .80 to .87 for the three life skill scales.

Section Two of the questionnaire collected data relative to students' demographic characteristics. The Rosenberg Self-Esteem Scale (Crandall, 1973) was used to assess the self-esteem of the subjects ($\alpha = .92$). Section Three of the instrument elicited data concerning the students' involvement in youth clubs and the organizational involvement of current and former 4-H members. This section was modeled after instrumentation used in the National 4-H Impact Study (Schlutt, 1987; Steel, 1989) and an Ohio 4-H dropout study (Nickles, 1989).

The survey instrument was reviewed by 12 Ohio 4-H district and state specialists to ensure content and face validity. Since the LSDI was developed to be used with teenagers, it was pilot tested in a county not selected for the study and found to have good reliability ($\alpha = .80$ to $.87$).

The population for the study included all 8th grade students enrolled in the Ohio Public School System in 1989-90. Allowing for a sampling error of five percent and risk factor of one percent, the needed sample size was 666 students (Krejcie & Morgan, 1970). To obtain the desired sample size, a multi-stage, random cluster sampling technique was used. Three counties from each of the five Ohio Cooperative Extension (OCES, 1989) districts were randomly selected. One public school system from each of the 15 counties (Ohio Department of Education, 1989) was then selected at random. Two schools had more than 50 8th graders, so two intact health classes were selected in each case. The research instruments were administered by the researchers and 735 instruments were completed by the students, with 709 being usable. All students recorded their answers on optical scan sheets which were processed at the University Testing Services of The Pennsylvania State University.

Two index values were computed for each subject based upon their participation in 4-H and other youth clubs. Respondents who indicated that they had never been a 4-H member or had no membership in other youth clubs were assigned index values of 0.00. Nominally scaled independent variables were collapsed into two levels and "dummy coded" to compute regression models. None of the variables tested for interactive effects were significantly related to any of the life skills scales ($p > .05$). First-order interactions were deleted from the regression equations.

Findings

The sample was evenly distributed between male and female students. Slightly over 83 percent were white and almost 15 percent African Americans. Most of the students (43%) lived in small towns (populations under 10,000); 39 percent lived in rural areas or on farms. Slightly over 58 percent were living with both natural parents, 16 percent lived

with their natural mother and stepfather, and 13 percent were living with only their mothers. Almost 40 percent of both the mothers and fathers of the students had high school diplomas as their highest level of education. A fourth of the students indicated that they were earning mostly A's and B's and 22 percent were earning mostly B's and C's.

Life Skills Development

On a seven point Likert-type scale, most of the 8th grade students perceived themselves as having developed medium to high levels of competency, coping, and contributory life skills (means ranged from 5.23 for contributory to 5.66 for the coping construct). Comparisons were drawn between how the students included in this study compared with the 11th and 12th graders included in a Louisiana study (Table 1). The respondents in the Louisiana study (Waguespack, 1988) rated themselves only slightly higher on each of the life skills development scales.

Table 1. Self-Perceived Development of Life Skills by Ohio and Louisiana Youth

Scale	Ohio Study		Louisiana Study ^a	
	Mean ^b	SD	Mean ^a	SD
	N=709		N=531	
Competency	5.51	.70	5.56	.62
Coping	5.66	.72	5.80	.64
Contributory	5.23	.88	5.53	.74

^a(Waguespack, 1998)

^bValues could range from 1=strongly disagree to 7=strongly agree.

One can only speculate why the mean values from the two studies were similar. Two plausible explanations are presented. Since they are still developing their intellectual capacities, the 8th graders may have somewhat unrealistic views of their development and tend to rate themselves higher than what is realistic. On the contrary, the 11th and 12th graders are in the latter phases of adolescence and may be able to more realistically evaluate their development because of maturity, a wider range of life experiences, and related developmental factors. A second explanation could be that both groups of students were responding in a manner they perceived to be socially acceptable.

Differences Between 4-H and non4-H Participants

Table 2 shows the mean scores for the 4-H and non4-H participants' self-rated life skills development. There were no significant differences in the self-perceived level of competency, coping, and contributory life skills for 4-H and non4-H participants. The literature contains citations wherein differences were noted between 4-H and non4-H participants. Those studies were conducted with older youth and program alumni, thus, differences in the life skills development of individuals attributable to 4-H or other club involvement may not appear until individuals are older and have had more opportunities for a variety of life experiences.

Table 2. Self-Perceived Development of Life Skills by 4-H and Non4-H Participants

Scale	4-H participants		Non4-H participants		df	t-value*
	Mean	SD	Mean	SD		
	N=239		N=470			
Competency	5.54	.74	5.50	.70	579	.66
Coping	5.69	.75	5.66	.72	623	.43
Contributory	5.24	.96	5.23	.88	659	.13

*=p>.05.

Variables Explaining Life Skills Development

Intercorrelations among the competency, coping, and contributory constructs and selected variables are presented in Table 3. The highest coefficients resulted from apparent interrelatedness among the three constructs (r ranged from .72 to .77). Relationships of moderate strength were found between self-esteem and the three constructs (r ranged from .33 to .45). To assess which variables listed in Table 3 could explain significant amounts of variation ($p < .05$) in the life skills constructs, three stepwise regression models were developed. As shown in Figures 1, 2 and 3, the level of self esteem provided the best explanation for the variation in the competency, coping, and contributory scores (R^2 of .11, .20, and .10 respectively). Participation in other youth clubs explained a small amount of the variation in the scores (R^2 ranged from .01 to .03). Race and the level of 4-H participation explained small amounts of variance in the competency and contributory life skills scores. In each of the regression models, most of the variation could not be explained by variables examined in this study (R^2 total ranged from .16 to .23).

Discussion

The findings of this study suggest that self-esteem and the self-perceived development of competency, coping, and contributory life skills are perhaps complementary constructs. The *ex post facto* nature in which these findings were derived prompts questions relative to how life skills and self-esteem develop, i. e. sequentially or simultaneously. If adolescents develop some life skills, then positive feelings of self-worth will follow--or if such youth have positive feelings of self-worth, they will be more likely to develop and practice new life skills. Hamachek (1987) suggested that indicators of healthy self-esteem include problem solving and decision-making skills, a sense of responsibility, the ability to act on one's best judgment, a feeling of value and being of interest to others, and possession of values and principles about which one feels good. These indicators relate closely to key components of successful life skills educational programs as specified by Hamburg (1989) and Weatherford and Weatherford (1987).

The findings also suggest that, in addition to the level of self-esteem, participation in 4-H or other youth clubs has a positive influence on the perceived development of competency, coping, and contributory life skills. These findings parallel those of Schlutt (1987) who reported that alumni of youth leadership programs are more likely to be contributing and responsible members of the community than nonalumni. The findings also support the contentions of Hamburg (1989) and the Grant Foundation (1988) that participation in clubs and community activities are beneficial for youth as they progress through adolescence. The Grant Foundation (1988) asserts that participation in clubs and community activities can help youth build the base for a successful adolescence--if one defines successful adolescence as the development of life skills. From a programmatic perspective, the findings suggest that it may not be so important which youth organization individuals join as much as that they join a club and participate extensively.

Because of the positive correlations with life skills development, adults such as parents, volunteers, and professional educators (formal and nonformal) should encourage youth to become involved in supervised youth clubs and educational programs. These programs provide atmospheres which tend to foster positive self-esteem and feelings of self-worth in adolescents (Ianni, 1989; Grant Foundation, 1988; Hamburg, 1989; Hamilton, 1981).

Table 3. Intercorrelations Among the Development of Competency, Coping, and Contributory Life Skills and Selected Variables

	V1 ^a	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15
V1	--	.10 ^b	-.04	-.01	.02	.00	-.06	.00	.07	-.03	-.05	-.11*	.00	.06	.04
V2		----	.01	-.01	.02	.03	.00	.01	.00	-.03	.05	.03	-.13*	-.03	-.09*
V3			----	.07	.05	.09*	.07	-.03	.05	.05	.33*	.00	.08	.02	.08
V4				----	.06	-.13*	.08	.09	.09	-.01	.03	.02	.03	.05	.11*
V5					----	.30*	-.04	.02	.06	-.02	.07	-.02	.06	.08	.09*
V6						----	-.12	.00	-.03	-.03	.18*	-.01	-.05	-.02	-.04
V7							----	.12*	.08	.12*	.02	.10*	.06	.01	.06
V8								----	.01	.20*	.03	.18*	.10*	.06	.12*
V9									----	.05	-.01	.19*	.06	.07	.06
V10										----	.11*	.10*	.16*	.17*	.21*
V11											----	.08	.18*	.12*	.17*
V12												----	.33*	.45*	.33*
V13													----	.79*	.77*
V14														----	.72
V15															----

*p<.05

^aCoding: V1=Gender (0=male; 1=female), V2=Race (0=nonwhite; 1=white), V3=Residence (0=urban/suburban, 1=rural/farm), V4=Parental Situation (0=dusrupted family, 1=intact family), V5 and V6=;Mother/Father's Education (0=<high school, 1=> high school), V7 and V8=;Mother/Father's Occupation (0=non professional/technical, 1=professional/technical), V9=Grades (0=below mostly C's, 1=Mostly C's and above), V10=Club Index, V11=4-H Index, V12=Self-esteem, V13=Competency, V14=Coping, V15=Con tributory.

^bCoefficients: Relationships involving categorical variables expressed as phi or Cramer's V; relationships between catagorical and interval level variables as point biserial; relationships between interval level variables as Pearson correlation.

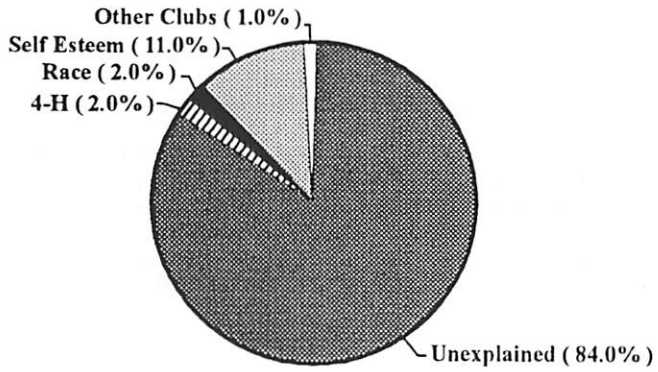


Figure 1. Variance in Competency Life Skills Development

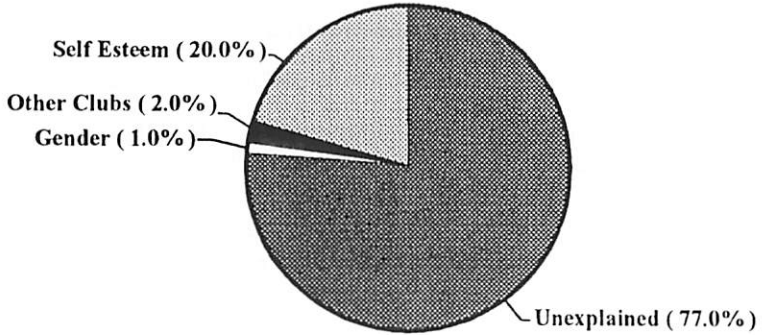


Figure 2. Variance in Coping Life Skills Development

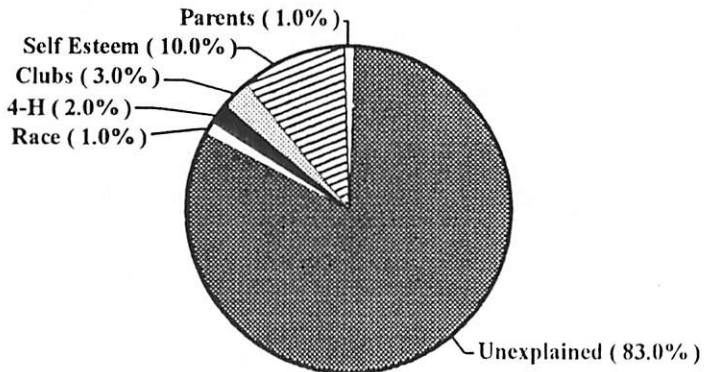


Figure 3. Variance in Contributory Life Skills Development

Conclusions

The following conclusions were made based on the findings of the study.

The early adolescents (8th graders) who participated in this study as well as the late adolescents (11th and 12th graders) who participated in a Louisiana study (Waguespack, 1988) perceived themselves as having developed moderate to high levels of life skills.

All youth participating in this study perceived themselves as having developed similar levels of life skills regardless of their status as 4-H members or nonmembers.

Self-esteem was the best indicator of the extent to which the youth had perceived the development of life skills

The competency, coping, and contributory life skills appear to be complementary constructs.

Recommendations

Two recommendations were developed based on the findings of the study.

The curricula and programs of 4-H and related clubs should be analyzed to determine to what extent and how they can be modified to enable members to develop life skills and self-esteem.

Additional research is needed on questions related to (a) the interrelatedness of the life skills constructs and (b) how the stages of adolescence relate to the development of life skills. Older youth should be studied to assess the developmental nature of the life skills constructs.

References

- Campbell, D. T. & Stanley, J. C. (1966). Experimental and quasi-experimental designs for research. Boston: Houghton Mifflin Company.
- Collins, O. P. (1984). Life skills development through 4-H: A survey of adolescent attitudes. Unpublished master's thesis, University of Nebraska, Lincoln.
- Crandall, R. (1973). Measures of self-esteem. In Robinson, J. T. & Shaver, P. R., Measures of social psychological attitudes. Ann Arbor, Michigan: Institute for Social Research, The University of Michigan.
- Extension Service-United States Department of Agriculture (ES-USDA). (1990). Cooperative Extension System National 4-H Statistics.
- Hamachek, D. E. (1987). Encounters with the self. New York; Holt.

- Hamburg, B. A. (1989). Life skills training: Preventive interventions for early adolescents. Report for the Life Skills Training Working Group, Carnegie Council on Adolescent Development.
- Hamilton, S. F. (1981). Adolescents in community settings: What is to be learned? Theory and Research in Social Education, 2(2), 23-38.
- Hanna, G. S. (1988). Kansas 4-H impact studies: 1983-1987. Staff Report, Kansas State University, Manhattan.
- Heinsohn, A. L. & Cantrell, M. J. (1986). Pennsylvania 4-H impact study: An evaluation of teens' life skill development. Staff Report. The Pennsylvania State University, University Park.
- Ianni, F. A. J. (1989). The search for structure: A report on American Youth Today. New York: The Free Press - A Division of Macmillan, Inc.
- Krejcie, R. V. & Morgan, D. (1970). Determining sample size for research activity. Educational and Psychological Measurement, 30, 607-610.
- Ladewig, H. & Thomas, J. K. (1987). Assessing the impact of 4-H on former members. Washington, D. C.: The 4-H Alumni Study, United States Department of Agriculture.
- Lang, C. L. & Gerwig, J. L. (1989). The ever growing clover. NAE4-H News and Views, 42(4), 6-8.
- Mueller, D. M. (1989). Relationships between 4-H youth leadership involvement and self-esteem. Unpublished master's thesis. Washington State University, Pullman.
- Nickles, S. A. (1989). 4-H member retention at the junior high age. Proceedings of the 43rd Annual Conference of the National Association of Extension 4-H Agents, Mobile, AL., p. 49.
- Ohio Cooperative Extension Service (OCES). (1989). Personnel directory: County and district. Columbus: The Ohio State University.
- Ohio Department of Education. (1989). Ohio Educational Directory: 1989-1990 School Year. Columbus.
- Schlutt, Jr., E. F. (1987). Impact of youth program membership of youth program life skills development, youth program experiences, adult community participation, and personal characteristics related to 4-H volunteerism. Unpublished doctoral dissertation, Texas A&M University, College Station.
- Steel, S. M. (1989). 4-H impact interview schedules: Revised after 1988 pilot test. Madison: University of Wisconsin, Department of Continuing and Vocational Education.

- United States Department of Agriculture (USDA), Extension Service, Extension Committee on Organization and Policy. (1986). Extension's 4-H: Toward the 90's. Washington, D.C.
- Waguespack, B. G. (1988). Development of life skills of 4-H club members in Louisiana. Unpublished master's thesis. Louisiana State University, Baton Rouge.
- Weatherford, D. & Weatherford, C. (1987). A review of theory and research found in selected experiential education, life skill development and 4-H program impacts literature. Raleigh: North Carolina State University, USDA and the National 4-H Council.
- William T. Grant Foundation Commission on Work, Family, and Citizenship. (1988). The forgotten Half: Pathways to success for America's youth and young families. Washington, D. C.