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More Than Cows & Cooking: Newest Research Shows the Impact of 4-H

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More Than Cows & Cooking: Newest Research Shows the Impact of 4-H

Abstract

This article reports on a statewide survey of students' use of out-of-school time conducted in 21 Montana counties. Only 17% of youth reported that they are not involved in out-of-school activities. Active students are more likely to lead healthier and happier lives than non-active youth. 4-H participants are less likely to shoplift or steal, smoke cigarettes, ride in a car with someone who has been drinking, or damage property for the fun of it. These participants are also more likely to develop self-confidence, social competence, and practical skills; to take on community leadership roles; and to feel more accepted and listened to by adults.

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Background

Each day, thousands of children across Montana return to an empty home after school--if they go home at all. The experts agree: what these children do in the out-of-school hours can affect their development in both positive and negative ways. As a result, when the school bell rings, the parents' anxiety often just begins. Parents worry about whether their children are safe, whether they are susceptible to involvement with drugs and crime, and whether they have access to programs that will positively contribute to their development and growth.

The out-of-school hours constitute the biggest single block of time in the life of a young adolescent (Council on Adolescent Development, 1992). However, until recently we did not have a very clear or accurate picture of how young people spent their time out of school. Moreover, we have not had extensive research data indicating whether participation in well-designed out-of-school programs provided significant benefits to the participants when they are compared to peers who did not participate in such programs. In addition, we haven't been able to determine if youth who are active in out-of-school programs experience greater academic success during school.

How important are the hours spent outside of school time? Very important, as it turns out. For example, in November 1999, top law enforcement officers from around the nation gathered in North Carolina and released the results of a poll of what police chiefs thought would prevent youth violence. Eighty-six percent of the 566 chiefs polled said best strategy would be to expand after-school programs and educational childcare programs. Only 17% recommended prosecuting more juveniles as adults, and only 13% said hire more police officers (*Bozeman Daily Chronicle*, 1999).

Research clearly shows that the out-of-school hours are times of concern for parents (U.S. Department of Education & U.S. Department of Justice, 1998). For example:

- Research indicates that children unsupervised after school are at significantly higher risk of

- truancy, stress, receiving poor grades, early experimentation with sex, and substance abuse.
- Juvenile crime increases by 300% in the hours immediately after school.
- About 29% of all juvenile offenses occur between 2 and 8 p.m. on school days. In fact, the hour immediately following the typical time of release from school--from 3:00 p.m. to 4:00 p.m.--yielded more than twice as much violent crime as the preceding hour.
- Children are also at a much greater risk of being the victim of a violent crime during the hours after school.
- Nationally, it is estimated that about 60% of 6th to 12th grade youth spend 2 or more hours per school day at home without an adult.
- FBI crime reports show that juvenile arrests for violent crimes increased by 50% in recent years, even while adult rates were dropping.

In addition, there is a significant number of youth who are not engaged in any structured out-of-school activities, and youth in rural areas typically have fewer options than their urban and suburban counterparts:

- In rural areas, about 23% of youth report that they have few options for structured activities after school.
- National studies indicate that 20% of eighth graders are NOT involved in any extra-curricular activities after school (*National Educational Longitudinal Study, 1988.*)

For years, those of us working as 4-H youth development professionals have claimed that participation in 4-H provides a variety benefits to youth. However, our claims to such results have often been more conjecture than substantiated. The good news is that now we have significant research results that prove the worth of sustained, continuous 4-H participation.

Methodology and Data Analysis

In the fall of 2000, the Montana Extension Service, in collaboration with researchers at Montana State University, conducted a survey in 21 randomly selected counties. Within each of these counties, two school districts were randomly selected for the study. All students in the 5th, 7th, and 9th grades were surveyed using a 74-question survey instrument comprised primarily of high quality (valid and reliable) questions taken from other national or state surveys. The questionnaire included basic demographic and family composition questions as well as questions grouped into 8 subscales:

- Leadership,
- Social competency,
- Positive self-identify,
- Relations with adults,
- Self-confidence,
- Empowerment,
- Compassion, and
- Skills.

Nearly 2,800 surveys were returned from more than 50 schools, including schools on four of Montana's seven reservations. Approximately 2,500 usable surveys were used in the analysis. Faculty at the MSU College of Nursing's Center for Research and Creativity coded and entered the data. The raw data was analyzed by research faculty in the MSU Department of Health and Human Development. Data analysis was carried out using SAS. Minimum cell size requirements for statistical significance were set at 50 observations.

Results

While the research study has produced a great deal of data, we focus in this article on the major results and conclusions. In addition, because the intent of the questionnaire was to learn about students who participate in out-of-school programs, we report results comparing active and non-active students as well as about 4-H participants. For the purposes of reporting our results, we considered youth to be 4-H members if they had been in the program for more than 1 year. All quotes are from 4-H members who responded to the open-ended questions on the survey.

Active and Non-Active Students

Diversity of Activities

Respondents were asked to identify up to six out-of-school programs, groups, clubs, teams, or activities in which they had been involved during the past year. Over 285 different activities were listed by respondents. For a rural, frontier state such as Montana, it was surprising to see the range and diversity of activities in which young people were involved.

Involvement as a Protective Factor

In an analysis of the data, youth who are involved in out-of-school activities were found to be less likely to be involved in a whole range of at-risk behaviors when compared to youth who are not involved in any out-of-school activities (Table 1). Non-active students were more likely to report

that they drink alcohol, shoplift, purposely damage property, use drugs to get high, smoke cigarettes, and engage in other at-risk behaviors.

Table 1.
Percentage of Students (All Grades) Involved in At-Risk Behaviors

Variable	Active Students (all grades)	Non-Active Students
Drank alcohol	18.5	22.6
Shoplifted	6.9	14.5
Used drugs	8.8	18.9
Drove while intoxicated	4.0	9.0
Rode in car with drunk driver	26.8	31.9
Purposely damaged property	13.1	19.6
Smoked cigarettes	14.0	22.6
Total Observations	2007	433
$p < .05$		

When these same variables were analyzed by individual grade level, there were fewer significant differences between active and non-active students in the 5th grade. Active and non-active students at this grade level only showed significant differences for smoking cigarettes and for the highest grades received.

However, many more differences were evident at the 7th grade level, and the differences between active and non-active students increased at the 9th grade level. Non-active students at both grade levels reported that they are less likely to get good grades and more likely to engage in a variety of at-risk behaviors than students who are involved in some sort of out-of-school activities. In fact, at the 9th grade level (Table 2), students who do not participate in any out-of-school activities reported that they are:

- Nearly two times more likely to smoke cigarettes,
- Seven times more likely to have carried a gun to school,
- More than twice as likely to report that they have driven while drunk,
- Nearly three times as likely to use drugs, and
- Twice as likely to have shoplifted.

Table 2.
Percentage of Active and Non-Active 9th Grade Students Engaged in At-Risk Behaviors

Variable	Active Students	Non-Active Students
Drank alcohol	37.4	49.6
Shoplifted	9.6	21.9
Used drugs	15.0	42.3
Drove while intoxicated	8.0	20.4
Rode in car with drunk driver	35.7	48.2
Purposely damaged property	15.4	25.5

Carried a gun to school	1.0	7.3
Smoked cigarettes	22.9	41.6
Total Observations	625	137
p <.05		

As the data shown in the Table 3 indicates, students who are active in out-of-school programs are also more likely to report getting better grades than students who are not active in such programs.

Table 3.

Academic Performance of Active and Non-Active Students (All Grades), by Percent

Grades	Active Students	Non-Active Students
Mostly A's	25.5	9.2
A's and B's	37.7*	37.4*
Mostly B's	9.2*	9.2*
B's and C's	18.3	23.3
Mostly C's	3.3	5.5
C's and D's	4.3	7.4
Mostly D's	0.8	3.0
Less Than D's	0.9	4.8
Total Observations	2007 (82.6%)	433 (17.4%)
p <.05 * = no significant difference		

Gender

In our analysis of the data, there were some significant differences by gender for both 4-H and non-4H youth (Table 4). Not surprisingly, females reported they are significantly less likely to chew tobacco than boys. This difference was true for both 4-H and non-4-H youth. A greater percentage of non-4-H boys are more likely to report, too, that they damaged property for the fun of it than girls did. Non-4-H boys are also more likely to shoplift than girls are and to drive with someone who was intoxicated. Non 4-H boys are also more likely to say that they would drive while intoxicated, but non-4-H girls are more likely to say that they smoked. Girls also reported that they got better grades than boys did.

Table 4.

Percentage of Students, by Gender and Participation, for Selected Risk Behaviors

Variable	4-H Females	4-H Males	Non 4-H Females	Non-4-H Males
Shoplifted	1.9*	4.1*	6.8	11.6
Drove intoxicated	2.9	6.4	3.9	5.9
Damaged property	3.4	15.1	10.2	20.2

Smoked	11.7*	8.7*	18.5	14.5
Smokeless tobacco	2.9	12.2	3.3	9.6
Total Observations	206	172	1,019	1,043
<p>p < .05 * = no significant difference</p>				

4-H Youth and Non-4-H Youth

4-H Youth: Making Contributions, Not Causing Trouble

Now, what about those youth who had participated in 4-H for more than 1 year? How do these youth compare to peers who have not participated in 4-H? The differences are substantial and show that 4-H youth are better off than their non-4-H peers in a number of areas.

First, our research indicates that Montana 4-H kids are busy making contributions to improve the quality of life in their families, neighborhoods, and communities. While about 17% of Montana kids (compared to 20% nationally) are not involved in any out-of-school activities or programs (Table 4), 4-H kids are very involved. Three-fourths of all 4-H members (75%) are involved in up to four out-of-school activities in addition to their involvement in 4-H. In fact, our research revealed that 4-H members are more likely to be involved in ALL out-of-school activities than other youth.

This research revealed that 4-H participants are more likely than other kids to:

- Succeed in school, getting more A's than other kids (Table 5),
- Be involved as leaders in their school and the community,
- Be looked up to as role models by other kids, and
- Help others in the community

Table 5.

Performance in School for 4-H and Non-4-H Youth, Percentage by Type of Grades

Performance	4-H	Others
Mostly A's	33.4	19.6
About half A's and half B's	37.5	37.7
Mostly B's	9.7	9.1
About half B's and half C's	13.5	20
Mostly C's	2.0	4.2
About half C's and half D's	2.4	5.6
Mostly D's	0.7	1.3
Mostly below D's	0.7	1.9

Moreover, as Table 6 indicates, 4-H kids reported that they are less likely than other kids to:

- Shoplift or steal (3 times less likely),
- Use illegal drugs of any kind to get high (2 times less likely),
- Ride in a car with someone else who has been drinking,
- Smoke cigarettes,
- Damage property for the fun of it (2 times less likely), and
- Skip school or cut classes without permission.

Table 6.

Percentage of Youth Engaging in Risk Behaviors

In the last 12 months, did you...	4-H	Non-4H
Shoplift	2.9	9.2
Use drugs of any kind to get high	5.0	11.6
Ride in a car with someone who has been drinking	20.9	28.9
Damage property just for the fun of it	8.7	15.3
Smoke cigarettes	10.3	16.5
Skip or cut class without permission	8.7	13.4
Total Observations	378	2,062
p < .05		

4-H kids are also more likely to contribute to their community by taking on leadership roles in their school and community. 4-H members are more likely to volunteer in class to lead activities than other youth. In the previous 12 months, 4-H members had shown a higher level of leadership involvement than other youth (Table 7).

Table 7.
Percentage of Youth Who Have Held Leadership Positions in School

	4-H	Non 4-H
Elected to a leadership position	32.0	20.0
Appointed to a leadership position	27.4	21.4
Served as chair of a committee	13.2	8.2
Served as a committee member	25.3	17.2
Total Observations	378	2,062
p < .05		

Montana 4-H members credited the program with making a significant difference in their own lives, in the quality of their family life, and in the quality of life in their community. For example:

- Half of all youth who have been members of 4-H agreed that "my participation in 4-H has been critical to my success in life."
- More than 6 out of 10 youth who have been 4-H members said that "4-H has made a positive difference in my life."

4-H Youth: Confident

"4-H gave me the confidence to do more things."
7th grade 4-H member, Stillwater County, MT

Kids in Montana 4-H have a positive self-identity that gives them the confidence to succeed in life. 4-H members tend to be distinguished from youth who haven't been in 4-H by their abilities to find ways to make things go better when things don't go well. They reported that they feel they have more control over the things that will happen in their lives, are more likely to feel good about who they are, feel that they "have much to be proud of," and that their lives have a purpose and meaning. 4-H members said that "Ten years from now, I think I will be very happy."

4-H members are also more likely than non-members to be able to "make their own decisions," "do things on my own," set goals, try new things, and take responsibility for their actions.

4-H Youth: Competent

"I have developed a better work ethic and communications skills."

9th grade 4-H member, Carbon County, MT

"4-H has taught me leadership and commitment that I can use for the rest of my life."

9th grade 4-H member, Stillwater County, MT

Our research shows that Montana 4-H youth feel more socially competent and self-assured than other youth. For example, our study revealed that they are more likely to report that they know how to resist negative peer pressures and how to "stay away from people who get me in trouble."

4-H kids are also significantly different from those who have not been in 4-H in their ability to meet and greet new people easily, feel comfortable in new situations, and volunteer to lead activities in school classes.

Kids who participate in Montana 4-H are also more likely to develop the practical and useful skills that will help them develop into capable, competent, and contributing adults. In our study, 4-H youth were more likely, for example, to report that they have developed good record keeping skills, are able to speak with ease in front of others, know how to organize their work, know how to plan ahead, and manage money wisely.

4-H Youth: Connected

"4-H brought me closer to my grandfather."

9th grade 4-H member, Phillips County, MT

"4-H has helped get my family together."

5th grade 4-H member, Golden Valley County, MT

4-H members in Montana are also more likely to have a positive view of their role in the community and the future than youth who have not been involved in the program. 4-H members were more likely to report that adults look at them as valuable assets to the community, that adults listen to them, and that they are given lots of chances to make their communities better places to live.

As adults, we know how important it is for kids to feel accepted and safe in activities during the out-of-school hours. The good news is that 7 out of 10 youth who had been in 4-H for more than a year reported that 4-H is a "safe place for learning" and that "4-H clubs are supportive environments where I feel accepted for who I am." Moreover, in 4-H clubs, today's kids overwhelmingly report (8 out of 10) that "in 4-H, I can explore my own interests."

4-H kids reported that they feel they have better relationships with adults than youth who have not been in 4-H. For example, 4-H kids said they are more likely to go to another adult (besides their parent or guardian) for help about important questions in their lives (Table 8).

Table 8.

Percentage of Youth Who Have Close Relationships with Parents and Other Adults

	4-H	Others
If you had an important question about your life, do you know of an adult (other than your parent) to whom you would feel comfortable going for help?	76.7	66.6
In the last month, have you had a good conversation with one of your parents that lasted 10 minutes or more?	81.8	69.2
In the last month, have you had a good conversation with another adult (not parent) that last 10 minutes or more?	72.5	57.2
Total Observations	378	2,062
p < .05		

4-H members also were more likely to say that if they have "an important concern about drugs, alcohol, sex, and any other serious issue," they would talk to their parents or guardians about it compared to those who were not 4-H members (Table 9).

Table 9.

Percentage of Youth Who Would Talk to Their Parents About Important Issues in Their Lives

Critical Issue	4-H	Non-4H
About drugs	75.0	64.0
About alcohol	72.0	63.0
About sex	59.0	50.0
About other serious issues	77.0	66.0
Total Observations	378	2,062
p < .05		

Finally, 4-H members reported that they feel that their contributions are more respected and listened to by their families, by other adults, and by the communities in which they live. 4-H members were more likely to report that:

- "Adults in my town or city make me feel important."
- "Adults in my town or city listen to what I have to say."
- "Adults in my town or city care about people my age."
- "In my town or city, I feel like I matter to people."
- "In my family, I feel useful and important."
- "I'm given lots of chances to help make my town or city a better place to live."

4-H Youth: Caring and Compassionate

"4-H makes you think to help others and be kind."
5th grade 4-H member, Dawson County, MT

"I can cook so my mom won't have to all the time."
5th grade 4-H member, Glacier County, MT

Our study indicates that 4-H kids are more likely to develop a deep sense of compassion and caring for others. The research shows that 4-H members are more likely to empathize with others in difficult circumstances and that they significantly differ from their peers in how much they care about other's feelings. 4-H members are also more likely to help others.

4-H members also reported that they are more likely to have been involved in a project to make life better for other people; give money or time to a charity or other organization that helps people; and to have spent time helping people who are poor, hungry, sick, or unable to care for themselves (Table 10).

Table 10.
Percentage of Youth Who Are Involved in Helping Others

Activity	4-H Members	Non-4-H
Involved in a project to help others	72.0	48.0
Given money or time to charity	67.0	52.0
Helping poor, sick or others	49.0	41.0
Helped others in your school	82.	74.0
Total Observations	378	2,062
p < .05		

4-H Clubs Are Designed to Make a Difference

Why are 4-H participants more likely to report these higher gains than others are? 4-H clubs are intentionally designed to include the eight critical elements necessary for positive youth development:

- Positive relationships with caring adults
- Opportunities for self-determination
- An accepting and inclusive environment
- Opportunities to contribute through community service
- A safe environment for learning and growing
- Opportunities to develop skills and mastery
- Engagement in learning
- Opportunities to be an active participant in life--now and in the future

When we have shared these results with others, one of the common questions is whether the kinds of youth who join 4-H are those who would excel anyway. However, our research and the research of others show that this is not the case. 4-H is making a difference for all kinds of kids, not just the "cream of the crop."

The National Educational Longitudinal Study (NELS:88) research shows that 4-H is not just reaching those kids or families who would excel anyway. This national research conducted by the U.S. Department of Education shows that 4-H families reflect the diversity of families present in the nation as a whole.

In fact, one-fifth of those who have been in 4-H before the eighth grade are from families with incomes of less than \$15,000. In addition, 4-H is more likely to attract youngsters where neither parent had completed high school than it is to attract youngsters where at least one of the parents had a graduate degree. Youth whose parents had graduate degrees are less likely to have been 4-H members. One-fourth of 4-H members show five or more indicators of being "at-risk." Finally, 4-H is more likely to attract youth from the two lowest socioeconomic quartiles than from the top socioeconomic quartile.

4-H does not just attract high-achieving kids from privileged families, and 4-H is not able to achieve the kind of results reported in this research summary by only working with "the best kids." Rather, 4-H is a powerful, proven program that makes a positive difference for all those who participate.

*"4-H helped me through tough times in my life."
9th grade 4-H member, Lewis & Clark County, MT*

Note: Copies of the survey instrument are available upon request to the author.

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