

Lasting Impacts of Camp Study

Final Report

Leah Brown, Allison Dymnicki, and Jingyan Xia

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About SeriousFun Camps

SeriousFun Children’s Network (SeriousFun) was founded by actor and philanthropist Paul Newman on the simple idea that camp can give young people living with serious illnesses the chance to escape the fear and isolation of their medical conditions and “just be kids” (SeriousFun Children’s Network, 2020). SeriousFun is an international network of 30 camps and programs that has delivered more than 1.4 million experiences to children and youth with serious illnesses and their families since the first camp opened in 1988. SeriousFun camps are designed to “create opportunities for children and their families to reach beyond serious illness and discover joy, confidence, and a new world of possibilities, always free of charge” (SeriousFun Children’s Network, 2020). SeriousFun camps aim to influence a variety of outcomes for youth who attend, including helping young people living with serious illnesses develop confidence, resilience, and social skills and creating opportunities for them to try new things.

About the Study

In 2020, the American Institutes for Research® (AIR®) was contracted by SeriousFun to conduct a descriptive study that examined the outcomes that are influenced by SeriousFun camps, differences in those outcomes based on camper demographic characteristics and camp attendance, and key elements of camp or other experiences that may influence those outcomes. This study is the first of its kind for the Network.

About AIR

AIR is a leading research firm in the youth development field and a nonpartisan, not-for-profit organization that conducts behavioral and social science research and delivers technical assistance to solve some of the most urgent challenges in the United States and around the world.

Research Questions

The study had three aims: (a) identify outcomes that are influenced by the SeriousFun camp experience, (b) determine differences in outcomes based on demographic characteristics and attendance, and (c) describe the key elements of camp and other experiences that influence those outcomes. AIR addressed these aims through the research questions (RQs) below.

Outcomes Influenced

RQ 1. Which outcomes for camp alumni were influenced by attending a SeriousFun camp, and by how much were each of these outcomes influenced?

Differences in Outcomes Based on Demographic Characteristics and Attendance

- RQ 2. To what extent are there differences in outcomes and the influence of camp based on demographic characteristics (i.e., race/ethnicity, gender, age, primary diagnosis)?
- RQ 3. What is the relationship between attendance (i.e., number of times attended summer residential program) and the program's targeted outcomes and the influence of camp?

Key Elements of Camp and Other Experiences That Influenced Outcomes

- RQ 4. To what extent do specific program elements contribute to improvements in the program's target outcomes?
- RQ 5. To what extent do other life events or experiences contribute to the program's target outcomes (e.g., participation in afterschool programming, religious activities)?

Sample

The sample included 2,252 alumni who attended one of 16 camps across eight countries (see Exhibit 1).

Exhibit 1. Number of Respondents by Camp

Camp	Country	Number of Responses
Barretstown	County Kildare, Ireland	132
Bátor Tábor	Budapest, Hungary	191
Camp Boggy Creek	Eustis, Florida, United States	432
Camp Korey	Mount Vernon, Washington, United States	61
Double H Ranch	Lake Luzerne, New York, United States	144
Dynamo Camp	San Marcello Piteglio, Italy	152
Flying Horse Farms	Mt. Gilead, Ohio, United States	45
The Hole in the Wall Gang Camp	Ashford, Connecticut, United States	236
Jordan River Village	Giv'at Avni, Israel	34
L'Envol	Paris, France	51
North Star Reach	Pinckney, Michigan, United States	20
Over The Wall	Havant, United Kingdom	60
The Painted Turtle	Lake Hughes, California, United States	163
Roundup River Ranch	Gypsum, Colorado, United States	82
Soluputi Kids' Camp	Hokkaido, Japan	23
Victory Junction	Randleman, North Carolina, United States	411

Note. Fifteen respondents did not provide the name of the camp that they attended.

There was a larger number of respondents who were female compared to male or another gender. The majority of respondents were White, followed by Black and Hispanic. About a quarter of respondents were aged 17–19, a quarter of respondents were aged 20–21, a quarter of respondents were aged 22–24, and a quarter of respondents were 25 years or older. Respondents had a range of diagnoses, with the most common being cancer, blood disorders, neurological disorders, gastrointestinal disorders, and rheumatologic disorders (see Exhibit 2).

Exhibit 2. Demographic Characteristics of Respondents

Demographic Characteristics	<i>n</i>	Percentage
Gender		
Female	890	59.3
Male	571	38.0
Other	40	2.7
Race/Ethnicity		
American Indian or Alaska Native	12	0.8
Asian	31	2.1
Black or African American	151	10.3
Caucasian/White	1,014	69.3
Hispanic	105	7.2
Multiracial	82	5.6
Other	68	4.7
Age		
17–19	473	27.5
20–21	405	23.6
22–24	434	25.3
25 or older	406	23.6
Diagnosis		
Blood disorder	177	10.23
Cancer	382	22.08
Cardiac or vascular disorder	88	5.09
Endocrine disorder	47	2.72
Gastrointestinal disorder	125	7.23
Genetic disorder	55	3.18
Immunologic disorder	76	4.39
Kidney disease	42	2.43

Demographic Characteristics	<i>n</i>	Percentage
Metabolic disorder	27	1.56
Neurological disorder	126	7.28
Orthopedic condition	54	3.12
Pulmonary disease	25	1.45
Rheumatologic disorder	116	6.71
Skin disease/dermatology	12	0.69
Ventilator dependent	3	0.17
Another diagnosis not included here	375	21.68

Note. Some respondents did not respond to demographic questions.

Data Sources

Alumni who attended a SeriousFun summer residential camp were invited to complete the survey between January and March 2021.¹ The survey was retrospective in nature—alumni thought back about their experiences in camp. The survey was translated into 11 languages. As shown in Appendix A, which presents the full survey instrument, the survey collected data about:

- Attendance at camp, including number of times attended summer residential programs (e.g., summer camp, Leader-in-Training)
- Demographic characteristics, including gender, race/ethnicity, age, primary diagnosis, educational attainment, and career choice
- Qualities and traits as defined by the American Camp Association (ACA) and SeriousFun (see Exhibit 3)
- The extent to which alumni attribute outcomes to participation in SeriousFun camps and in specific camp elements
- Other activities or programs in which alumni participated (e.g., afterschool programs, sports, other camps, religious activities, support groups, community service)
- The extent to which alumni attribute outcomes to participation in other activities or programs

The study examined 14 qualities and traits (10 defined by ACA and four that are specific to SeriousFun camps (see The four qualities created for this study by SeriousFun were developed by SeriousFun Support Center staff to assess outcomes more unique to the context of medical

¹ Dr. Ann Gillard, SeriousFun’s research director, coordinated with the camps and provided materials for camps to use to invite alumni to complete the online survey.

specialty camps. Two of these qualities were measured by a single item (the other two were measured by three items).

). Qualities and traits were grouped into three categories:

- Personal (e.g., self-confidence, emotion regulation, willingness to try new things)
- Social (e.g., friendship skills, empathy and compassion)
- Physical or health-related (e.g., medical independence, medical self-advocacy)

Exhibit 3. Qualities and Traits Measured in Study

Outcome (# of items)	Category	Definition
ACA Outcomes		
Friendship skills (3 items)	Social	Ability to form friendships with others
Empathy and compassion (3 items)	Social	Ability to empathize with others
Perseverance (2 items)	Personal	Ability to persevere in the face of challenges
Self-identity (3 items)	Personal	Understanding of who I am and how I want to live my life
Emotion regulation (1 Item)	Personal	Ability to control emotions
Self-confidence (3 items)	Personal	Confidence in ability to succeed
Appreciation of diversity (3 items)	Personal	Appreciation for different people's perspectives
Willingness to try new things (1 item)	Personal	Willingness to try new things
Responsibility (1 item)	Personal	Ability to accept responsibility for own actions
Career orientation (1 item)	Personal	Understanding of what to do for a career or in college
SeriousFun-Specific Outcomes		
Health-related quality of life (1 item)	Health-related	Ability to have good health-related quality of life
Medical-related self-care (3 items)	Health-related	Ability to take actions to manage or promote health
Medical independence (3 items)	Health-related	Ability to function independently in medical areas without reliance on family or health care professionals
Medical self-advocacy (1 item)	Health-related	Ability to self-advocate for health needs

The 10 qualities and traits, taken from the ACA [Youth Outcomes Battery](#) and [Youth Impact Study Survey](#), but modified for our study, were identified through a multiyear survey development, pilot study, and validation process that included multiple stakeholders such as academic partners and 54 camps. In many cases, we selected a subset of items from the ACA Youth Outcomes Battery or Youth Impact Study survey questions to assess an outcome in order to create a brief survey for alumni to complete. To ensure the understandability of the survey items, SeriousFun staff conducted cognitive interviews with camp alumni between August 3, 2020, and August 14, 2020. These interviews helped SeriousFun staff and AIR researchers gauge when item wording choices are well understood by respondents and when item choices were potentially problematic. The survey was revised in response to findings from these interviews.

Appendix B shows the items included for each quality or trait and the reliability coefficients for each (if applicable²). Using Cronbach's alpha as a measure of reliability, all but one quality or trait (self-confidence) for this study met the field's standards where Cronbach's alpha was .70 or above (Schmitt, 1996). The four qualities created for this study by SeriousFun were developed by SeriousFun Support Center staff to assess outcomes more unique to the context of medical specialty camps. Two of these qualities were measured by a single item (the other two were measured by three items).

Analytic Method

In this section, we briefly describe our approach to analyzing the survey data. More details about the analytic approach and the data cleaning process are included in Appendix C.

Outcomes Influenced. To respond to RQ 1, AIR descriptively analyzed alumni's self-reports on all 10 ACA qualities and traits and four SeriousFun qualities (see Exhibit 3). AIR also descriptively analyzed survey questions about alumni perceptions of how SeriousFun camp positively influenced each of the outcomes. These analyses describe what outcomes exist among alumni but are not experimental in nature and, therefore, do not establish the cause of the outcomes. We also examined answers to one open-ended question ("Of the things you learned while at [this camp], which one is the most valuable to you today?") and pulled illustrative quotes to contextualize the findings.

Differences in Outcomes Based on Demographic Characteristics and Attendance. To respond to RQ 2, AIR examined differences in qualities and traits and the extent to which SeriousFun camps positively influenced each outcome by alumni gender, race/ethnicity, age, education, employment status, and medical diagnosis to understand whether certain groups of campers

² We cannot compute Cronbach's alpha for single-item outcomes since Cronbach's alpha is a measure of internal consistency or how strong the relationship between the items is (Tavakol & Dennick, 2011).

perceived camp as more influential in developing outcomes than others. Analysis focused on two statistical measures—comparison of means and effect sizes. The comparison of means analysis provides information about whether group means differ based on demographic characteristic and whether the difference is statistically significant, while the effect sizes provide a measure of the magnitude of the effect—larger effect sizes indicate a stronger relationship between the two variables.³

To respond to RQ 3, AIR conducted a linear regression to examine differences in qualities and traits and the influence of camp on outcomes for alumni who had lower attendance in camp (one, two, or three sessions) to those who had higher attendance in camp (four or more sessions).

Key Elements of Camp and Other Experiences That Influenced Outcomes. To respond to RQ 4, AIR conducted a descriptive analysis of the camp elements and activity-related elements that alumni noted as important. SeriousFun Support Center staff identified a set of camp elements that they hypothesized are the *critical* camp elements (i.e., those elements that contribute to camper outcomes). This is the first study done by SeriousFun to conceptualize and measure camp elements. In addition, we compared alumni’s ratings of outcome based on participation in different SeriousFun activities, including family weekend and the hospital-based program using the same approach used to analyze for differences based on demographic characteristics. We also examined one open-ended question (“What do you remember most about your time at [this camp]?”) using qualitative analysis to contextualize the findings.

To respond to RQ 5, AIR conducted a descriptive analysis of survey questions that compared the influence of SeriousFun camps to other activities that respondents participated in during that time in their life. In addition, we calculated the number of activities alumni participated in outside of camp and conducted correlations to determine the relationship between the number of activities they participated in and their perceptions of the influence of camp on each outcome.

Findings

In this section, we describe the findings in response to each of the research questions.

³ Cohen (1992) suggested that $d = 0.2$ be considered a “small” effect size, 0.5 a “medium” effect size, and 0.8 a “large” effect size. These standards are still used in the field today.

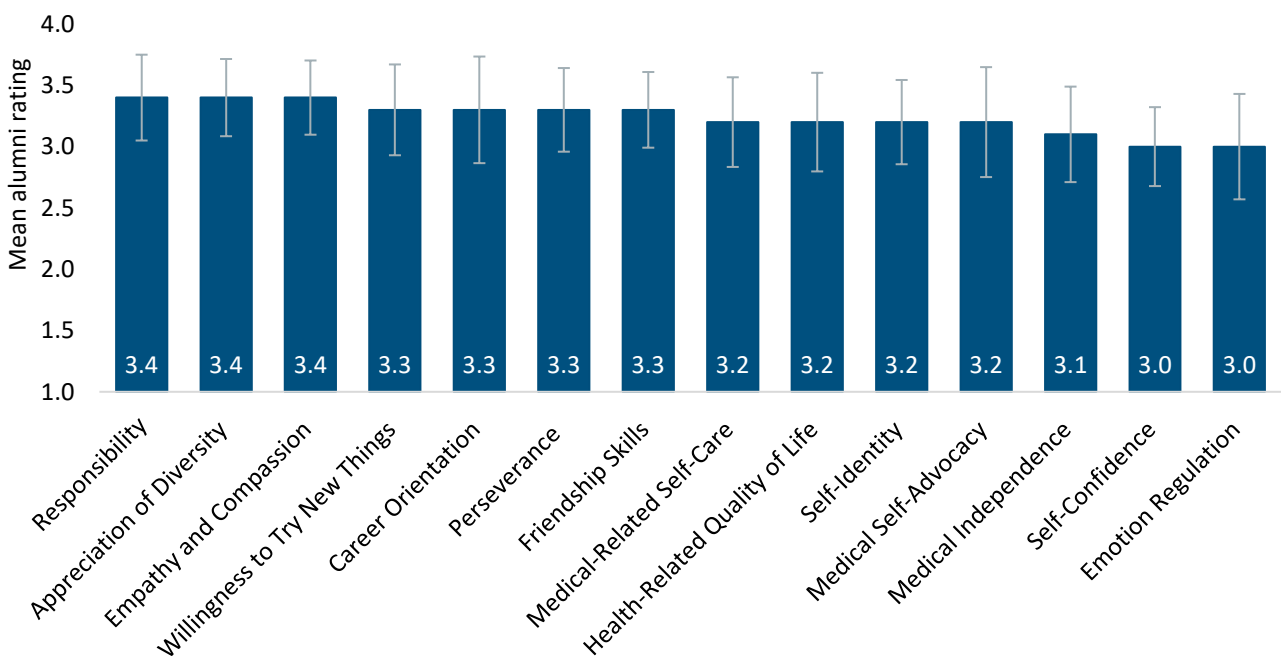
RQ 1. Which outcomes for camp alumni were influenced by attending a SeriousFun camp, and by how much were each of these outcomes influenced?

Self-Reported Qualities and Traits

Alumni rated themselves on each of the qualities and traits in The four qualities created for this study by SeriousFun were developed by SeriousFun Support Center staff to assess outcomes more unique to the context of medical specialty camps. Two of these qualities were measured by a single item (the other two were measured by three items).

. These ratings provide contextual information about alumni’s self-reported strengths and weaknesses so that we understand the outcomes and traits that alumni possess and can better interpret the extent to which these qualities and traits were addressed by SeriousFun camps. Overall, alumni rated themselves high on all qualities and traits—when asked “How true are the following statements for you today?” most respondents said that the quality or traits was “mostly true” for them. Alumni rated themselves highest on responsibility, appreciation of diversity, and empathy and compassion and lowest on emotion regulation and self-confidence (see Exhibit 4).

Exhibit 4. Alumni Ratings of the Extent to Which They Have Specific Qualities and Traits

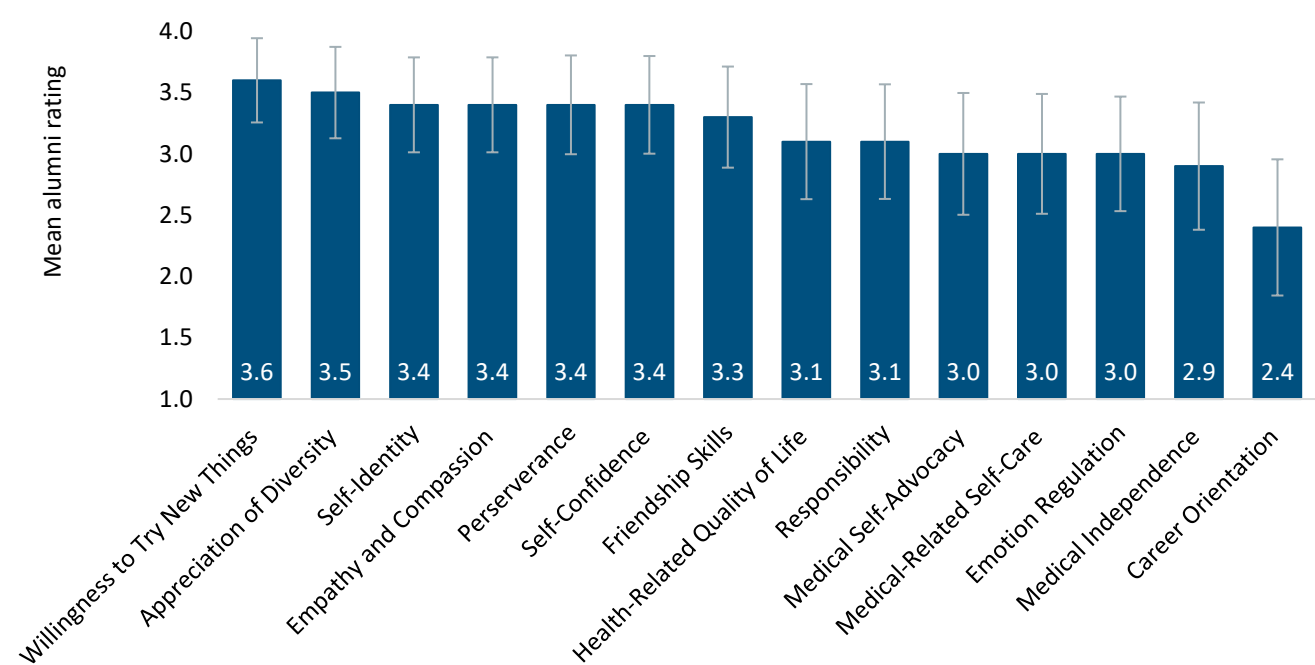


Note. Standard deviations are shown in gray bars. 1 = Not at all true, 2 = A little true, 3 = Mostly true, 4 = Very true.

Outcomes Influenced by Camp

Most alumni reported that camp helped them develop the outcomes presented on the survey “a lot” or “somewhat.” The outcomes that alumni reported as most influenced by camp were willingness to try new things, appreciation of diversity, self-identity, empathy and compassion, perseverance, self-confidence, and friendship skills (see Exhibit 5). This finding aligns with the Network’s mission. Career orientation was the outcome that the fewest alumni reported as a lot or somewhat influenced, which is consistent with expectations because influencing career orientation is not central to SeriousFun’s mission.

Exhibit 5. Influence of Camp on Outcomes



Note. Standard deviations are shown in gray bars. 1 = Did not help at all, 2 = Helped a little, 3 = Helped somewhat, 4 = Helped a lot.

Exhibit 6 shows example quotes from alumni that illustrate the ways in which camp helped them to develop outcomes.

Exhibit 6. Illustrative Quotes of Influence of Camp

Outcome	Illustrative Quote
Willingness to try new things	“I believe learning to try new things is something that was very vital to my success since I last went to camp. Keeping an open mind and being positive about new opportunities has led me towards some decisions that I do not regret to this day.”

Outcome	Illustrative Quote
Appreciation of diversity	“Being able to properly communicate and understand other’s perspectives towards certain ideas, problems, or solutions towards many things out in the world that can honestly change your own view point on certain objectives or life points.”
Self-identity	“The most valuable to me was to learn to be aware of my strengths. Camp taught me how to be more outgoing, how to work with people, and gave me a passion for the arts. Camp brought out all of my strengths and I’m so grateful.”
Empathy and compassion	“To be empathetic to others and to accept people the way they are and always be open to learning something new.”
Perseverance	“The resilience and self-awareness which I acquired during a difficult time, allowed me to understand and become, to some extent, who I am now. It taught me to persevere and fight for my needs and pursue new approaches and identities.”
Self-confidence	“I am not limited in the things that I can do because of my sickness. The camp was one of the biggest influences in me learning that your illness does not define who you are and what you can do.”
Friendship skills	“During a time when I was feeling incredibly alone, my time at camp made me feel connected to others. At camp, I finally felt like I belonged, like I fit in, had friends, and was well liked and understood by my peers for the first time ever in my life.”

RQ 2. To what extent are their differences in outcomes and the influence of camp based on demographic characteristics?

Differences in Self-Reported Qualities or Traits

There were some differences in alumni’s ratings of their own qualities and traits based on demographic characteristics. These demographic comparisons provide an understanding of differences in alumni’s self-reported traits. Many of the differences were small in terms of the effect sizes and we would not consider them meaningful, but some differences were medium-sized effects. The qualities and traits for which there were *medium-sized* differences between demographic characteristics are as follows:

- *Gender, on one of 14 outcomes*—Female alumni rated themselves higher on empathy and compassion compared to male alumni or alumni who identified as another gender.
- *Education, on four of 14 outcomes*—Alumni with a high school diploma or above rated themselves higher on responsibility, career orientation, medical-related self-care, and medical independence compared to alumni with less than a high school diploma.

- *Employment, on three of 14 outcomes*—Alumni who were employed or students rated themselves higher on career orientation, medical-related self-care, and medical independence compared to alumni who were unemployed or unable to work.
- *Medical diagnosis, on two of 14 outcomes*—Alumni who had blood disorders, gastrointestinal disorders, cancer, and rheumatologic disorders rated themselves higher on medical-related self-care and medical independence compared to alumni who had neurological disorders.
- *Alumni currently working in a health-related field, on one of 14 outcomes*—Alumni who worked in a health-related field rated themselves higher on medical independence compared to those who did not.

Differences in Outcomes Influenced by Camp

Although there were some differences in alumni's ratings of their own qualities and traits, analyses showed that all sorts of alumni indicated that SeriousFun camps influenced them. Some comparisons between the influence of camp on outcomes and demographic characteristics were significant;ⁱⁱ however, effect sizes were small across all comparisons indicating that the differences are too small to be policy or program relevant. Appendix D shows all comparisons of means, including those that had small or no significant differences.

RQ 3. What is the relationship between overnight camp attendance and the program's targeted outcomes and influence of camp?

A small relationship was observed between attendance at overnight camp and self-ratings of alumni qualities and traits: alumni who had higher attendance reported slightly higher scores on qualities and traits compared with those who had lower attendance (see Appendix D, Exhibit D18). In general, all alumni indicated that camp influenced the qualities and traits, even those who attended one session of a SeriousFun camp.

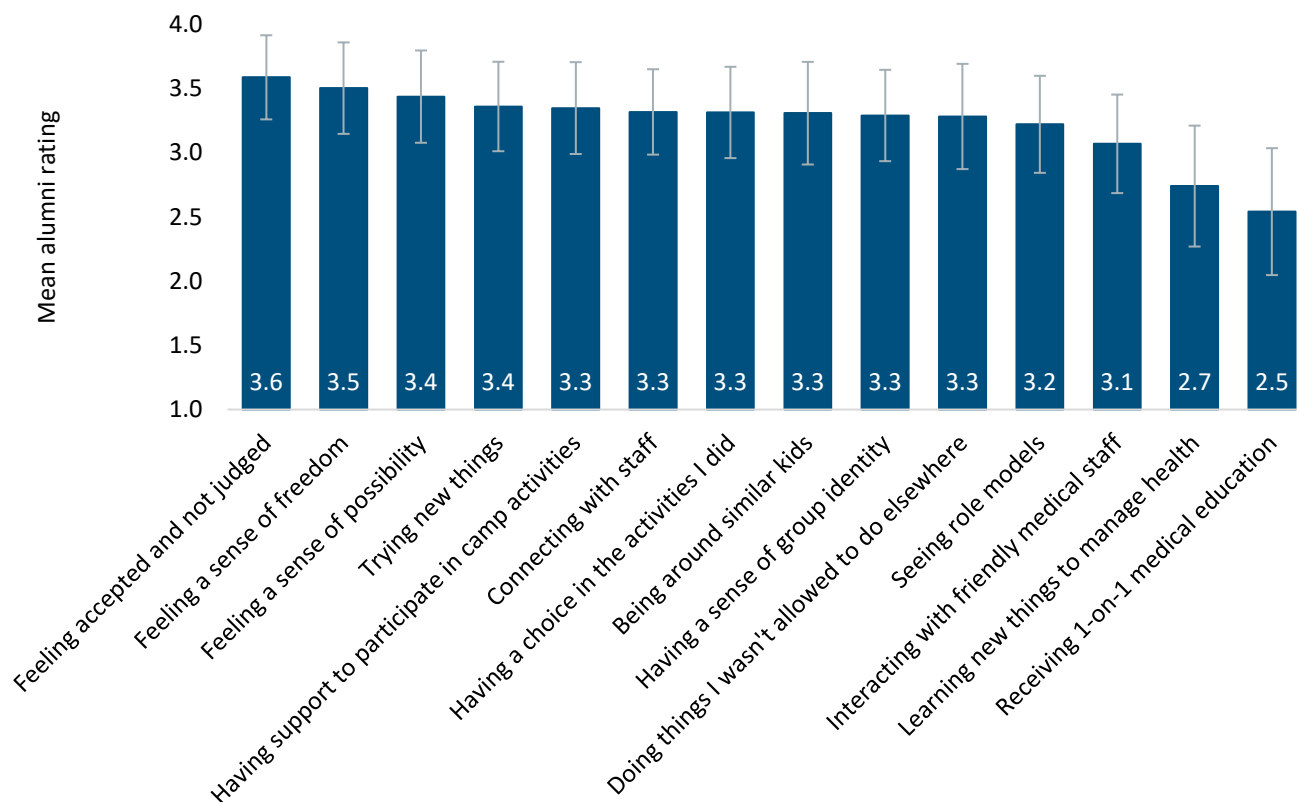
A small relationship was observed between attendance at camp and influence of camp on outcomes: alumni who had higher attendance reported a slightly greater influence compared with those who had lower attendance (see Appendix D, Exhibit D19).

RQ 4. To what extent do specific program elements contribute to improvements in the program's target outcomes?

Alumni indicated the camp elements that were most important to their experience. As shown in Exhibit 7, feeling accepted and not judged, feeling a sense of freedom, feeling a sense of possibility, and trying new things were the top four essential elements of the SeriousFun camp experience reported by alumni; this finding aligns with the Network's mission. It is not

surprising that medical-related camp elements were relatively less important to alumni, given that the health-related work is intended to be conducted in the background and not made noticeable to campers. Because of all of that work to keep campers safe, alumni were able to experience camp's greater influence on their personal and social qualities, just like other kids.

Exhibit 7. Importance of Camp Elements



Note. Standard deviations are shown in gray bars. 1 = Not at all important, 2 = Somewhat important, 3 = Important, 4 = The most important.

When asked what they remember most about camp, alumni described the people, making friends, and building relationships ($n = 363$); trying new things and the activities ($n = 279$); having fun ($n = 111$); feeling a sense of belonging and not feeling judged ($n = 107$); being happy ($n = 71$); and being around people with similar experiences ($n = 71$).

Exhibit 8 shows examples of quotes from alumni that illustrate what campers remember most.

Exhibit 8. Illustrative Quotes of What Alumni Remember Most

Outcome	Illustrative Quote
The people, making friends, and building relationships	“Each time I was amazed anew of how in such a short period of time it was possible to acquire new friends, connect with them, open up to new team members and the amazing staff, more than any other person in your normal life. The opportunity to disconnect from the day-to-day troubles and having a few days of enjoyment, fun and laughter is worthwhile.”
Trying new things and the activities	“The fact that despite the many limitations that accompanied me at that time, I was able to try many new opportunities that seemed unattainable outside the camp.”
Feeling a sense of belonging and not feeling judged	“The welcoming, 'come as you are' environment. Experiencing joy, and being encouraged to share these life changing feelings/experiences beyond the gates of camp. Being a part of something so much bigger than myself.”
Being happy	“When I think of those times, I feel a sense of happiness and light-heartedness that I have rarely experienced in my life, but which helps me to think positively every day.”
Being around people with similar experiences	“Connecting with others who had the same condition as me, particularly those my age and older who could demonstrate what life could be like outside of camp for disabled people.”

When looking at the differences between alumni’s ratings who attended family weekends and hospital-based programs, we found

- There were small differences in alumni’s ratings of their outcomes between alumni who attended family weekends and those who did not for one outcome,⁴ and
- There were also small differences in alumni’s ratings of their outcomes between alumni who attended hospital-based programs and those who did not for six outcomes.⁵

However, effect sizes for these differences were small and therefore not policy or program relevant. See Appendix D for all comparisons of means.

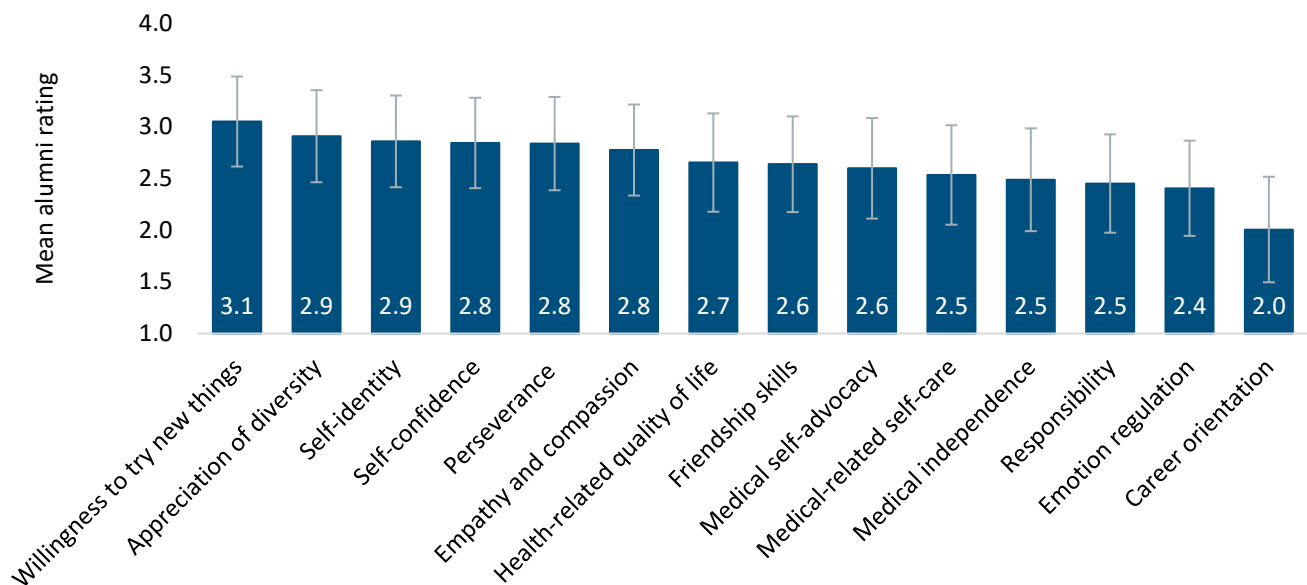
⁴ Alumni who attended family weekends rated themselves higher on willingness to try new things compared to alumni who did not.

⁵ Alumni who attended hospital-based programs rated themselves higher on friendship skills, empathy and compassion, willingness to try new things, responsibility, career orientation, and health-related quality of life compared to alumni who did not.

RQ 5. To what extent do other life events or experiences contribute to the program’s target outcomes?

Alumni indicated the extent to which camp was influential in changing their outcomes compared with other activities in which they participated during the time when they were in camp. Alumni thought camp was “one of the biggest influences” on their willingness to try new things, appreciation of diversity, and self-identity (see Exhibit 9).

Exhibit 9. Influence of Camp on Outcomes Compared With Other Activities



Note. Standard deviations are shown in gray bars. 1 = Not a big influence, 2 = One of many influences, 3 = One of the biggest influences, 4 = The biggest influence.

There was a small relationship between the number of activities that alumni participated in outside of camp and their perceptions that camp had an influence on 12 of the 14 outcomes. Specifically, the more activities the campers participated in, the more likely they were to think that camp helped them to develop these 12 outcomes. There was not a significant relationship between participation in other activities and emotion regulation and willingness to try new things (see

Exhibit 10).

Exhibit 10. Influence of Camp on Outcomes Compared With Other Activities

	Correlation Coefficient	Sig.
Friendship skills	.06	.015*
Empathy and Compassion	.05	.040*
Perseverance	.05	.021*
Self-identity	.07	.004*
Emotion regulation	.04	.056
Self-confidence	.05	.039*
Appreciation of diversity	.06	.017*
Willingness to try new things	.04	.112
Responsibility	.06	.013*
Career orientation	.11	<.001*
Health-related quality of life	.09	<.001*
Medical-related self-care	.06	.005*
Medical independence	.05	.026*
Medical self-advocacy	.08	<.001*

Note. * $p < .05$.

Limitations

The results presented in this report have several limitations. First, the findings may not represent the attitudes and behaviors of all alumni at SeriousFun camps as the response rates were quite low (approximately 13%) but similar to other studies done with this population (Wu et al., 2011). Further, alumni who have more positive attitudes about camp may be more likely to respond to the survey compared to alumni who did not respond (Panel on a Research Agenda for the Future of Social Science Data Collection, 2013). Second, the outcomes measured by multiple items were created by calculating the average response for the item set. More sophisticated psychometric techniques such as Rasch Modeling may produce scores that better capture the underlying traits but were outside of the scope of this analysis. Third, some outcomes were measured using single items; using multiple items to assess an outcome would likely improve measurement accuracy by increasing reliability of these measures. Fourth, the analyses relied on self-report data, which can result in response bias (Furnham & Henderson, 1982). Sixth, the analyses were descriptive in nature and do not establish the cause of the

outcomes described. Fifth, the survey was retrospective and assumes that respondents accurately remember their experiences from the past. Research shows that these types of surveys can have issues with reporting accuracy (Beckett et al., 2001).

Implications

These findings have implications for how SeriousFun camps and staff can support campers. For example, given the findings, SeriousFun programming should provide opportunities for choice, flexibility, and real connections to be made among campers. We describe several implications below.

- Alumni reported that camp most influenced their personal (e.g., willingness to try new things, appreciate diversity, develop self-identity) and social outcomes (e.g., empathy, and compassion) somewhat or a lot. In general they rated the influence of camp on medical-related outcomes (e.g., medical self-advocacy, medical independence) lower than personal and social outcomes. By design, health-related work is intended to be conducted in the background and not made noticeable to campers. Because of all of that work to keep campers safe, alumni were able to experience camp's greater influence on their personal and social qualities, just like other kids.
- All sorts of people benefit from SeriousFun camps. Alumni with different types of medical conditions, of different race/ethnicities, those who are currently employed (which may serve as a proxy for higher functioning individuals), and those who are not currently employed all reported being influenced by attending SeriousFun camps.
- In general, all alumni indicated that camp influenced the outcomes, even those who attended one session of SeriousFun camp. Attending more sessions of SeriousFun camps made a positive difference, but only a small one.
- Alumni thought camp was one of the biggest influences in helping them to develop personal (e.g., being open to try new things, appreciate diversity, and develop self-identity) and social outcomes (e.g., empathy and compassion), even when they were participating in other extracurricular, sports, and afterschool activities during the same period in their lives. Camp is a meaningful experience that alumni remember and value years later.
- Youth can be kids at SeriousFun camps, and they value (more than anything else) the opportunities to try new things, to explore their self-identity, and develop self-confidence at camp. As one camp leader stated, "Alumni were able to participate in [SeriousFun camps] because of the safe environment that we create methodically, through programming, and [through] program adaptations and because we have the medical team there. The medical

team is actually not so much about medical education but about allowing kids to come and be kids.”

Endnotes

ⁱ Female alumni rated themselves higher on qualities and traits compared to male alumni or alumni who identified as another gender, including Friendship skills; Perseverance; Emotion Regulation; Self-confidence; Appreciation of diversity; Willingness to try new things; Responsibility; Career orientation; Health-related quality of life; Medical-related self-care; Medical Independence; and Medical self-advocacy.

Alumni who were multiracial, Hispanic, White, or Black rated themselves higher on qualities and traits compared to alumni who were American Indian/Alaska Native, including Friendship skills; Empathy and compassion; Perseverance; Appreciation of diversity; Willingness to try new things; Responsibility; and Health-related quality of life.

Alumni with a high school diploma or higher rated themselves higher on qualities and traits compared to alumni with less than a high school diploma, including Friendship skills; Empathy and compassion; Perseverance; Self-identity; Emotion regulation; Self-confidence; Appreciation of diversity; Willingness to try new things; Health-related quality of life; and Medical self-advocacy.

Alumni who were employed or students rated themselves higher on qualities and traits compared to alumni who were unemployed or unable to work, including Friendship skills; Empathy and compassion; Perseverance; Self-identity; Emotion regulation; Appreciation of diversity; Willingness to try new things; Responsibility; Health-related quality of life; and Medical self-advocacy.

Alumni who had blood disorders, gastrointestinal disorders, rheumatologic disorders, and cancer rated themselves higher on qualities and traits compared to alumni who had neurological disorders, including Friendship skills; Empathy and compassion; Perseverance; Self-confidence; Appreciation of diversity; Willingness to try new things; Responsibility; Career orientation; Health-related quality of life; and Medical self-advocacy.

Alumni who did not have a rare diagnosis rated themselves higher on qualities and traits compared to those who did, including Friendship skills; Empathy and compassion; Self-confidence; Appreciation of diversity; Career orientation; Medical-related self-care; Medical independence; and Medical self-advocacy.

Alumni who worked in a health-related field rated themselves higher on qualities and traits compared to alumni who did not work in a health-related field, including Friendship skills; Empathy and compassion; Perseverance; Self-identity; Emotion regulation; Self-confidence; Appreciation of diversity; Willingness to try new things; Responsibility; Career orientation; Health-related quality of life; Medical-related self-care; and Medical self-advocacy.

Alumni who were 21 or younger rated themselves higher on medical independence compared to alumni who were 22 and older.

ⁱⁱ Female alumni said that camp was more influential on outcomes compared to male alumni or alumni who identified as another gender, including Friendship skills; Empathy and Compassion; Perseverance; Self-identity; Self-confidence; Appreciation of diversity;

Willingness to try new things; Health-related quality of life; Medical-related self-care; Medical Independence; and Medical self-advocacy.

Alumni who were multiracial and Hispanic said that camp was more influential on outcomes compared to alumni who were American Indian/Alaska Native, including Friendship skills; Perseverance; Self-identity; Emotion regulation; Self-confidence; Appreciation of diversity; Responsibility; Career orientation; Health-related quality of life; Medical-related self-care; Medical Independence; and Medical self-advocacy.

Alumni with a high school diploma said that camp was more influential on outcomes compared to alumni with a master's/professional/doctorate degree, including Self-identity; Emotion regulation; Self-confidence; Appreciation of diversity; Responsibility; Career orientation; Medical-related self-care; and Medical self-advocacy.

Alumni who were employed or students said that camp was more influential on outcomes compared to alumni who were unemployed or unable to work, including Medical-related self-care; Medical Independence; and Medical self-advocacy.

Alumni who had blood disorders, gastrointestinal disorders, and rheumatologic disorders said that camp was more influential on outcomes compared to alumni who had cancer or neurological disorders, including Medical-related self-care; Medical Independence; and Medical self-advocacy.

Alumni who did not have a rare diagnosis said that camp was more influential on developing Friendship skills compared to alumni who had a rare diagnosis.

Alumni who worked in a health-related field said that camp was more influential on outcomes compared to alumni who did not work in a health-related field, including Appreciation of diversity; Medical-related self-care; Medical Independence; and Medical self-advocacy.

Alumni who were 21 or younger said that camp was more influential on their Career orientation, Health-related quality of life, and Medical-related self-care than alumni who were 22 and older.

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Appendix A. Survey Instrument

Section 1. SeriousFun Camp Participation

1. Please select all SeriousFun camps you have attended as a camper (Mark all that apply)
[list of all SeriousFun Camps]
2. If you selected more than one SeriousFun camp above, please tell us which camp you attended most often? [Drop down menu of all camps, or pre-populated list of camps that they selected above]
3. When did you last attend [this camp]?
1-3 years ago, 4-6 years ago, 7-9 years ago, 10-12 years ago, 13-15 years ago, 16 or more years ago, Don't know
4. From ages 6-17, how many sessions did you attend [this camp] as a camper or participant in the summer? Include sessions such as a summer camp, Counselor-in-Training, Leader-in-Training, teen programming, or other sessions where you stayed at camp for 4 or more nights in a row. Do NOT include sessions you spent as an adult volunteer or staff member.
 - a. One session
 - b. Two sessions
 - c. Three sessions
 - d. Four sessions
 - e. Five sessions
 - f. Six sessions
 - g. Seven or more sessions
 - h. Don't know
5. Did you ever participate in a family weekend program [at this camp]?
Yes, No, I Don't Know
6. Did you ever participate in a hospital-based program run by [this camp], such as an event at the hospital or a bedside visit?
Yes, No, I Don't Know
7. If yes, how many times did you participate in a family weekend program [at this camp]?
Once, 2-3 times 4-5 times, More than 6 times, I Don't Know
8. If yes, how many times did you participate in a hospital-based program?
Once, 2-3 times 4-5 times, More than 6 times, I Don't Know

Section 2. Other Out-of-School-Time Participation

During the year(s) that you attended [this camp], how often did you participate in the following activities outside of [this camp]?

9. Afterschool or enrichment programs (e.g., tutoring, clubs, Girl or Boy Scouts/Guides, music lessons, student government, theater)
Never, Once in a While, Sometimes, Frequently
10. Sports (team or individual)
Never, Once in a While, Sometimes, Frequently
11. Other camps
Never, Once in a While, Sometimes, Frequently
12. Religious activities (i.e., attending services, religious text study)
Never, Once in a While, Sometimes, Frequently
13. Support groups (e.g., through the hospital or clinic, illness-focused)
Never, Once in a While, Sometimes, Frequently
14. Community service or volunteering
Never, Once in a While, Sometimes, Frequently
15. Other types of activities such as jobs, babysitting, caring for older or younger family members, online groups, political, activism, or other activities not included above (please describe activity and frequency)_____

Section 3. About You

How true are the following statements for you today?

	Not at all true for me	A little true for me	Mostly true for me	Very true for me
16. I am good at listening carefully to things that my friends tell me				
17. I am good at talking to friends about things that are important to me				
18. I am good at understanding my friends' feelings				
19. I care about other people's feelings and points of view.				
20. I am a good listener.				
21. I think about other people's perspectives easily.				
22. I am diligent. I never give up.				

	Not at all true for me	A little true for me	Mostly true for me	Very true for me
23. I have overcome setbacks to conquer an important challenge.				
24. I am aware of my own strengths.				
25. I am proud of my identity.				
26. I know how I want to live my life.				
27. I have strong self-control.				
28. I am good at meeting new people				
29. I am good at taking care of myself				
30. I am good at learning new things				
31. I am open to hearing the opinions of people who are different from me.				
32. I appreciate the perspectives of people from different experiences and backgrounds.				
33. I look to learn from others whose perspective is different from mine.				
34. I am willing to try new things.				
35. I accept responsibility for my actions.				
36. I know what I need to do to get into college or find a job.				
37. My quality of life is good. I can do most or all of the things I want to do.				
38. I have the knowledge and skills that I need to manage my own health.				
39. I take actions to manage or promote my own health.				
40. I manage my health needs in ways that maximize my ability to participate in activities.				
41. I handle my own health needs independently.				
42. I routinely monitor my health-related needs.				
43. I reach out to healthcare professionals when I'm concerned about my health.				
44. I advocate for my health needs.				

Section 4. Reflections About How Camp Impacted You

In your opinion, how much did attending [this camp] influence each of the following skills, abilities, and beliefs?

45. To what extent do you believe that attending [this camp] helped you learn how **to talk to friends about things that are important to you?**
0 = Did not help at all, 1 = Helped a little, 2 = Helped somewhat, 3 = Helped a lot
46. Compared to other activities you did around the same time you attended [this camp] (e.g., enrichment programs, sports, support groups), what was the influence of [this camp] on your ability to **talk to friends about things that are important to you?**
0 = Not a big influence, 1 = One of many influences, 2 = One of the biggest influences, 3 = The biggest influence
47. To what extent do you believe that attending [this camp] helped you learn how **to care about other people's feelings and points of view?**
0 = Did not help at all, 1 = Helped a little, 2 = Helped somewhat, 3 = Helped a lot
48. Compared to other activities you did around the same time you attended [this camp] (e.g., enrichment programs, sports, support groups), what was the influence of [this camp] on your **ability to care about other people's feelings and points of view?**
0 = Not a big influence, 1 = One of many influences, 2 = One of the biggest influences, 3 = The biggest influence
49. To what extent do you believe that attending [this camp] helped you learn how **to be diligent and never give up?**
0 = Did not help at all, 1 = Helped a little, 2 = Helped somewhat, 3 = Helped a lot
50. Compared to other activities you did around the same time you attended [this camp] (e.g., enrichment programs, sports, support groups), what was the influence of [this camp] on your ability to be **diligent and never give up?**
0 = Not a big influence, 1 = One of many influences, 2 = One of the biggest influences, 3 = The biggest influence
51. To what extent do you believe that attending [this camp] helped you learn how **to be aware of your own strengths?**
0 = Did not help at all, 1 = Helped a little, 2 = Helped somewhat, 3 = Helped a lot
52. Compared to other activities you did around the same time you attended [this camp] (e.g., enrichment programs, sports, support groups), what was the influence of [this camp] on your ability to be **aware of your own strengths?**
0 = Not a big influence, 1 = One of many influences, 2 = One of the biggest influences, 3 = The biggest influence

53. To what extent do you believe that attending [this camp] helped you learn how **to have strong self-control?**
0 = Did not help at all, 1 = Helped a little, 2 = Helped somewhat, 3 = Helped a lot
54. Compared to other activities you did around the same time you attended [this camp] (e.g., enrichment programs, sports, support groups), what was the influence of [this camp] on your ability to **have strong self-control?**
0 = Not a big influence, 1 = One of many influences, 2 = One of the biggest influences, 3 = The biggest influence
55. To what extent do you believe that attending [this camp] helped you learn how **to be good at learning new things?**
56. 0 = Did not help at all, 1 = Helped a little, 2 = Helped somewhat, 3 = Helped a lot
57. Compared to other activities you did around the same time you attended [this camp] (e.g., enrichment programs, sports, support groups), what was the influence of [this camp] on your ability to **be good at learning new things?**
0 = Not a big influence, 1 = One of many influences, 2 = One of the biggest influences, 3 = The biggest influence
58. To what extent do you believe that attending [this camp] helped you learn how **to appreciate the perspectives of people from different experiences and backgrounds?**
0 = Did not help at all, 1 = Helped a little, 2 = Helped somewhat, 3 = Helped a lot
59. Compared to other activities you did around the same time you attended [this camp] (e.g., enrichment programs, sports, support groups), what was the influence of [this camp] on your ability to **appreciate the perspectives of people from different experiences and backgrounds?**
0 = Not a big influence, 1 = One of many influences, 2 = One of the biggest influences, 3 = The biggest influence
60. To what extent do you believe that attending [this camp] helped you learn how **to be willing to try new things?**
0 = Did not help at all, 1 = Helped a little, 2 = Helped somewhat, 3 = Helped a lot
61. Compared to other activities you did around the same time you attended [this camp] (e.g., enrichment programs, sports, support groups), what was the influence of [this camp] on your ability to **be willing to try new things?**
0 = Not a big influence, 1 = One of many influences, 2 = One of the biggest influences, 3 = The biggest influence

62. To what extent do you believe that attending [this camp] helped you learn how to **accept responsibility for your actions?**
0 = Did not help at all, 1 = Helped a little, 2 = Helped somewhat, 3 = Helped a lot
63. Compared to other activities you did around the same time you attended [this camp] (e.g., enrichment programs, sports, support groups), what was the influence of [this camp] on your ability to **accept responsibility for your actions?**
0 = Not a big influence, 1 = One of many influences, 2 = One of the biggest influences, 3 = The biggest influence
64. To what extent do you believe that attending [this camp] helped you learn how to **know what you need to do to get into college or find a job?**
0 = Did not help at all, 1 = Helped a little, 2 = Helped somewhat, 3 = Helped a lot
65. Compared to other activities you did around the same time you attended [this camp] (e.g., enrichment programs, sports, support groups), what was the influence of [this camp] on your ability to **know what you need to do to get into college or find a job?**
0 = Not a big influence, 1 = One of many influences, 2 = One of the biggest influences, 3 = The biggest influence
66. To what extent do you believe that attending [this camp] helped you learn how to **have a good quality of life so you can do most or all of the things you want to do?**
0 = Did not help at all, 1 = Helped a little, 2 = Helped somewhat, 3 = Helped a lot
67. Compared to other activities you did around the same time you attended [this camp] (e.g., enrichment programs, sports, support groups), what was the influence of [this camp] on your ability to **have a good quality of life so you can do most or all of the things you want to do?**
0 = Not a big influence, 1 = One of many influences, 2 = One of the biggest influences, 3 = The biggest influence
68. To what extent do you believe that attending [this camp] helped you learn how to **have knowledge and skills that you need to manage your own health?**
0 = Did not help at all, 1 = Helped a little, 2 = Helped somewhat, 3 = Helped a lot
69. Compared to other activities you did around the same time you attended [this camp] (e.g., enrichment programs, sports, support groups), what was the influence of [this camp] on your ability to **have knowledge and skills that you need to manage your own health?**
0 = Not a big influence, 1 = One of many influences, 2 = One of the biggest influences, 3 = The biggest influence
70. To what extent do you believe that attending [this camp] helped you learn how to **handle your own healthcare needs independently?**
0 = Did not help at all, 1 = Helped a little, 2 = Helped somewhat, 3 = Helped a lot

71. Compared to other activities you did around the same time you attended [this camp] (e.g., enrichment programs, sports, support groups), what was the influence of [this camp] on your ability to **handle your own healthcare needs independently?**
 0 = Not a big influence, 1 = One of many influences, 2 = One of the biggest influences, 3 = The biggest influence
72. To what extent do you believe that attending [this camp] helped you learn how **to advocate for your health needs?**
 0 = Did not help at all, 1 = Helped a little, 2 = Helped somewhat, 3 = Helped a lot
73. Compared to other activities you did around the same time you attended [this camp] (e.g., enrichment programs, sports, support groups), what was the influence of [this camp] on your ability to **advocate for your health needs?**
 0 = Not a big influence, 1 = One of many influences, 2 = One of the biggest influences, 3 = The biggest influence
74. Of the things you learned while at [this camp], which one is the most valuable to you today? _____

Section 5. Camp Elements

When you reflect on your experience at camp, how important, if any, were the following camp elements to you?

75. Being around similar kids (who look like me or are going through similar things)
 Not at all important, Somewhat important, Important, The most important
76. Having a sense of group identity (with people in my cabin or unit or camp community)
 Not at all important, Somewhat important, Important, The most important
77. Feeling accepted and not judged (for example by staff and campers)
 Not at all important, Somewhat important, Important, The most important
78. Connecting with staff
 Not at all important, Somewhat important, Important, The most important
79. Seeing role-models
 Not at all important, Somewhat important, Important, The most important
80. Receiving 1-on-1 medical education such as tips on how to take medication in a new way, self-infusing, or other health-related learning
 Not at all important, Somewhat important, Important, The most important
81. Interacting with friendly medical staff
 Not at all important, Somewhat important, Important, The most important

82. Trying new things
Not at all important, Somewhat important, Important, The most important
83. Doing things at camp I wasn't allowed to do elsewhere
Not at all important, Somewhat important, Important, The most important
84. Feeling a sense of possibility
Not at all important, Somewhat important, Important, The most important
85. Feeling a sense of freedom
Not at all important, Somewhat important, Important, The most important
86. Having a choice in the activities I did
Not at all important, Somewhat important, Important, The most important
87. Having support to participate in camp activities
Not at all important, Somewhat important, Important, The most important
88. Learning new things to manage my health
Not at all important, Somewhat important, Important, The most important
89. Other:
Not at all important, Somewhat important, Important, The most important
90. What do you remember most about your time at [this camp]?

91. Is there anything else you would like to tell us about your summer camp experiences or this survey? _____

Section 6. Demographic Questions

92. Thinking about the time period when you were at camp, what was the primary medical diagnosis you had? Please choose only ONE.
Blood disorder, Cancer, Cardiac or Vascular disorder, Endocrine disorder, Gastrointestinal disorder, Genetic disorder, Immunologic disorder, Kidney disease, Metabolic disorder, Neurological disorder, Orthopedic condition, Pulmonary disease, Rheumatologic disorder, Skin disease/dermatology, Ventilator dependent. Another diagnosis not included here. I attended as a sibling.
93. What is your age today?
18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30
Something else? _____

94. To which gender identity do you identify? (Select all that apply)
- Female/woman
 - Genderqueer
 - Male/man
 - Nonbinary
 - Transgender man
 - Transgender woman
 - I prefer to self-describe _____
 - I prefer not to respond
95. To what race or ethnicity do you identify? (Select all that apply)
- American Indian or Alaska Native
 - Asian
 - Black or African American
 - Caucasian/White
 - Hispanic or Latino/a/x or Spanish origin
 - Native Hawaiian or Other Pacific Islander
 - Middle Eastern or North African
 - Multiracial
 - I prefer to self-describe _____
 - I prefer not to respond
96. What answer best describes the highest degree or level of school you have completed? (Select one)
- Less than a high school diploma
 - High school degree or equivalent (e.g. GED)
 - Some college, no degree
 - Currently in college or post-graduate degree program
 - Associate degree (e.g. AA, AS)
 - Bachelor's degree (e.g. BA, BS)
 - Master's degree (e.g. MA, MS, MEd)
 - Professional degree (e.g. MD, DDS, DVM)
 - Doctorate (e.g. PhD, EdD)
 - Other _____
 - I prefer not to respond
97. What answer best describes your current employment status?
- Employed full time (35 or more hours per week)
 - Employed part time (up to 39 hours per week)
 - Unemployed and currently looking for work
 - Unemployed and not currently looking for work
 - Student
 - Retired
 - Homemaker

Self-employed
Unable to work
Other _____
I prefer not to respond

98. Have you worked or do you currently work or study in a health-related field?
99. Yes, No
If yes, please describe: _____

Appendix B. Matrix of Constructs for Qualities and Traits

	Item	Origin	Definition	α
Friendship skills	1. I am good at listening carefully to things that my friends tell me.	ACA YOB	Ability to form friendships with others	.730
	2. I am good at talking to friends about things that are important to me.	ACA YOB		
	3. I am good at understanding my friends' feelings.	ACA YOB		
Empathy and Compassion	4. I care about other people's feelings and points of view.	ACA YIS	Ability to empathize with others	.750
	5. I am a good listener.	ACA YIS		
	6. I think about other people's perspectives easily.	ACA YIS		
Perseverance	7. I am diligent. I never give up.	Grit Scale	Ability to persevere in the face of challenges	.714
	8. I have overcome setbacks to conquer an important challenge.	Grit Scale		
Self-Identity	9. I am aware of my own strengths.	ACA YIS	Understanding of who I am and how I want to live my life	.771
	10. I am proud of my identity.	ACA YIS		
	11. I know how I want to live my life.	ACA YIS		
Emotion Regulation	12. I have strong self-control.	ACA YIS	Ability to control emotions	—
Self-Confidence	13. I am good at meeting new people	ACA YOB	Confidence in ability to succeed	.659
	14. I am good at taking care of myself.	ACA YOB		
	15. I am good at learning new things.	ACA YOB		
Appreciation of Diversity	16. I am open to hearing the opinions of people who are different from me.	ACA YIS	Appreciation for different people's perspectives	.844
	17. I appreciate the perspectives of people from different experiences and backgrounds.	ACA YIS		
	18. I look to learn from others whose perspective is different from mine.	ACA YIS		

	Item	Origin	Definition	α
Willingness to Try New Things	19. I am willing to try new things.	ACA YIS	Willingness to try new things	—
Responsibility	20. I accept responsibility for my actions.	ACA YIS	Ability to accept responsibility for my actions	—
Career Orientation	21. I know what I need to do to get into college or find a job.	ACA YIS	Ability to know what I need to do to get into college or find a job	—
Health-Related Quality of Life	22. My quality of life is good. I can do most or all of the things I want to do.	SeriousFun	Ability to have a good health-related quality of life	—
Medical-Related Self-Care	23. I have the knowledge and skills that I need to manage my own health.	SeriousFun	Ability to engage in medical-related self-care	.862
	24. I take actions to manage or promote my own health.	SeriousFun		
	25. I manage my health needs in ways that maximize my ability to participate in activities.	SeriousFun		
Medical Independence	26. I handle my own health needs independently.	SeriousFun	Ability to be medically independent	.792
	27. I routinely monitor my health-related needs.	SeriousFun		
	28. I reach out to health care professionals when I'm concerned about my health.	SeriousFun		
Medical Self-Advocacy	29. I advocate for my health needs.	SeriousFun	Ability to self-advocate for health needs	—

Note. ACA YOB = American Camp Association Youth Outcome Battery. ACA YIS = American Camp Association Youth Impact Study.

Appendix C. Data Cleaning Procedures

There were 2,445 cases in the original data file. Two test cases were dropped. In addition, the following cases were dropped: 14 cases did not consent, 114 cases had no data, 54 cases were siblings and not actual camp attendees, and nine cases were below 17 years old. The final analytic sample included 2,252 cases.

Camp attended. We generated a variable denoting the camp that respondents attended using Q1 and Q2. If respondents indicated attending one camp, we used the value from Q1. If respondents indicated attending more than one camp, we kept the value from Q2. Respondents who selected multiple options for Q1 and did not respond to Q2 were recoded camp attended to missing since we did not know which camp they were reporting for.

Dosage. We generated a dichotomous indicator denoting whether the participation dosage is high using Q4. If the respondent attended 1–3 sessions, the response was coded as 0 (low); if the respondent attended 4 or more sessions, the response was coded as 1 (high).

Participation in other activities. We generated a dichotomous variable indicating if respondents participated in other out-of-school-time activities. If the respondent indicated once in a while, sometimes, or frequently, the response was coded as 1. If the respondent indicated never, the response was coded as 0. We computed the total number of activities that respondents participated in by finding the sum of the dichotomous variables that were generated.

Qualities and traits. For qualities and traits that were measured using more than one item, we generated scores by computing the mean of all items within the outcome (see Appendix B for items that comprise the outcomes). Scores were computed if respondents answered more than half of the items within the outcome (e.g., if there were three items that comprise the outcome, respondents must respond to two or more for a score to be calculated). If respondents answered fewer than half of the items in the outcome, the value for the outcome was set to missing.

Appendix D. Comparison of Means

Differences in Alumni Ratings of Qualities and Traits by Demographic Characteristics

Exhibit D1. Differences in Alumni Ratings of Qualities and Traits by Gender

	Female (<i>n</i> = 719)	Male (<i>n</i> = 419)	Other (<i>n</i> = 37)	F	Sig.	Effect Size
Friendship skills	3.4	3.2	3.3	31.21	<.001*	0.05
Empathy and compassion	3.5	3.2	3.4	45.42	<.001*	0.07 ^a
Perseverance	3.4	3.3	3.3	7.50	.001*	0.01
Self-identity	3.3	3.2	3.2	2.27	.103	—
Emotion regulation	3.1	3.0	2.9	3.99	.019*	0.01
Self-confidence	3.1	3.0	3.1	5.51	.004*	0.01
Appreciation of diversity	3.5	3.3	3.5	19.73	<.001*	0.03
Willingness to try new things	3.4	3.2	3.5	8.54	<.001*	0.01
Responsibility	3.5	3.4	3.4	8.52	<.001*	0.01
Career orientation	3.4	3.2	3.2	13.52	<.001*	0.02
Health-related quality of life	3.3	3.1	2.9	9.81	<.001*	0.02
Medical-related self-care	3.4	3.1	3.2	23.14	<.001*	0.04
Medical independence	3.2	2.9	3.2	32.22	<.001*	0.05
Medical self-advocacy	3.3	2.9	3.4	32.29	<.001*	0.05

Note. Analysis excluded alumni who attended a camp outside of the United States. 1 = Not at all true, 2 = A little true, 3 = Mostly true, 4 = Very true.

^a Effect size is medium at $\eta^2 \geq 0.06$.

* $p \leq .05$.

Exhibit D2. Differences in Alumni Ratings of Qualities and Traits by Race

	American Indian or Alaska Native (<i>n</i> = 10)	Asian (<i>n</i> = 29)	Black (<i>n</i> = 137)	White (<i>n</i> = 840)	Hispanic (<i>n</i> = 97)	Multiracial (<i>n</i> = 72)	Other (<i>n</i> = 31)	F	Sig.	Effect Size
Friendship skills	2.7	3.1	3.3	3.3	3.3	3.4	3.1	3.54	.002*	0.02
Empathy and compassion	2.8	3.3	3.3	3.4	3.4	3.5	3.0	4.49	<.001*	0.02
Perseverance	2.9	3.1	3.2	3.4	3.3	3.5	3.4	4.19	<.001*	0.02
Self-identity	3.0	3.2	3.2	3.2	3.3	3.4	3.1	1.58	.148	—
Emotion regulation	2.4	3.0	3.1	3.0	3.1	3.2	3.1	1.83	.091	—
Self-confidence	2.8	3.0	3.1	3.1	3.1	3.2	3.1	1.12	.346	—
Appreciation of diversity	2.9	3.3	3.4	3.4	3.5	3.5	3.3	2.27	.035*	0.01
Willingness to try new things	2.7	3.2	3.3	3.3	3.3	3.5	3.5	2.25	.037*	0.01
Responsibility	3.1	3.3	3.5	3.5	3.5	3.6	3.2	2.15	.045*	0.01
Career orientation	3.0	3.2	3.3	3.3	3.3	3.5	3.0	1.50	.173	—
Health-related quality of life	2.8	3.2	3.1	3.2	3.2	3.4	3.5	2.20	.040*	0.01
Medical-related self-care	2.9	3.0	3.2	3.2	3.3	3.4	3.3	1.29	.258	—
Medical independence	2.8	2.8	3.1	3.1	3.1	3.2	3.2	1.27	.269	—
Medical self-advocacy	3.0	2.7	3.1	3.2	3.1	3.3	3.2	1.64	.133	—

Note. Analysis excluded alumni who attended a camp outside of the United States. 1 = Not at all true, 2 = A little true, 3 = Mostly true, 4 = Very true.

^a Effect size is medium at $\eta^2 \geq 0.06$.

* $p \leq .05$.

Exhibit D3. Differences in Alumni Ratings of Qualities and Traits by Education

	Less than HS (<i>n</i> = 118)	HS or equivalent (<i>n</i> = 793)	Associate's (<i>n</i> = 82)	Bachelor's (<i>n</i> = 170)	Master's, Professional, Doctorate (<i>n</i> = 69)	F	Sig.	Effect Size
Friendship skills	3.0	3.3	3.3	3.4	3.4	10.47	<.001*	0.04
Empathy and compassion	3.1	3.4	3.4	3.5	3.5	8.74	<.001*	0.03
Perseverance	3.1	3.4	3.4	3.4	3.4	4.00	.001*	0.02
Self-identity	2.9	3.3	3.2	3.4	3.3	7.69	<.001*	0.03
Emotion regulation	2.7	3.1	3.1	3.1	3.1	5.39	<.001*	0.02
Self-confidence	2.8	3.1	3.2	3.2	3.1	6.86	<.001*	0.03
Appreciation of diversity	3.2	3.5	3.4	3.5	3.5	6.46	<.001*	0.03
Willingness to try new things	3.2	3.4	3.3	3.4	3.4	2.49	.030*	0.01
Responsibility	2.9	3.5	3.5	3.5	3.5	16.18	<.001*	0.06 ^a
Career orientation	2.7	3.3	3.4	3.6	3.6	21.29	<.001*	0.08 ^a
Health-related quality of life	2.9	3.2	3.3	3.5	3.4	9.48	<.001*	0.04
Medical-related self-care	2.7	3.2	3.4	3.5	3.3	18.68	<.001*	0.07 ^a
Medical independence	2.5	3.1	3.2	3.4	3.4	25.14	<.001*	0.09 ^a
Medical self-advocacy	2.6	3.1	3.2	3.4	3.4	13.18	<.001*	0.05

Note. Analysis excluded alumni who attended a camp outside of the United States. 1 = Not at all true, 2 = A little true, 3 = Mostly true, 4 = Very true.

^a Effect size is medium at $\eta^2 \geq 0.06$.

* $p \leq .05$.

Exhibit D4. Differences in Alumni Ratings of Qualities and Traits by Employment

	Employed (n = 559)	Unemployed (n = 142)	Student (n = 440)	Unable to Work (n = 69)	Other (n = 21)	F	Sig.	Effect Size
Friendship skills	3.3	3.2	3.4	3.0	3.3	6.25	<.001*	0.02
Empathy and compassion	3.4	3.3	3.4	3.1	3.4	6.13	<.001*	0.02
Perseverance	3.4	3.1	3.5	3.2	3.3	10.56	<.001*	0.03
Self-identity	3.3	3.1	3.3	3.1	3.2	2.74	.028*	0.01
Emotion regulation	3.0	2.9	3.1	2.8	2.9	4.13	.003*	0.01
Self-confidence	3.1	3.0	3.1	2.7	3.1	8.59	<.001*	0.03
Appreciation of diversity	3.4	3.3	3.5	3.1	3.3	8.41	<.001*	0.03
Willingness to try new things	3.4	3.3	3.4	3.1	3.3	3.65	.006*	0.01
Responsibility	3.5	3.3	3.5	3.1	3.4	6.23	<.001*	0.02
Career orientation	3.5	3.0	3.4	2.5	2.8	34.09	<.001*	0.10 ^a
Health-related quality of life	3.3	3.0	3.3	2.7	3.0	17.06	<.001*	0.05
Medical-related self-care	3.4	3.0	3.3	2.5	3.0	27.12	<.001*	0.08 ^a
Medical independence	3.3	2.9	3.1	2.3	2.7	26.90	<.001*	0.08 ^a
Medical self-advocacy	3.3	2.9	3.2	2.5	3.0	13.65	<.001*	0.04

Note. Analysis excluded alumni who attended a camp outside of the United States. 1 = Not at all true, 2 = A little true, 3 = Mostly true, 4 = Very true.

^a Effect size is medium at $\eta^2 \geq 0.06$.

* $p \leq .05$.

Exhibit D5. Differences in Alumni Ratings of Qualities and Traits by Diagnosis

	Blood Disorder (n = 151)	Cancer (n = 233)	Gastrointestinal Disorder (n = 93)	Neurological Disorder (n = 108)	Rheumatologic Disorder (n = 94)	F	Sig.	Effect Size
Friendship skills	3.4	3.4	3.4	3.2	3.5	4.24	.002*	0.02
Empathy and compassion	3.5	3.5	3.4	3.2	3.6	8.17	<.001*	0.05
Perseverance	3.3	3.5	3.4	3.4	3.5	3.89	.004*	0.02
Self-identity	3.3	3.4	3.3	3.2	3.3	1.78	.131	—
Emotion regulation	3.1	3.2	3.0	2.9	3.0	2.26	.062	—
Self-confidence	3.1	3.3	3.1	3.0	3.2	4.00	.003*	0.02
Appreciation of diversity	3.5	3.6	3.5	3.3	3.6	4.43	.002*	0.03
Willingness to try new things	3.4	3.5	3.4	3.3	3.5	2.61	.035*	0.02
Responsibility	3.6	3.6	3.5	3.3	3.6	4.33	.002*	0.03
Career orientation	3.5	3.6	3.4	2.9	3.5	15.72	<.001*	0.09
Health-related quality of life	3.3	3.5	3.3	3.1	3.2	5.45	<.001*	0.03
Medical-related self-care	3.4	3.4	3.4	2.9	3.5	15.82	<.001*	0.09 ^a
Medical independence	3.4	3.3	3.3	2.6	3.4	21.94	<.001*	0.12 ^a
Medical self-advocacy	3.4	3.4	3.4	2.8	3.3	9.57	<.001*	0.05

Note. Analysis excluded alumni who attended a camp outside of the United States. 1 = Not at all true, 2 = A little true, 3 = Mostly true, 4 = Very true.

^a Effect size is medium at $\eta^2 \geq 0.06$.

* $p \leq .05$.

Exhibit D6. Differences in Alumni Ratings of Qualities and Traits by Rare Diagnosis

	Not Rare (n = 1,220)	Rare (n = 100)	t	Sig.	Effect Size
Friendship skills	3.3	3.2	2.32	.020*	0.18
Empathy and compassion	3.4	3.3	2.85	.005*	0.22
Perseverance	3.4	3.3	1.59	.112	—
Self-identity	3.2	3.2	0.91	.363	—
Emotion regulation	3.0	3.0	0.87	.387	—
Self-confidence	3.1	3.0	2.41	.016*	0.18
Appreciation of diversity	3.4	3.3	2.42	.015*	0.18
Willingness to try new things	3.3	3.3	1.35	.179	—
Responsibility	3.4	3.4	0.88	.379	—
Career orientation	3.4	3.1	3.32	.001*	0.25
Health-related quality of life	3.2	3.1	1.92	.055	—
Medical-related self-care	3.3	3.1	3.28	.001*	0.25
Medical independence	3.1	2.9	2.61	.009*	0.20
Medical self-advocacy	3.2	3.0	2.69	.007*	0.21

Note. 1 = Not at all true, 2 = A little true, 3 = Mostly true, 4 = Very true.

* $p \leq .05$.

Exhibit D7. Differences in Alumni Ratings of Qualities and Traits by Health-Related Work

	Yes (n = 324)	No (n = 978)	t	Sig.	Effect Size
Friendship skills	3.4	3.3	3.55	<.001*	0.23
Empathy and compassion	3.5	3.3	3.84	<.001*	0.25
Perseverance	3.5	3.3	3.83	<.001*	0.25
Self-identity	3.3	3.2	2.79	.005*	0.18
Emotion regulation	3.2	3.0	3.51	.001*	0.23
Self-confidence	3.2	3.1	3.65	<.001*	0.23
Appreciation of diversity	3.6	3.4	4.54	<.001*	0.29
Willingness to try new things	3.5	3.3	3.51	.001*	0.23
Responsibility	3.6	3.4	2.91	.004*	0.19
Career orientation	3.6	3.2	5.90	<.001*	0.38
Health-related quality of life	3.5	3.2	5.50	<.001*	0.35
Medical-related self-care	3.5	3.2	6.43	<.001*	0.41
Medical independence	3.4	3.0	7.90	<.001*	0.51 ^a
Medical self-advocacy	3.4	3.1	5.73	<.001*	0.37

Note. Analysis excluded alumni who attended a camp outside of the United States. 1 = Not at all true, 2 = A little true, 3 = Mostly true, 4 = Very true.

^a Effect size is medium at $d \geq 0.50$.

* $p \leq .05$.

Exhibit D8. Differences in Alumni Ratings of Qualities and Traits by Age

	17–19 (n = 364)	20–21 (n = 301)	22–24 (n = 319)	25 or older (n = 313)	F	Sig.	Effect Size
Friendship skills	3.3	3.3	3.3	3.3	0.22	.885	—
Empathy and compassion	3.4	3.4	3.4	3.4	0.33	.802	—
Perseverance	3.4	3.4	3.3	3.3	0.25	.864	—
Self-identity	3.3	3.2	3.3	3.3	0.33	.803	—
Emotion regulation	3.1	3.0	3.1	3.0	1.08	.356	—
Self-confidence	3.1	3.0	3.1	3.1	1.31	.271	—
Appreciation of diversity	3.5	3.4	3.4	3.4	1.70	.165	—
Willingness to try new things	3.4	3.4	3.3	3.3	1.45	.227	—
Responsibility	3.5	3.4	3.5	3.4	0.13	.942	—
Career orientation	3.4	3.3	3.3	3.4	0.91	.438	—
Health-related quality of life	3.3	3.2	3.2	3.2	1.11	.342	—
Medical-related self-care	3.3	3.2	3.2	3.3	0.22	.886	—
Medical independence	3.1	3.0	3.1	3.2	3.56	.014*	0.01
Medical self-advocacy	3.1	3.1	3.1	3.2	1.05	.371	—

Note. Analysis excluded alumni who attended a camp outside of the United States. 1 = Not at all true, 2 = A little true, 3 = Mostly true, 4 = Very true.

* $p \leq .05$.

Differences in Influence of Camp on Outcomes by Demographic Characteristics

Exhibit D9. Differences in Influence on Outcomes by Gender

	Female (n = 719)	Male (n = 419)	Other (n = 37)	F	Sig.	Effect Size
Friendship skills	3.4	3.2	3.1	5.99	.003*	0.01
Empathy and compassion	3.5	3.3	3.4	7.15	.001*	0.01
Perseverance	3.5	3.3	3.4	11.66	<.001*	0.02
Self-identity	3.6	3.4	3.4	11.87	<.001*	0.02
Emotion regulation	3.0	3.0	2.9	0.34	.715	—
Self-confidence	3.5	3.3	3.4	6.40	.002*	0.01
Appreciation of diversity	3.6	3.4	3.4	9.70	<.001*	0.02
Willingness to try new things	3.7	3.5	3.7	7.56	.001*	0.01
Responsibility	3.1	3.0	2.9	2.76	.064	—
Career orientation	2.4	2.3	2.3	0.82	.441	—
Health-related quality of life	3.3	3.1	3.0	9.64	<.001*	0.02
Medical-related self-care	3.1	2.8	3.0	10.71	<.001*	0.02
Medical independence	3.0	2.7	2.9	10.32	<.001*	0.02
Medical self-advocacy	3.2	2.9	3.2	13.90	<.001*	0.02

Note. Analysis excluded alumni who attended a camp outside of the United States. 1 = Did not help at all, 2 = Helped a little, 3 = Helped somewhat, 4 = Helped a lot.

* $p \leq .05$.

Exhibit D10. Differences in Influence on Outcomes by Race

	American Indian or Alaska Native (n = 10)	Asian (n = 29)	Black (n = 137)	White (n = 840)	Hispanic (n = 97)	Multiracial (n = 72)	Other (n = 31)	F	Sig.	Effect Size
Friendship skills	2.7	3.2	3.2	3.3	3.5	3.3	3.0	3.00	.007*	0.01
Empathy and compassion	3.2	3.4	3.5	3.4	3.6	3.5	3.1	1.97	.067	—
Perseverance	2.9	3.2	3.4	3.5	3.6	3.6	3.1	3.11	.005*	0.02
Self-identity	3.2	3.4	3.3	3.5	3.6	3.7	3.2	2.71	.013*	0.01
Emotion regulation	2.6	3.0	3.1	2.9	3.3	3.1	2.9	3.32	.003*	0.02
Self-confidence	3.1	3.4	3.6	3.4	3.6	3.5	3.1	2.41	.026*	0.01
Appreciation of diversity	3.2	3.4	3.6	3.5	3.6	3.5	3.1	2.13	.047*	0.01
Willingness to try new things	3.4	3.4	3.6	3.6	3.8	3.6	3.6	1.80	.096	—
Responsibility	3.4	3.0	3.2	3.0	3.4	3.2	2.8	3.51	.002*	0.02
Career orientation	3.1	2.5	2.5	2.3	2.7	2.5	2.2	3.74	.001*	0.02
Health-related quality of life	3.4	3.1	3.0	3.2	3.4	3.4	2.9	2.74	.012*	0.01
Medical-related self-care	3.2	2.9	3.0	2.9	3.3	3.1	3.0	2.59	.017*	0.01
Medical independence	2.6	3.0	3.0	2.8	3.4	2.9	2.8	3.99	.001*	0.02
Medical self-advocacy	2.5	2.9	3.1	3.0	3.3	3.2	3.0	2.16	.044*	0.01

Note. Analysis excluded alumni who attended a camp outside of the United States. 1 = Did not help at all, 2 = Helped a little, 3 = Helped somewhat, 4 = Helped a lot.

* $p \leq .05$.

Exhibit D11. Differences in Influence on Outcomes by Education

	Less than HS (n = 118)	HS or equivalent (n = 793)	Associate's (n = 82)	Bachelor's (n = 170)	Master's, Professional, Doctorate (n = 69)	F	Sig.	Effect Size
Friendship skills	3.2	3.3	3.3	3.3	3.2	1.20	.307	—
Empathy and compassion	3.3	3.5	3.5	3.4	3.4	1.95	.083	—
Perseverance	3.3	3.5	3.5	3.4	3.3	1.31	.257	—
Self-identity	3.3	3.5	3.5	3.5	3.3	3.59	.003*	0.01
Emotion regulation	2.8	3.0	3.1	3.0	2.7	3.07	.009*	0.01
Self-confidence	3.4	3.5	3.5	3.4	3.2	2.70	.020*	0.01
Appreciation of diversity	3.3	3.6	3.6	3.5	3.4	4.51	<.001*	0.02
Willingness to try new things	3.5	3.6	3.5	3.6	3.5	2.16	.057	—
Responsibility	2.9	3.1	3.3	3.0	2.7	4.92	<.001*	0.02
Career orientation	2.3	2.4	2.4	2.3	2.1	2.37	.038*	0.01
Health-related quality of life	3.0	3.2	3.3	3.2	3.0	2.19	.053	—
Medical-related self-care	2.8	3.1	3.1	3.0	2.7	4.22	.001*	0.02
Medical independence	2.7	2.9	2.9	3.0	2.8	2.17	.056	—
Medical self-advocacy	2.8	3.1	3.2	3.1	2.8	4.61	<.001*	0.02

Note. Analysis excluded alumni who attended a camp outside of the United States. 1 = Did not help at all, 2 = Helped a little, 3 = Helped somewhat, 4 = Helped a lot.

* $p \leq .05$.

Exhibit D12. Differences in Influence on Outcomes by Employment

	Employed (n = 559)	Unemployed (n = 142)	Student (n = 440)	Unable to Work (n = 69)	Other (n = 21)	F	Sig.	Effect Size
Friendship skills	3.3	3.4	3.3	3.3	3.3	0.36	.841	—
Empathy and compassion	3.4	3.4	3.4	3.5	3.5	0.26	.906	—
Perseverance	3.4	3.3	3.5	3.4	3.5	0.77	.543	—
Self-identity	3.5	3.4	3.5	3.5	3.5	0.32	.861	—
Emotion regulation	3.0	3.0	2.9	3.1	2.9	0.99	.415	—
Self-confidence	3.5	3.4	3.5	3.5	3.3	0.61	.656	—
Appreciation of diversity	3.5	3.5	3.6	3.4	3.3	1.15	.331	—
Willingness to try new things	3.6	3.5	3.6	3.6	3.6	0.73	.570	—
Responsibility	3.1	3.1	3.1	3.1	3.0	0.28	.889	—
Career orientation	2.4	2.3	2.4	2.2	2.0	1.79	.128	—
Health-related quality of life	3.2	3.2	3.2	3.1	3.3	0.64	.633	—
Medical-related self-care	3.1	2.9	3.0	2.8	2.8	2.53	.039*	0.01
Medical independence	3.0	2.8	2.9	2.6	2.7	3.14	.014*	0.01
Medical self-advocacy	3.2	3.0	3.1	2.7	2.9	4.72	.001*	0.02

Note. Analysis excluded alumni who attended a camp outside of the United States. 1 = Did not help at all, 2 = Helped a little, 3 = Helped somewhat, 4 = Helped a lot.

* $p \leq .05$.

Exhibit D13. Differences in Influence on Outcomes by Diagnosis

	Blood Disorder (n = 151)	Cancer (n = 233)	Gastrointestinal Disorder (n = 93)	Neurological Disorder (n = 108)	Rheumatologic Disorder (n = 94)	F	Sig.	Effect Size
Friendship skills	3.4	3.3	3.2	3.3	3.5	2.03	.089	—
Empathy and compassion	3.5	3.5	3.3	3.4	3.6	2.25	.062	—
Perseverance	3.4	3.4	3.3	3.6	3.6	1.80	.127	—
Self-identity	3.5	3.5	3.5	3.6	3.5	0.43	.786	—
Emotion regulation	3.1	3.0	2.9	3.0	3.0	0.72	.576	—
Self-confidence	3.6	3.4	3.5	3.6	3.4	0.91	.457	—
Appreciation of diversity	3.6	3.6	3.5	3.5	3.6	1.12	.348	—
Willingness to try new things	3.7	3.6	3.6	3.6	3.6	0.38	.826	—
Responsibility	3.2	3.1	2.9	3.1	3.1	1.08	.364	—
Career orientation	2.5	2.4	2.3	2.2	2.4	1.63	.166	—
Health-related quality of life	3.2	3.2	3.3	3.2	3.3	0.34	.853	—
Medical-related self-care	3.2	2.9	3.1	2.7	3.2	5.65	<.001*	0.03
Medical independence	3.2	2.8	3.1	2.6	3.1	5.48	<.001*	0.03
Medical self-advocacy	3.3	3.0	3.3	2.8	3.2	5.78	<.001*	0.03

Note. Analysis excluded alumni who attended a camp outside of the United States. 1 = Did not help at all, 2 = Helped a little, 3 = Helped somewhat, 4 = Helped a lot.

* $p \leq .05$.

Exhibit D14. Differences in Influence on Outcomes by Rare Diagnosis

	Not Rare (n = 1,220)	Rare (n = 100)	t	Sig.	Effect size
Friendship skills	3.3	3.2	2.29	.022*	0.18
Empathy and compassion	3.4	3.4	0.16	.877	—
Perseverance	3.5	3.4	1.69	.092	—
Self-identity	3.5	3.5	0.33	.741	—
Emotion regulation	3.0	2.9	1.29	.198	—
Self-confidence	3.4	3.4	1.12	.261	—
Appreciation of diversity	3.5	3.5	1.31	.192	—
Willingness to try new things	3.6	3.6	0.22	.829	—
Responsibility	3.1	3.1	0.70	.482	—
Career orientation	2.4	2.4	0.15	.884	—
Health-related quality of life	3.2	3.1	1.25	.211	—
Medical-related self-care	3.0	3.0	0.90	.367	—
Medical independence	2.9	2.9	1.04	.300	—
Medical self-advocacy	3.1	3.0	0.97	.333	—

Note. Analysis excluded alumni who attended a camp outside of the United States. 1 = Did not help at all, 2 = Helped a little, 3 = Helped somewhat, 4 = Helped a lot.

* $p \leq .05$.

Exhibit D15. Differences in Influence on Outcomes by Health-Related Work

	Yes (n = 324)	No (n = 978)	t	Sig.	Effect Size
Friendship skills	3.3	3.3	0.57	.571	—
Empathy and compassion	3.5	3.4	1.64	.101	—
Perseverance	3.5	3.4	1.63	.104	—
Self-identity	3.5	3.4	1.66	.097	—
Emotion regulation	2.9	3.0	-0.72	.469	—
Self-confidence	3.4	3.4	-0.52	.604	—
Appreciation of diversity	3.6	3.5	1.99	.047*	0.13
Willingness to try new things	3.6	3.6	1.29	.197	—
Responsibility	3.1	3.0	0.55	.579	—
Career orientation	2.5	2.3	1.41	.158	—
Health-related quality of life	3.2	3.1	1.36	.173	—
Medical-related self-care	3.1	2.9	2.16	.031*	0.14
Medical independence	3.0	2.9	3.16	.002*	0.20
Medical self-advocacy	3.2	3.0	3.86	<.001*	0.25

Note. Analysis excluded alumni who attended a camp outside of the United States. 1 = Did not help at all, 2 = Helped a little, 3 = Helped somewhat, 4 = Helped a lot.

* $p \leq .05$.

Exhibit D16. Differences in Influence on Outcomes by Age

	17–19 (<i>n</i> = 364)	20–21 (<i>n</i> = 301)	22–24 (<i>n</i> = 319)	25 or older (<i>n</i> = 313)	F	Sig.	Effect Size
Friendship skills	3.3	3.3	3.3	3.3	0.33	.806	—
Empathy and compassion	3.5	3.4	3.4	3.4	0.65	.585	—
Perseverance	3.5	3.5	3.4	3.4	1.32	.266	—
Self-identity	3.5	3.5	3.5	3.4	1.56	.197	—
Emotion regulation	3.1	3.0	3.0	2.9	1.60	.186	—
Self-confidence	3.5	3.5	3.4	3.4	1.40	.241	—
Appreciation of diversity	3.6	3.6	3.5	3.5	1.27	.283	—
Willingness to try new things	3.6	3.6	3.6	3.6	0.49	.687	—
Responsibility	3.1	3.2	3.1	3.0	0.97	.406	—
Career orientation	2.5	2.5	2.4	2.3	3.73	.011*	0.01
Health-related quality of life	3.3	3.3	3.2	3.1	2.89	.034*	0.01
Medical-related self-care	3.1	3.1	3.0	2.9	2.76	.041*	0.01
Medical independence	3.0	3.0	2.9	2.8	1.30	.272	—
Medical self-advocacy	3.1	3.1	3.0	3.0	1.91	.127	—

Note. Analysis excluded alumni who attended a camp outside of the United States. 1 = Did not help at all, 2 = Helped a little, 3 = Helped somewhat, 4 = Helped a lot.

* $p \leq .05$.

Exhibit D17. Differences in Alumni Ratings of Qualities and Traits by Participation in Family Weekends and Hospital-Based Programs

	Family Weekends					Hospital-Based Programs				
	Yes (n = 1,022)	No (n = 837)	t	Sig.	Effect Size	Yes (n = 1,505)	No (n = 263)	t	Sig.	Effect Size
Friendship skills	3.3	3.3	0.75	.454	—	3.3	3.1	4.88	<.001*	0.33
Empathy and compassion	3.4	3.3	1.73	.083	—	3.4	3.1	6.17	<.001*	0.41
Perseverance	3.3	3.3	-0.54	.586	—	3.3	3.2	1.80	.072	—
Self-identity	3.2	3.2	-1.86	.063	—	3.2	3.1	1.91	.056	—
Emotion regulation	2.9	3.0	-1.72	.086	—	3.0	3.0	-0.33	.742	—
Self-confidence	3.0	3.1	-0.57	.570	—	3.0	3.0	0.42	.677	—
Appreciation of diversity	3.4	3.4	1.54	.124	—	3.4	3.2	4.62	<.001*	0.31
Willingness to try new things	3.4	3.3	2.45	.014*	0.11	3.3	3.3	1.48	.140	—
Responsibility	3.5	3.4	1.08	.282	—	3.5	3.3	3.66	<.001*	0.25
Career orientation	3.3	3.3	0.48	.633	—	3.3	3.2	2.26	.024*	0.15
Health-related quality of life	3.2	3.2	-0.98	.326	—	3.2	3.1	2.34	.020*	0.16
Medical-related self-care	3.2	3.2	0.61	.539	—	3.2	3.2	0.47	.636	—
Medical independence	3.1	3.1	1.47	.142	—	3.1	3.1	0.31	.755	—
Medical self-advocacy	3.2	3.1	1.83	.068	—	3.1	3.2	-0.42	.671	—

Note. 1 = Not at all true, 2 = A little true, 3 = Mostly true, 4 = Very true.

* $p \leq .05$.

Exhibit D18. Differences in Alumni Ratings of Qualities and Traits by Attendance

		Participation	Camp	Constant
Friendship skills	b	0.078	-0.005	3.288
	SE	0.029	0.003	0.030
	t	2.722	-1.785	111.275
	p value	.007	.074	.000
Empathy and compassion	b	0.107	-0.004	3.345
	SE	0.028	0.003	0.029
	t	3.830	-1.458	115.467
	p value	.000	.145	.000
Perseverance	b	0.128	0.006	3.186
	SE	0.032	0.003	0.033
	t	4.035	2.118	97.374
	p value	.000	.034	.000
Self-identity	b	0.130	0.002	3.096
	SE	0.032	0.003	0.033
	t	4.083	0.827	94.000
	p value	.000	.409	.000
Emotion regulation	b	0.171	0.001	2.873
	SE	0.040	0.004	0.041
	t	4.300	0.182	69.828
	p value	.000	.855	.000
Self-confidence	b	0.136	-0.003	3.008
	SE	0.030	0.003	0.031
	t	4.570	-0.989	97.446
	p value	.000	.323	.000
Appreciation of diversity	b	0.170	0.003	3.290
	SE	0.029	0.003	0.030
	t	5.855	1.040	109.306
	p value	.000	.298	.000
Willingness to try new things	b	0.104	-0.004	3.325
	SE	0.034	0.003	0.036
	t	3.010	-1.379	93.327
	p value	.003	.168	.000

		Participation	Camp	Constant
Responsibility	b	0.092	-0.007	3.447
	SE	0.033	0.003	0.034
	t	2.836	-2.139	102.289
	p value	.005	.033	.000
Career orientation	b	0.129	-0.010	3.341
	SE	0.040	0.004	0.042
	t	3.183	-2.740	79.903
	p value	.001	.006	.000
Health-related quality of life	b	0.203	0.000	3.091
	SE	0.037	0.004	0.038
	t	5.482	-0.124	80.540
	p value	.000	.902	.000
Medical-related self-care	b	0.148	-0.011	3.240
	SE	0.034	0.003	0.035
	t	4.396	-3.396	92.656
	p value	.000	.001	.000
Medical independence	b	0.139	-0.015	3.165
	SE	0.036	0.003	0.037
	t	3.841	-4.359	84.658
	p value	.000	.000	.000
Medical self-advocacy	b	0.132	-0.019	3.247
	SE	0.042	0.004	0.043
	t	3.184	-4.885	75.523
	p value	.001	.000	.000

Note. SE is standard error.

Exhibit D19. Differences in Influence of Camp on Outcomes by Attendance

		Participation	Camp	Constant
Friendship skills	b	0.279	-0.006	3.189
	SE	0.039	0.004	0.040
	<i>t</i>	7.216	-1.688	79.698
	<i>p</i> value	.000	.092	.000
Empathy and compassion	b	0.215	-0.009	3.377
	SE	0.036	0.003	0.038
	<i>t</i>	5.951	-2.609	89.904
	<i>p</i> value	.000	.009	.000
Perseverance	b	0.271	-0.003	3.297
	SE	0.038	0.004	0.039
	<i>t</i>	7.189	-0.879	84.382
	<i>p</i> value	.000	.379	.000
Self-identity	b	0.293	0.000	3.284
	SE	0.036	0.003	0.037
	<i>t</i>	8.129	-0.014	87.889
	<i>p</i> value	.000	.989	.000
Emotion regulation	b	0.212	-0.009	2.934
	SE	0.044	0.004	0.046
	<i>t</i>	4.801	-2.182	64.194
	<i>p</i> value	.000	.029	.000
Self-confidence	b	0.228	-0.002	3.303
	SE	0.038	0.004	0.039
	<i>t</i>	6.081	-0.701	84.858
	<i>p</i> value	.000	.483	.000
Appreciation of diversity	b	0.194	-0.004	3.436
	SE	0.035	0.003	0.036
	<i>t</i>	5.527	-1.218	94.137
	<i>p</i> value	.000	.224	.000
Willingness to try new things	b	0.163	-0.002	3.516
	SE	0.033	0.003	0.034
	<i>t</i>	5.000	-0.664	104.126
	<i>p</i> value	.000	.507	.000

		Participation	Camp	Constant
Responsibility	b	0.223	-0.013	3.032
	SE	0.044	0.004	0.046
	<i>t</i>	5.061	-3.079	66.433
	<i>p</i> value	.000	.002	.000
Career orientation	b	0.188	-0.014	2.380
	SE	0.052	0.005	0.054
	<i>t</i>	3.587	-2.873	43.694
	<i>p</i> value	.000	.004	.000
Health-related quality of life	b	0.306	-0.001	2.975
	SE	0.044	0.004	0.046
	<i>t</i>	6.949	-0.208	64.933
	<i>p</i> value	.000	.835	.000
Medical-related self-care	b	0.212	-0.012	2.960
	SE	0.046	0.004	0.048
	<i>t</i>	4.617	-2.711	61.992
	<i>p</i> value	.000	.007	.000
Medical independence	b	0.200	-0.011	2.886
	SE	0.049	0.005	0.051
	<i>t</i>	4.097	-2.334	56.772
	<i>p</i> value	.000	.020	.000
Medical self-advocacy	b	0.236	-0.013	3.028
	SE	0.047	0.004	0.048
	<i>t</i>	5.057	-2.992	62.501
	<i>p</i> value	.000	.003	.000

Note. SE is standard error.

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