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A Descriptive Analysis of the Perceptions of North Carolina 4-H Agents Toward Minority Youth Participation in Agricultural-Related Activities

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Abstract: An analysis of the perceptions of North Carolina 4-H Extension personnel regarding minority youth participation in agriculture-related activities was conducted. Based on the data collected, the researchers found that 4-H agricultural programs were not fully meeting the needs of a growing diverse population. There is a strong need to improve agricultural program participation in order to increase recruitment and retention strategies for minority youth in relation to 4-H agricultural based activities.

Introduction

According to Foster and Henson (1992), the agricultural industry is the foundation for any society; however, in the United States, ethnic minorities' and women' involvement in agriculture is limited. Various demographic estimates indicate that ethnic minority populations are steadily increasing, and more of these students will need to be recruited into agriculture-related careers in order to sustain the agricultural industry for the future and to help ensure that the United States remains competitive in the global economy (Mitchell, 1993). In relation to these factors, the demand for agricultural graduates, in particular ethnic minorities, is high, but the supply is very low. Tally (1996) further believes that the lack of minority representation in the production and sale of agricultural commodities can be greatly attributed to traditional perceptions of agriculture.

The traditional perception of agriculture "is a contributing factor to the current shortage and available supply of individuals with knowledge and expertise in the food and agricultural sciences (Thompson & Russell, 1993, p. 55)." People see agriculture as relevant to their daily lives with respect to what they eat and in how food is processed. They do not see the relevance of participating in agriculture as a career, particularly minority populations.

"The decisions of individuals to select agriculture as a field of study or to become actively engaged in an agricultural career may be predicted by examining their beliefs about agriculture (Thompson & Russell, 1993, p. 55)." Studies have shown that minority youth do not participate in agricultural programs because of perceptual concerns regarding the industry. "Many minorities exhibit limited awareness of the science demands faced by students who want to prepare for professional careers in the food and agricultural sciences" (Wiley, Bowen, Bowen, & Heinsohn, 1997, p. 21).

The United States Department of Agriculture 4-H Program is one of the largest youth organizations in the country. Ingram (1999) stated that 4-H uses a 'learn by doing' approach to help more than 5.6 million youth ages 8 to 19 to develop problem solving, decision-making, and leadership skills. Cano and Bankston (1992) addressed the factor of increasing the number of ethnic minorities in 4-H. They suggest that reaching and serving minority populations will require greater consideration in the future. Program efforts directed toward youth should ensure that all youth are adequately served through the 4-H program.

Cano and Bankston (1992) also stated that a closer look at the numbers of ethnic minority youth served by 4-H makes it uncertain whether or not efforts and strategies have been utilized to make 4-H programs accessible to all populations. They further emphasized that the organization will face the challenge of becoming responsive to an increasing ethnically diverse population. Due to this factor, "current changes in contemporary society are forcing 4-H Professionals to examine more closely the content and methodology of their youth programming to ensure that it addresses the needs of a changing society" (Henderson & Ellis, 1993, p. 11).

A study performed by Stewart and Sutphin (1994) showed that educational interventions are needed to encourage minority groups to better understand agriculture and develop a more positive view of education and careers in this area. Burnett, Johnson, and Hebert (2000) stated the mission of 4-H is to assist youth in acquiring research-based knowledge in agriculture, home economics, and related subjects that contribute to human development. Thompson and Russell (1993) suggested that it is important to understand student attitudes and beliefs about agriculture. Stewart and Sutphin (1994) indicated that white students tend to have a more positive perception of agriculture and environmental science than minority groups. Holz-Clause and Jost (1995) suggest that when writing agricultural curriculum, don't assume youth are interested in agriculture. Instead, actively cultivate this interest, and demonstrate that agriculture is relevant to youth.

Minority youths' perceptions of agriculture in urban areas differ from those in rural areas. White, Stewart, and Linhardt (1991) observed that inner city students believe persons working in agriculture should have an agricultural background, will work outdoors, have opportunity for advancement, and can learn the skills needed for employment on the job. They also agree that inner city students believe that career opportunities are available in many areas of agriculture, but they believe the greatest opportunity for jobs exist in engineering, education, Extension, food service and lodging management, and horticulture. There needs to be a heightened awareness of the urban population to the value of agriculture and agribusiness.

According to Cano and Bankston (1992), reaching and serving minority populations will require greater consideration in the future. Youth perceptions of agriculture have developed from parents, school administrators, and counselors. Thompson and Russell (1993) stated that groups with more positive beliefs and intentions towards agriculture are persons with formal education beyond high school and residents of large urban communities. Thompson and Russell (1993) perceived that high school students who have taken course work in agriculture expressed more favorable beliefs about agricultural careers and are more inclined to consider an agricultural area of study than those students without such exposure.

Conceptual Framework

The conceptual framework for the study reported here is built upon the concept of inclusion. Inclusion is a philosophy that brings students, families, educators, and community members together to create schools and other social institutions based on acceptance, belonging, and community (Bloom, Permuter, & Burrell, 1999). The concept of inclusion seeks to "establish collaborative, supportive, and nurturing communities of learners that are based on giving all students the services and accommodations they need to learn, as well as respecting and learning from each other's individual differences" (Salend, 2001, p. 5). Inclusion is built upon four major principles: Diversity, Individual Needs, Reflective Practice, and Collaboration.

Diversity improves the educational systems for all students by placing them in general education environments regardless of race, ability, gender, economic status, gender, learning styles, ethnicity, cultural background, religion, family structure, linguistic ability, and sexual orientation (Salend, 2001). Individual Needs involves sensitivity to and acceptance of individual needs and differences (Salend, 2001). Reflective Practice insists that "educators reflect upon their attitudes, teaching and classroom management practices, and curricula to accommodate individual needs (Salend, 2001)". Collaboration involves groups of professional educators, parents, students, families, and community agencies working together to build effective learning environments (Salend, 2001).

Purpose and Research Goals

Given the lack of minority youth participating in agriculturally based activities, the purpose of the descriptive research study reported here is to analyze the perceptions of North Carolina 4-H Extension personnel regarding minority youth participation in agriculturally related activities. To accomplish this purpose, the following research goals were developed:

- Assess North Carolina 4-H Extension agents' perceptions of why minority youth do not participate in agricultural based programs.
- Assess North Carolina 4-H Extension agents' opinions of proposed solutions to increase participation in agricultural based programs by minority youth.
- Assess the demographic characteristics of North Carolina 4-H agent personnel and the 4-H ethnic demographics in their county of employment.

Methodology

The population for the study consisted of all county level 4-H Extension agents in North Carolina (N = 100). The survey instrument for the study consisted of a survey containing three sections. The validity of the instrument was established by means of content and face validity. Brown (1983) defined content validity as the degree to which items on a test representatively sample the underlying content domain. Brown recommends using expert judges as one means of establishing content validity. A panel of experts consisting of the graduate student's thesis committee reviewed the instrument. Face validity was established during a pilot study consisting of 20 North Carolina 4-H Extension agents who were included in the final survey population.

Cronbach's alpha was utilized as a reliability measure according to conventions established by Nunnally (1967) and Davis (1971). The measurements of .78 and .85 for sections one and two, respectively, were found. In order to control for nonresponse error, Miller and Smith (1983) recommended comparing early to late respondents. Early and late respondents were compared, and no differences were found. Elements of Dillman's (2000) survey methodology were utilized to achieve an optimal return rate. A three-round mail questionnaire approach was utilized for the study. Forty-four surveys were returned, for a final response rate of 44%.

Findings

Research Goal One

Respondents were asked to evaluate their perceptions regarding minority youth participation in 4-H agriculturally related activities.

Table 1.
Perceptions Regarding Minority Youth Participation In 4-H Agricultural Related Activities (N=44)

Perceptions	Mean	SD	Rank
Perception is important to the development of the agriculture industry.	4.11	.75	1
The negative perception of agriculture needs to be changed in order to meet the demands of a highly technological future.	3.95	1.01	2
The decision of an individual to choose agriculture as a major field can be predicted by their beliefs about agriculture.	3.91	.80	3
The change in the economy and the shift to technological advances has an important impact on minority youth perceptions of agriculture.	3.73	.85	4
Ethnic minority involvement in the field of agriculture is limited.	3.68	.91	5
Minorities in urban areas tend to have a larger negative perception of	3.66	.89	6

agriculture in rural areas.			
Farming is perceived by minorities to be hard physical labor.	3.55	.82	7
The consumption of food is the only contact that many minority youth have with the food and agricultural sciences.	3.50	.95	8
Agriculture is embedded into a political, economic and cultural system that has traditionally favored majority populations.	3.43	1.11	9
The traditional perception of agriculture contributes to a shortage of minority individuals with knowledge about the food and agricultural sciences	3.32	.83	10
The factors affecting minority student enrollment in 4-H agriculture based programs is the misconception that agriculture programs are designed to train students only for production agriculture.	3.27	1.06	11
The lack of minority interest in agriculture has led to a decline in the number of individuals who participate in the field of agriculture.	3.27	.87	12
Minority youth carry a larger negative perception of agriculture than majority youth.	3.23	.89	13
Minority youth carry a negative perception of agriculture.	2.95	.99	14
Scale: 1=Strongly Disagree, 2= Disagree, 3=Uncertain, 4=Agree, 5= Strongly Agree			

Research Goal Two

Respondents were asked to evaluate their perceptions of solutions to increase minority youth participation in 4-H agriculturally related activities.

Table 2.
Solutions to Increase Minority Youth Participation in 4-H Agriculture-Related Activities. (N=44)

Solutions	Mean	SD	Rank
Minority adult role models in the agricultural industry should be incorporated into 4-H programming.	4.70	5.53	1
Program efforts directed toward youth should ensure all youth are adequately served through the 4-H program.	4.32	.91	2
Agriculturally based programs should be offered in a way that provides equal opportunities for youth with no previous farm experience.	4.16	.78	3
Educational interventions such as recruitment are needed to encourage minority groups to better understand agriculture.	3.98	.79	4
Educational interventions are needed to encourage minority groups to develop a more positive view of education and careers in agriculture.	3.98	.66	5
It is important for 4-H agents to understand minority student attitudes and beliefs about agriculture.	3.93	1.02	6
Teachers, administrators and 4-H Extension agents should take into account traditional minority perceptions about agriculture when developing youth agricultural curricula.	3.89	.81	7
Reaching and serving minority youth, to interest them in agriculture will require greater consideration in the future.	3.84	.86	8
A heightened awareness of minority youth of the value of agriculture and agribusiness is important to increasing minority enrollment in 4-H.	3.73	.95	9
The introduction of more agriculturally based programs will increase the understanding of agriculture for minority youth.	3.66	.89	10
There should be more targeted areas to make minorities aware of agricultural programs.	3.66	.89	11
4-H programs should make minority youth aware that there is a technical side to agriculture.	3.59	1.09	12
Scale: 1=Strongly Disagree, 2= Disagree, 3=Uncertain, 4=Agree, 5= Strongly Agree			

Research Goal Three

Table 3 presents the means, standard deviations, and percentages for the demographic variables analyzed in this study.

Table 3.
Demographic Characteristics of 4-H Agents (N=44)

Demographics	N	Mean or Percent	SD
Age	44	35.41	11.92
Gender			
Male	5	11.40	
Female	39	88.60	
Education			
Bachelor	18	41%	
Masters	26	59%	
Doctorate	0	0%	
Years of Experience in Cooperative Extension		11.62	9.83
Years of Experience as a 4-H Agent		8.20	9.01

Conclusions

Based upon the aforementioned findings, the following conclusions have been made.

- Respondents agreed that the perception of agriculture plays a significant role in relation to the participation of minorities in agriculturally related activities. This finding is consistent with Cano and Bankston (1992, 1993) and Tally (1996), who identified the perception of agriculture to be a limiting factor in relation to minority agricultural recruitment.
- It was also noted that respondents felt that urban minorities displayed a more negative perception of agriculture than rural minorities, which is consistent with Cano and Bankston (1993), but in contrast to White, et al. (1991), who found that urban minority youth believed agriculture to be a diverse field and one for advancement.
- North Carolina 4-H agents were undecided as to whether the perception of agriculture contributed to the lack of minorities with knowledge of the agricultural sciences and who work in the field of agriculture professionally. Holz-Clause and Jost (1995) and Thompson and Russell (1993) indicated that educational interventions are needed in order to cultivate minority students' interest in agriculture.

- Findings from the study show that respondents were unsure whether minority youth have a more negative perception of agriculture than white students. This is in direct contrast to Stewart and Sutphin (1994), who found that white students tended to have more positive views regarding agriculture than minority students.
- It was agreed that adult minority role models in the agricultural industry should be incorporated into 4-H programming, which directly correlates with findings by Cano and Bankston (1992).
- Respondents indicated that 4-H agents, teachers, and administrators should make an effort to understand background, attitudes, and perceptions regarding agriculture when conducting and designing educational programming efforts. This finding is supported by Cano and Bankston (1992), Stewart and Sutphin (1994), Thompson and Russell (1993), and Holz-Clause and Jost (1995).

Recommendations

Based on the findings of the study, the following recommendations are presented.

- Revise agriculturally based 4-H curriculum, taking into account the attitudes and backgrounds of minority students in order to more effectively address their unique needs while promoting agricultural literacy.
- Incorporate more adult minority role models who work in the field of agriculture for selected programming efforts.
- Provide professional development workshops for 4-H Extension personnel concerning diversity in today's global agricultural industry in order to aid them in more effectively designing targeted activities for minority youth audiences in relation to agriculture.

Implications

Findings of the study reported here show that 4-H agricultural programs are not fully meeting the needs of a growing diverse population. The study has demonstrated the need to improve 4-H agricultural program curricula by taking minority perceptions into account when determining how to meet the needs of minority youth. The study has demonstrated that more effort is needed to reach youth regardless of their experience within agriculture. If America is truly a melting pot of diversity and cultural exchange, then 4-H youth programs must be actively involved in aiding this process by encouraging minority populations to participate in America's wealth of agricultural opportunity.

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