

11-16-2021

An Examination of Why 4-H is Beneficial

Makayla Aichholz
maichh@bgsu.edu

Follow this and additional works at: <https://scholarworks.bgsu.edu/honorsprojects>



Part of the [Business Analytics Commons](#)

Repository Citation

Aichholz, Makayla, "An Examination of Why 4-H is Beneficial" (2021). *Honors Projects*. 624.
<https://scholarworks.bgsu.edu/honorsprojects/624>

This work is brought to you for free and open access by the Honors College at ScholarWorks@BGSU. It has been accepted for inclusion in Honors Projects by an authorized administrator of ScholarWorks@BGSU.

An Examination of Why 4-H is Beneficial

Makayla Aichholz

Honors Project

Submitted to the Honors College at
Bowling Green State University in partial fulfillment of the
requirements for graduation with

University Honors Spring 2022

Mearl Sutton, Advisor
Marketing Department

Kyle Moninger, Advisor
Applied Statistics/Operations Research

Table of Contents

Overview.....	page 3
Background.....	page 3
What is 4-H?.....	page 3
Positive Youth Development.....	page 4
Personal Experience.....	page 5
Review of Literature.....	page 5
Other Studies.....	page 5
Other Personal Experiences.....	page 8
Methodology.....	page 11
Survey Distribution.....	page 13
Data Transformation and Analysis.....	page 13
Limitations.....	page 14
Results.....	page 14
Conclusion.....	page 20
Works Cited.....	page 21
Appendix A: Survey.....	page 23

Overview

4-H is the largest youth organization in the United States, therefore it has an impact on many lives across the nation. As a former 4-H member myself, I wanted to discover what some of the benefits of this organization are. I started my project by researching how 4-H began and what members in the organization participate in while also using my personal experience as background knowledge. I then looked at a variety of different studies that examined some of the benefits of 4-H, specifically in alumni. These other studies were used to guide the research I conducted. Also, I found many other personal stories about how 4-H impacted people's lives. The stories showed members from a variety of backgrounds and how 4-H influenced and even still has an influence in their lives today. For my project, I sent out a survey to all of the 4-H members in the county I grew up in. The questions asked them about different skills that 4-H has helped them develop as well as activities they were able to participate in through 4-H. Descriptive statistics were then used to analyze the data. The ultimate goal of this project is to determine the exact benefits of 4-H and to be able to share them with others.

Background

What is 4-H?

“I pledge my Head to clearer thinking, my Heart to greater loyalty, my Hands to larger service, and my Health to better living, for my club, my community, my country, and my world (4-H Pledge).” This quote serves as the pledge for all 4-H clubs throughout the world and defines what 4-H is all about. The beginnings of 4-H can be traced back to the early 1900s. Programs for rural youth began to form as a way to learn about the changes in agriculture technology, although these programs were not known as 4-H at the time. Many had agriculture-related names such as “Corn Clubs” and “Pig Clubs” (“History of 4-H”). Eventually, Congress passed an act that

created the Cooperative Extension System through the USDA and the National 4-H organization was born.

Today 4-H has expanded from only rural areas to suburban and urban areas as well. 4-H members are able to participate in a variety of projects from raising livestock, learning culinary skills, building rockets, learning to manage money, and many more. These projects are designed to help members learn life skills that will be very useful in their futures. 4-H members also attend meetings and participate in a variety of activities to help further these skill developments. Over the past 120 years, 4-H has grown to be the largest youth organization in the United States and is still growing (“History of 4-H”).

Positive Youth Development

One of 4-H’s main focuses is Positive Youth Development (PYD). As the name implies PYD is used to help youth develop and expand on skills that will have a positive impact on their lives. 4-H is able to accomplish PYD through individual projects as well as providing activities for members to participate in in the club as well as throughout the community. PYD is known for its 5 C’s which include: competence, confidence, connection, character, and caring. These 5 C’s often lead to the development of a sixth C: contribution. The National 4-H Organization conducted an eight-year longitudinal study to determine the impact of PYD in 4-H. This study followed students from the time they were in fifth grade to twelfth grade. One of the findings of this study showed that 4-H youth were more likely to contribute to their communities than non-4-H youth. The study also discovered that girls in 4-H had higher levels of PYD in many categories when compared to boys in 4-H in some grades. Some areas of study include healthy choices, participation in science programs, and participation in civic activities. The results showed that there were at least a couple grades where 4-Her’s were more likely to participate in

these compared to other students in out-of-school-activities. Overall, this study verified that 4-H is aiding in PYD and even more so than other out-of-school activities (Lerner).

Personal Experience

I chose to do this as my project because I am a former 4-H member. I started 4-H when I was 8 years old. I remember receiving a flyer in my school mailbox for this club in my hometown and it piqued my interest so I convinced my parents to take me to the first meeting. I ended up taking a cooking project because I didn't live on a farm or have animals to show. In the end, I didn't end up caring for the cooking project and was going to quit 4-H, but then my dad asked me if I would be interested in showing rabbits and I decided to give it a shot and stayed in 4-H. I ended up falling in love with showing rabbits and went on to show for 10 years. I did however quit 4-H when I was a freshman in high school and showed through FFA instead. There is a part of me that wished I would have stayed in 4-H because of everything it did for me. I was able to grow as a person and develop new skills. For example, in my club we had to give a demonstration on any topic of our choice which helped me develop public speaking skills. This led me to my topic choice. I wanted to see what the benefits of 4-H are and if other members had a similar experience to mine.

Literature Review

Other Studies

In 2008, an initiative called the 4-H Healthy Living was created to “engage youth and families through access and opportunities to achieve optimal physical, social, and emotional well-being (Downey).” The 4-H Healthy Living program seeks to teach youth and their families about healthy eating habits, physical activity, alcohol/drug use prevention, and other healthy habits. This program aims to help youth form healthy habits and reduce their risk of health issues

in the future. A study was conducted to determine the effectiveness of these programs through the use of a survey, interviews, and content analysis. The survey was sent to all 91 4-H Healthy Living programs obtained through the National 4-H Headquarters. Interviews were only conducted with those on the emailing list that did not respond to the survey to ensure they did not want to participate. The content analysis allowed for the identification of additional programs not found during the survey process. The results from this study showed that almost every participating program had an outcome of “selecting food consistent with dietary guidelines” and more than half had the outcome of “increasing physical activity (Downey).” The use of these 4-H Healthy Living programs can lead to Positive Youth Development by helping youth increase their healthy habits.

A study conducted by Fox, Schroeder, and Lodl (2003) assessed what life skills 4-H alumni were able to gain through the organization and to what extent. A survey was distributed to 17 counties within Nebraska, which accounts for 55% of the state's population, to 4-H alumni who were in a club between 1982-1988. The survey asked about whether 4-H contributed to 32 life skill developments which were divided into four categories of technical skills, communication skills, personal/social skills, and leadership skills. The survey respondents were asked to rate what effect 4-H had on each skill development on a 4-point scale with 1 equaling primary influence and 4 being no influence (Fox). The top 5 skills, in order, from the survey were: responsibility, product production skills, ability to handle competition, ability to meet new people, and working as a family. The survey also included an option for respondents to list additional skills not listed that they gained through 4-H. In the technical skills section, many respondents added that they learned skills that they now use in their careers. In the communication section, many said they learned how to ask questions and improve their public

speaking ability. In the personal/social skills section many said they learned how to teach others and teamwork. Lastly, in the leadership section, many were said to have gained networking skills and the ability to follow orders. Overall, this study found that 4-H played a vital role in the development of many life skills (Fox).

Another study conducted by Radhakrishna (2005), examined the influence 4-H had on alumni's life in later years. The study focused on 4-H's influence on respondent's leadership, personal and community development, communication skills, and agriculture subject knowledge and also compared how other organizations besides 4-H influenced respondents. Also, the study looked at how 4-H had an influence on alumni's careers and later life experiences. The 4-H Alumni Database was used to determine survey participants in which a random sample of 289 was chosen. Of the 289 selected, 168 responded to the mail survey. The survey consisted of five sections. The first section was related to 4-H participation. The second section used the above mentioned 4-H influence factors turned into 38 statements to be rated on a seven-point scale with 1 being "no contribution" and 7 being "great contribution" based on 4-H's contribution to each. The third section measured how 4-H influenced alumni in their careers and later life using a 5 point scale with 1 being "no influence" and 5 being "critical influence." The fourth section was used to compare 4-H to other youth organizations with statements rated with either a 1 "4-H most helpful," 2 "other programs were most helpful," and 3 "programs about the same (Radhakrishna)." The study discovered that 4-H did have an influence on 4-H alumni's leadership, personal and community development, communication skills, and agriculture subject knowledge. The results also showed that even many years after being in 4-H, the impact of the organization still influences alumni in their current life. When comparing 4-H to other youth organizations, many alumni said that 4-H was the superior organization by allowing them to

learn a variety of skills. Overall, this study showed that 4-H had/still has a positive effect on 4-H alumni's lives (Radhakrishna).

An article by Carrie Stark outlines the findings of a 2019 study conducted by the National 4-H Council and Edge Research on 4-H alumni's experience. The study compared different areas of satisfaction for 4-H alumni and non-alumni to see if 4-H can have an impact. Overall, the study found that 84% of 4-H alumni were satisfied with their lives compared to only 70% of non-alumni. It was also discovered that the longer a 4-H alumni was in 4-H, the more satisfied they were with their lives compared to alumni who were not in the organization as long. The first area of the survey was over social and emotional satisfaction. The results showed that 4-H alumni were more satisfied than non-alumni in all categories with the smallest gap being 13% for the mental and emotional health and family situation categories and the largest at 24% for connections with others in the community. The second survey area was over job satisfaction and financial security. Again, 4-H alumni compared to non-alumni had higher satisfaction in all areas. The non-alumni's responses were between 42-51% whereas the 4-H alumni's responses were between 55-65%. The third area of the survey was on job/career satisfaction. As seen with the first two sections, 4-H alumni had higher satisfaction than non-alumni. The only exception was the statement "I only work because I have to work" where 4-H alumni responses were lower, but a lower response to this statement is actually a good sign (Stark). This study, as well as all the others, examined show that 4-H has a positive impact on member's lives that extends into lifetimes.

Other Personal Experiences

While all 4-H clubs throughout the nation follow similar guidelines, every 4-H member will have a different experience, some of which have been shared with the world. One example

of this can be seen from a club based in New York known as the Homesteaders. Three girls in this club found out they were able to take beekeeping as a project and were able to receive their bees through the county's "4-H earn an animal" program (Edwards). The girls had to learn a lot in the beginning as it was new to them, but they soon became experts on beekeeping. There are not many teenagers in this world that do beekeeping, but, because of 4-H these girls had the opportunity to gain this skill. All three girls also participated in the county 4-H Public Speaking program where they were able to talk about their beekeeping project. One of the Program Leaders has even noticed how their public speaking skills have improved since they started the program (Edwards).

A book titled *The Lifelong Impact of 4-H: Stories From Texas* contains stories from about 20 4-H alumni on how 4-H impacted their life. Every story is different, but each has a common theme which is that 4-H had a positive impact on their lives and taught them lifelong skills. One story in particular named "Generations of Gold Stars" was written by Nicole Sellers and talks about the three generations of Sellers who were in 4-H and how it was beneficial for them. One of Nicole's projects was raising hogs which she did alongside the rest of her family. While 4-H usually only meets for a few months out of the year, many projects involve work year-round such as Nicole's pig project. Raising animals requires a lot of work as there are no days off and 4-H members can learn valuable skills. Another activity Nicole and other Seller's participated in was method demonstrations. This allowed many family members to improve their public speaking skills in which they would use in their future careers to succeed. Some skills Nicole learned through 4-H include safety in many forms, sportsmanship, leadership, and people skills. Nicole was also able to attend a variety of camps through 4-H where she was able to meet new people and learn new information on topics such as electricity. Nicole and the rest of the Seller

family were all high-achieving 4-H members who are proud alumni. While Nicole's story is just one of many throughout the book, it shows the benefits she received from the organization (Lepley).

The Green Leprechauns 4-H club is not your typical 4-H club. It is an in-school club for middle school students with disabilities advised by their teacher Ms. Skinner. When Ms. Skinner first started teaching at this school, she noticed many of the students were out of control due to a lack of consistency in the program. As a former 4-H member herself, Ms. Skinner came up with the idea of integrating a 4-H club with the program and received help from the local extension agency. Thus, the Green Leprechauns 4-H club was formed and soon became a favorite of the students. The students elected officers to run the meetings and all were involved in creating the agenda. Through the projects and activities, the students participated in, many were able to grow their self-esteem as well as improve their social skills. The club put on schoolwide activities including a talent show and Haunted House that many students attended and decreased the stigmatization around Ms. Skinner's class. The students were also able to participate in a variety of 4-H activities outside of the school including: attending summer camp, participating in the North Carolina state fair, being a part of the State Congress, and many more. The student's participation in this 4-H club allowed them to have an easier transition to high school and achieve their goals. One student, in particular, went on to study engineering in college and play on the football team. Ms. Skinner's in-school 4-H club has allowed the students to develop new skills that they can apply to the rest of their lives (Allred).

While 4-H has grown to be an expansive organization, it originally focused heavily on the agriculture industry. Today members can take projects in a variety of areas, but 4-H is still vital in teaching members about agriculture, particularly how food gets to our tables. Studies

have been conducted that show many children, and even some adults, do not know where their food comes from beside the store. A University of California researcher went to a city day camp and interviewed the young campers about where their food comes from. One girl thought that cows with brown spots make chocolate milk while the ones with black spots produce white milk. This is just one of many examples showing how little many Americans know about the agriculture industry (Butler). *What 4-H Teaches 7 Million Kids & How Its Lessons Could Change Food & Farming Forever*, follows the stories of 4-H members in California and 1 in Ghana and how they have been able to expand their knowledge on the agriculture industry through 4-H. 4-H has a heavy presence in urban and suburban areas now, giving the ability to teach non-rural youth about how food gets to their table. Food is an essential element to survival, making it important to know how it gets to the end consumer and 4-H has the ability to teach youth this (Butler).

Methodology

For my research, I decided to look at what the benefits of 4-H are from current 4-H member's perspectives. I accomplished this by creating a survey and collecting data that I used to run a statistical analysis. I created the survey using Qualtrics based on metrics used in the other studies I researched as well as my personal experience. The first section of the survey contains demographic questions including "What is your 4-H age?" and "How many years have you been in 4-H (including Colverbud years)?" These questions will be used to give a background of the respondent's exposure to 4-H. The second section of the survey asks respondents to rate whether they disagree or agree based on a seven-point Likert scale ranging from strongly disagree to strongly agree. The statements are centered around items that 4-H has allowed members to accomplish or gain. The third section of the survey asks respondents to rank

a list of skills on a ten-point sliding scale based on how much 4-H has contributed to the skills development. The last section of the survey asks about the different types of projects respondents have taken. The list of projects are the general categories that are listed on the National 4-H's website. For example, animal sciences is the general category for any type of livestock that members take. The survey was designed to be simple and quick. Only the first 2 questions were fill-in-the-blanks and the rest were multiple choice. The survey was intended to take no more than 5-10 minutes to complete. A copy of the full survey can be found in Appendix A.

Due to the use of human subjects to conduct my survey, I had to receive IRB approval. This involved completing the human subject training provided by BGSU which outlines how to properly conduct the research and to learn the different categories and rules. Since my research only consisted of a low impact to daily life survey, I was able to go through the expedited review process. I created 3 different consent/assent letters that respondents had to agree to before taking the survey. The first consent document was for respondents age 18 and over. The second was for parents of respondents under 18 as well as an assent letter for the respondents. To ensure that respondents read their respective letters a separate consent survey was created. This allowed respondents to remain anonymous in the actual survey. Once consent/assent was granted for either side, respondents were automatically redirected to the actual 4-H benefits survey. The 4-H benefits survey was also approved by the IRB to ensure it would not cause any more harm than experienced in daily life. Lastly, the IRB also improved the email that would be sent to all potential respondents. The email outlined the reasoning for the survey, what the survey results will be used for, and copies of the consent/assent documents. Once IRB approval was received, I was able to send out my survey.

Survey Distribution

For the survey distribution, I chose Crawford County Ohio as my location because that is the county in which I was a 4-H member. I obtained my list of potential survey respondents by contacting the county Ohio State University (OSU) Extension office. Allison Copper, an extension office employee, was able to provide me with a list of all current 4-H members, cloverbuds, and advisors. The list contained each member's full name and contact email. From there, I created an emailing list through my BGSU Outlook account for all 4-H members as well as advisors. The initial contact was sent on May 16, 2021 to 294 families with all approved Institutional Review Board (IRB) documents including the survey. An email was also sent to all 4-H advisors to inform them of the survey and to encourage their members to take the survey. A follow-up email was sent on June 13, 2021 to remind members and advisors of the survey. One last reminder was sent on June 24, 2021, one week before the deadline, to once again remind members and advisors of the survey. Potential respondents had until midnight of July 1, 2021 to complete the survey. A total of 24 responses were collected, with only 20 being usable.

Limitations

One major limitation of my project was the sample size. I was only able to obtain a small portion of 4-H members compared to the number of members actually in the organization. With my limited resources I chose to only focus on my county of residence. While these results are valid, they may not show the entire picture for 4-H as a whole. Another limitation was most of the emails provided for the 4-H members were actually their parents. This made it harder to reach the potential respondents. The parents may not have seen the email or they forgot to tell their children about it. Also, my only source of communication was through email, making it harder to encourage potential respondents to take the survey. There was also no incentive

provided to take the survey or a direct benefit, which may have decreased the potential responses. The last limitation is the use of only one type of communication to distribute the survey. The survey could only be accessed through email and no in-person communication was made. This could limit responses by the email potentially going to the junk folder or getting buried beneath other emails. The use of email as the survey distribution medium puts more dependence on the potential respondents to take the survey.

Data Transformation and Analysis

After the survey closed, I transferred the results from Qualtrics into an Excel file. I then cleaned the data by removing any unnecessary columns such as the IP address as the survey was anonymous. This data was placed on a new Excel sheet within the same workbook. Next, I created an Excel sheet for each of the questions on the survey so that it is easier to look at the results. I copied the data from the sorted sheet and pasted it into each respective sheet. I also transposed the data as it made the appearance better and the analysis easier. Descriptive statistics were calculated to analyze the data. This included calculating the mean, median, mode, standard deviation, and a count of valid responses. From there I was able to turn the data into tables and charts to give visualization to the data. The data visualizations allow the organization of the results that can be easily read by anyone. The use of descriptive statistics and data visualizations can be seen in the following section.

Results

After computing the descriptive statistics for each of the questions, I discovered the responses for the first question of “What is your 4-H age?” to be invalid. The average age was 7.74 years which is too young to even be taking the survey therefore I will not be using that data in my analysis. However, the results for the second question of “How many years have you been in 4-H (including Cloverbud years)?” the results showed an average of 7.65 years with a standard

deviation of 3.33 out of 20 responses. I had respondents include Cloverbud years because despite it not being the same as 4-H, they were still a part of the organization. Cloverbuds is designed for future 4-H members that are in Kindergarten through Second Grade where they complete smaller-scale projects. Figure 1 shows the distribution of responses. The minimum number of years for the responses was 2 and the maximum was 13. The results show that the responses came from a wide variety of 4-H experience.

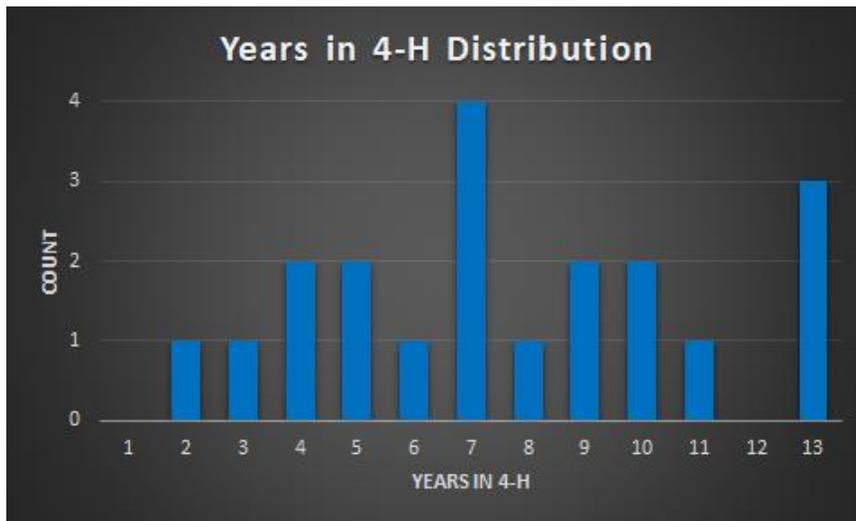


Figure 1, Years in 4-H Distribution

The fifth question asked “What types of projects have you taken?,” and respondents were able to check all that applied from the list of project categories listed on the OSU Extensions page. The full list of the project categories can be found in Appendix A under question 5. Figure 2 outlines the top projects reported from the 20 responses. The data showed that 95% of respondents have taken an Animal Science project which typically involves raising and showing livestock at the county fair. The next highest category was Food and Nutrition with 50% of respondents having taken one of these projects. These projects typically involve learning kitchen safety skills, cooking/baking skills, and nutrition for different areas such as sports. Categories

that received a response of 2 or below are not included in Figure 2. Overall, the results show that participants have participated in a variety of different projects.

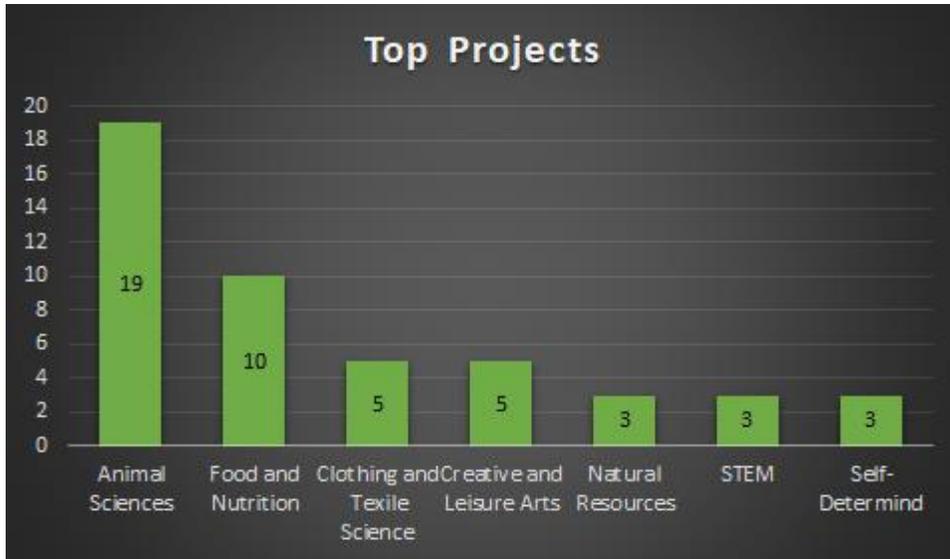


Figure 2, Top Projects

The third question asked respondents to rate a list of 11 skills on a ten-point scale based on how much 4-H has contributed to each skill's development. A rating of 1 meant that 4-H had no influence on the skill and a rating of 10 meant that 4-H had the most influence on the skill's development. Figure 3 shows the ranking of the skills based on the average of the responses. As the chart shows, responsibility was the number one skill with an average of 8.35, but the others were not far behind. The lowest rated skill was public speaking with an average of 7.2. Many of the skills had the same averages which can be seen with the multiples of one ranking. Overall, the results show that 4-H has had an impact on all of the skills development. For this question I consider responses between 1-3 to mean that 4-H had a low impact, responses between 4-6 to mean that 4-H had a medium impact, and responses between 7-10 to mean that 4-H had a high impact on the skills development. Therefore, based on the breakdowns, on average, 4-H had a high impact on all the skills developments.

Ranking	Skill	Average	Standard Deviation	<i>n</i>
1	Responsibility	8.35	1.80	20
2	Leadership	8	2.19	20
2	Sportsmanship	8	2.32	20
2	Time Management	8	1.78	20
5	Problem Solving	7.55	2.44	20
6	Teamwork	7.5	2.50	20
6	Critical Thinking	7.5	1.85	20
8	Adaptability	7.35	2.28	20
9	Communication	7.3	2.41	20
9	Creativity	7.3	2.47	20
11	Public Speaking	7.2	2.40	20

Figure 3, Ranking of Skills

The fourth question asked respondents to rate a list of 9 statements based on whether they agreed or disagreed with them. The statements were centered around a variety of possibilities that 4-H has allowed members to accomplish. Respondents were asked to rate the statements on a seven-point Likert scale which ranged from strongly disagree to strongly agree. Figure 4 shows a ranking of the statements based on the average of the responses. The scale for the rankings is: 1=strongly disagree, 2=disagree, 3=somewhat disagree, 4=neutral, 5=somewhat agree, 6=agree, and 7=strongly agree. Based on the averages, the top statement that respondents agreed with the most was “4-H has allowed me to learn new things.” On the other hand, the least agreed with statement was “4-H has made me want to try new things.” To further analyze the data from this question, I determined the amount of respondents who disagreed, were neutral, and agreed with the statements. The results from this analysis can be viewed in Figure 5. The statements are listed in the same order as in Figure 4 to allow for ease of comparison. As Figure 5 shows, there were

no respondents who disagreed with the statements and only a few who were neutral. The majority of the respondents agreed with all of the statements. Overall, these results show that 4-H has impacted member's lives and allowed them to gain skills, learn new things, meet new people and so much more.

Ranking	Statement	Average	Standard Deviation	<i>n</i>
1	4-H has allowed me to learn new things	6.75	0.55	20
2	4-H has allowed me to meet new people	6.65	1.32	20
3	4-H has taught me life skills	6.55	1.38	20
4	4-H keeps me productive	6.5	1.34	20
5	4-H has had a meaningful impact on my life	6.45	1.44	20
6	4-H has allowed me to explore my interests	6.25	1.07	20
6	4-H has allowed me to give back to my community	6.25	1.34	20
8	4-H has helped me develop a positive attitude	6	0.86	20
9	4-H has made me want to try new things	5.85	1.09	20

Figure 4, Ranking of Statements

Statement	% of respondents who agree	% of respondents who were neutral	% of respondents who disagree
4-H has allowed me to learn new things	100	0	0
4-H has allowed me to meet new people	100	0	0
4-H has taught me life skills	100	0	0
4-H keeps me productive	95	5	0
4-H has had a meaningful impact on my life	95	5	0

4-H has allowed me to explore my interests	85	15	0
4-H has allowed me to give back to my community	95	5	0
4-H has helped me develop a positive attitude	95	5	0
4-H has made me want to try new things	85	15	0

Figure 5, Percentage of Respondents Statement Agreements

The last test I ran with the data was to see if there was a correlation between the skill ratings and years in 4-H. Correlations can range from -1 to 1, with numbers closer to either end representing strong correlations and numbers closer to 0 being weak correlations with 0 being no correlation. The strongest correlation between years in 4-H was with time management at 0.446, but it is not a strong correlation by definition. Public speaking, communication, problem solving, and creativity all had negative correlations with years in 4-H with communication with the strongest of the group at -0.204. Almost all the other skills had correlations between 0.10-0.20. From this data, I can conclude that there is not a significant correlation between years in 4-H and skills development ratings. Due to this low significance, I also tested the correlation among each skill. Figure 6 is a table containing all the strong correlations, which is any above 0.70, between the skills. The correlations are listed in order from highest to lowest. As figure 6 shows, the highest correlation is between creativity and adaptability at 0.774. As for the other correlations, many of them were higher compared to the correlations with years. There were only 3 negative correlations between the skills which were: responsibility and public speaking (-0.132), responsibility and creativity (-0.097), and leadership and creativity (-0.044). As a whole, I would not consider the correlations between the skills to be significant, however, they are stronger than the correlations between the skills and years in 4-H.

First Skill	Second Skill	Correlation
Creativity	Adaptability	0.774
Teamwork	Problem Solving	0.767
Responsibility	Leadership	0.737
Responsibility	Critical Thinking	0.737
Adaptability	Critical Thinking	0.714
Sportsmanship	Time Management	0.706

Figure 6, Strong Correlations Between Skills

Conclusion

From starting as many different agriculture clubs in the early 1900s to what it is now, 4-H has grown to be the largest youth organization in the United States. It allows members to take a variety of different projects and has expanded to include suburban and urban areas. Through my initial research, I found that Positive Youth Development (PYD) was a recurring theme of 4-H. PYD aims to have a positive impact on youth’s lives through skill development. For this project, I conducted a survey to see if 4-H is reaching its goal of PYD. I used my personal experience, other studies, and other personal experiences to develop my survey. The results showed that the most popular project taken by respondents was animal science. The majority of the skills received high ratings for 4-H impacting their development, with responsibility having the highest average. For the statements, most of the respondents agreed with them and there were no disagreements with “4-H allowed me to learn new things” being the most agreed with. In conclusion, my research confirms that 4-H is reaching its goal of Positive Youth Development throughout the organization.

Works Cited

- Allred, Christine L. "Using an In-School 4-H Club to Promote Social Skills Development." *Beyond Behavior*, vol. 15, no. 2, 1 January 2006, pp. 3-6, *EBSCOhost*, [Ezproxy.bgsu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=ehh&AN=19989169&site=ehost-live&scope=site](http://search.ebscohost.com/login.aspx?direct=true&db=ehh&AN=19989169&site=ehost-live&scope=site). Accessed 11 September 2021.
- Butler, Kiera. "What 4-H Teaches 7 Million Kids & How Its Lessons Could Change Food & Farming Forever." *University of California Press*, 2014, *EBSCOhost*, web.b.ebscohost.com.ezproxy.bgsu.edu/ehost/ebookviewer/ebook?sid=92ddeb26-d387-4c75-8a89-1545cd4603f7%40pdc-v-sessmgr05&ppid=pp_x&vid=0&format=EB. Accessed 11 September 2021.
- Downey, Laura H., et al. "4-H Healthy Living Programs with Impact: A National Environmental Scan." *New Directions for Youth Development*, vol. 2014, issue 143, 2014, pp.13-24, *EBSCOhost*, ezproxy.bgsu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=sih&AN=100066643&site=ehost-live&scope=site. Accessed 12 September 2021.
- Edwards, David. "Homesteaders 4-H Club: Head, Heart, Hands and Health." *Bee Culture*, vol. 148, no. 7, July 2020, pp. 83-85, *EBSCOhost*, ezproxy.bgsu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=144330635&site=ehost-live&scope=site. Accessed 9 September 2021.
- Fox, Janet, et al. "Life Skill Development Through 4-H Clubs: The Perspective of 4-H Alumni." *Journal of Extension*, vol. 41, no. 6, December 2003, archives.joe.org/joe/2003december/rb2.php. Accessed 11 September 2021.

“History of 4-H.” *National 4-H History Preservation Program*, 4-hhistorypreservation.com/History/Hist_Nat/. Accessed 10 September 2021.

Lepley, Todd L. and Couch, Martha E. “The Lifelong Impact of 4-H: Stories From Texas.” *Texas A&M University Press*, 2015, *EBSCOhost*, ezproxy.bgsu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=e000xna&AN=1561223&site=ehost-live&scope=site&ebv=EB&ppid=pp_cvr. Accessed 10 September 2021.

Lerner, Richard M., Lerner, Jacqueline V., and Colleagues. “The Positive Developments of Youth: Comprehensive Findings from the 4-H Study of Positive Youth Development.” *4-H*, 4-h.org/wp-content/uploads/2016/02/4-H-Study-of-Positive-Youth-Development-Full-Report.pdf. Accessed 1 September 2021.

Radhakrishna, Rama B. “Influence of 4-H Program on Former 4-H Members’ Career and Life Experiences.” *American Association for Agricultural Education*, vol. 32, May 2005, pp. 77-90, www.researchgate.net/profile/Tracy_Kitchel/publication/251774367_A_Two_Year_Snapshot_of_Agricultural_Youth_Organizations_and_Learning_Communitie'_Influence_on_Academic_Achievement_and_Degree_Completion/links/5bd4feca299bf1124fa75122/A-Two-Year-Snapshot-of-Agricultural-Youth-Organizations-and-Learnig-Communities-Influence-on-Academic-Achievement-and-Degree-Completion.pdf#page=78. Accessed 12 September 2021.

Stark, Carrie. “4-H’ers benefit from their 4-H experience over the course of their lives-- socially, Physically, emotionally and economically.” *Nevada Today*, 7 February 2020, www.unr.edu/nevada-today/news/2020/4h-lifetime-benefits. Accessed 12 September 2021.

“4-H Pledge.” *4-H*, <https://4-h.org/about/what-is-4-h/4-h-pledge/>. Accessed August 31 2021.

Appendix A: Survey

4-H Benefits

Start of Block: Default Question Block

Q1 What is your 4-H age?

▼ 8 (2) ... 18 (12)

Q2 How many years have you been in 4-H (including Cloverbud years)?

▼ 1 (1) ... 14 (14)

Q3 For the following statements please rate whether you agree or disagree with it.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neutral (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
4-H has taught me life skills (1)	<input type="radio"/>						
4-H has allowed me to learn new things (2)	<input type="radio"/>						
4-H has allowed me to	<input type="radio"/>						

meet new
people (3)

4-H has
made me
want to
try new
things (4)

4-H has
had a
meaningf
ul impact
on my life
(5)

4-H has
helped me
develop a
positive
attitude
(6)

4-H has
allowed
me to give
back to
my
communit
y (7)



4-H has allowed me to explore my interests (8)

4-H keeps me productive (9)

Q4 For the following skills, please rate on a scale of 1-10, with 1 being not at all and 10 being the most, how much you think 4-H contributed to your skill development.

0 1 2 3 4 5 6 7 8 9 10

Responsibility ()	
Public Speaking ()	
Leadership ()	
Communication ()	
Teamwork ()	
Sportsmanship ()	

Problem Solving ()	
Creativity ()	
Adaptability ()	
Critical Thinking ()	
Time Management ()	

Q5 What types of projects have you taken? If you do not know what category they fall into please visit <https://projectcentral.ohio4h.org/> (choose all that apply)

- About 4-H (1)
- Animal Sciences (2)
- Child and Family Development (3)
- Clothing and Textile Science (4)
- Creative and Leisure Arts (5)
- Food and Nutrition (6)
- Healthy Living (7)
- Home Living (8)

- Leadership and Citizenship (9)
- Money Management (10)
- Natural Resources (11)
- School Enrichment (12)
- STEM (13)
- Self-Determined (14)
- Workplace Preparation (15)