



**Rural America Initiatives
Ateyapi Wicozani Program
Rapid City, SD 57701**

**Lakota Circles of Hope
Program Evaluation Report
Rapid City Middle Schools (6th to 8th Grades)
2018 - 2020**



Prepared By

**John J. Usera, Ph.D. & Associates, Inc.
Delta Evaluation Consulting, LLC
Sturgis SD 57785**

**Lakota Circles of Hope
Catholic Social Services
Rapid City, SD 57701**

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Ateyapi Wicozani Program Staff

Bruce Long Fox..... RAI Executive Director
Robert Yellowhawk Ateyapi Wicozani Program Coordinator
Darcie Horned AntelopeAteyapi Wicozani Program Administrative Assistant
Lily Eagle Elk (2018-20) East Middle School Mentor
Erick Long Wolf (2018-19)
Jarrod Dillon (2019-20) North Middle School Mentor
Thristine LaPointe (2018-19)
Erick Long Wolf (2019-20) South Middle School Mentor
Kevin Pederson (2018-19)
Maya Garrard (2019-20) West Middle School Mentor

Lakota Circles of Hope Program Staff

Jim Kinyon LCH Program Director
Staci Eagle Elk LCH Program Manager
Kahomy SouksavathLCH Program Manager

Ateyapi Wicozani Program

Rapid City Middle Schools Program Evaluation

Introduction

Rural America Initiative's Ateyapi Wicozani Middle School Program uses the Lakota Circles of Hope (LCH) Middle School Program (*Hocoka Ohomni Wacinyekiyapi*) which is an innovative Lakota culturally centered prevention curriculum designed for the sixth through the eighth grades as one of the major components of its program. The LCH program teaches how to make healthy decisions based on the traditional Lakota values of respect, generosity, fortitude and wisdom. The primary target population for the LCH program is the Rapid City School District middle schools that have a substantial Native American enrollment of students (Table 1). Through the curriculum, summer sessions, and other activities families, the community, and students attain knowledge and resources for making safe choices and resisting peer pressure, tobacco, alcohol, non-prescribed drugs, and interpersonal violence. From its inception, the Lakota Circles of Hope curriculum has been developed as a collaborative project of Lakota elders, educational professionals (Lakota counselors, administrators, and teachers) and experienced Catholic Social Services Lakota Circles of Hope staff. The various collaborators and program designers bring to the program their knowledge and experience in Lakota culture, in curriculum development, in education, and in program evaluation. Additionally, the Ateyapi Wicozani Program includes supplemental Lakota cultural activities, events, mentoring, and academic tutoring of its participants.

Table 1 Rapid City Middle Schools Target Population – Native American Students				
Middle School	Enrollment (2018-19)	Native American Multiracial*	Intervention Group Ateyapi Wicozani (2018-19)	Intervention Group Ateyapi Wicozani (2019-20)
North	569	354	105	16
East	664	144	45	7
West	645	92	30	12
South	674	213	65	15
Southwest	699	70	20	0
Total	3,251	873	265	50

The earlier appropriate decision-making tools are introduced to youth so good habits can be established with the probability of poor choices in early and middle age adolescence is reduced. Many studies document how substance use, anti-social behaviors, and depression prevalence, intentions, and practices increase with grade level at a moderate increase between the 4th to 6th grades and a larger increase between the 7th and 8th grades. Thus, the Lakota Circles of Hope is an age appropriate curriculum with scaling of depth and understanding of particular topics distributed throughout the three-year program. Additionally, families and communities are embedded as a major component of the curriculum. It is realized that they have a great effect on child rearing practices, attitudes, values and behaviors which may in turn influence whether children will abuse drugs, be involved in violence or antisocial behavior, or consider suicide. The children are encouraged to share what they have learned with their parents, families, and trusted adults, which in turn serves to reinforce what has been learned in the classroom.^{1,2}

The Lakota Circles of Hope (LCH) program involves the teaching of ten lessons per year beginning in the sixth grade and ending in the eighth grade. The lessons within the program are designed to reduce early risk behaviors by enhancing the understanding and appreciation of the Lakota values and traditions as a framework for making decisions and choices that contribute to a healthy and safe environment. Parents, educators and community members have identified this program as a first step in helping introduce young people, families and educators to substance use, depression, and antisocial behaviors prevention efforts. The program supports many studies involving prevention initiatives for children based on relevancy, medically accurate information, and cultural influences.^{3,4}

The lessons are delivered in a classroom setting by a facilitator, teacher, or counselor who has a good knowledge about the Lakota language and traditions. The students receive a minimum of 45-minute lesson with opportunities to finish their activities in school and at home. The lessons are delivered either in the fall or spring semester depending upon the scheduling and opportunities to offer the classes. There are three years of lessons with each previous year's lesson being expanded and enriched using age-appropriate pedagogical methodologies.

¹ Lowe J., Liang H., Riggs C. & Henson J. (2012). Community partnership to affect substance abuse among Native American adolescents. *American Journal of Drug and Alcohol Abuse*, 38(5), 450-455.

² McKennitt, D. & Currie, C. (2012). Does a cultural sensitive smoking prevention program reduce smoking intentions among aboriginal children?: A pilot study. *American Indian and Alaska Native Mental Health Research*, 19(2), 55-63. doi: 10.5820/aian.1902.2012.55

³ LaFromboise, T.D. (1995). *American Indian life skills development curriculum*. Madison, WI: The University of Wisconsin Press.

⁴ O'Connell J.M., Novins D.K., Deals J., Whitesell N., Libby A.M., Orton H., & Croy C.D. (2007). Childhood characteristics with stage of substance use of American Indians: Family background, traumatic experiences, and childhood behaviors. *Addictive Behaviors*, 32(12), 3142-3152. DOI: 10.1016/j.addbeh.2007.07.012

Each facilitator is trained in the facilitation of the LCH program’s philosophy, purpose, and learning objectives by the program staff who serve as mentors for the teachers and counselors at each school site. The training includes Lakota teaching pedagogy, learning skills to help students with academic and social issues, referral and communication techniques, and a review of Lakota cultural values, language, practices, and traditions. The understanding of the expectations by the LCH facilitators are part of the training process. Retention of the facilitator is critical to the success of the program and thus efforts are made to provide appropriate staff development throughout the implementation year based on staff requests and input, and to assure that each staff member receives the support and feedback necessary to be an effective LCH program facilitator.

The Ateyapi Wicozani Program supplements the LCH program with additional after-school activities which include cultural practices, history, and traditions; recreational activities; presentations by Lakota elders, professional health providers, and youth development specialists. The boys and girls are separated and two times a week for the LCH lessons (1 hour per day) and one of the supplemental activities (2 hours per day). These activities not only supplement the LCH program but enrich the students with additional information and practices about their Lakota cultural and coping skills to deal with antisocial and risk behaviors. Mentors are available during the day to help the students with academic and attendance challenges.

A recent study of LCH has determined that the LCH elementary program has a positive impact on fourth and fifth grade participants regarding healthy decisions on substance use, conflict resolution, communication, self-identity, and cultural competence.⁵ The study used a mixed methods approach was used to answer the research questions, which were aligned with the program objectives. It sought to understand whether children completing the LCH would:

1. demonstrate an improved understanding of the Lakota values, traditions, and practices;
2. demonstrate an understanding of the health impediments caused by the use of alcohol, tobacco, and chemical substances;
3. be able to resolve conflicts using learned skills and techniques;
4. demonstrate improved self-esteem and self-efficacy; and
5. demonstrate improved communication skills with their parents, elders, and other trusted adults.

In addition, the research determined if the cultural framework of the program was relevant and

⁵ Usera, J. (2017). The efficacy of an American Indian culturally based risk prevention program for upper elementary school youth residing on the Northern Plains Reservations. *Journal of Primary Prevention, 38(1)*, 175-194.
Doi:10.1007/s10935-016-0462-3

meaningful to a Lakota child's life. The culturally responsive pedagogy used in LCH cultivated academic achievement, social consciousness, cultural affirmation, value-centric behavior, individual self-worth, and social competence.⁶ In this study, it showed that culturally responsive pedagogy was effective in helping students meet the challenges within their daily lives. The middle school curriculum continues to follow the same framework as the LCH elementary school curriculum, and it is anticipated it will produce the same positive outcomes for the participants.

This program evaluation report is a study to determine if the curriculum has made a difference in the participants' lives over the past year of implementation. The evaluation process used a pre/post questionnaire design with qualitative data from student focus groups, whenever possible. Additionally, each lesson delivered by trained instructors required the completion of fidelity self-assessments. These assessments documented the delivery each lesson as outlined in the curriculum with no major adaptations to the lessons.

Evaluation Questions & Hypotheses

The logic model provides an overview of the LCH program with a list of the outcome objectives, intervention, outcomes impact, and performance measures. The objectives and evaluation questions are aligned to the logic model. The data collected throughout the project will be analyzed to test the questions linked to the project objectives and goal. The evaluation questions focus on specific outcomes that include conflict resolution, academic improvement, communication, Lakota identity, self-efficacy, and anti-social behaviors.

There are six evaluation questions and ten corresponding hypotheses which attempt to document the achievement of the program goals through the students' participation in the Lakota Circles of Hope program. The questions and associated hypotheses include:

Q₁ Do the youth completing LCH show an improved understanding of the Lakota values, traditions, and practices? [*Lakota Identity*]

H₁: Upon completion of the LCH program 6th to 8th will demonstrated an improved understanding and application of their Lakota values, traditions, and practices.

Q₂ Do the middle school youth completing LCH show an understanding of the health impediments to the use of alcohol, tobacco, and chemical substances? [*Risk Behaviors*]

H₂: Upon completion of the LCH program 6th to 8th graders will show a decrease in the use of alcohol, tobacco, and chemical substances.

⁶ Gay, G. (2000). *Culturally Responsive Teaching: Theory, Research, & Practice*. New York: Teachers College Press.

- H₃: Upon completion of the LCH program 6th to 8th grades will show an improved understanding of the health implications when using alcohol, tobacco, and chemical substances.
- Q₃ After completing LCH will the participating youth be able to resolve conflicts using learned skills and techniques? [*Conflict Resolution*]
- H₄: After participating in LCH, youth in 6th to 8th grades will demonstrate a decrease in the number of physical fights during the school year.
- H₅: After participating in LCH youth in the 6th and 8th grades will be able to resolve conflicts using acquired resolution skills.
- Q₄ After completing LCH will the participating middle school youth have improved self-esteem and self-efficacy qualities? [*Self-Esteem*]
- H₆: After participating in LCH, youth in 6th to 8th grades will demonstrate an increase in the level of self-esteem and self-confidence.
- H₇: After participating in LCH youth in 6th to 8th grades will show an increased pride in being Lakota.
- Q₅ After completing LCH will the participating youth have improved communication skills with their parents, elders, and other adults? [*Communication*]
- H₈: After participating in LCH youth in 6th to 8th grades will show an increase level of communication with their parents, elders, and other adults in their lives regarding issues related to healthy decision making.
- Q₆ After completing LCH will the participating youth show an increase in their respect for themselves, others, and other individuals' property? [*Respect*]
- H₉: After participating in LCH youth in 6th to 8th grades will show an increase level of respect for themselves, their peers and adults in their lives.
- H₁₀: After participating in LCH youth in 6th to 8th grades will show an increase respect for individuals' property.

Methodology & Reporting Format

Appendix A shows the pre/post questionnaire subscales and how each question aligns with a specific performance scale. The subscales include communication, respect, Lakota Identity, conflict resolution, self-esteem, and risk behaviors. The selection of specific questions for a particular subscale (factor) was determined using principal component factor analysis.⁷ A one-year presentation of the proportional responses for each question in a subscale is presented by grade level in this report. The visual presentation of data was selected because it provided a quick overview of how the students performed in each grade level (6th, 7th, & 8th grades) from pre intervention to post intervention assessments. The 2018-19 and 2019-20 composite mean scores for each subscale (factor) and grade level are presented and analyzed using Student t-test or the Welch t-test depending if the variance between the pre and post intervention scores are equal or unequal.

In this report a reader will be able to see how the participation in LCH contributes to different proportional response ratings from pre to post intervention assessments. It has been determined that the longer the students have participated in the program the more impact it has on the various outcome measures. In many cases the difference between the pre and post intervention assessments showed positive changes. If the change was statistically significant different, then the probability of the change or difference at the alpha 0.05 or less was noted using the Z proportional test for two independent samples (pre and post intervention assessments).

As part of the program's database and information demographic information was collected as part of the recruitment and enrollment phase of the program. The enrollment data fields include, date of birth (age), grade level, school, residency, ethnicity, gender, household configuration, number of siblings, and date of a completed active parental consent form. Rural America Initiatives (RAI) has access to a database system that can store this information with the appropriate coding system. Upon request by the evaluator, the information was transmitted to the evaluator using codes (no names) only. Additionally, the RAI system was able to track any referrals of youth to health providers and counselors. As part of the project, students requiring additional intervention and treatment was noted as a factor contributing to the formation of a cohort of students receiving supplemental services that could serve as a threat to the validity of the prevention aspects of the program. Analysis was performed to determine if supplemental services provided a measurable bias to the school-based prevention programming outcomes.

⁷ Kachigan, S.K. (1986). *Statistical Analysis: An Interdisciplinary Introduction to Univariate & Multivariate Methods*. New York: Radius Press.

Program Fidelity

Fidelity to program implementation and adherence to the project's work plan were monitored throughout the implementation evaluation process. Each facilitator completed a **Fidelity Lesson Self-Assessment Log** after completing a lesson. Changes to program activities and delivery modalities were reported by the facilitator(s) to the evaluator and program coordinator and after lesson observations performed by the evaluator. Any significant changes were measured for association between initial activity designs versus any significant change in the activity. The association between activity design and an outcome measure were analyzed used the Chi Square Goodness of Fit analysis procedures if it was necessary. No analysis was performed in the two program years. Other information to document program fidelity was obtained through interviews with facilitators, mentors, and staff. In order to validate the fidelity of the key program inputs and activities, at least five percent of the lessons were observed by the evaluator during the program year. The evaluator used a session and observation checklist corresponding to a particular lesson to assure the topics were covered as outlined in the **LCH** curricula and that appropriate pedagogy was used in the presenting the lesson. Consistencies and deviations from the curriculum and pedagogical techniques were noted and shared with the facilitators and program coordinator through a written report. At the end of year meetings with the Ateyapi Wicozani program coordinator and facilitators addressed any issues regarding program fidelity and implementation.

Observations of LCH intervention sessions are designed to provide information regarding adherence and competence of the facilitators (mentors). The evaluator rates the facilitators' adherence and competence to the defined intervention protocol and curriculum format using a fidelity instrument that identifies key components of the intervention. An important advantage of observation data is that they are generally considered more accurate than self-report, providing a more objective assessment of practitioners' and participants' behavior. The majority of the fidelity efforts in preventive interventions use observational data, but the self-reporting using the Self-Assessment Fidelity Logs provides additional information for the improvement of the delivery of the program and for the achievement of program goals and objectives.⁸

⁸ Dusenbury L, Brannigan R, Hansen W, Walsh J, Falco M. (2005). Quality of implementation: Developing measures crucial to understanding the diffusion of preventive interventions. *Health Education Research*, 20, 308–313

Findings

Demographics

In the 2018-19 implementation of the Lakota Circles of Hope program in the Rapid City middle schools, the Ateyapi Wicozani Program reached out to 105 students in the spring of 2019 (Level 1) and 78 students in the summer of 2019 (Level 2). Level 1 LCH program was delivered in the spring of 2019 (January to May) to 40 sixth graders, 27 seventh graders and 6 eighth graders who completed the pre intervention assessment. Level 2 LCH program was delivered in the summer of 2019 (June and July) to 4 sixth graders, 19 seventh graders and 9 eighth graders who completed the pre intervention assessment. (Table 2A)

Table 2A (2018-19)								
Lakota Circles of Hope Pre/Post Questionnaire Completers								
Distribution of Participants by Gender & Grade Level								
Level 1								
Gender	Grade 6		Grade 7		Grade 8		Total	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Boy	24	18	6	5	2	1	32	24
Girl	16	13	21	13	4	2	41	28
Subtotal – Level 1	40	31	27	18	6	3	73	52
Level 2								
Boy	2	2	7	7	5	5	14	14
Girl	2	4	12	8	4	5	18	17
Subtotal – Level 2	4	6	19	15	9	10	32	31
Total – Levels 1 + 2	44	37	46	33	15	13	105	83

In the 2019-20 implementation of the Lakota Circles of Hope program in the Rapid City middle schools, the Ateyapi Wicozani Program reached out to 50 students in the fall of 2019 (Level 1) and 46 students in the spring of 2020 (Level 2). Level 1 LCH program was delivered in the fall of 2019 (October to December) to 19 sixth graders, 21 seventh graders and 10 eighth graders who completed the pre intervention assessment. Level 2 LCH program was delivered in the spring of 2020 (February to May) to 17 sixth graders, 13 seventh graders and 16 eighth graders who completed the post intervention assessment. Level 3 LCH program was delivered in the summer of 2020 (June to August) to 10 sixth graders, 23 seventh graders and 22 eighth graders who completed the post intervention assessment. (Table 2B)

Table 2B (2019-20)								
Lakota Circles of Hope Pre/Post Questionnaire Completers								
Distribution of Participants by Gender & Grade Level								
Level 1								
Gender	Grade 6		Grade 7		Grade 8		Total	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Boy	13	7	12	6	6	1	31	14
Girl	6	4	9	2	4	2	19	8
Subtotal – Level 1	19	11	21	8	10	3	50	22
Level 2								
Boy	3	9	4	6	0	4	7	19
Girl	7	8	7	7	11	12	25	27
Subtotal – Level 2	10	17	11	13	11	16	32	46
Total: Levels 1 + 2	29	28	32	21	21	19	82	68
Level 3								
Boy	5	8	2	9	8	6	15	23
Girl	2	2	4	14	12	16	18	32
Subtotal – Level 3	7	10	6	23	20	22	33	55
Total: Levels 1 + 2 + 3	36	38	38	44	41	41	115	123

Age and Race Distributions

Year 1: 2018-19

At pre intervention assessment for Level 1 the average age for the sixth graders was 11.65 years ($s = 0.622$) with a range from 11 years to 14 years. The average age for the seventh graders was 12.59 years ($s = 0.636$) with a range from 12 years to 14 years at pre intervention and 12.67 years ($s = 0.594$) at post intervention. The average age for the eighth graders was 13.5 ($S = 0.837$) years with a range from 12 to 14. The ethnicity of the students in Level 1 was 79.5% Lakota or Dakota, 6.8% White, 6.8% Black and 6.8% Hispanic at pre intervention.

At pre intervention assessment for Level 2 the average age for the sixth graders was 11.75 years ($s = 0.957$) with a range from 11 years to 13 years. The average age for the seventh graders was 12.26 years ($s = 0.653$) with a range from 11 years to 13 years at pre intervention and 12.40 years ($s = 0.632$) at post intervention. The average age for the eighth graders was 13.56 ($S = 0.882$) years with a range from 12 to

15. The ethnicity of the students in Level 2 was 81.3% Lakota or Dakota, 3.1% White, 3.1% Black and 9.4% Hispanic at pre intervention.

Year 2: 2019-20

At pre intervention assessment for **Level 1** the average age for the sixth graders was 11.15 years ($s = 0.086$) with a range from 11 years to 12 years. The average age for the seventh graders was 12.48 years ($s = 0.602$) with a range from 12 years to 14 years at pre intervention and 12.38 years ($s = 0.183$) at post intervention. The average age for the eighth graders was 13.30 ($s = 0.213$) years with a range from 12 to 14 at pre intervention. The ethnicity of the students in Level 1 was 78.0% Lakota or Dakota, 6.0% White, 8.0% Black and 8.0% Hispanic at pre intervention.

At pre intervention assessment for **Level 2** the average age for the sixth graders was 11.60 years ($s = 0.699$) with a range from 11 years to 13 years. The average age for the seventh graders was 12.82 years ($s = 0.603$) with a range from 12 years to 14 years at pre intervention and 13.08 years ($s = 0.760$) at post intervention. The average age for the eighth graders was 13.82 ($s = 0.751$) years with a range from 13 to 15. The ethnicity of the students at pre intervention in Level 2 was 78.1% Lakota or Dakota, 9.4% White, 3.1% Black and 9.4% Hispanic.

At pre intervention assessment for **Level 3** the average age for the sixth graders was 11.29 years ($s = 0.184$) with a range from 11 years to 12 years. The average age for the seventh graders was 12.00 years ($s = 0.894$) with a range from 11 years to 13 years at pre intervention and 12.39 years ($s = 0.656$) at post intervention. The average age for the eighth graders was 13.55 ($s = 1.191$) years with a range from 12 to 16. The ethnicity of the students at pre intervention in Level 3 was 90.9% Lakota or Dakota and 9.1% White.

Attendance

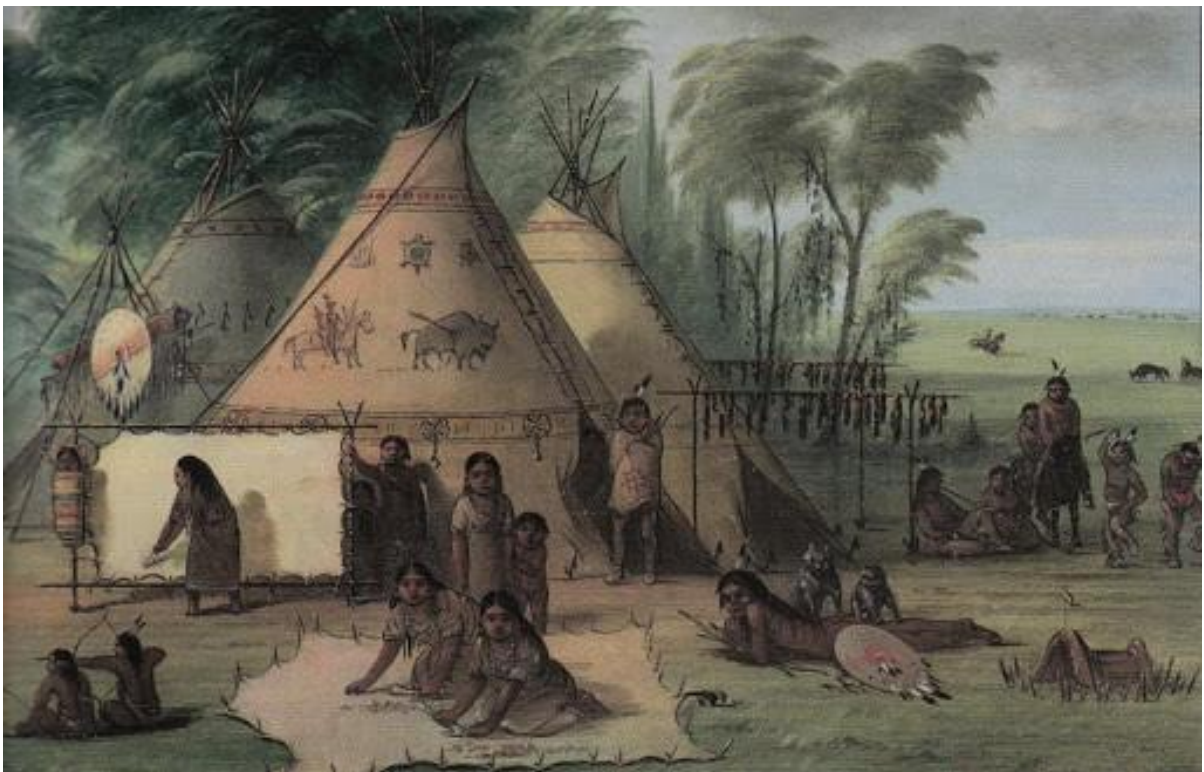
Year 1: 2018-19

Attendance was taken for individuals participating in each of the ten LCH lessons delivered. In Level 1 attendance was taken for 69 participants. The average attendance rate was 46.0% with 47.8% ($n = 33$) of the participants completing 5 or more lessons. Twenty-two percent (21.7%) of the participants completed 7 or more lessons ($n = 15$). In Level 2 attendance was taken for 49 participants. The average attendance rate was 49.0% with 32.7% ($n = 16$) of the participants completing 5 or more lessons. Ten percent (10.2%) of the participants completed 7 or more lessons ($n = 5$).

Year 2: 2019-20

Attendance was taken for individuals participating in each of the ten LCH lessons delivered. During the fall and spring semesters Level 1 and Level 2 attendance was taken for 59 participants. The average attendance rate was 46.0% with 54.2% (n = 32) of the participants completing 5 or more lessons. Twenty-five percent (25.4%) of the participants completed 7 or more lessons. During the summer session Level 3 attendance was taken for 24 participants. The average attendance rate was 26.0% with 20.8% of the participants completing 4 or more lessons.

For each session the students' activities included mentoring, cultural activities, and events, recreational opportunities, and tutoring if the student needed academic assistance or support. During the school year there were 114 enrollees which was composed of 57.9% female (n = 66) and 42.1% male (n = 48). In the summer session there were 45 enrollees which was composed of 62.2% female (n = 28) and 37.8% male (n = 17). Seventeen students enrolled in both the school year and summer sessions.



Communication

The communication factor identifies the first teachers of any child as the parents or guardians. All children look to their parents for guidance and modeling of behaviors. When parents understand the risks and challenges facing their pre-adolescent, they can help their child by reinforcing messages regarding their Lakota heritage and healthy lifestyles, and by providing family activities. Opening the path to two-way communication strengthens youths' family relationships and helps them feel more supported in their pathway to self-sufficiency. An area of common ground is the shared belief that adolescents would benefit from parents playing a larger role in educating them about anti-social and other risk behaviors.^{9,10,11} This belief is supported by research showing that parents and responsible adults can significantly influence adolescents' personal health and risk reduction through parent-child relationships, parenting practices, and communication about risk behaviors.^{12,13} Recent studies have found that adolescents whose parents and adults talk to them about risk behaviors are more likely to delay making unhealthy choices. The communications scale contains three items.

Social research has shown that adolescent youth need positive, sustained, and meaningful relationships with extended family members, teachers, mentors, grandparents, neighbors, and many others. It is important that adults give adolescents the impression that they really understand them. A healthy adult-adolescent relationship is not a friendship but more like an apprenticeship into adulthood. A major component of the Ateyapi Wicozani Program is to help youth communicate and learn how to link with a trusted adult. A main developmental task for youth is to form a coherent and stable sense of personal and social identity. In fact, in adolescence (from ages 10 to 18), the multiple biological, cognitive, and social changes that occur stimulate youth to rethink about themselves, to reflect on the kind of person they want to become, and to find their own place in the society. This dynamic process is strongly intertwined with interpersonal and group communication processes. In this section, the pre and post

⁹ Kirby D. & Miller B. (2002). Interventions designed to promote parent-teen communication about sexuality. *New Directions for Child and Adolescent Development*, 2002(97), 93-110.

¹⁰ Meschke L.L., Bartholomae S. & Zentall S. (2002). Adolescent sexuality and parent-adolescent processes: Promoting healthy teen choices. *Journal of Adolescent Health*, 31(6), 264-279.

¹¹ Jordan, A. B., & Robinson, T. N. (2008). Children, television viewing, and weight status: Summary and recommendations from an expert panel meeting. *The ANNALS of the American Academy of Political and Social Science*, 615(1), 119–132. <https://doi.org/10.1177/0002716207308681>

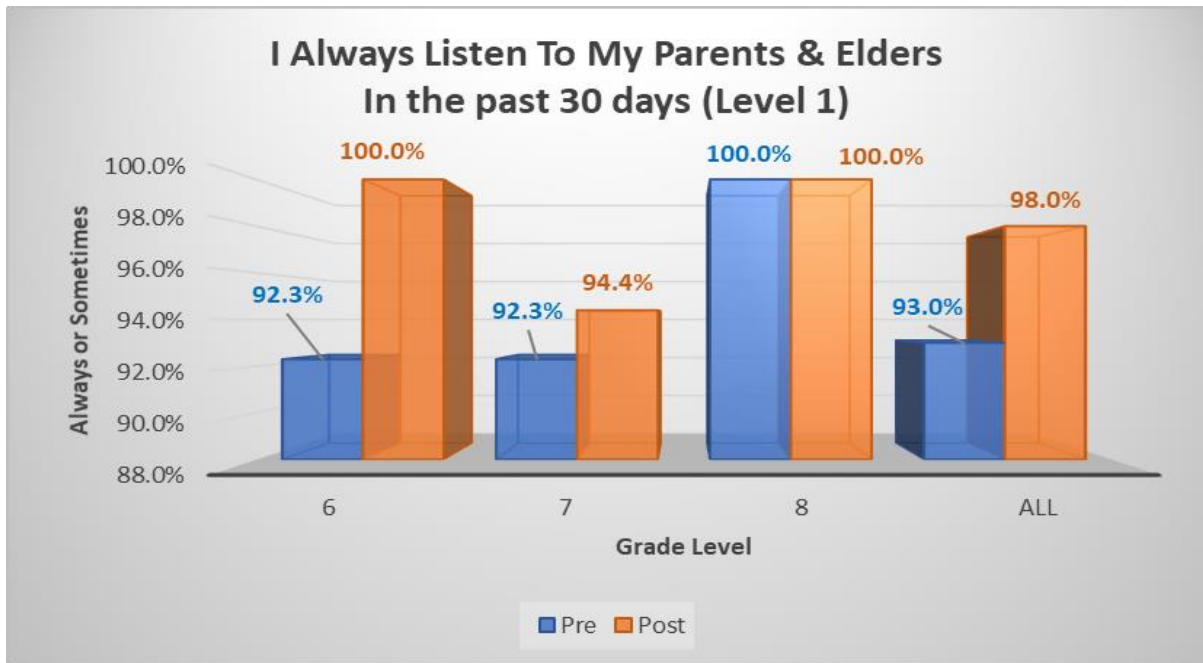
¹² Wight D., Williamson L. & Henderson M. (2006). Parental influences on young people's sexual behavior: A longitudinal analysis. *Journal of Adolescent*, 29(4), 473-494.

¹³ Dittus, P., Miller K.S., Kotchick B.A., & Forehand R. (2004). Why parents matter!: The conceptual basis for a community-based HIV prevention program for the parents of African American youth. *Journal of Child and Family Studies*, 13(1), 5-10.

questionnaires results attempt measure if the participants have strength their communication links with their parents and a trusted adult.¹⁴

Listening to Parents and Elders

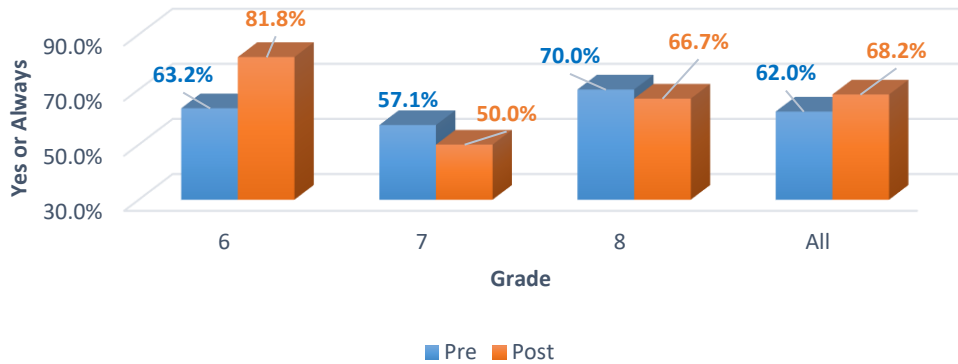
In 2018-19 all of the Level 1 students in each grade level reported improvements in listening to their parents and elders in the past 30 days at post intervention assessment. The overall response rates showed a 5.0% improvement from the pre to the post intervention assessments. The change was not statistically significant at the 0.05 alpha level [$Z = 1.393$, $p < 0.164$].



In 2019-20 the 6th grade in Level 1 reported an improvement in listening to their parents and elders in the past 30 days at post intervention assessment. The 7th and 8th grades did not show an improvement. The overall response rates showed a 6.2% improvement from the pre to the post intervention assessments. The change was not statistically significant at the 0.05 alpha level [$Z = 0.504$, $p < 0.614$].

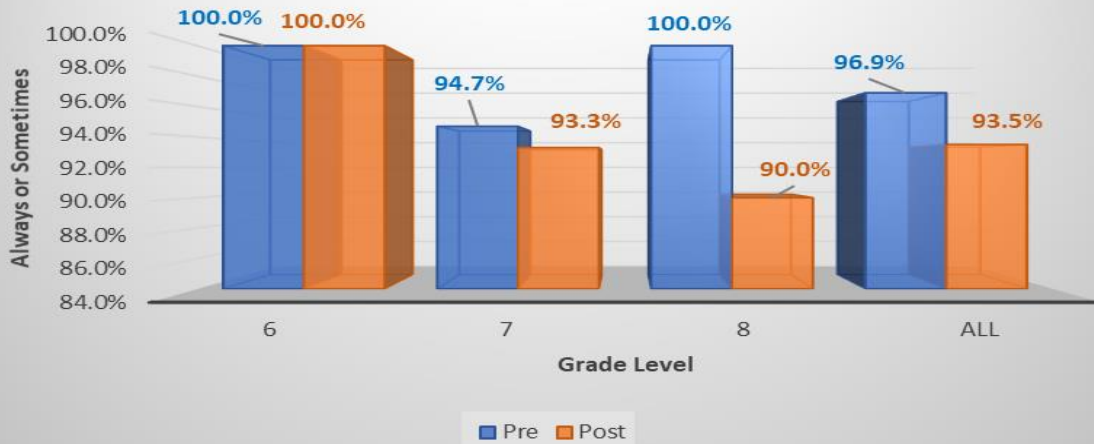
¹⁴ Crocetti, E. & Rubini, M (2017). *Communicating personal and social identity in adolescence*. Oxford Research Encyclopedias. Oxford University Press. DOI: 10.1093/acrefore/9780190228613.013.482

I Always Listen to My Parents & Elders In the Past 30 Days (Level 1) 2019-20



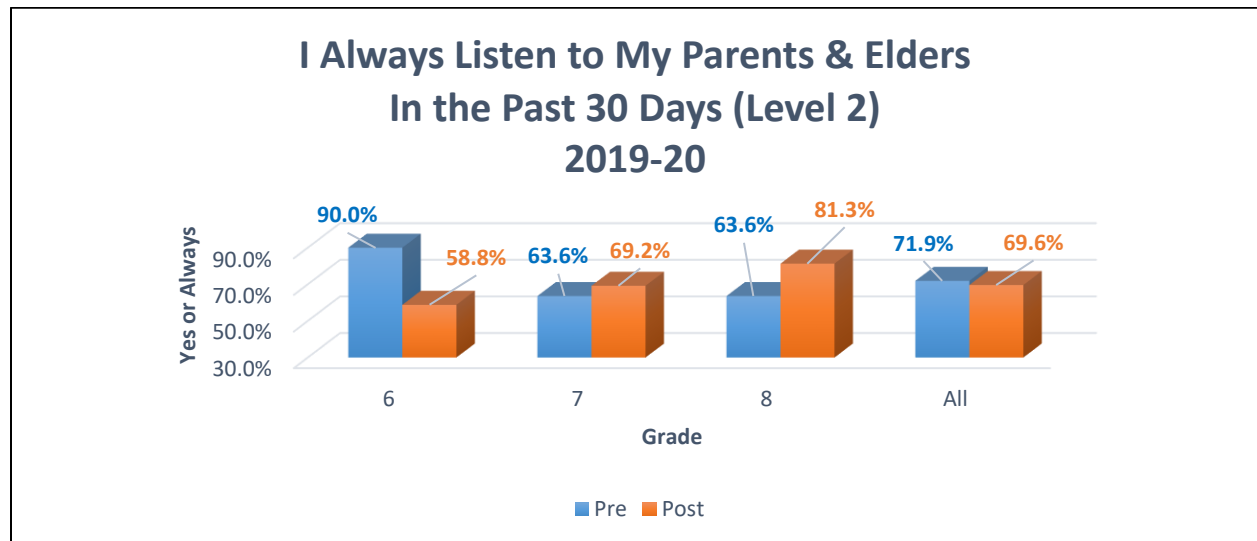
Except for the sixth grade in 2018-19 all of the other grades at Level 2 did not show improvement in the response rates from the pre to the post intervention assessments. The overall response rate change of -3.4% from the pre to the post intervention assessments was not statistically significant at the 0.05 alpha level [$Z = -0.621$, $p < 0.534$].

I Always Listen To My Parents & Elders In the past 30 days (Level 2)

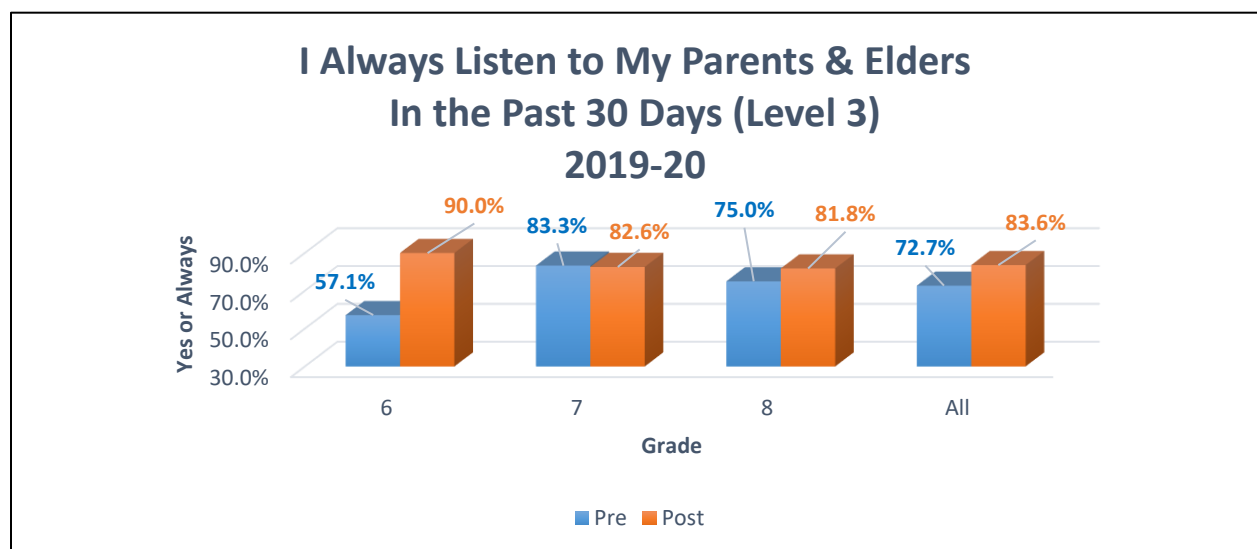


Except for the sixth grade in 2019-20 the seventh and eighth graders at Level 2 showed an improvement in the response rates from the pre to the post intervention assessments in listening to their parents and elders. The -31.2% change for the sixth graders was statistically significant at the 0.05 alpha level [$Z = 1.97$, $p < 0.049$]. The +5.6% change for the seventh graders was not statistically significant at the 0.05 alpha level [$Z = 0.277$, $p < 0.782$]. The +17.7% change for the eighth graders was not statistically significant at the 0.05 alpha level [$Z = 0.970$, $p < 0.332$]. The overall response rate change of -2.3% from the

pre to the post intervention assessments was not statistically significant at the 0.05 alpha level [$Z = -0.217$, $p < 0.828$].

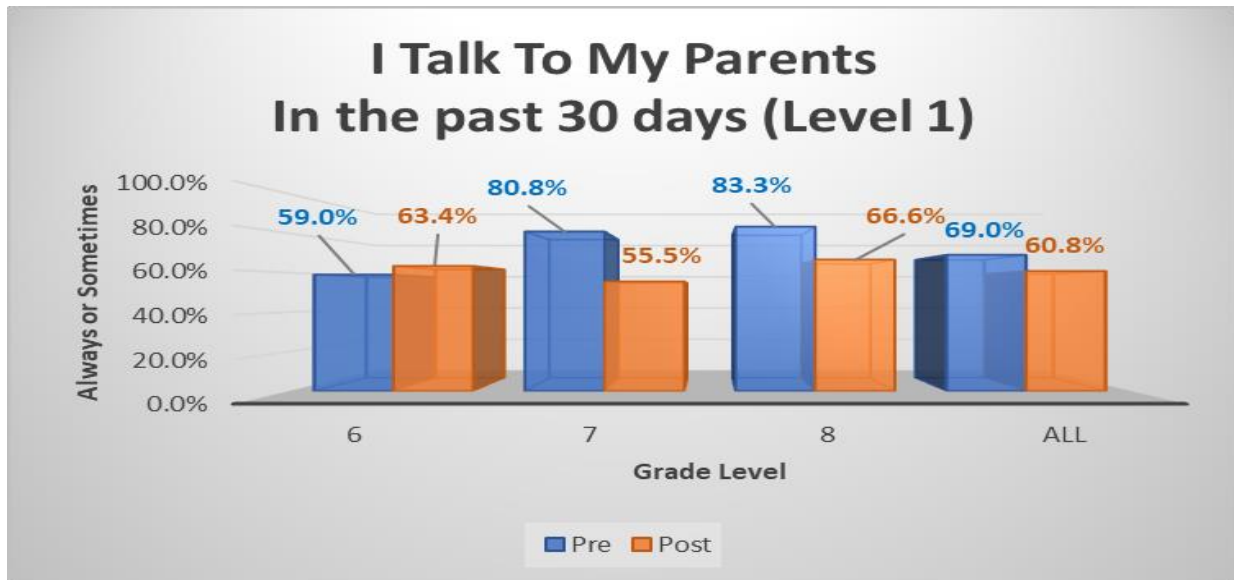


Except for seventh grade in 2019-20 the sixth and eighth graders at Level 3 showed an improvement in the response rates from the pre to the post intervention assessments in listening to their parents and elders. The +32.9% change for the sixth graders was not statistically significant at the 0.05 alpha level [$Z = 1.574$, $p < 0.116$]. The -0.7% change for the seventh graders was not statistically significant at the 0.05 alpha level [$Z = -0.0404$, $p < 0.968$]. The +6.8% change for the eighth graders was not statistically significant at the 0.05 alpha level [$Z = 0.536$, $p < 0.589$]. The overall response rate change of +10.9% from the pre to the post intervention assessments was not statistically significant at the 0.05 alpha level [$Z = 0.980$, $p < 0.327$].

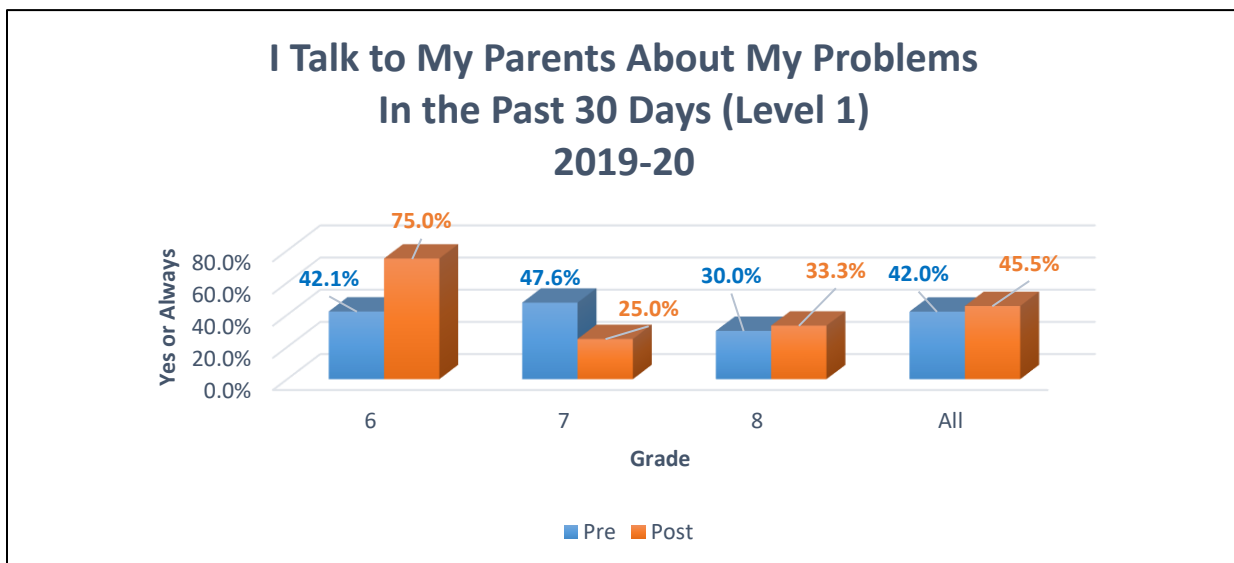


Talked to Parents About My Problems

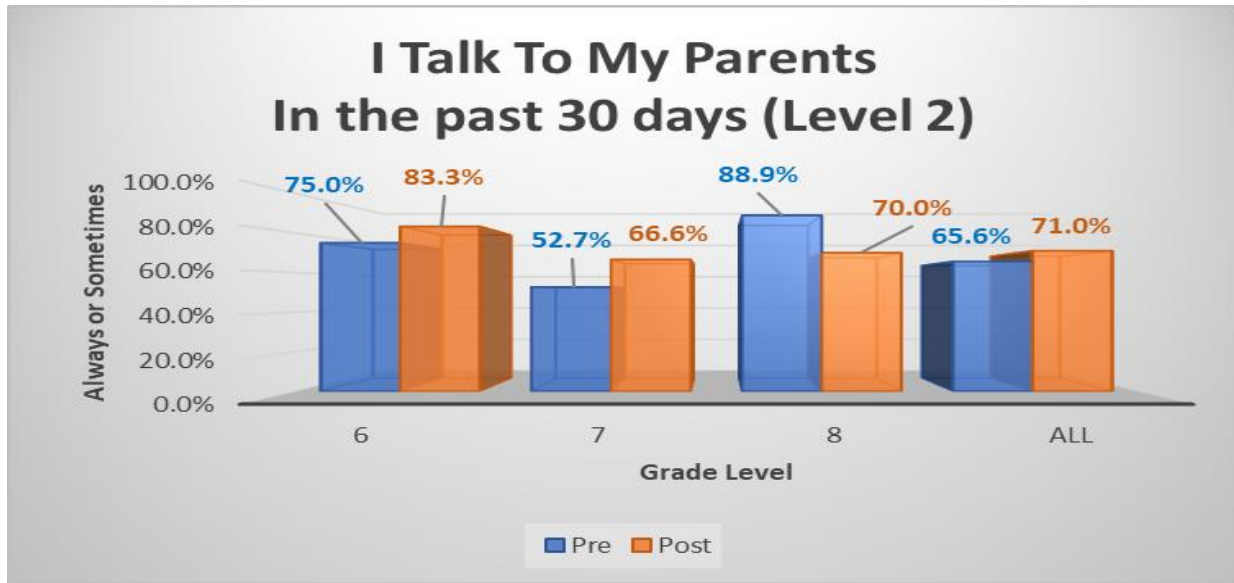
Except for the sixth grade in 2018-19 all of the other grades at Level 1 did not show improvement in the response rates from the pre to the post intervention assessments. The overall negative response rate change of -8.2% from the pre to the post intervention assessments was not statistically significant at the 0.05 alpha level [$Z = -0.938, p < 0.348$].



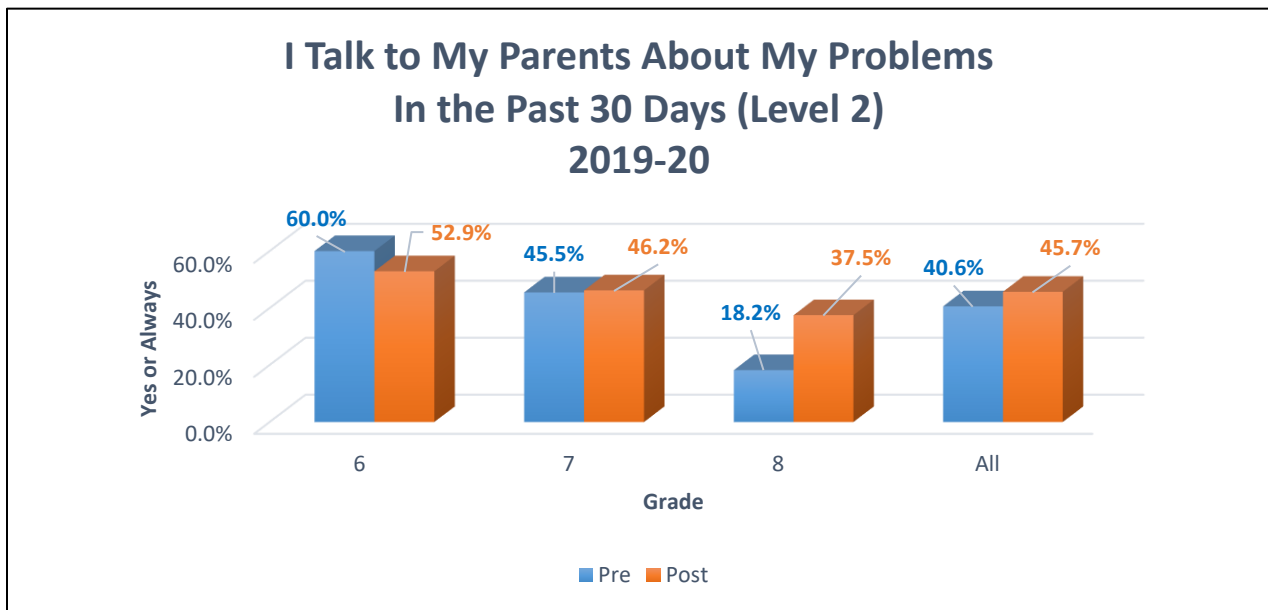
In 2019-20 there was an improvement in the response rates for 6th and 8th grades at Level 1 to talking to their parents about their problems. The 7th grade did not show any improvement in the rates from the pre to the post intervention assessments. The overall positive response rate change of +3.5% from the pre to the post intervention assessments was not statistically significant at the 0.10 alpha level [$Z = 0.193, p < 0.847$].



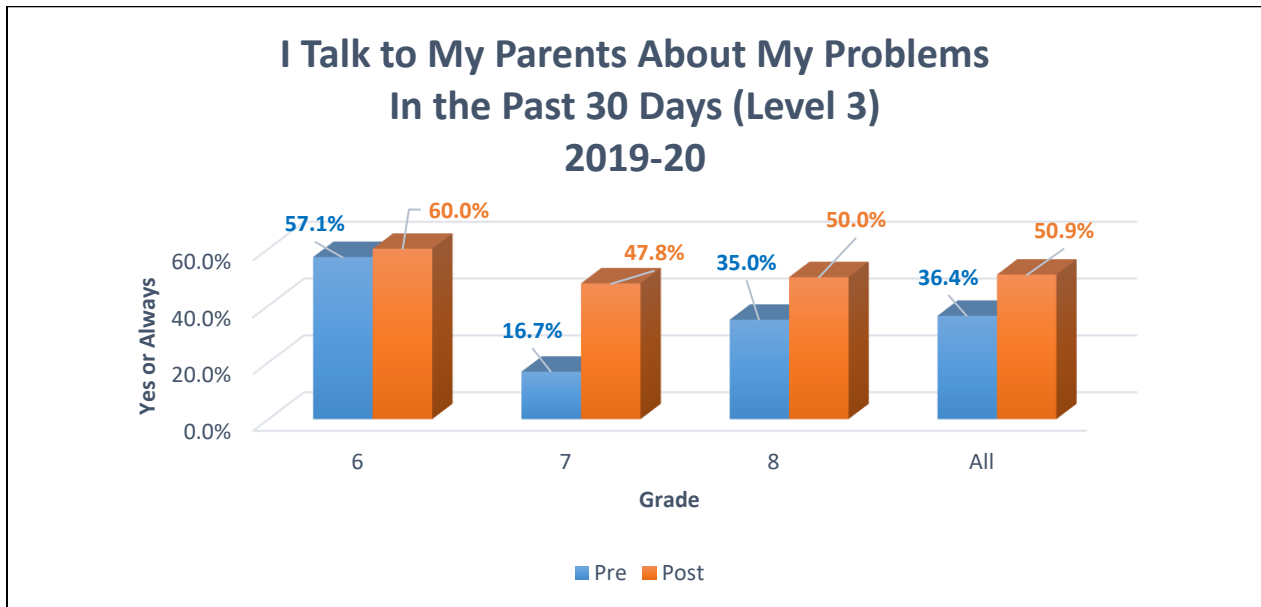
Except for the eighth grade in 2018-19 all of the other grades at Level 2 did show improvement in the response rates from the pre to the post intervention assessments. The overall positive response rate change of 5.4% from the pre to the post intervention assessments was not statistically significant at the 0.05 alpha level [$Z = 0.454$, $p < 0.650$].



Except for sixth grade in 2019-20 the seventh and eighth graders at Level 2 showed improvement in the response rates from the pre to the post intervention assessments. The +19.3% change for the eighth graders was not statistically significant at the 0.05 alpha level [$Z = 1.105$, $p < 0.269$]. The overall response rate change of +5.1% from the pre to the post intervention assessments was not statistically significant at the 0.05 alpha level [$Z = 0.442$, $p < 0.658$].

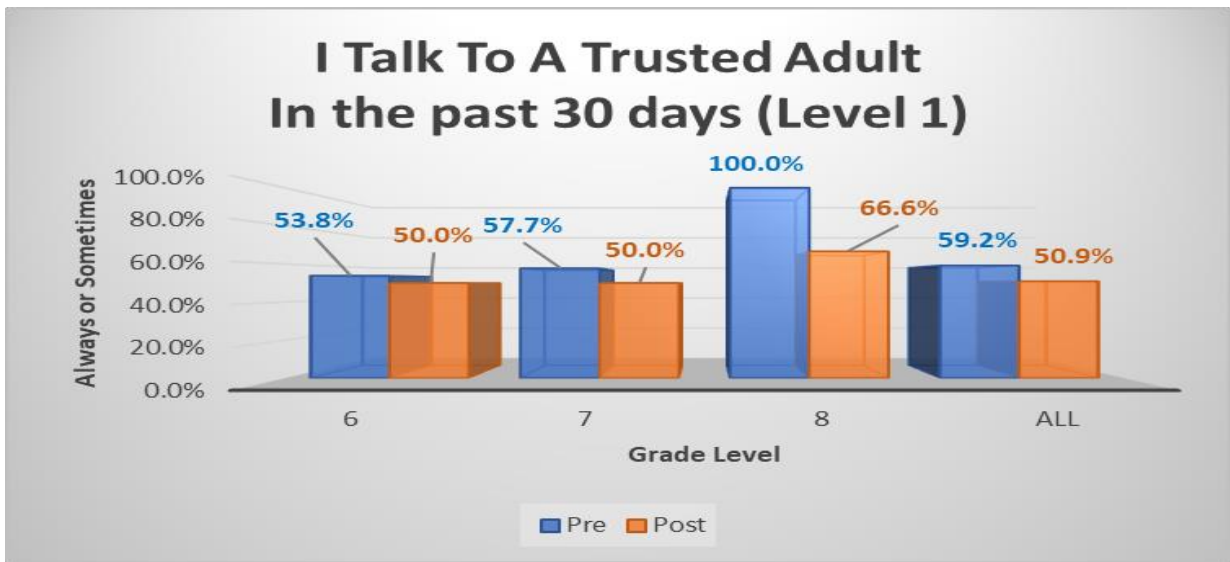


In 2019-20 all the grades at Level 3 showed improvement in the response rates from the pre to the post intervention assessments. The +2.9% change for the sixth graders was not statistically significant at the 0.05 alpha level [Z= 0.120, p < 0.904]. The +31.1% change for the seventh graders was not statistically significant at the 0.05 alpha level [Z= 1.413, p < 0.159]. The +15.0% change for the eighth graders was not statistically significant at the 0.05 alpha level [Z= 0.981, p < 0.327]. The overall response rate change of +14.5% from the pre to the post intervention assessments was not statistically significant at the 0.05 alpha level [Z = 1.323, p < 0.187].

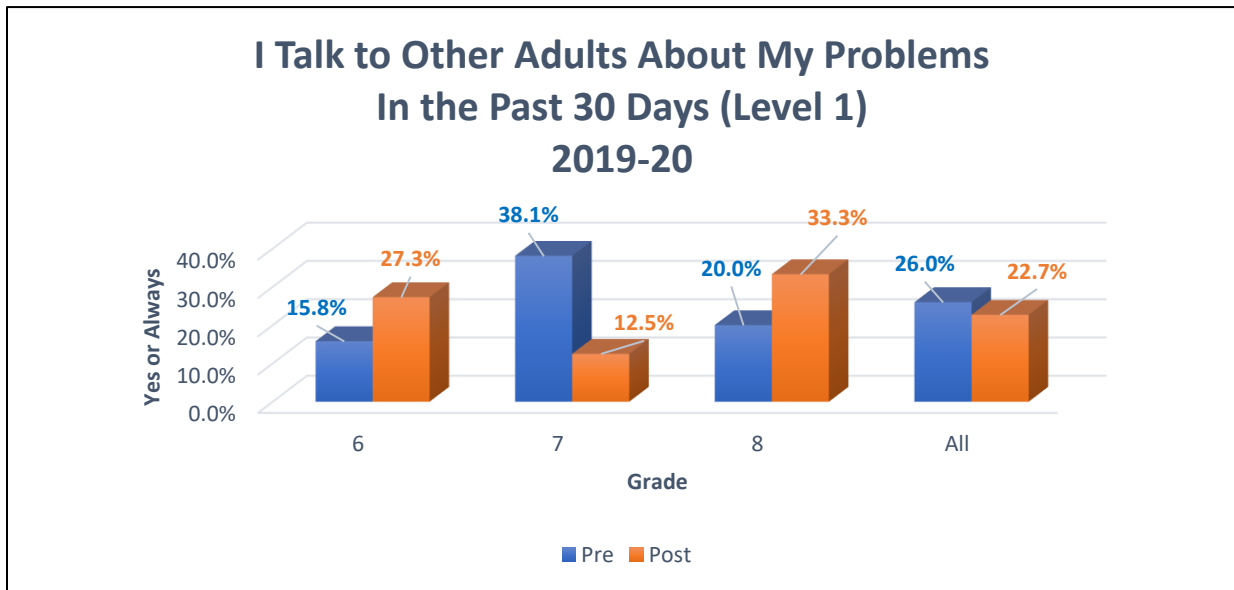


I Talked to Other Adults About My Problems.

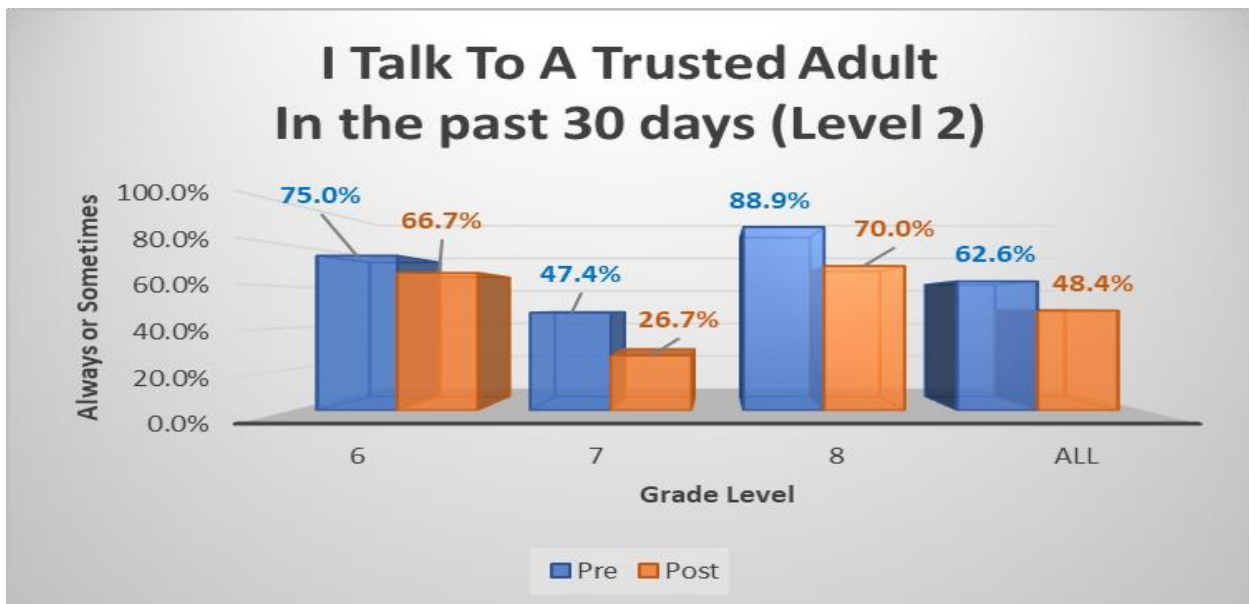
In 2018-19 all of the Level 1 students in each grade level reported did not show any improvement in talking to an adult about their problems in the past 30 days at post intervention assessment. The overall negative response rate change of -8.3% from the pre to the post intervention assessments was not statistically significant at the 0.05 alpha level [Z =-0.914, p < 0.361].



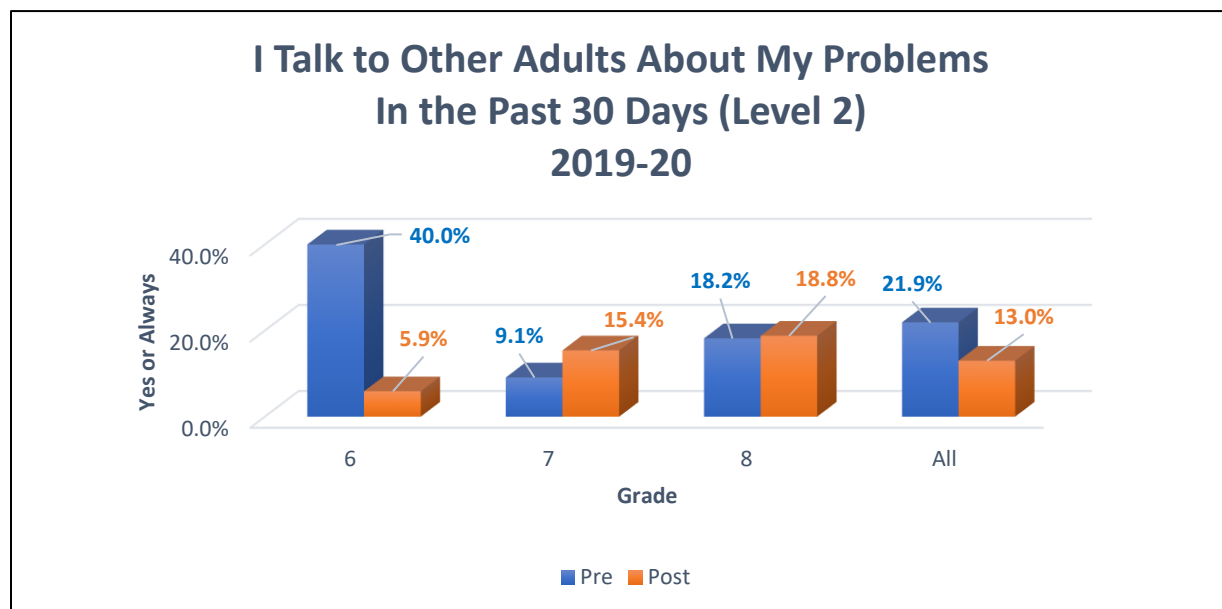
In 2019-20 all of the Level 1 students in the 6th and 8th grades reported improvement in talking to an adult about their problems in the past 30 days. While the 7th graders did not show any improvement. The overall there a negative response rate change of -3.3% from the pre to the post intervention assessments which not statistically significant at the 0.05 alpha level [$Z = -0.298, p < 0.766$].



In 2018-19 a similar trend as in Level 1 was found for Level 2. The response rates for each grade level reported did not show any improvement in talking to an adult about their problems in the past 30 days from pre to post intervention assessment. The overall negative response rate change of -14.2% from the pre to the post intervention assessments was not statistically significant at the 0.05 alpha level [$Z = -1.127, p < 0.260$].

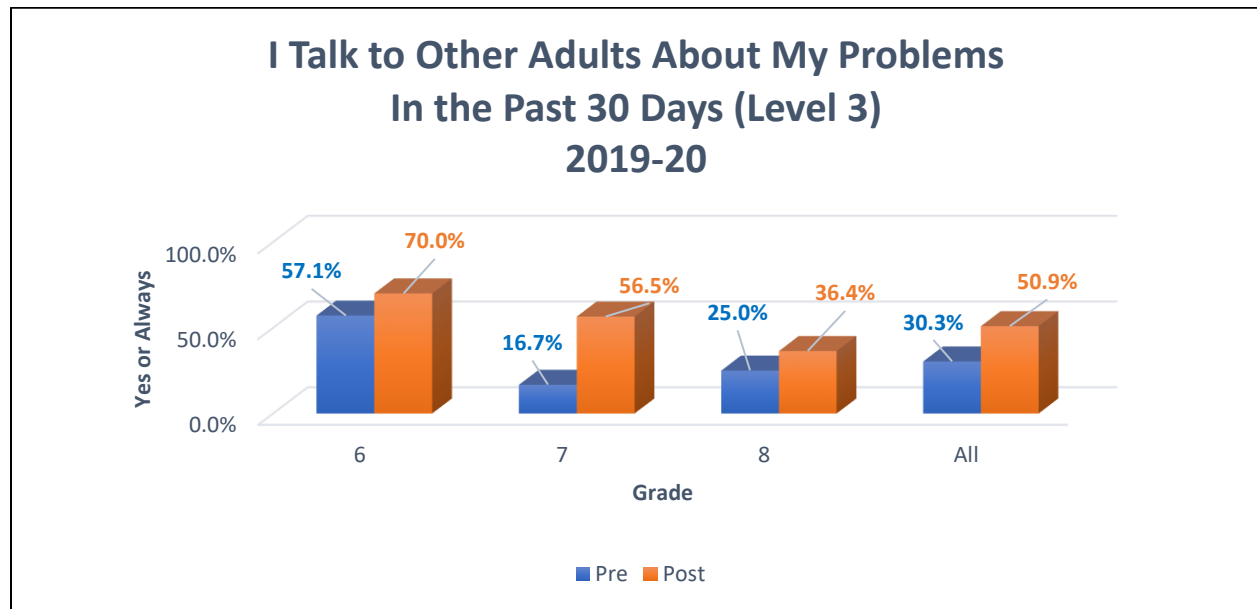


In 2019-20 the response rates for the seventh and eighth graders in Level 2 showed an improvement in talking to an adult about their problems in the past 30 days from pre to post intervention assessment. The overall negative response rate change of -8.9% from the pre to the post intervention assessments was not statistically significant at the 0.05 alpha level [$Z = -0.993, p < 0.321$].



In 2019-20 all the grades at Level 3 showed improvement in the response rates from the pre to the post intervention assessments when talking to a trusted adult about their problems. The +12.9% change for the sixth graders was not statistically significant at the 0.05 alpha level [$Z = 0.548, p < 0.582$]. The +39.8% change for the seventh graders was statistically significant at the 0.10 alpha level [$Z = 1.74, p < 0.0819$]. The +11.4% change for the eighth graders was not statistically significant at the 0.05 alpha level

[Z= 0.798, p < 0.424]. The overall response rate change of +20.6% from the pre to the post intervention assessments was statistically significant at the 0.10 alpha level [Z = 1.889, p < 0.0588].



Communication Composite Score Analysis

When the student responses for the communication variables were compiled into a single score, the analysis shows that Level 1 had a positive change in the mean scores of 8.5%. Level 2 mean scores had a similar positive change of 5.9%. A positive change in the mean scores is a not favorable outcome. None of change from pre to post assessment for both levels showed a statistically significant change at the 0.05 alpha level. (Table 3A)

		n	Mean	Standard Deviation	Welch t-test	p
Level 1	Pre	71	6.00	2.16	1.208 df = 120	0.230
	Post	51	6.51	2.39		
	Percent Change		+8.5%			
Level 2	Pre	32	5.94	2.03	0.613 df = 61	0.542
	Post	31	6.29	2.49		
	Percent Change		+5.9%			

Table 3B shows that participants in Level 1 had a positive change in the mean scores of 23.5% which was statistically significant at the alpha 0.05 level [$p < 0.043$]. The Level 2 mean scores had a small positive change of 0.3%. A positive change or improvement in the mean scores is not a favorable outcome. The change was not statistically significant at the 0.05 alpha level [$p < 0.978$]. In Level 3 there was an improvement in communication mean scores. A negative difference shows a favorable outcome which was statistically significant at the 0.05 alpha level. (Table 3B)

Table 3B Communication Mean Score Comparison 2019-20						
		n	Mean	Standard Deviation	Welch t-test	p
Level 1	Pre	50	6.00	2.28	2.104 df = 70	0.043*
	Post	22	7.41	2.75		
	Percent Change	+23.5%				
Level 2	Pre	32	6.09	2.40	0.0279 df = 78	0.978
	Post	46	6.11	2.22		
	Percent Change	+0.3%				
Level 3	Pre	33	5.91	2.39	2.267 df = 86	0.025*
	Post	55	4.82	2.06		
	Percent Change	-11.3%				

***Statistically significant at the $p < 0.05$ level**



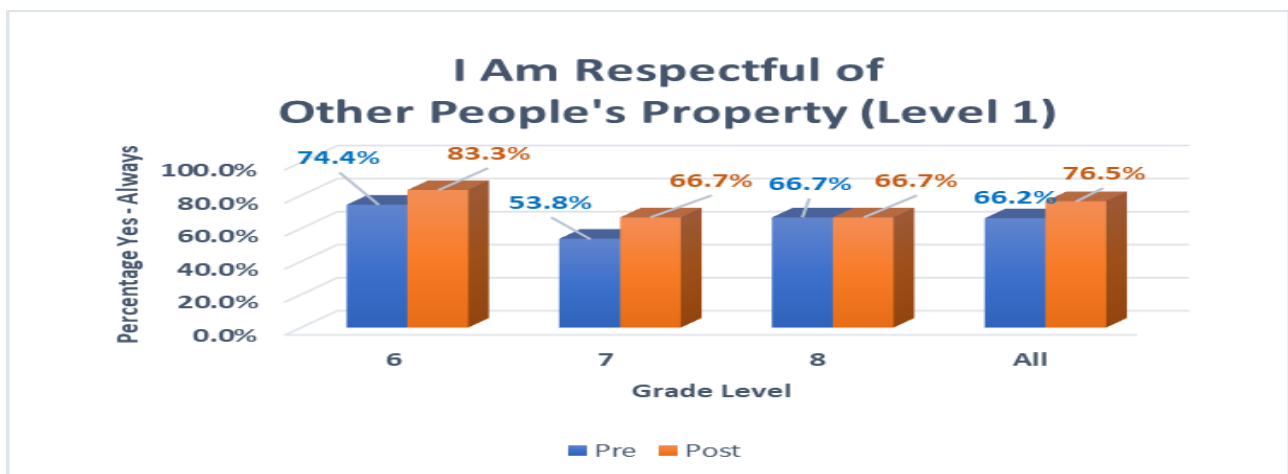
Respect

The Lakota Circles of Hope curriculum is framed around the Lakota values. One of the most important values is respect or wowacintanka. The youth are guided to understand that respect helps people to live together in peace and harmony. This attitude means a reverence for all other living things in the world. This value is sometimes expressed as wotitakuye or kinship. This is one of the important values coming from the tiyospaye, a band or extended family group. It includes the ideas of living in harmony, belonging, relations as the true wealth and the importance of trusting in others. It is one of the values that make the tiyospaye work.

The other Lakota value linked to respect is the value of generosity or wacantognaka. This value contributes to the well-being of one's people and all life by sharing and giving freely. This sharing is not just of objects and possessions, but of emotions like sympathy, compassion, kindness. It also means to be generous with one's personal time. The act of giving and not looking for anything in return can make you a better person and make you happy. Through the lessons taught in Lakota Circles of Hope, youth are guided to show how generosity is a sign of respect for other people.¹⁵

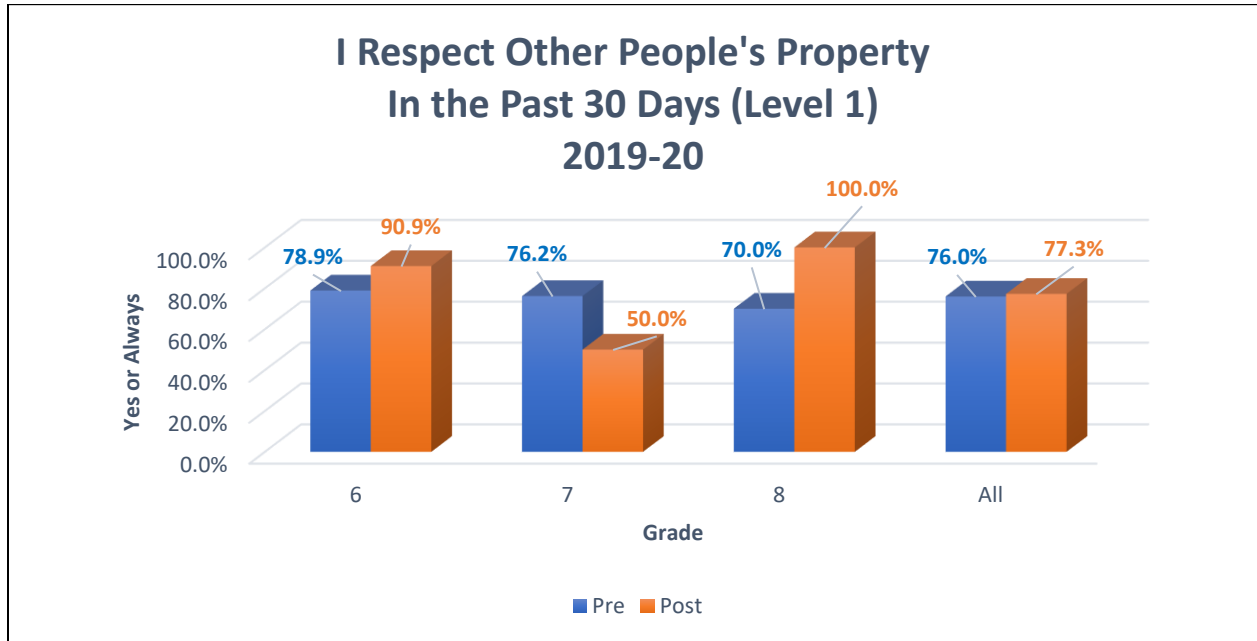
Respect for Other People's Property

In 2018-19 all of the Level 1 students in each grade level an improvement in respecting other people's property from pre to post intervention assessments. The overall positive response rate change of 10.3% from the pre to the post intervention assessments was not statistically significant at the 0.05 alpha level [$Z = 1.265, p < 0.206$].

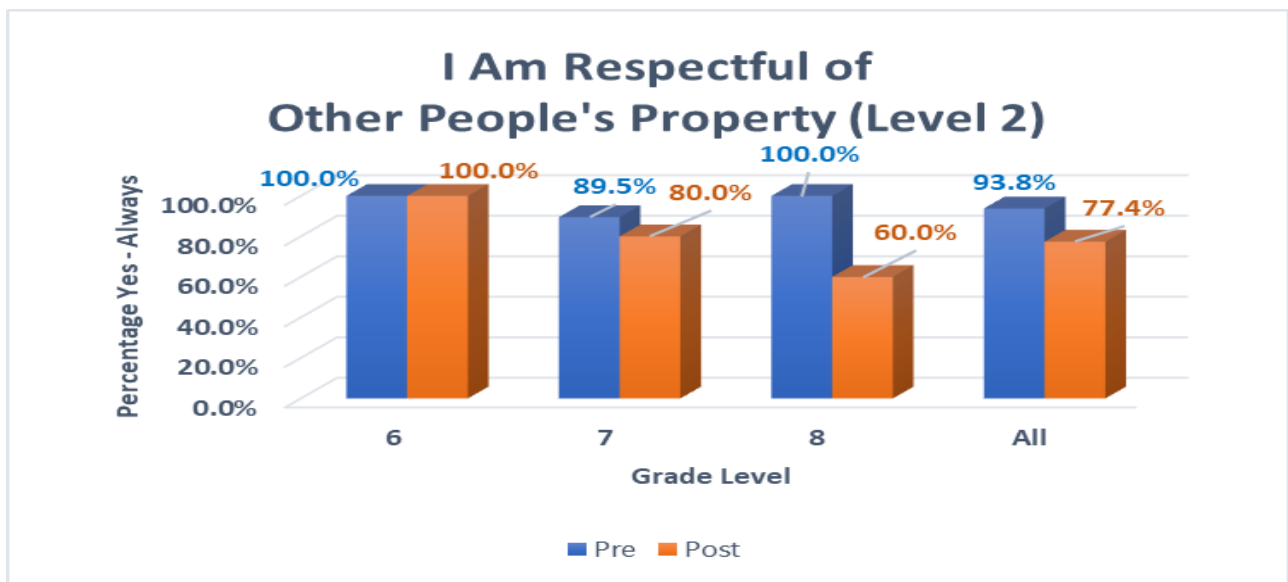


¹⁵ Usera, J. (2013). A risk behavior prevention program for Lakota children in elementary school: Lakota Circles of Hope. Sturgis, SD: Delta Evaluation Consulting, LLC. Retrieved from: <http://nebula.wsimg.com/4008f917b9ae137c1c4d9ba6b8cbd9c?AccessKeyId=F680E10178024708835F&disposition=0&alloworigin=1>

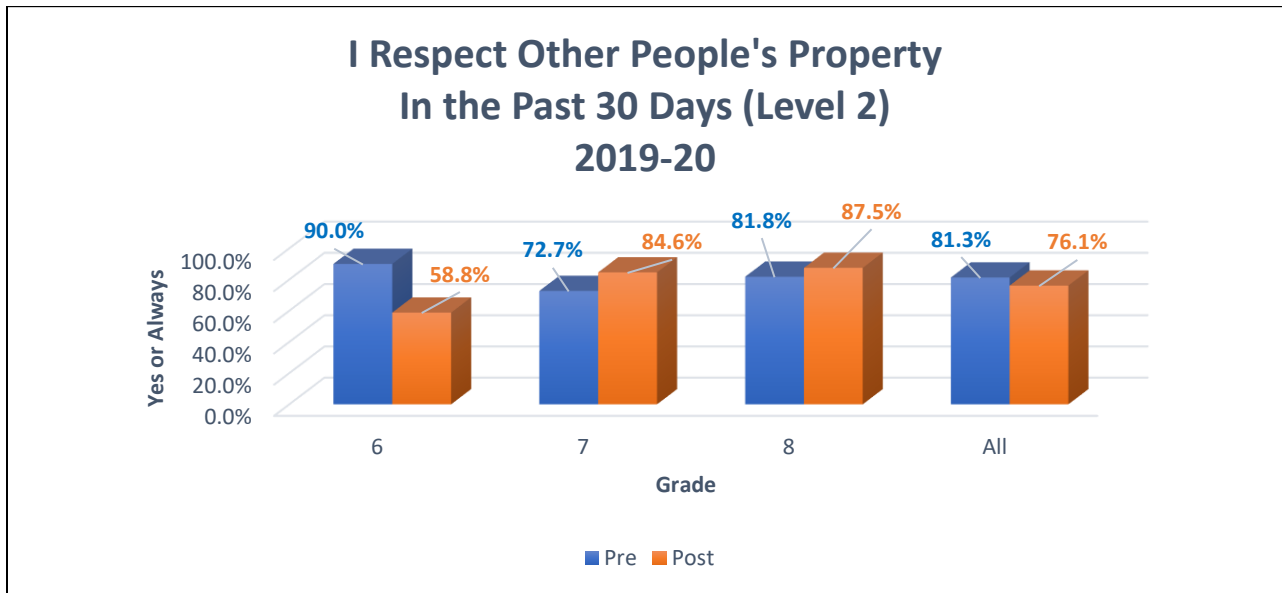
In 2019-20 the 6th and 8th graders showed an improvement in respecting other people's property from pre to post intervention assessments. The overall positive response rate change of 1.3% from the pre to the post intervention assessments was not statistically significant at the 0.05 alpha level [Z = 0.118, p < 0.906].



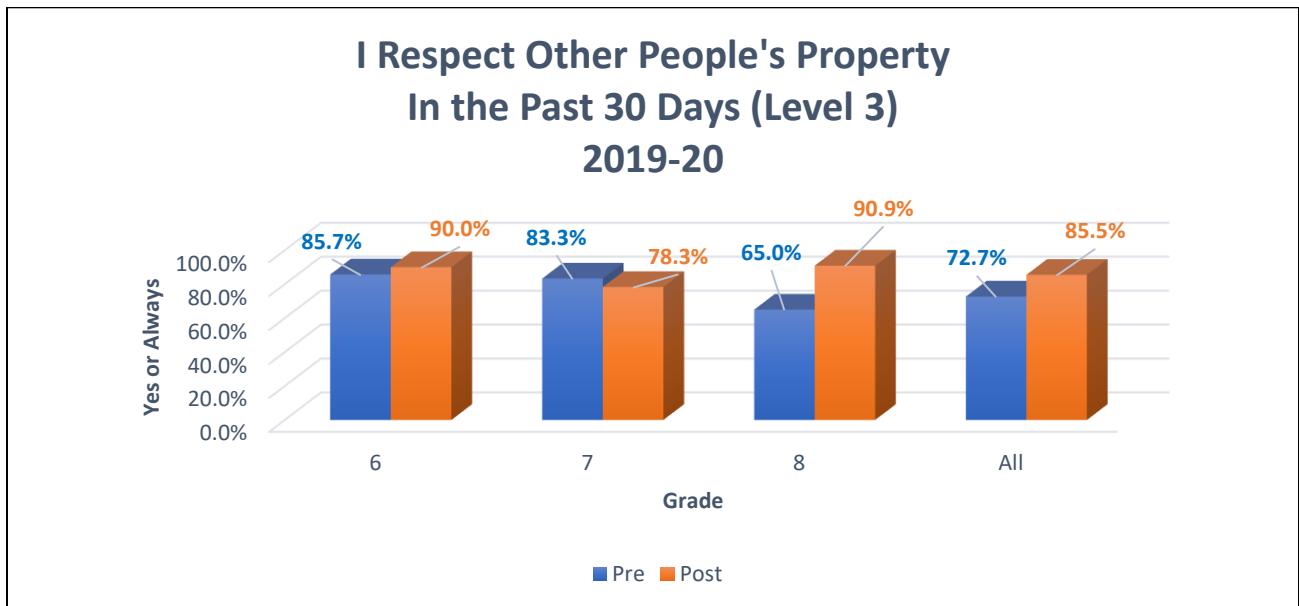
Except for the sixth grade in 2018-19, the Level 2 participants showed a decline in their respect of other people's property from pre to post intervention assessments. The overall change of -16.4% was statistically significant at the 0.10 alpha level [Z = -1.868, p < 0.0617].



Except for the sixth grade in 2019-20, the Level 2 participants showed an improvement in their respect of other people’s property from pre to post intervention assessments. The -31.2% decline in the sixth-grade response rate was statistically significant at the 0.05 alpha level [Z = 1.97, P < 0.0491]. While the overall change of -5.2% was not statistically significant at the 0.10 alpha level [Z = -0.550, p < 0.583].

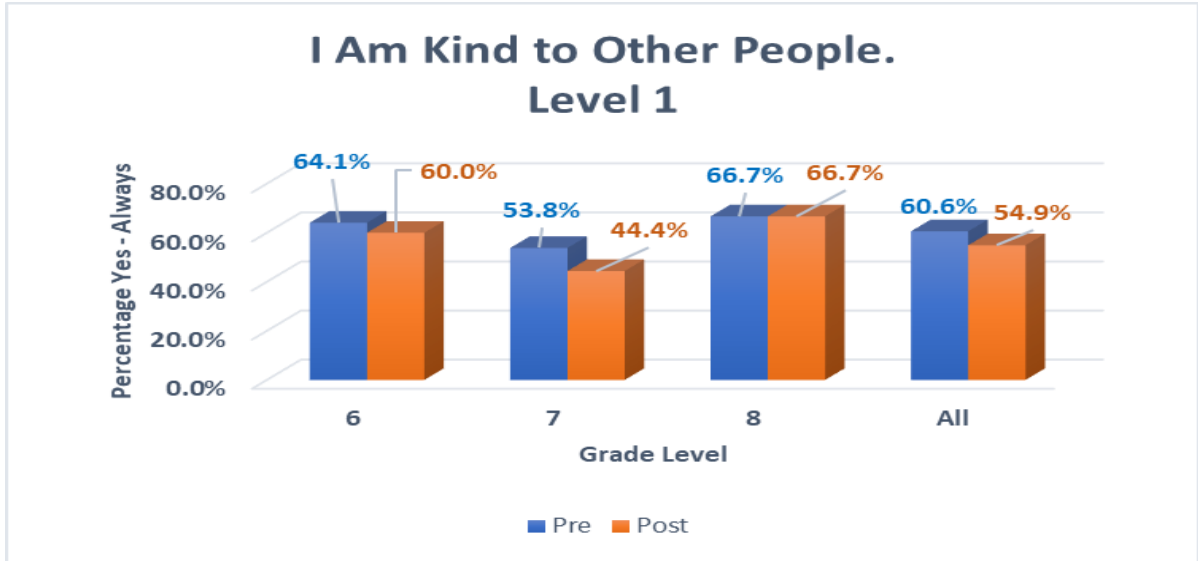


Except for the seventh grade in 2019-20, the Level 3 participants showed an improvement in their respect of other people’s property from pre to post intervention assessments. The -5.0% decline in the seventh-grade response rate was not statistically significant at the 0.05 alpha level [Z = -0.269, P < 0.787]. While the overall change of +12.8% was not statistically significant at the 0.05 alpha level [Z = 1.473, p < 0.142].

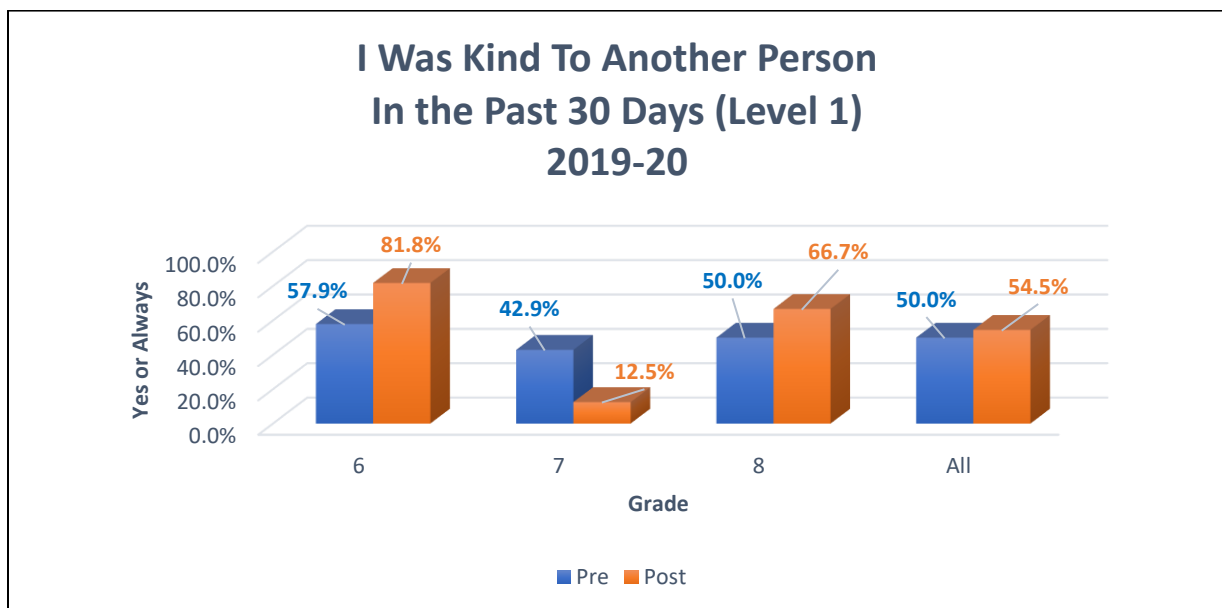


I Was Kind to Another Person

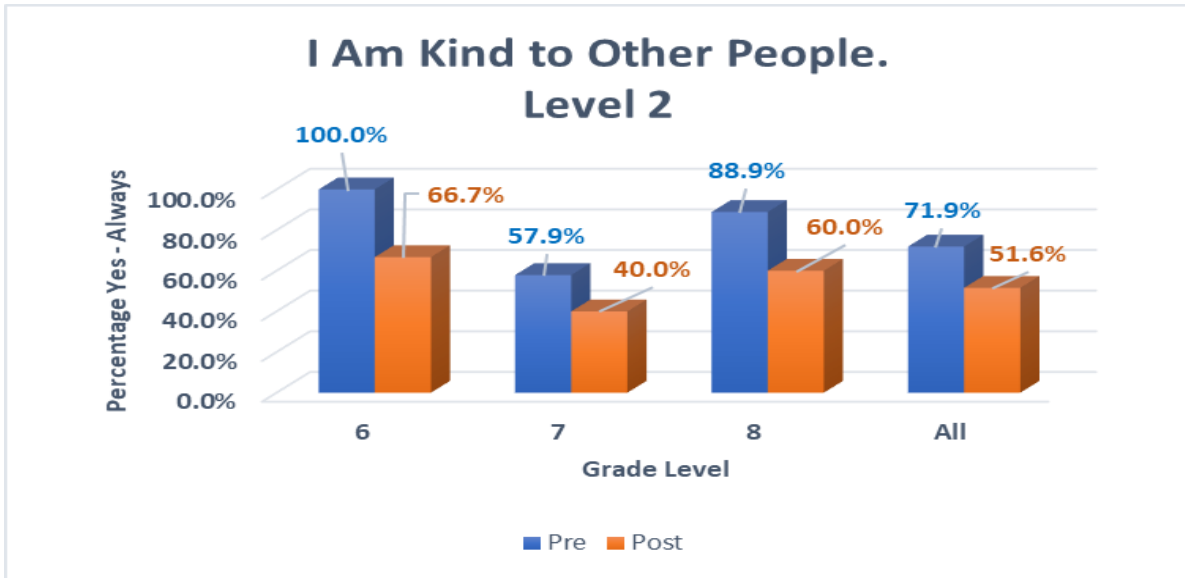
Except for eight graders in 2018-19 all of the Level 1 students in the sixth and seventh grade levels reported a decline in the response rates for being kind to other people from pre to post intervention assessments. The overall negative response rate change of -5.7% from the pre to the post intervention assessments was not statistically significant at the 0.05 alpha level [$Z = -0.631$, $p < 0.528$].



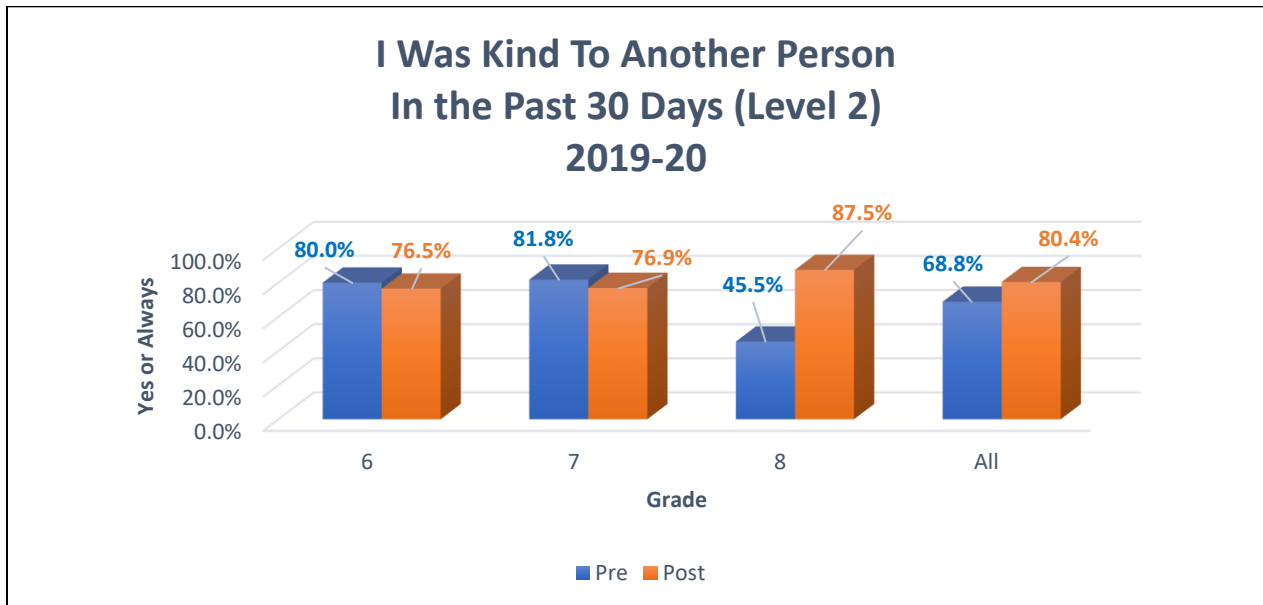
In 2019-20 the 6th and 8th graders reported an increase in the response rates for being kind to other people from pre to post intervention assessments. The 7th graders showed a decline in the response rate. The overall response rate change was +4.5% from the pre to the post intervention assessments. The positive was not statistically significant at the 0.05 alpha level [$Z = 0.346$, $p < 0.729$].



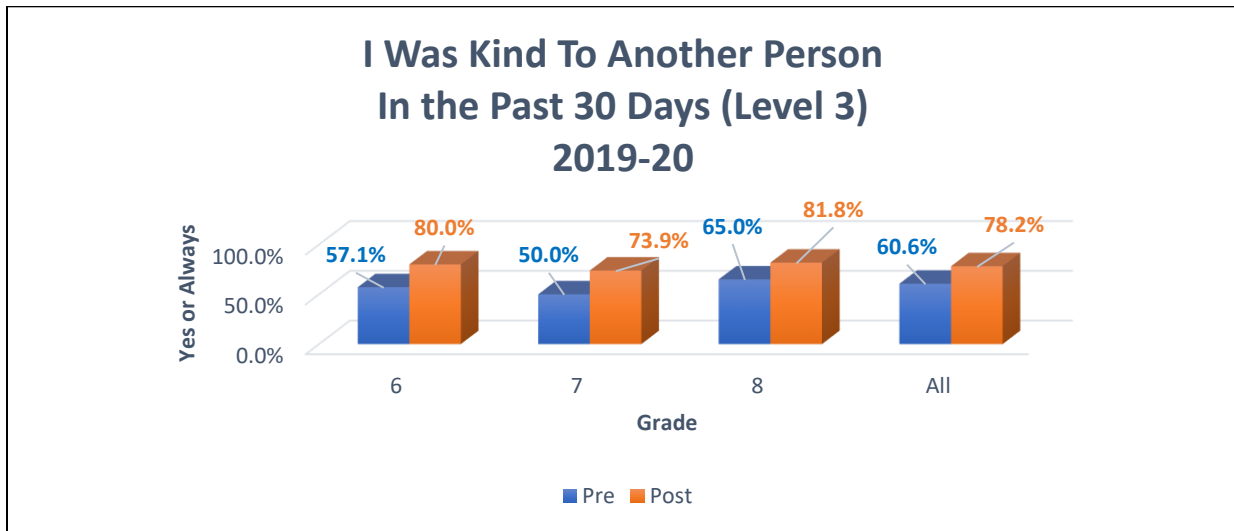
All of the Level 2 students reported a decline in the response rates for being kind to other people from pre to post intervention assessments. The overall negative response rate change of -20.3% from the pre to the post intervention assessments was statistically significant at the 0.10 alpha level [$Z = -1.666$, $p < 0.0957$].



Except for the eighth graders in 2019-20, the sixth and seventh graders in Level 2 reported a decline in the response rates for being kind to other people from pre to post intervention assessments. The +42.0% response rate change by the eighth graders was statistically significant at the 0.05 alpha level [$Z = 2.345$, $p < 0.019$]. The overall negative response rate change of +11.6% from the pre to the post intervention assessments was not statistically significant at the 0.05 alpha level [$Z = +1.136$, $p < 0.256$].

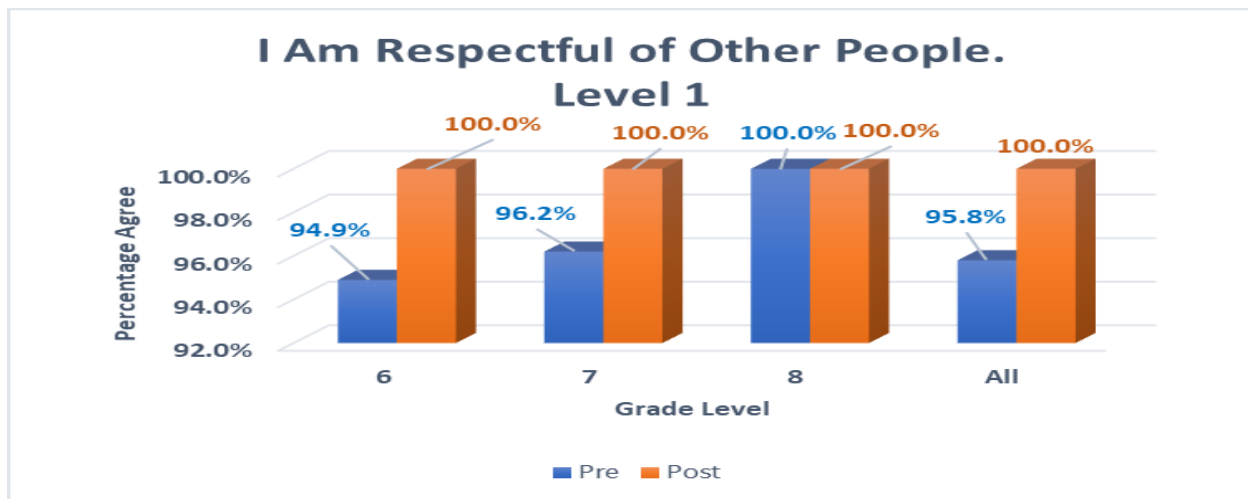


In 2019-20, all the grades in Level 3 reported an improvement in their response rates for being kind to other people from pre to post intervention assessments. The +22.9% response rate change by the sixth graders was not statistically significant at the 0.05 alpha level [$Z = 1.02$, $p < 0.308$]. The +23.9% response rate change by the seventh graders was not statistically significant at the 0.05 alpha level [$Z = 1.13$, $p < 0.258$]. The +16.8% response rate change by the eighth graders was not statistically significant at the 0.05 alpha level [$Z = 1.24$, $p < 0.215$]. The overall negative response rate change of +17.6% from the pre to the post intervention assessments was statistically significant at the 0.10 alpha level [$Z = +1.773$, $p < 0.0767$].

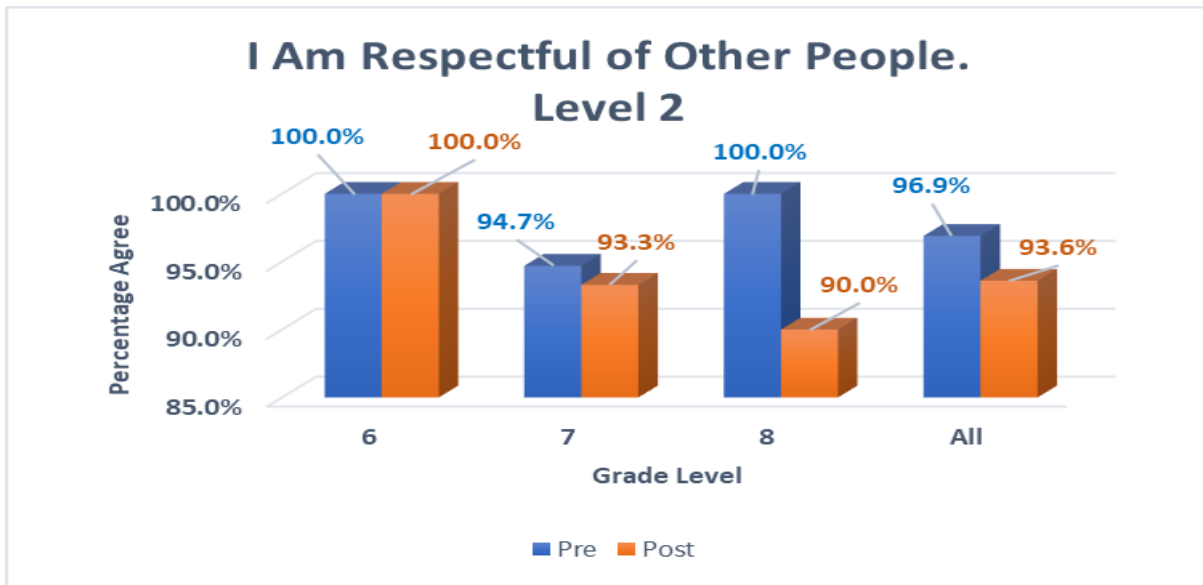


I Am Respectful of Other People

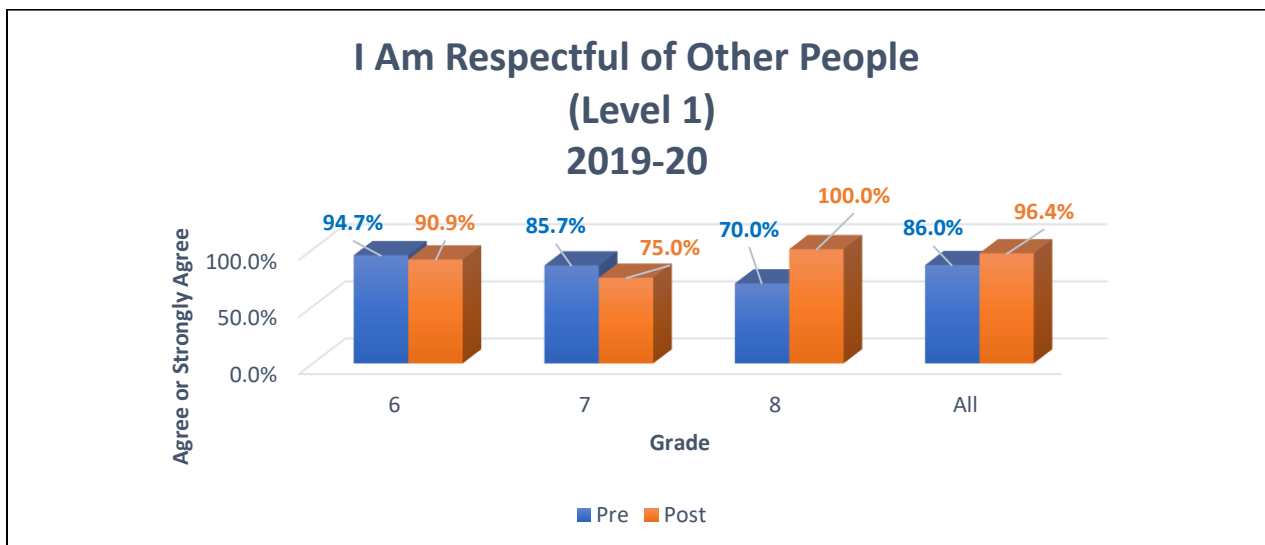
In 2018-19 all of the Level 1 students reported increases in their response rates in being respectful of other people. Overall, there was a 4.2% improvement from pre to post intervention assessment which was statistically significant at 0.10 alpha level [$Z = 1.777$, $p < 0.0756$].



Except for the sixth graders in 2018-19 the seventh and eighth graders in Level 2 reported a decline in the response rates for being respectful to other people from pre to post intervention assessments. The overall negative response rate change of -3.3% from the pre to the post intervention assessments was not statistically significant at the 0.05 alpha level [$Z = -0.606, p < 0.545$].

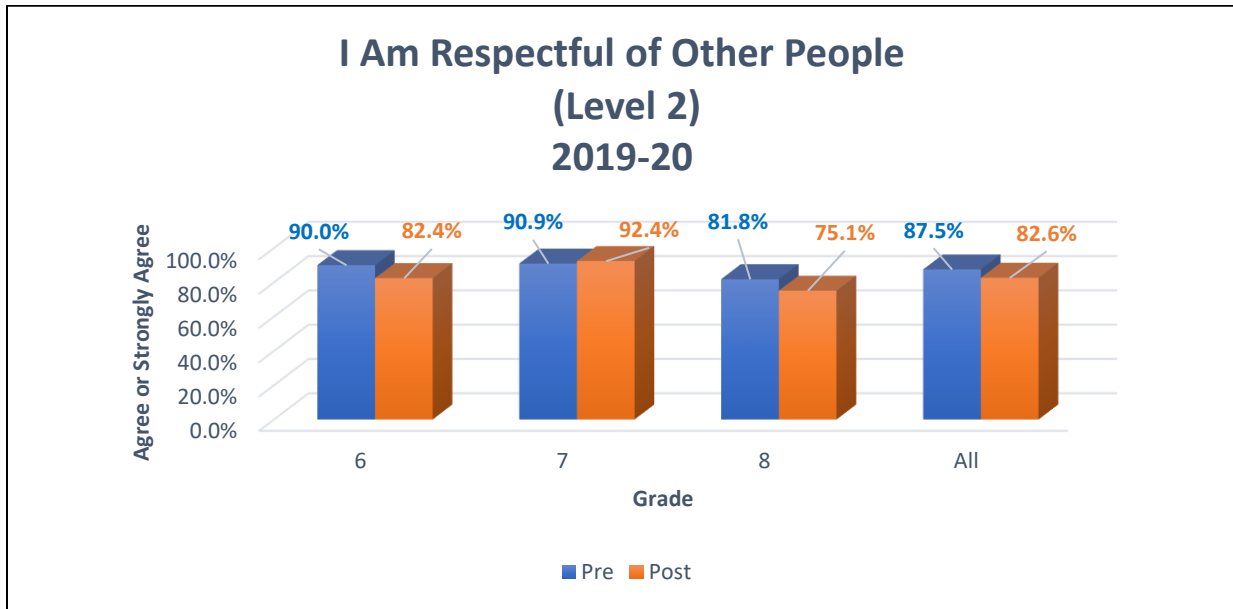


In 2019-20 the 8th grade Level 1 students reported a 30% increase in being respectful of other people. The 6th and 7th graders showed a decline from pre to post intervention assessment. Overall, there was a 10.4% improvement from pre to post intervention assessment which was not statistically significant at 0.05 alpha level [$Z = 1.622, p < 0.1047$].

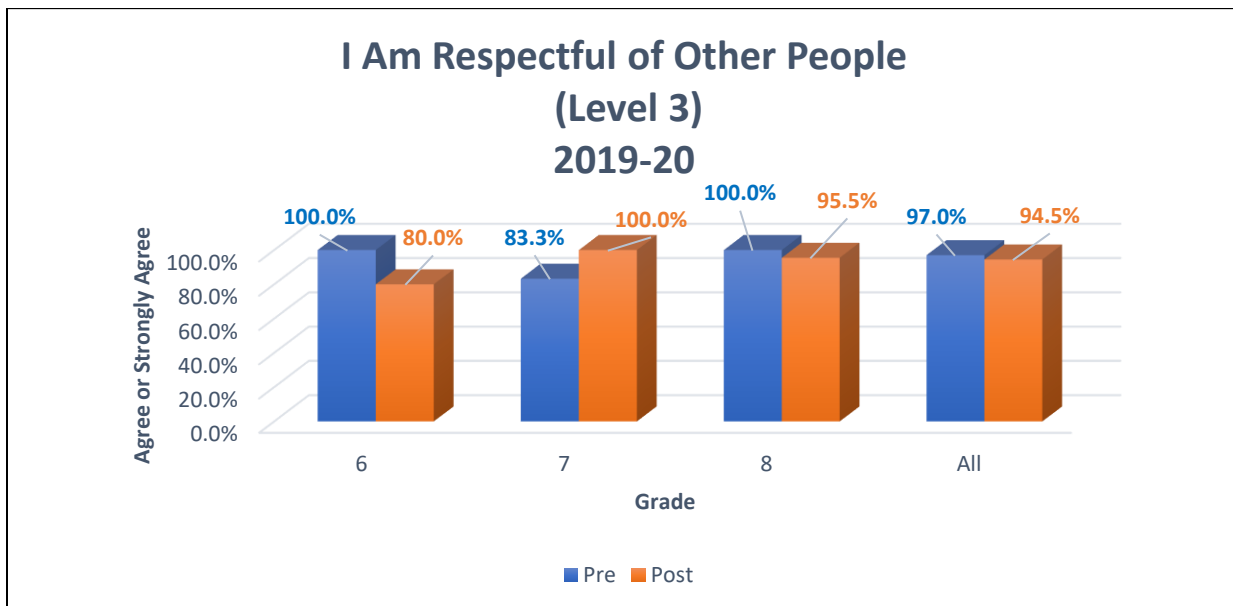


Except for the seventh graders in 2019-20 the sixth and eighth graders in Level 2 reported a decline in the response rates for being respectful to other people from pre to post intervention assessments. The

overall negative response rate change of -4.9% from the pre to the post intervention assessments was not statistically significant at the 0.05 alpha level [$Z = -0.598, p < 0.550$].

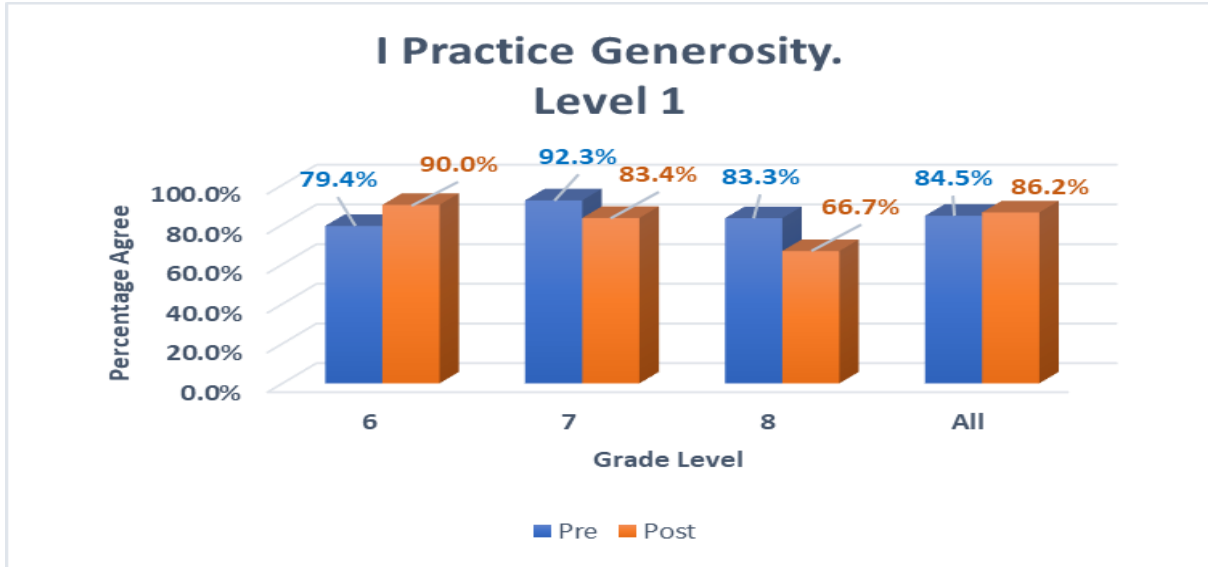


Except for the seventh graders in 2019-20 the sixth and eighth graders in Level 2 reported a decline in the response rates for being respectful to other people from pre to post intervention assessments. The overall negative response rate change of -2.5% from the pre to the post intervention assessments was not statistically significant at the 0.05 alpha level [$Z = -0.544, p < 0.589$].

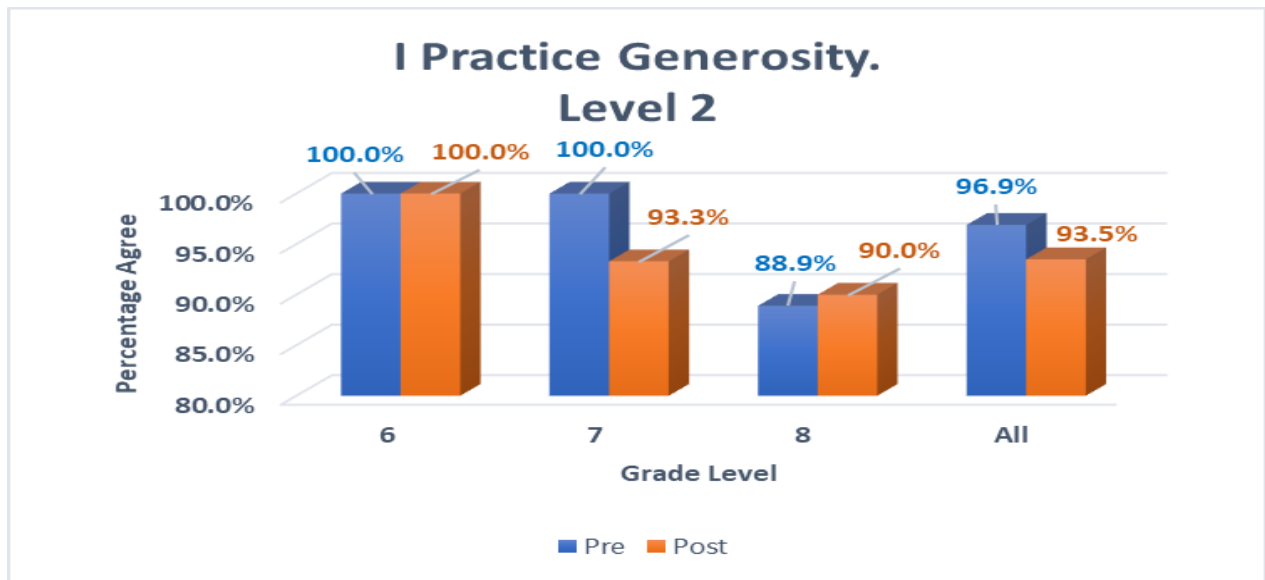


I Practice Generosity (Wacantognaka).

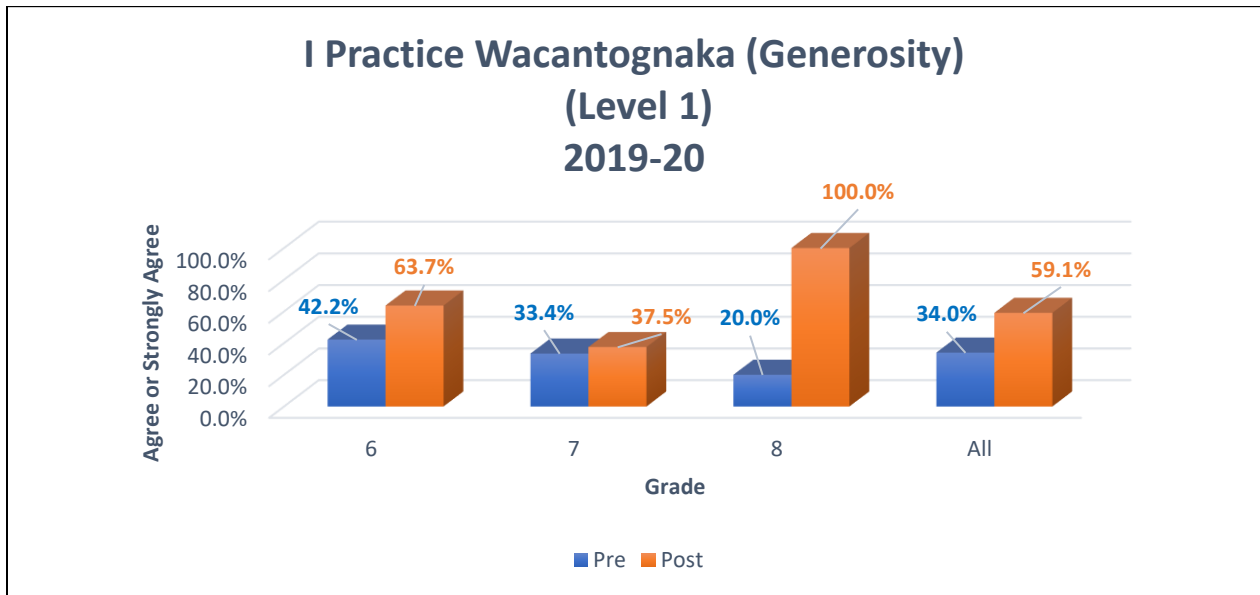
Except for the sixth graders in 2018-19 the seventh and eighth graders in Level 1 reported a decline in the response rates for practicing generosity from pre to post intervention assessments. Overall, there was small improvement in the response rates of 1.7% from the pre to the post intervention assessments which was not statistically significant at the 0.05 alpha level [$Z = 0.264, p < 0.793$].



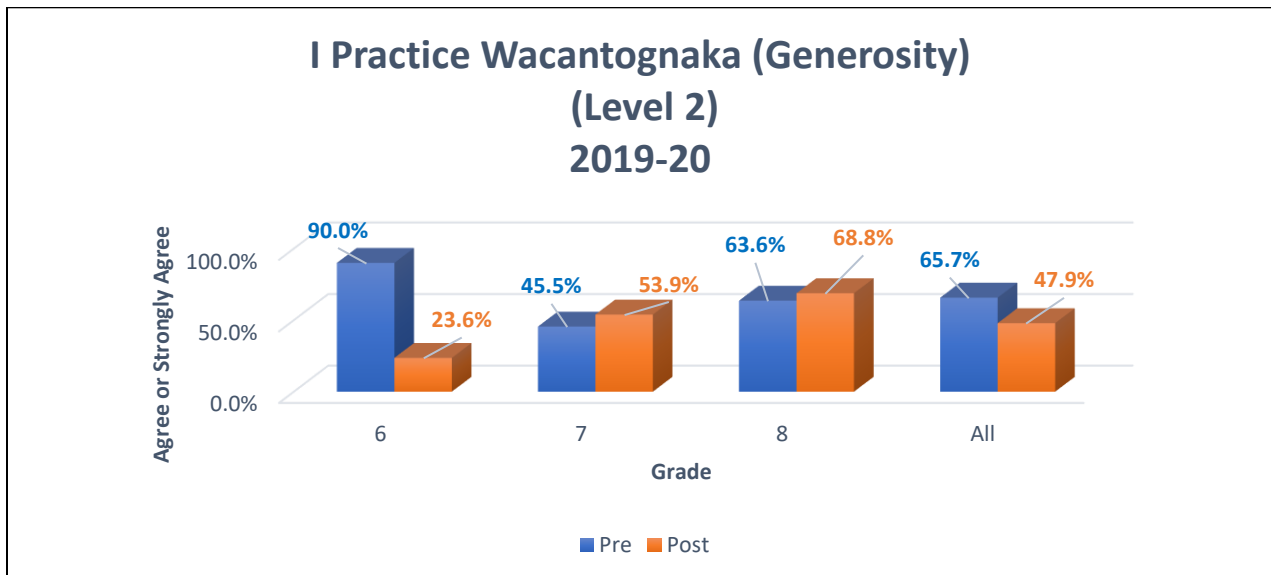
In 2018-19 the sixth and eighth graders showed an improvement of their responses rates in practicing generosity from the pre to the post intervention assessments. The seventh graders and overall response rates showed a decline in practicing generosity. The negative change of -3.4% was not statistically significant at the 0.05 alpha level [$Z = -0.621, p < 0.534$].



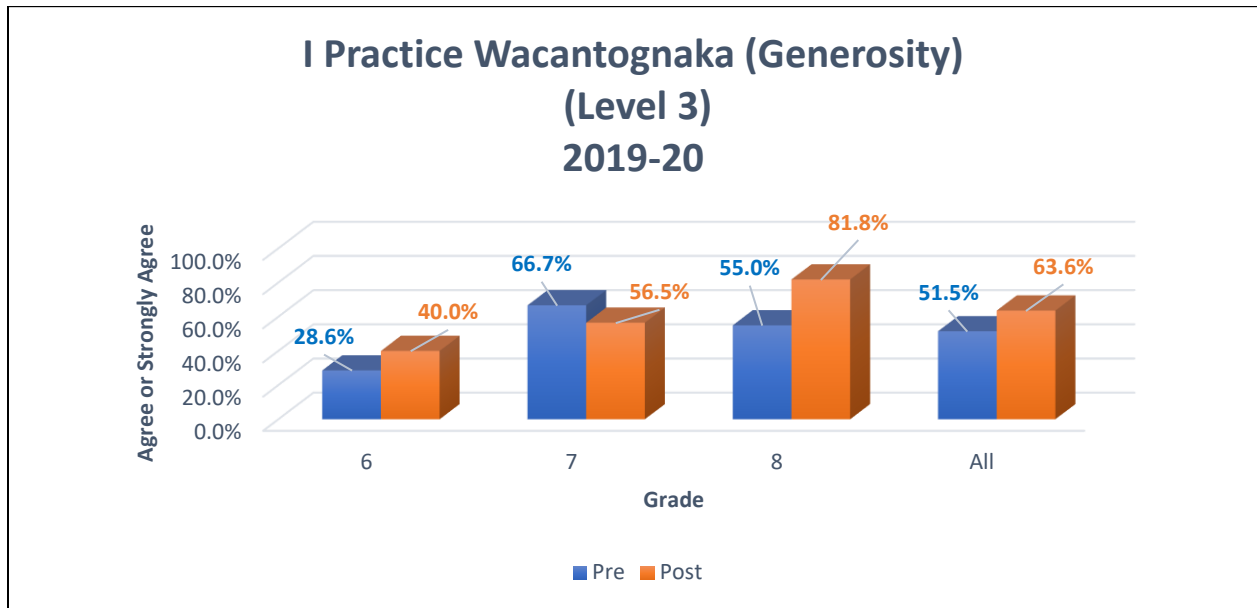
In 2019-20 all the Level 1 students reported an increase in the response rates for practicing generosity from pre to post intervention assessments. Overall, there was a 25.1% improvement in the response rates from the pre to the post intervention assessments which was statistically significant at the 0.05 alpha level [$Z = 1.978, p < 0.0478$].



In 2019-20 the Level 2 seventh and eighth graders showed an improvement of their responses rates in practicing generosity from the pre to the post intervention assessments. The sixth graders and the overall response rates showed a decline in practicing generosity. The overall change of -17.8% was not statistically significant at the 0.05 alpha level [$Z = -1.57, p < 0.116$]. The sixth graders' change of -66.4% was statistically significant at the 0.01 alpha level [$Z = -4.54, p < 0.0001$].



In 2019-20 the Level 3 sixth and eighth graders showed an improvement of their responses rates in practicing generosity from the pre to the post intervention assessments. The seventh graders showed a 10.2% decline in response rates from pre to post intervention. The overall change of +12.1% was not statistically significant at the 0.05 alpha level [$Z = 1.12, p < 0.263$].



Respect Composite Score Analysis

A lower mean score for respect is a favorable outcome. Both levels showed an unfavorable outcome with a 0.8% increase in the Level 1 and 12.8% increase in the Level 2 mean scores from pre intervention to post intervention. These changes reflected that students reported being less respectful and kinder to other people over the program implementation period. The changes were not statistically significant at the 0.05 alpha level. [Table 4A]

Table 4A Respect Mean Score Comparison 2018-19						
		n	Mean	Standard Deviation	Welch t-test	p
Level 1	Pre	71	5.18	1.50	0.131 df = 120	0.896
	Post	51	5.22	1.29		
	Percent Change		+0.8%			
Level 2	Pre	32	4.75	1.24	1.449 df = 61	0.154
	Post	31	5.36	1.98		
	Percent Change		+12.8%			

A lower mean score for respect is a favorable outcome. Level 2 showed an unfavorable outcome of +2.9% increase the mean scores from pre intervention to post intervention. This change reflected that the students reported being less respectful and kinder to other people over the program implementation period. Level 1 and Level 3 showed negative changes of -9.5% and -8.7%, respectively, which supported an improvement in the respect construct. All of the changes were not statistically significant at the 0.05 alpha level.

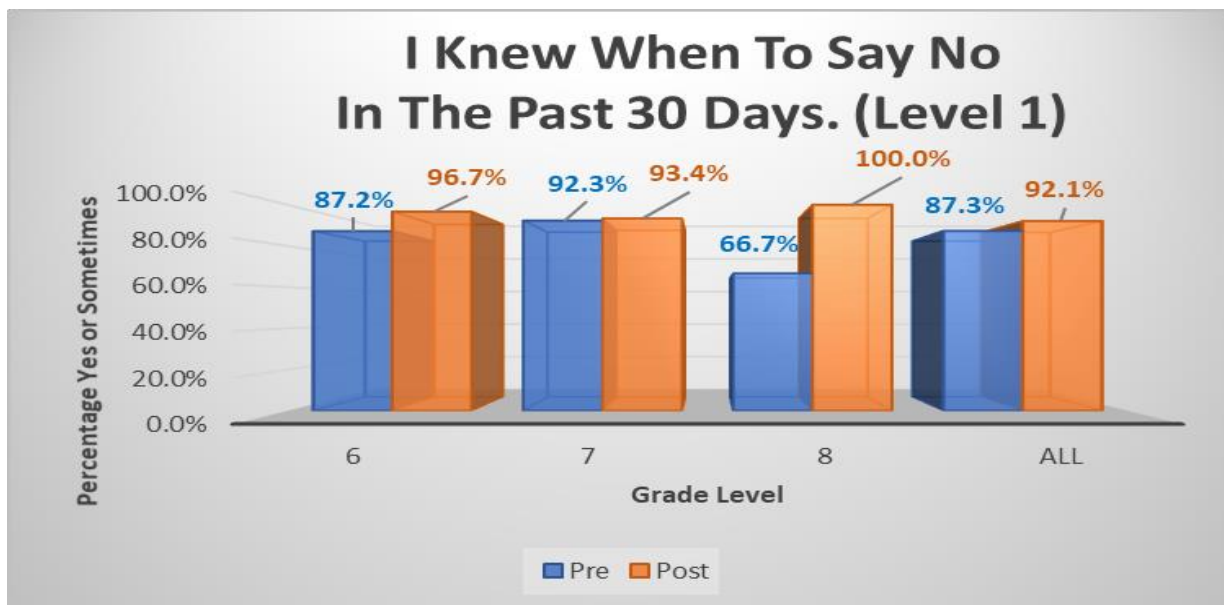
Table 4B Respect Mean Score Comparison 2019-20						
		n	Mean	Standard Deviation	Welch t-test	p
Level 1	Pre	50	7.68	2.17	1.174 df = 70	0.248
	Post	22	6.95	2.52		
	Percent Change		-9.5%			
Level 2	Pre	32	6.59	2.24	0.398 df = 76	0.692
	Post	46	6.78	1.78		
	Percent Change		+2.9%			
Level 3	Pre	33	6.67	1.59	-1.529 df = 86	0.147
	Post	55	6.09	1.89		
	Percent Change		-8.7%			

Conflict Resolution & Refusal Skills

The aggression and conflict resolution outcomes are based on the development and psychometric properties of a self-reporting aggression scale. The scale consists of 4 items designed to measure self-reported aggressive behaviors among the middle school students (6th to 8th graders). The scales are based on research performed by Connor, Dann, & Twentyman (1982)¹⁶ and Orpinas & Frankowski (2001).¹⁷ These measures have been found to be a useful tool for assessing a program's effectiveness in helping middle school students make healthy decisions on dealing with conflicts using appropriate refusal and coping skills.

In the Past Month I Knew How To Say No

In 2018-19 all of the Level 1 students in each grade reported improvements in being able to say no to individuals involved in negative behavior in the past 30 days from pre to post intervention assessments. The Level 1 overall positive response rates change showed a 4.8% improvement from the pre to the post intervention assessments. This change was not statistically significant at the 0.05 alpha level [$Z = 0.881, p < 0.378$].

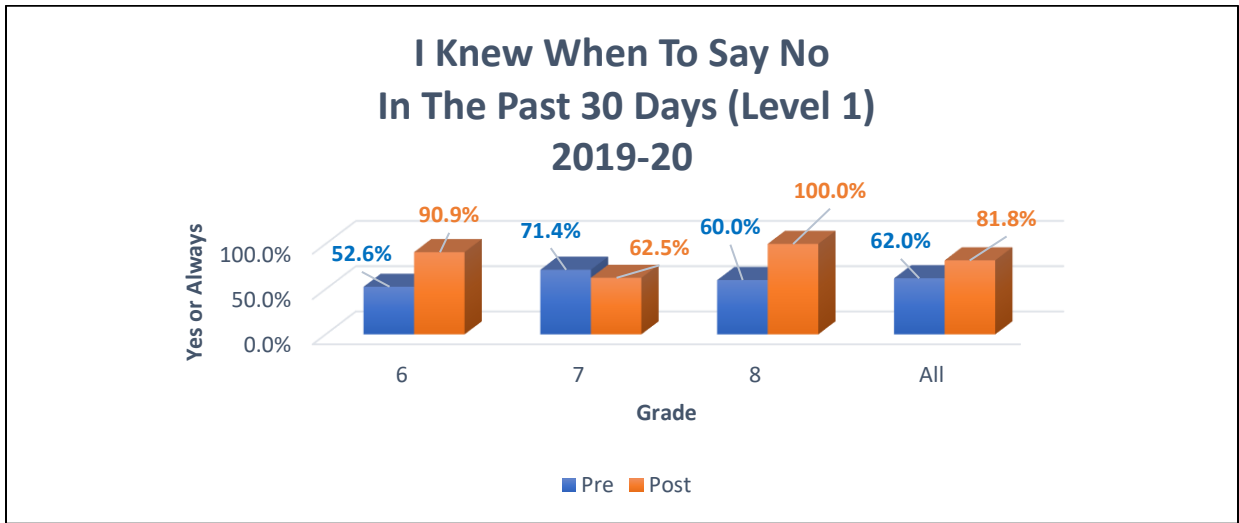


In 2019-20 the 6th and 8th Level 1 students reported improvements in being able to say no to individuals involved in negative behavior in the past 30 days from pre to post intervention assessments. The Level 1 overall positive response rates change showed a 19.8% improvement from the pre to the post

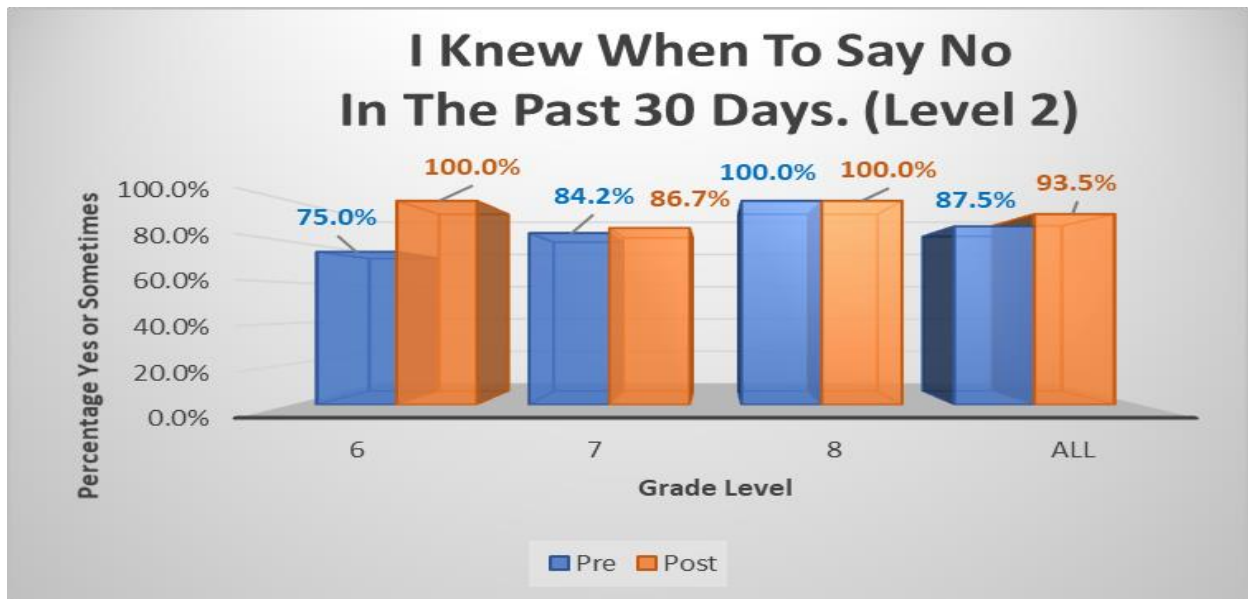
¹⁶ Connor J.M., Dann L.N. & Twentyman C.T. (1982). A self-report measure of assertiveness in young adolescents. *Journal of Clinical Psychology, 38(1)*, 101-106

¹⁷ Orpinas, P. & Frankowski, R. (2001). The aggression scale: A self-report measure of aggressive behavior for young adolescents. *Journal of Early Adolescence, 21(1)*, 51-68.

intervention assessments. This change was statistically significant at the 0.10 alpha level [$Z = 1.66, p < 0.097$].

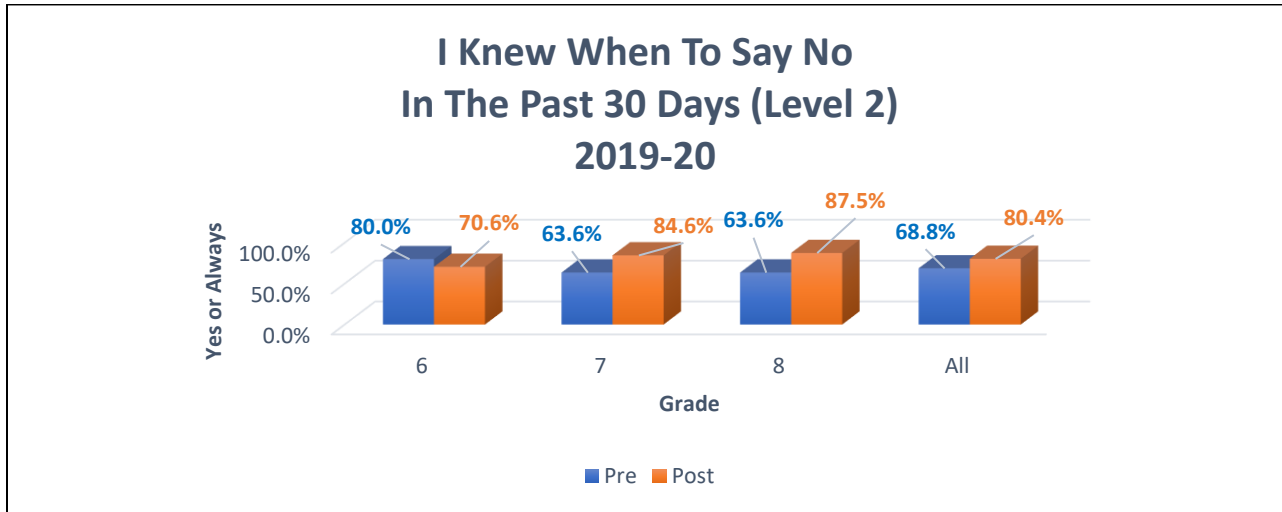


In 2018-19 the Level 2 overall positive response rates change showed a 6.0% improvement from the pre to the post intervention assessments. This change was not statistically significant at the 0.05 alpha level [$Z = 0.805, p < 0.421$]. The response rates in being able to say no showed improvement for all grade levels.

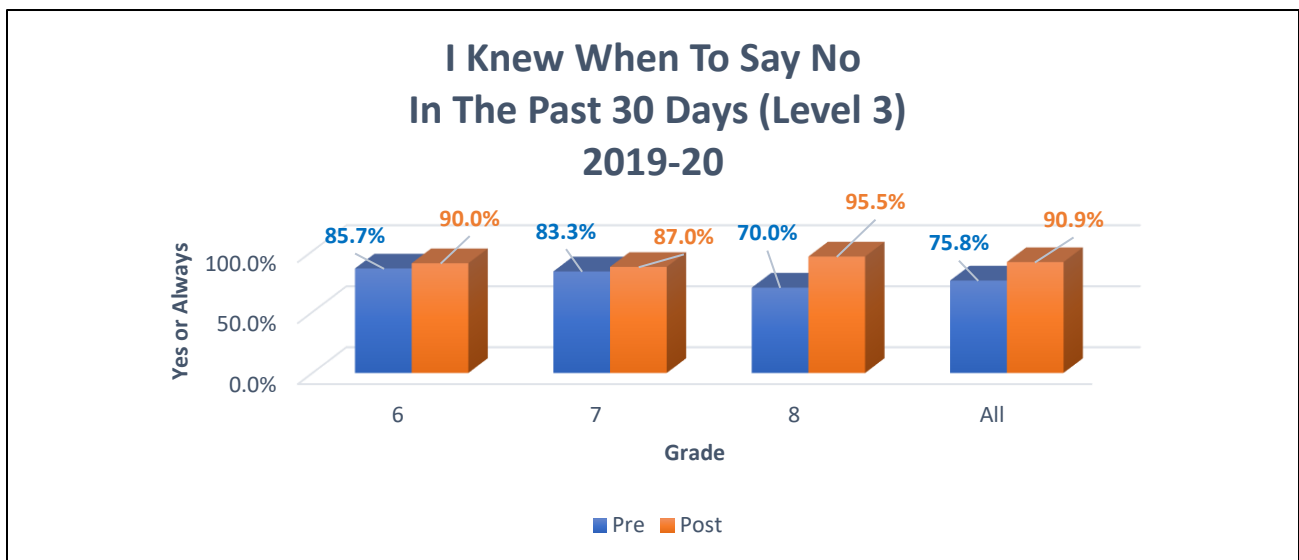


In 2019-20 the seventh and eighth graders showed an improvement in being able to say not to any negative behavior or requests. The seventh graders showed a +21.0% non-statistically significant improvement [$Z = 1.183, p < 0.238$]. The eighth graders showed a +23.9% non-statistically significant improvement [$Z = 1.467, p < 0.142$]. The sixth graders showed a -9.4% non-statistically significant decline

from pre to post intervention [$Z = 0.538$, $p < 0.589$]. Overall, the positive response rates change showed a 11.6% improvement from the pre to the post intervention assessments. This change was not statistically significant at the 0.05 alpha level [$Z = 1.174$, $p < 0.242$].

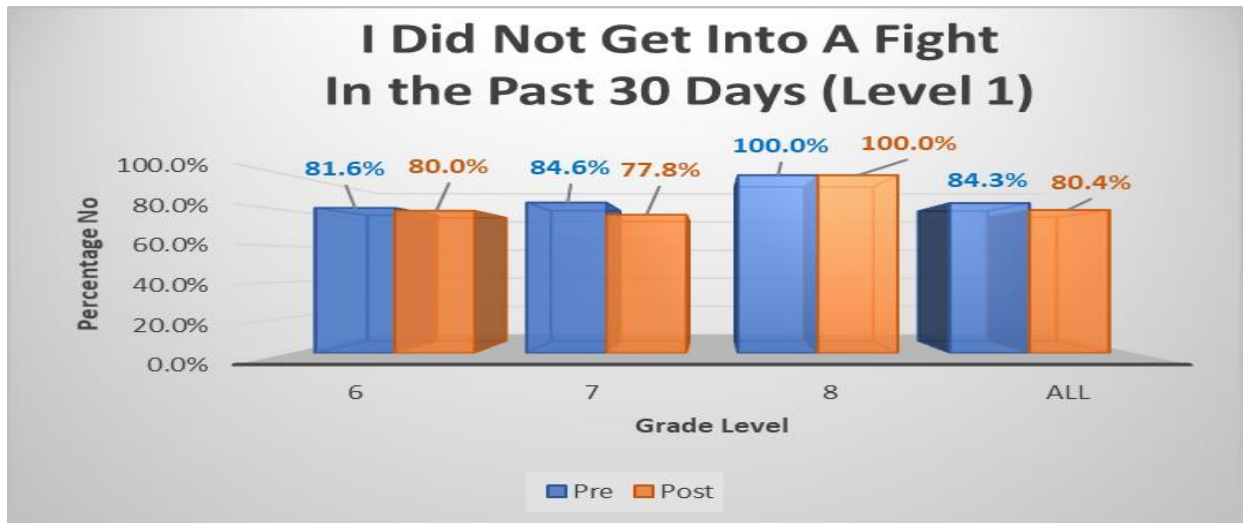


In 2019-20 all the Level 3 grades showed an improvement in being able to say not to any negative behavior or requests. The seventh graders showed a +3.7% non-statistically significant improvement [$Z = 0.234$, $p < 0.818$]. The eighth graders showed a +25.5% statistically significant improvement at the 0.05 alpha level [$Z = 2.22$, $p < 0.0264$]. The sixth graders showed a +4.3% non-statistically significant decline from pre to post intervention [$Z = 0.271$, $p < 0.787$]. Overall, the positive response rates change showed a +15.1% improvement from the pre to the post intervention assessments. This change was statistically significant at the 0.10 alpha level [$Z = 1.933$, $p < 0.0536$].

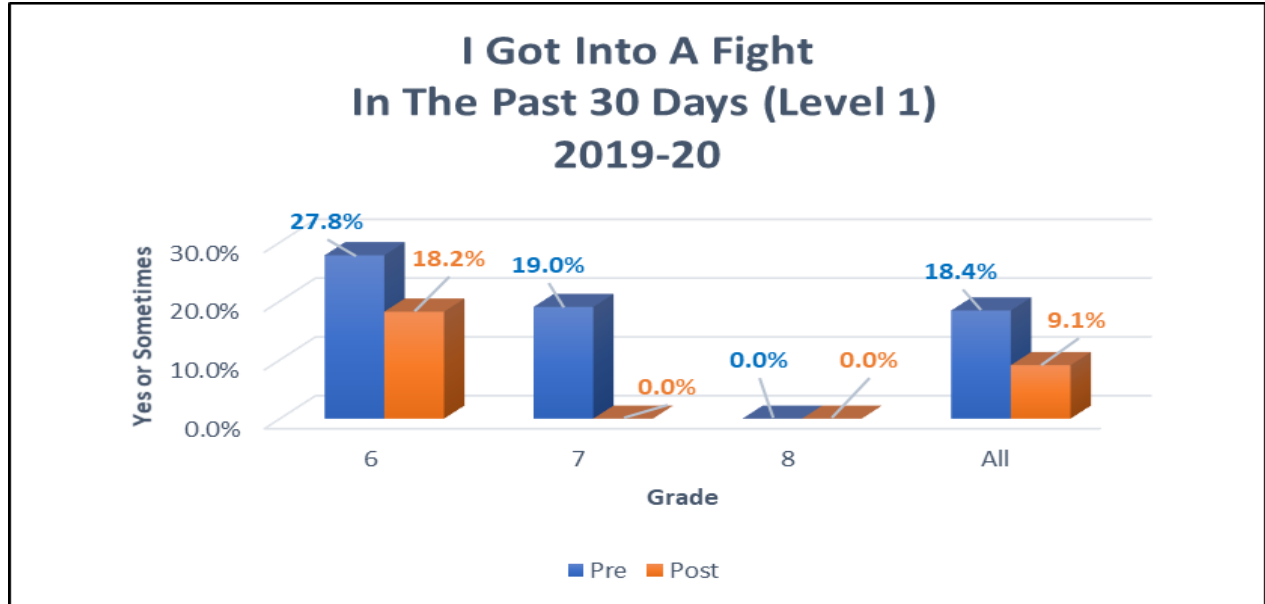


In the Past 30 Days I Got Into A Fight

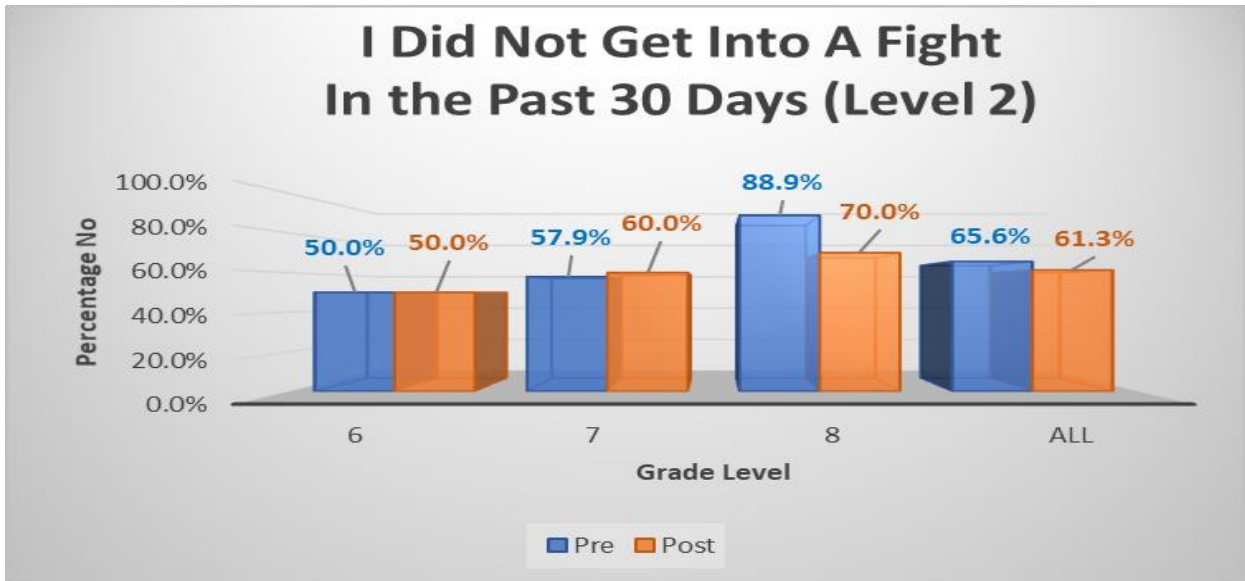
Except for the eighth graders in 2018-19 the Level 1 sixth and seventh graders reported getting into more fights in the past 30 days. Overall, there was a -3.9% decline in not getting into a fight in the past 30 days. This negative change was not statistically significant at the 0.05 alpha level [$Z = -0.526, p < 0.579$].



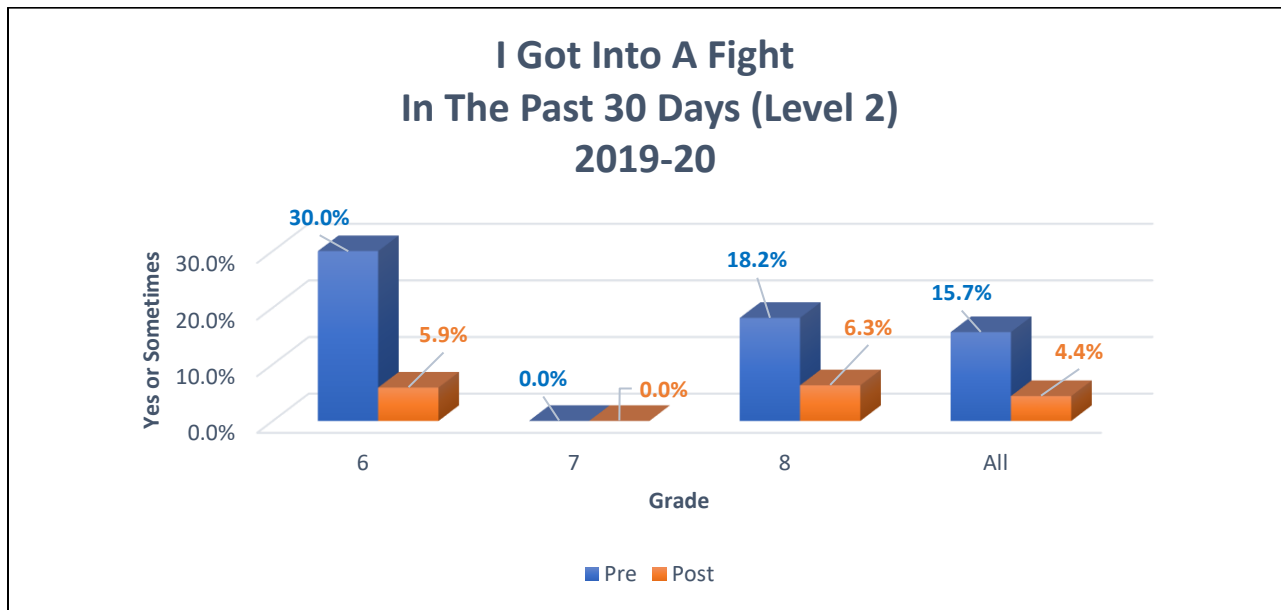
Except for the eighth graders in 2019-20 the Level 1 sixth and seventh graders reported not getting into more fights in the past 30 days. Overall, there was a 9.3% decrease in getting into a fight in the past 30 days. This change was not statistically significant at the 0.05 alpha level [$Z = 0.854, p < 0.395$].



In 2018-19 the sixth and seventh graders in Level 2 showed a small improvement in not getting into a fight in the past 30 days. Overall, there was a -4.2% decline in not getting into a fight. This change was not statistically significant at the 0.05 alpha level [$Z = -0.349, p < 0.727$].

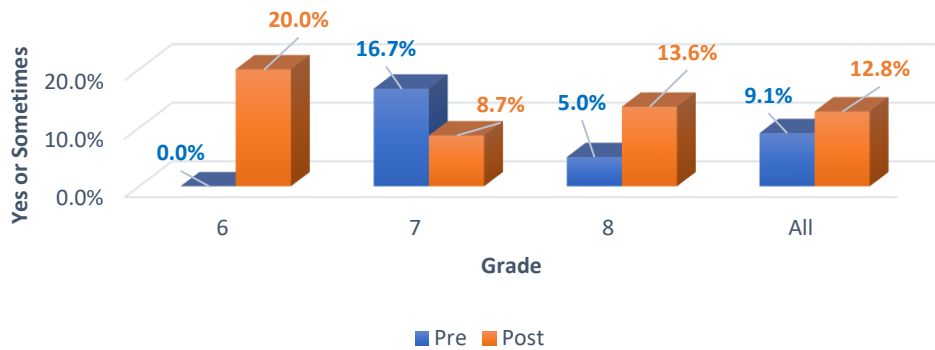


In 2019-20 all of the grades in Level 2 showed an improvement in not getting into a fight in the past 30 days. Overall, there was a -11.3% decline in not getting into a fight. This change was statistically significant at the 0.10 alpha level [$Z = -1.712$, $p < 0.0873$].



In 2019-20 except for the seventh grade in Level 3 the sixth and eighth grades showed reported getting into more fights at post intervention. The sixth graders reported a +20.0 % non-statistically significant increase in fights [$Z = 1.260$, $p < 0.208$]. The seventh graders reported a -8.0% non-statistically significant decline in getting into fights at the 0.05 alpha level [$Z = 0.573$, $p < 0.569$]. The eighth graders reported a +8.6% non-statistically significant increase in fights from pre to post intervention [$Z = 0.949$, $p < 0.342$]. Overall, the response rates change showed a +3.7% increase from the pre to the post intervention assessments. This change was not statistically significant at the 0.05 alpha level [$Z = 0.529$, $p < 0.596$].

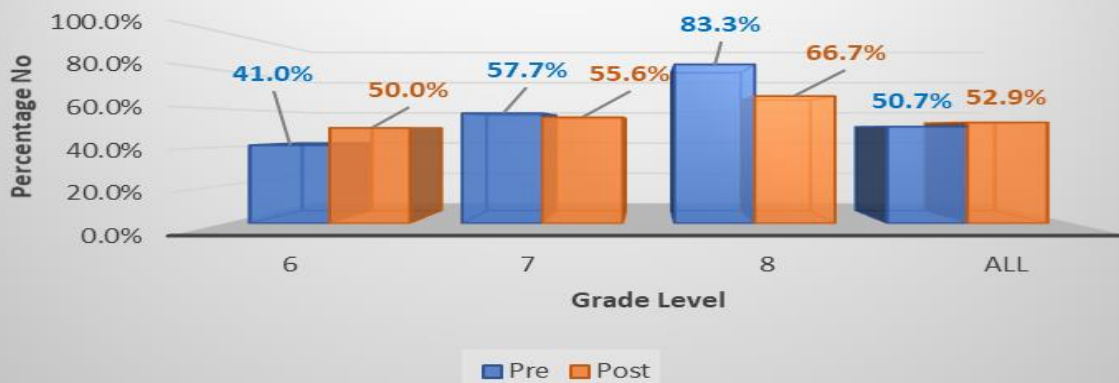
I Got Into A Fight In The Past 30 Days (Level 3) 2019-20



In the Past 30 Days Someone Teased Me or Picked on Me

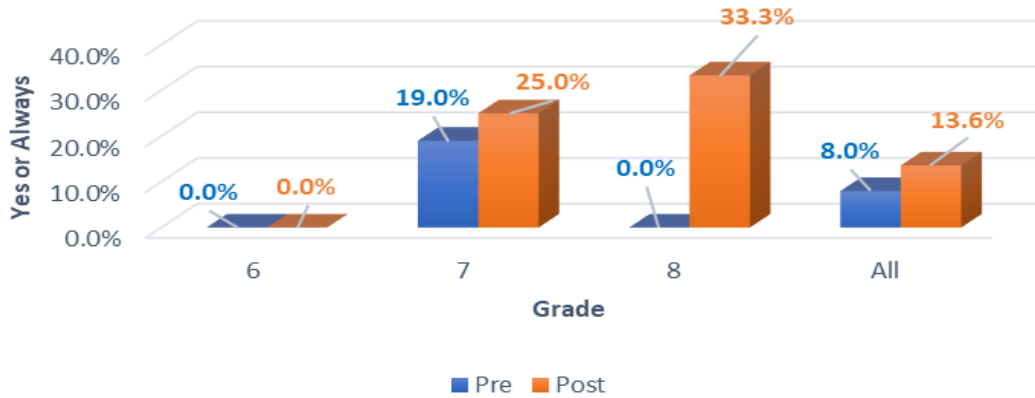
In 2018-19 the Level 1 sixth graders report a 9.0% improvement in their response rate of not being teased in the past 30 days from the pre to the post intervention assessments. The seventh and eighth graders reported an increase in be teased in the past 30 days. Overall, there was a 2.2% improvement in not being teased from the pre to the post intervention assessments. This change was not statistically significant at 0.05 alpha level [$Z = 0.241, p < 0.810$].

I Did Not Get Teased In the Past 30 Days (Level 1)



In 2019-20 the Level 1 sixth graders reported not being teased in the past 30 days. While the seventh and eighth graders reported an increase in the level of being teased in the past 30 days from the pre to the post intervention assessments. Overall, there was a 5.6% increase in being teased from the pre to the post intervention assessments. This change was not statistically significant at 0.05 alpha level [$Z = 0.629, p < 0.529$].

Someone Teased Me & Picked On Me In The Past 30 Days (Level 1) 2019-20



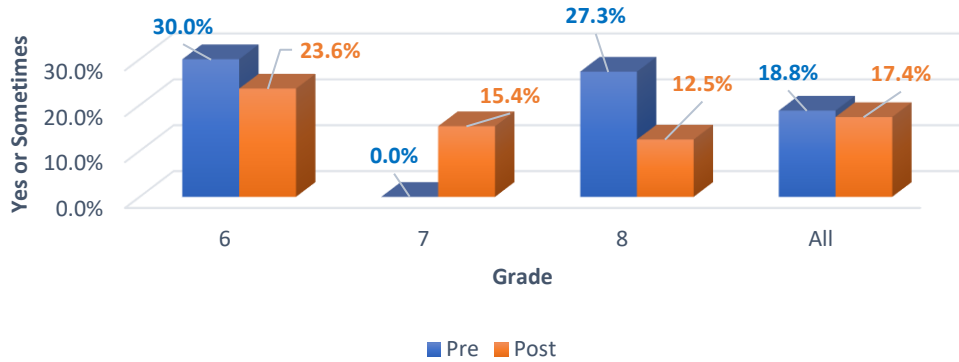
Except for the Level 2 seventh graders in 2018-19 the sixth and seventh graders reported a decline in their response rates in not being teased in the past 30 days. Overall, the -7.5% decline in the response rates was not statistically significant at 0.05 alpha level [$Z = 0.604$, $p < 0.546$]. It is important to note that although there was a -16.6% decline in the eighth grade response rate from pre to post intervention assessments because of the sample sizes ($n_{pre} = 9$ and $n_{post} = 10$), the negative change was not statistically significant at the 0.05 alpha level [$Z = 0.809$, $p = 0.418$].

I Did Not Get Teased In the Past 30 Days (Level 2)



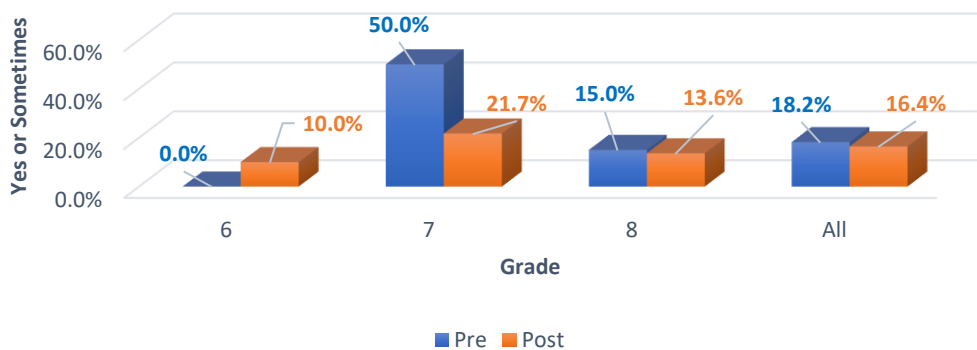
In 2019-20 the Level 2 seventh graders showed an increase in being teased by someone while the sixth and eighth graders reported a decline in their response rates in not being teased in the past 30 days. Overall, the -1.4% decline in the response rates was not statistically significant at 0.05 alpha level [$Z = 0.158$, $p < 0.873$]. The -6.4% decline by the sixth graders [$Z = 0.366$, $p < 0.711$] and the -14.8% decline by the eighth graders [$Z = 0.973$, $p < 0.332$] were not statistically significant changes at the 0.05 alpha level.

Someone Teased Me & Picked On Me In The Past 30 Days (Level 2) 2019-20



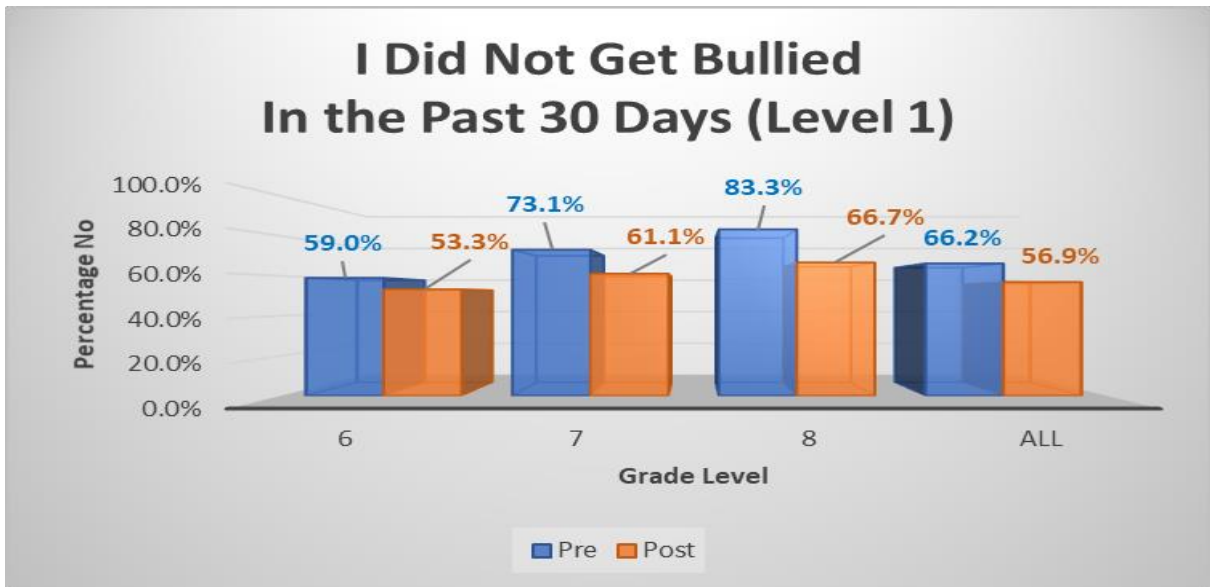
In 2019-20 the Level 3 sixths graders showed a 10.0% increase in being teased by someone while the seventh and eighth graders reported a decline in their response rates in not being teased in the past 30 days. Overall, the -1.8% decline in the response rates was not statistically significant at 0.05 alpha level [$Z = 0.217, p < 0.826$]. The +10.0% decline by the sixth graders [$Z = 0.862, p < 0.390$] was not a statistically significant change at 0.05 alpha level. The +28.3% increase by the seventh graders [$Z = 1.382, p < 0.168$] and the +1.4% increase by the eighth graders [$Z = 0.130, p < 0.897$] were not statistically significant changes at the 0.05 alpha level

Someone Teased Me & Picked On Me In The Past 30 Days (Level 3) 2019-20

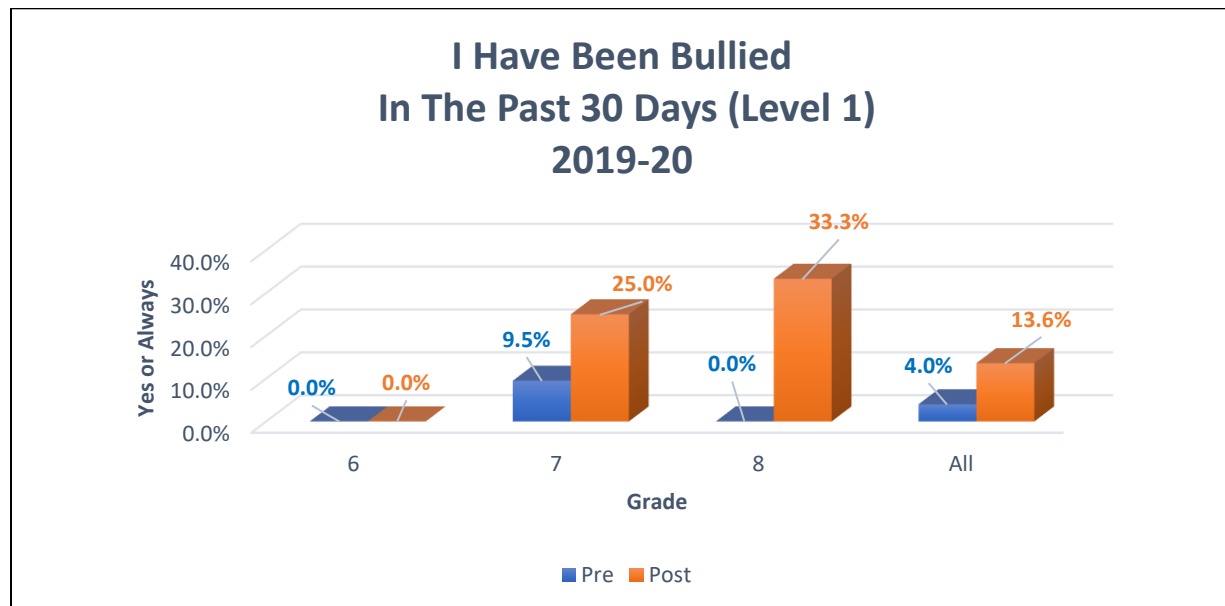


In the Past 30 Days Someone Has Bullied Me

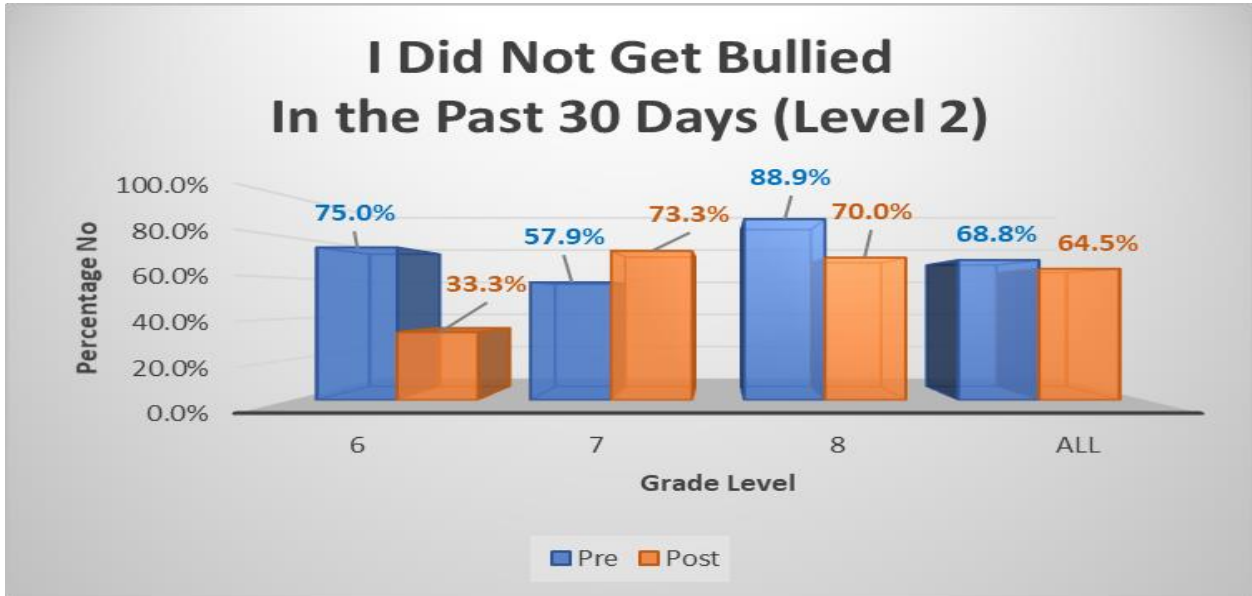
In 2018-19 all of the Level 1 grades reported a decline in their response rates in being bullied in the past 30 days from pre to post intervention assessments. The overall negative change of -9.3% from pre to post intervention was not statistically significant at the 0.05 alpha level [$Z = 1.045$, $p < 0.296$]



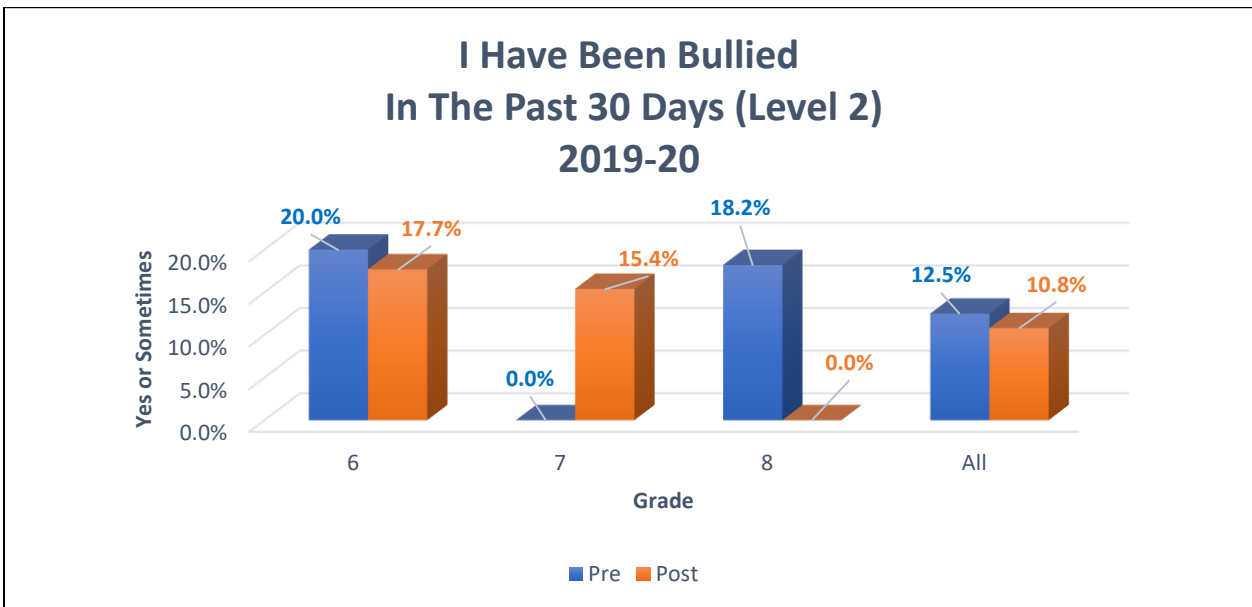
In 2019-20 the seventh and grades students reported a rate increase being bullied in the past 30 days from pre to post intervention assessments. The sixth graders reported not being bullied in the past 30 days at the pre and post intervention assessments. The overall change of 9.6% from pre to post intervention was not statistically significant at the 0.05 alpha level [$Z = 1.256$, $p < 0.208$]



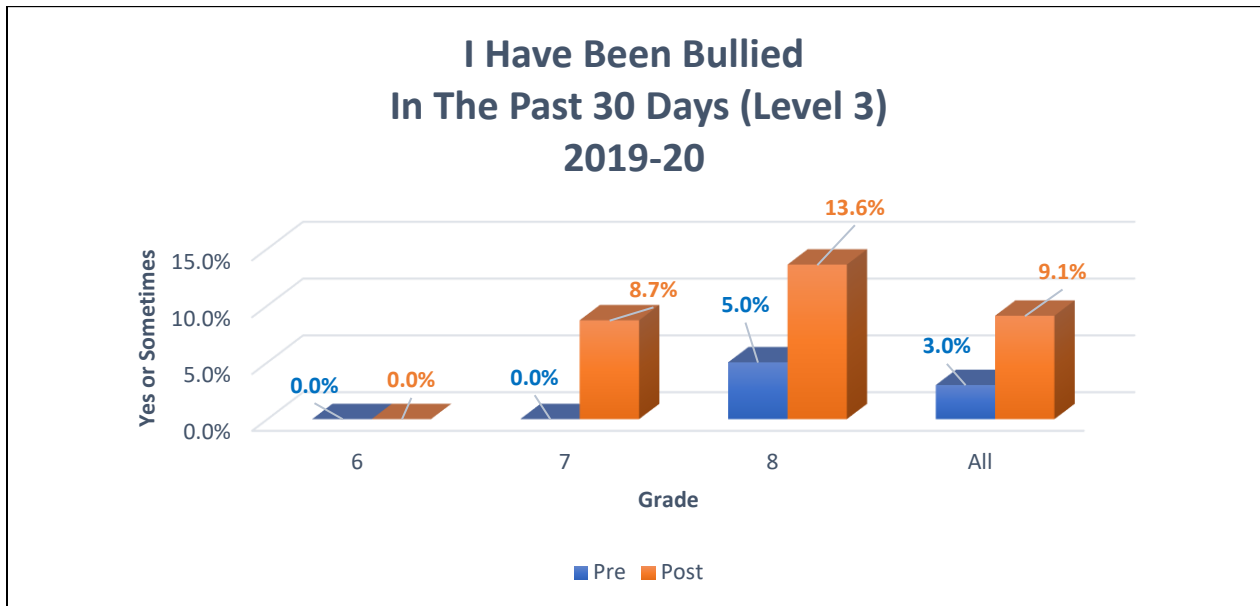
Except for the seventh grade in 2018-19 in Level 2 the sixth and eighth grades showed an increase in being bullied in the past 30 days from pre to post intervention assessments. Although the changes for each of the grades they were not found to be statistically significant because of their sample sizes. Overall, the negative response rate change of -4.3% from pre to post intervention was not statistically significant at the 0.05 alpha level [$Z = -0.332, p < 0.740$].



In 2019-20 the sixth and eighth graders showed a decline in the rate of bullying by another person. Except for the seventh grade there was a 15.4% increase in being bullied in the past 30 days from pre to post intervention assessments. Overall, the negative response rate change of -1.7% from pre to post intervention was not statistically significant at the 0.05 alpha level [$Z = -0.232, p < 0.818$].

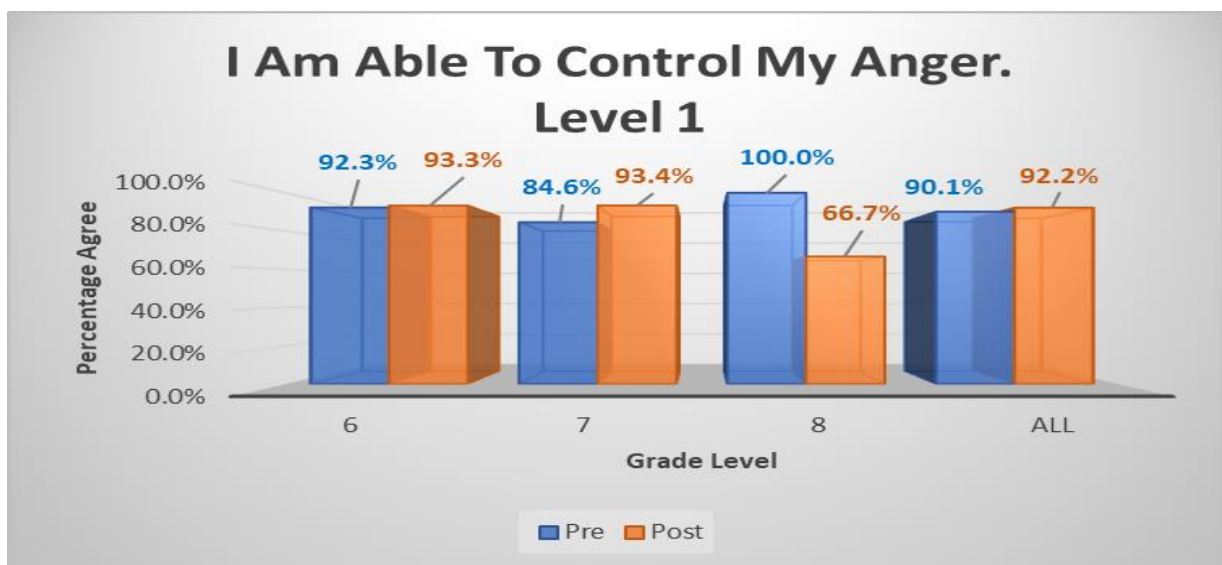


In 2019-20 the seventh and eighth graders showed an increase in the rate of bullying by another person. Except for the sixth grade there was no report of being bullied in the past 30 days from pre to post intervention assessments. Overall, the negative response rate change of +6.1% from pre to post intervention was not statistically significant at the 0.05 alpha level [$Z = 1.10, p < 0.271$].



I Am Able to Control My Anger

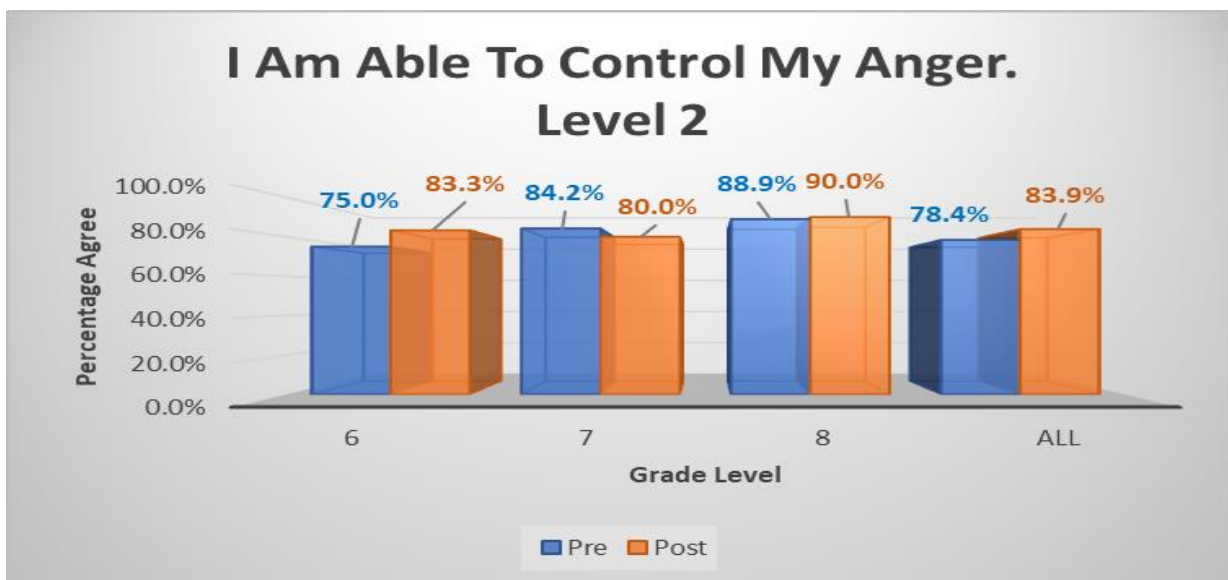
Except for eighth graders in 2018-19 the Level 1 respondent rates showed an improvement in being able to control one's anger from pre to post intervention assessments. Overall, there was a 2.1% improvement in the response rates for controlling one's anger. This change was not statistically significant at 0.05 alpha level [$Z = 0.408, p < 0.683$].



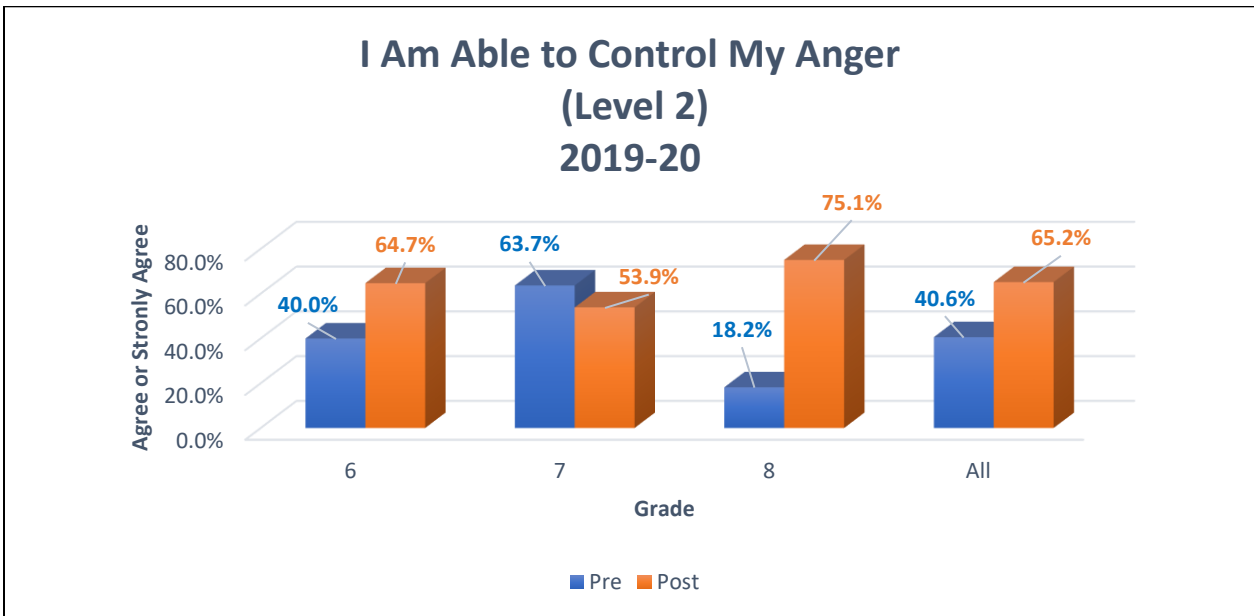
Except for sixth graders in 2019-20 the Level 1 respondent rates showed a decline in being able to control one's anger from pre to post intervention assessments. The sixth graders reported a 0.4% increase in the ability to control their anger. Overall, there was a -7.4% decline in the response rates for controlling one's anger. This change was not statistically significant at 0.05 alpha level [$Z = -0.502, p < 0.617$].



Except for seventh graders in 2018-19 in Level 2 the respondent rates for the sixth and eighth grades showed an improvement in being able to control one's anger from pre to post intervention assessments. Overall, there was a 5.5% improvement in the response rates for controlling one's anger. This change was not statistically significant at 0.05 alpha level [$Z = 0.551, p < 0.582$].

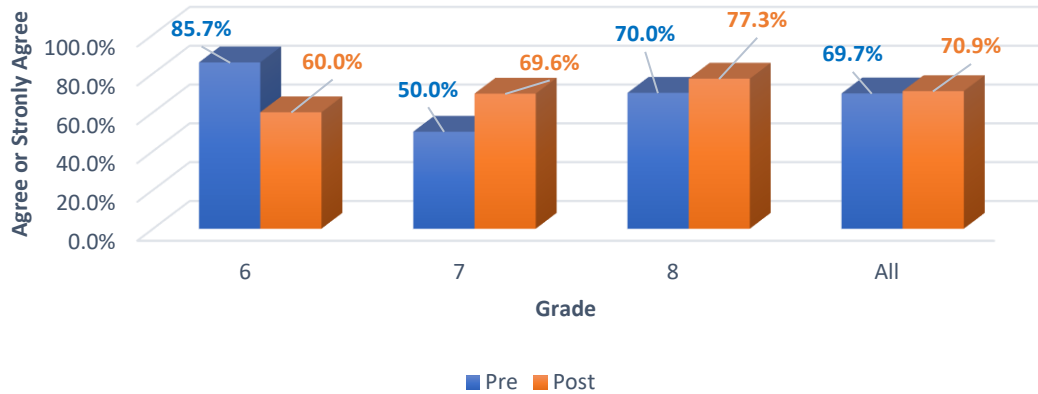


In 2019-20 except for seventh graders in Level 2 the respondent rates in the sixth and eighth grades showed an improvement in being able to control one's anger from pre to post intervention assessments. The +24.0% improvement in response rate for the sixth graders was not statistically significant at the 0.05 alpha level. [$Z = 1.211, p < 0.226$]. The +56.9% improvement in response rate for the eighth graders was statistically significant at the 0.01 alpha level. [$Z = 3.678, p < 0.0002$]. Overall, there was a 24.6% improvement in the response rates for controlling one's anger. This change was statistically significant at 0.05 alpha level [$Z = 2.149, p < 0.0316$].



In 2019-20 except for sixth graders in Level 3 the respondent rates in the seventh and eighth grades showed an improvement in being able to control one's anger from pre to post intervention assessments. The -24.30% decline in response rate for the sixth graders was not statistically significant at the 0.05 alpha level. [$Z = -1.14, p < 0.254$]. The +19.6% improvement in response rate for the seventh graders [$Z = 0.900, p < 0.368$] and the +7.3% improvement for the eighth graders [$Z = 0.538, p < 0.589$] were not statistically significant at the 0.05 alpha level. Overall, there was a +1.2% improvement in the response rates for controlling one's anger. This change was not statistically significant at 0.05 alpha level [$Z = 0.119, p < 0.904$].

I Am Able to Control My Anger (Level 3) 2019-20



Conflict Resolution Composite Score Analysis

A higher mean score for **Conflict Resolution** is a favorable outcome. The Level 1 mean scores showed a -4.4% change from pre to post intervention assessments in their ability to deal with conflict and to reduce any aggressive situations (fighting, bullying or teasing). The Level 2 participants showed a -2.0% decline in their mean scores from pre to post intervention. The negative changes for Level 1 and Level 2 were not statistically significant at the 0.05 alpha level. [Table 5A]

		n	Mean	Standard Deviation	Student t-test	p
Level 1	Pre	71	13.30	2.70	-1.098 df = 120	0.275
	Post	51	12.71	3.08		
	Percent Change		-4.4%			
Level 2	Pre	32	11.75	2.38	-0.393 df = 61	0.696
	Post	31	11.52	2.26		
	Percent Change		-2.0%			

In 2019-20 the Level 1 mean scores showed a -1.8% change from pre to post intervention assessments a decline in their ability to deal with conflict and to reduce any aggressive situations (fighting, bullying or teasing). The Level 2 participants showed a +7.4% improvement in their mean scores from pre to post intervention which was statistically significant at the 0.10 alpha level. The Level 3 participants showed positive change of +0.6% which was not statistically significant at the 0.05 alpha level. [Table 5B]

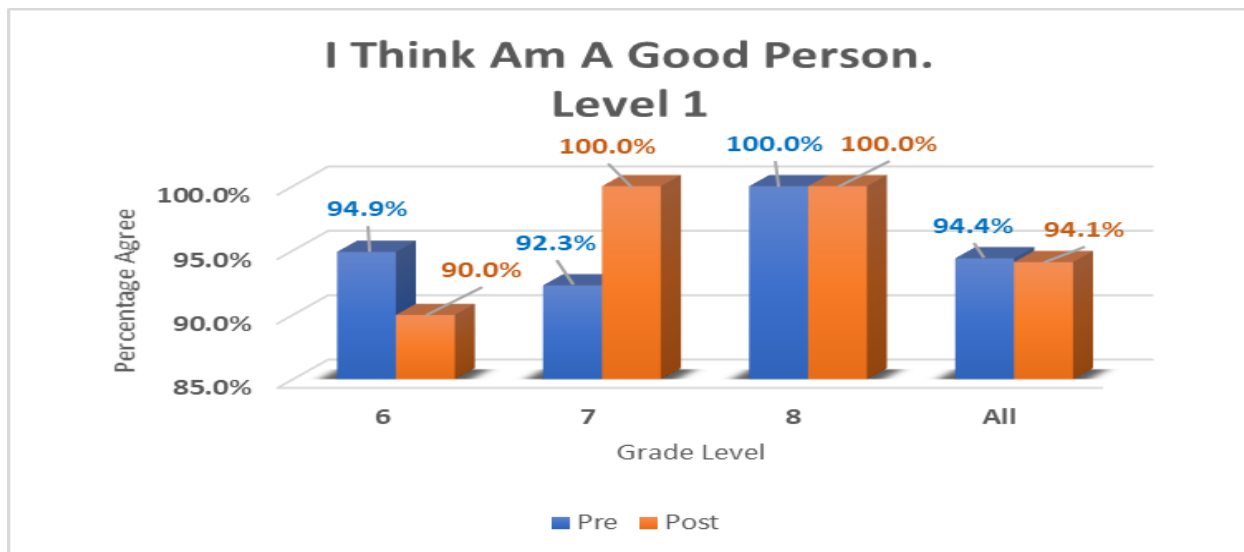
Table 5B Conflict Resolution Mean Score Comparison 2019-20						
		n	Mean	Standard Deviation	Student t-test	p
Level 1	Pre	50	17.54	2.51	-0.419 df = 70	0.677
	Post	22	17.22	3.70		
	Percent Change		-1.8%			
Level 2	Pre	32	17.06	2.93	+1.953 df = 76	0.0544
	Post	46	18.33	2.72		
	Percent Change		+7.4%			
Level 3	Pre	33	18.42	2.85	0.171 df = 86	0.865
	Post	55	18.53	2.67		
	Percent Change		+0.6%			

Self-Esteem

The Lakota/Dakota Identity and self-esteem measures are obtained from LCH curriculum that teaches middle school students about their personal value and importance through their traditions, values, and history of their heritage. The purpose of the program is to help Lakota youth appreciate and value their heritage and to show that they have a connection to these traditions and history. Ethnic identity and culture are key components in pre-adolescent identity and self-esteem, yet these domains are often neglected in research focused on prevention and intervention programs. Research examining the introduction of culture into a prevention modality is sparse, and prevention programming is often limited in development and assessment as it is tailored to the mainstream non-Indian population. Further, minority adolescents that act out are often left silenced, unsupported, unrecognized and viewed as a deficit oriented homogenous population. Many factors serve as confounding variables and contribute to the at-risk status of Native American adolescents including poverty, poor performance in school, the achievement gap, exposure to violence and substance abuse and living in an ethnic urban and reservation enclaves.¹⁸

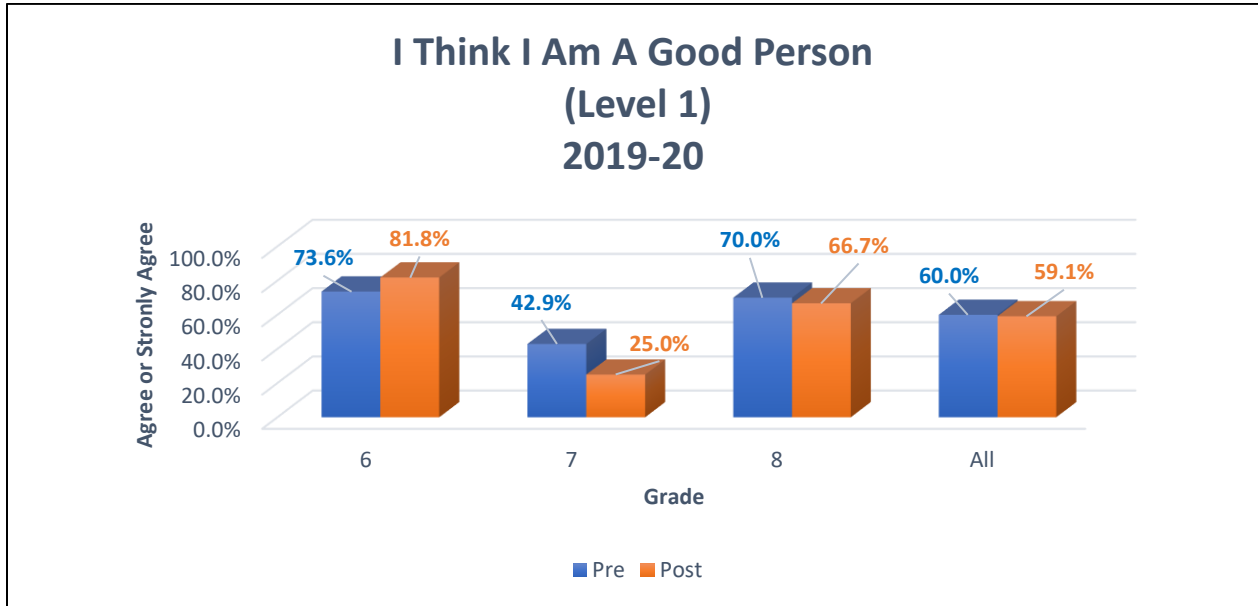
I Think I Am A Good Person

In 2018-19 the Level 1 eighth graders (100%) reported at both the pre and post intervention assessments that they were good persons. The seventh graders showed a 7.7% positive change from pre to post intervention in believing he or she is a good person while the sixth graders reported a -4.9% decline. The overall decline of 0.3% in response rates from pre to post intervention assessments was not statistically significant at the 0.05 alpha level [$Z = 0.70, p < 0.944$].

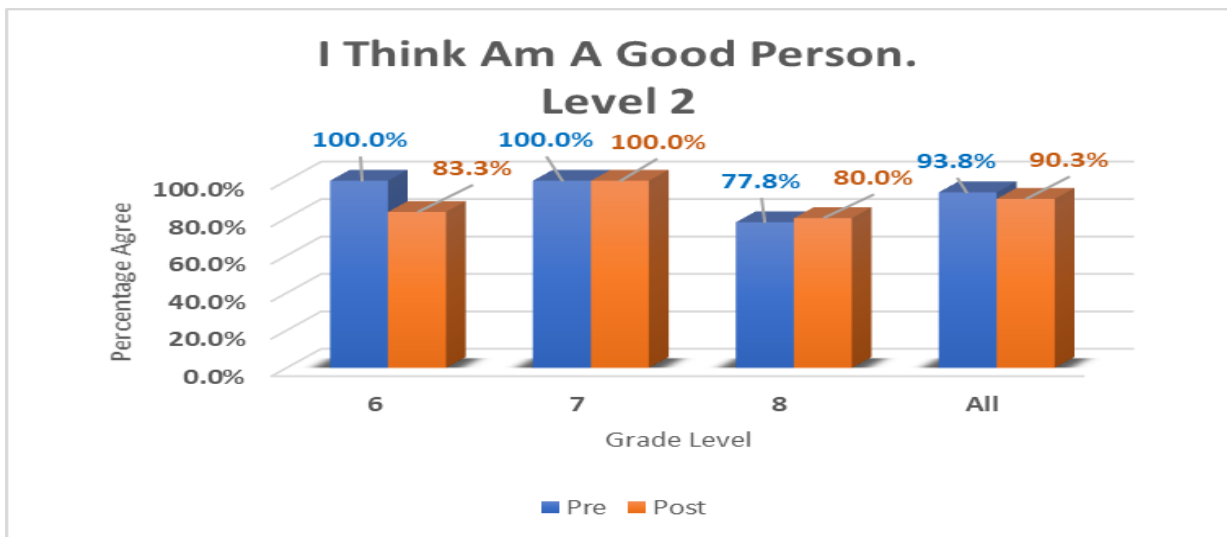


¹⁸ Rodriguez N. (2010). The cumulative effect of race and ethnicity in juvenile court outcomes and why preadjudication detention matters. *Journal of Research in Crime and Delinquency*, 47(3), 391-413.

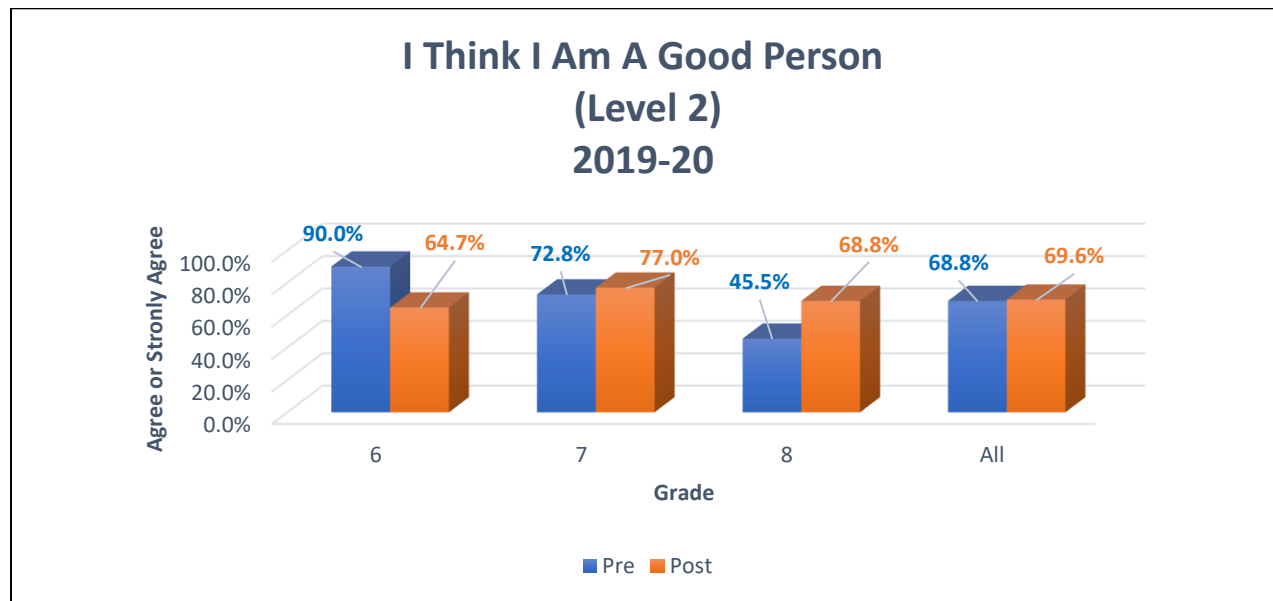
In 2019-20 the Level 1 sixth graders reported an improvement from pre and post intervention assessments in believing they are good persons. The seventh and eighth graders showed a decline from pre to post intervention in believing he or she is a good person. The overall decline of 0.9% in response rates from pre to post intervention assessments was statistically significant at the 0.10 alpha level [$Z = -0.605, p < 0.542$].



In 2018-19 all of the Level 2 seventh graders (100%) reported at pre and post intervention assessments believing are a good person. The eighth graders showed a 2.2% positive change from pre to post intervention in believing he or she is a good person. The overall decline of 3.5% in response rates from pre to post intervention assessments was not statistically significant at the 0.05 alpha level [$Z = 0.505, p < 0.613$].

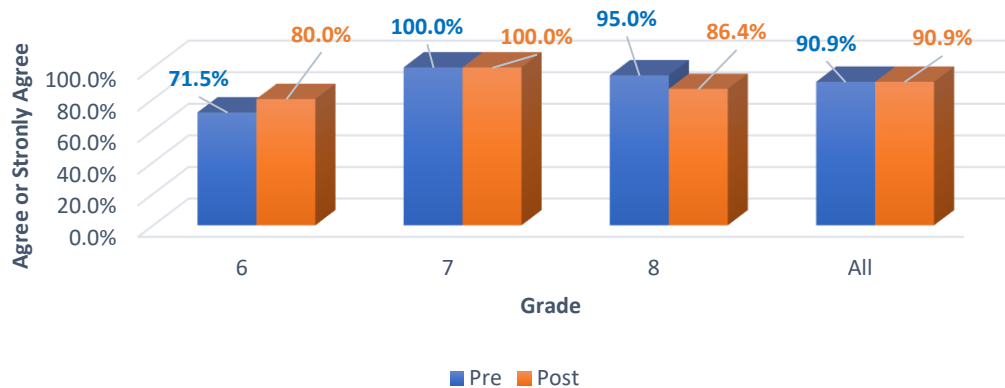


In 2019-20 the Level 2 seventh and eighth graders reported an increase in their response rates from pre to post intervention assessments believing they are a good person. The sixth graders showed a -25.3% decline in response rates which was not statistically significant at the 0.05 alpha level [$Z = -1.499$, $p < 0.147$]. The eighth graders showed a 23.3% positive change from pre to post intervention in believing he or she is a good person. This change was not statistically significant at the 0.05 alpha level [$Z = 1.211$, $p < 0.226$]. The overall increase of 0.8% in response rates from pre to post intervention assessments was not statistically significant at the 0.05 alpha level [$Z = 0.0753$, $p < 0.936$].



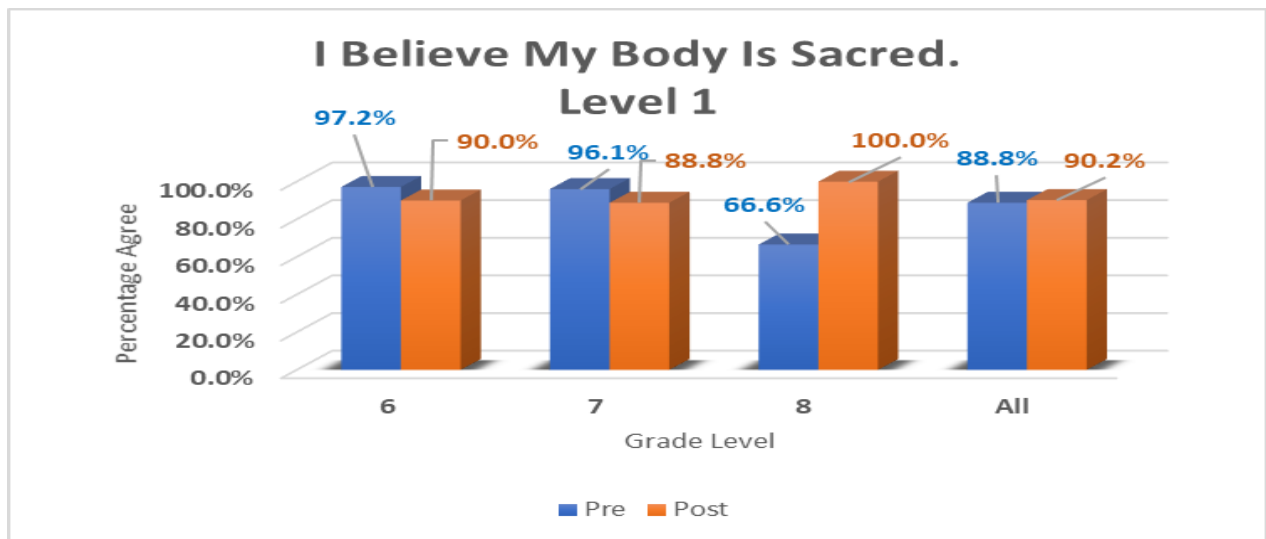
In 2019-20 the Level 3 sixth and seventh graders reported an increase in their response rates from pre to post intervention assessments believing they are a good person. The eighth graders showed a -8.6% decline in their response rates which was not statistically significant at the 0.05 alpha level [$Z = -0.932$, $p < 0.352$]. The sixth graders showed a +8.5% positive change from pre to post intervention in believing he or she is a good person. This change was not statistically significant at the 0.05 alpha level [$Z = 0.407$, $p < 0.682$]. The seventh graders reported no change from pre to post intervention remaining at 100% of the respondents saw themselves as a good person. The overall response rates remained constant at 90.9% from pre to post intervention assessments.

I Think I Am A Good Person (Level 3) 2019-20

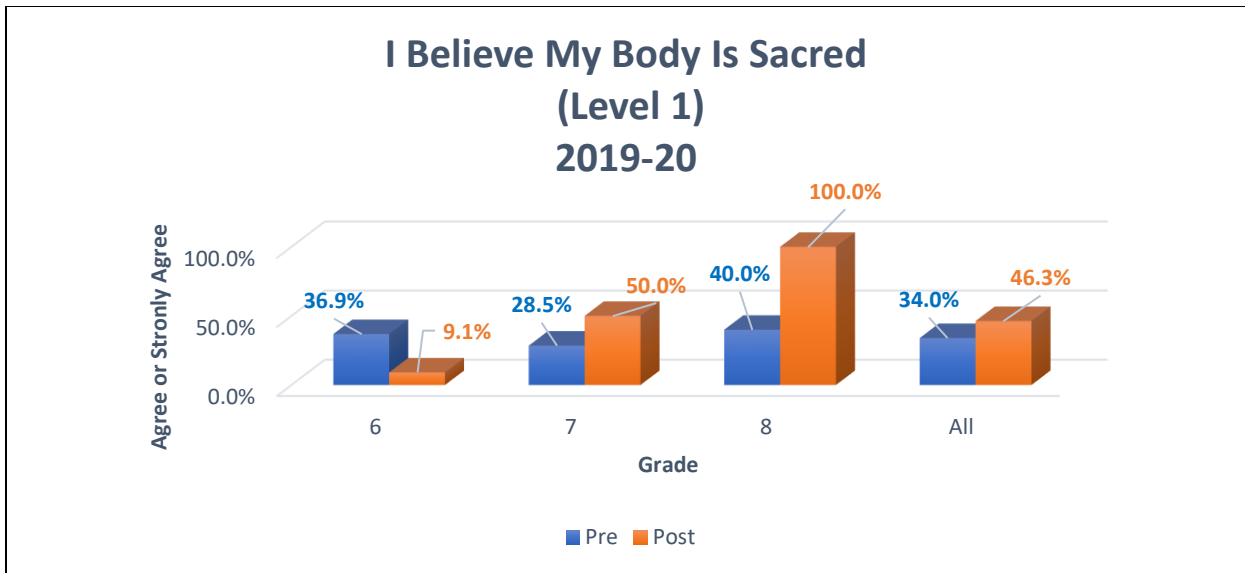


I Believe My Body Is Sacred

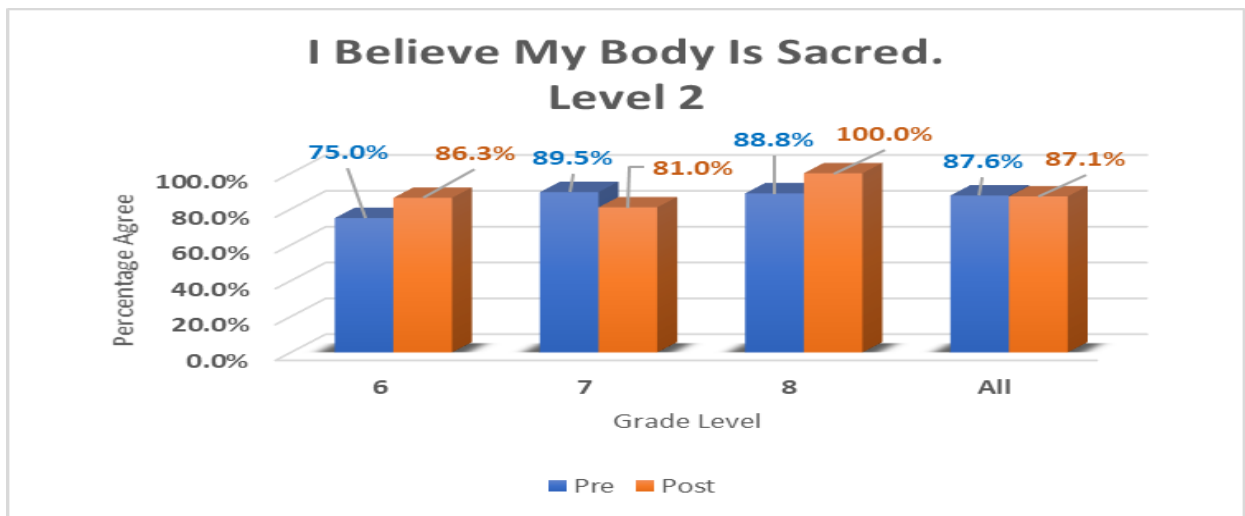
In 2018-19 the sixth and seventh graders reported a decline in the response rates at pre and post intervention assessments in believing that their bodies are sacred. The eighth graders had a 33.3% improvement in their response rates. Overall, the positive improvement of 1.4% from pre to post intervention was not statistically significant at the 0.05 alpha level [$Z = 0.251, p < 0.802$].



In 2019-20 the sixth graders reported a decline in the response rates from pre to post intervention assessments in believing that their bodies are sacred. The seventh and eighth graders had an improvement in their response rates. Overall, the positive improvement of 12.3% from pre to post intervention was not statistically significant at the 0.01 alpha level [$Z = 0.844, p < 0.401$].

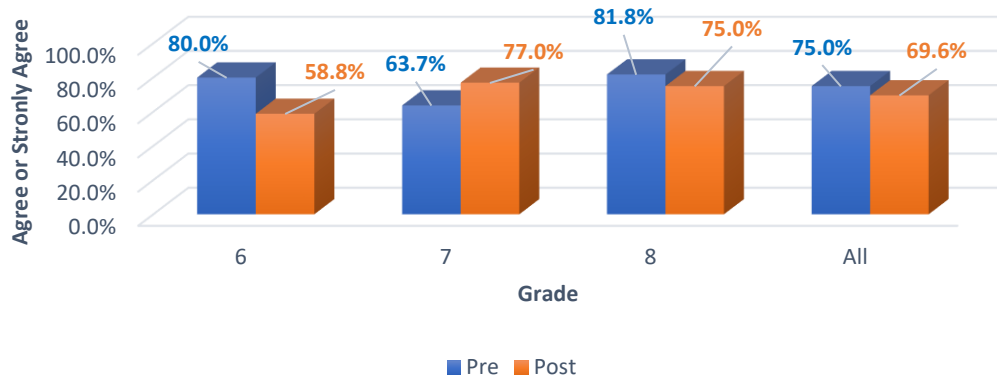


In 2018-19 the sixth and eighth graders reported an increase in the response rates from pre to post intervention assessments in believing that their bodies are sacred. The seventh graders had a -8.5% decline in their response rates. Overall that negative change of -0.5% from pre to post intervention was not statistically significant at the 0.05 alpha level [$Z = -0.0587$, $p < 0.953$].



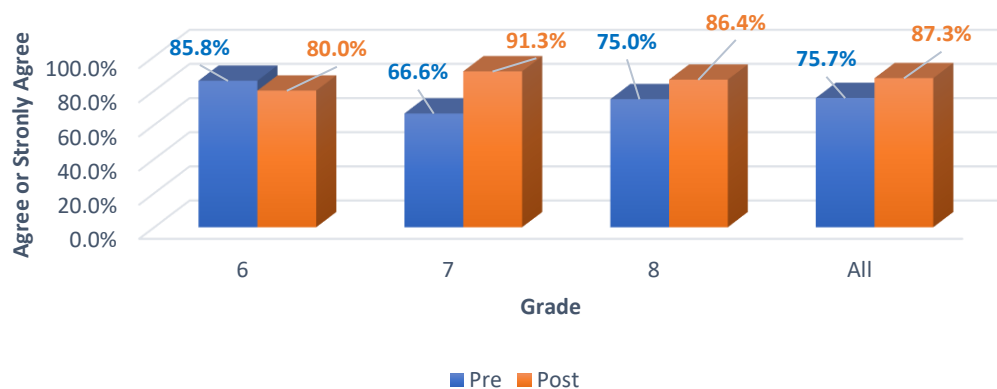
In 2019-20 the sixth and eighth graders reported a decline in their response rates from pre to post intervention assessments in believing that their bodies are sacred. The seventh graders had a 13.3% increase in their response rates. This increase was not statistically significant at the 0.05 alpha level [$Z = 0.715$, $p < 0.478$]. Overall that negative change of -5.4% from pre to post intervention which was not statistically significant at the 0.05 alpha level [$Z = -0.521$, $p < 0.603$].

I Believe My Body Is Sacred (Level 2) 2019-20



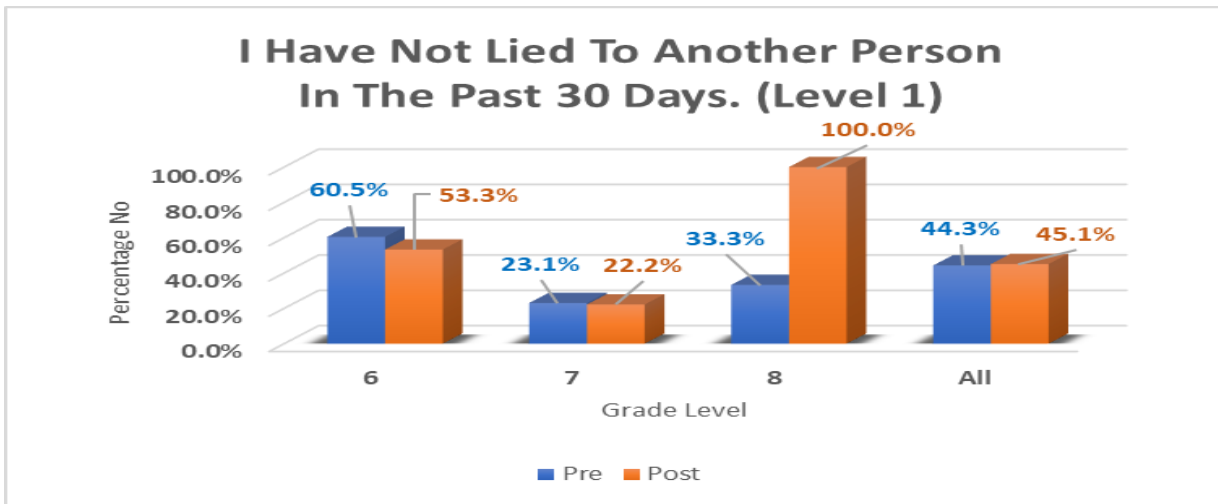
In 2019-20 the sixth graders reported a decline of -5.8% in their response rates from pre to post intervention assessments in believing that their bodies are sacred. The seventh graders had a +24.7% increase in their response rates and the eighth graders had +11.4% increase. These increases were not statistically significant at the 0.05 alpha level [$Z = 1.56, p < 0.119$; $Z = 0.940, p < 0.347$]. Overall, there was a positive change of +11.6% from pre to post intervention which was not statistically significant at the 0.05 alpha level [$Z = 1.401, p < 0.162$].

I Believe My Body Is Sacred (Level 3) 2019-20

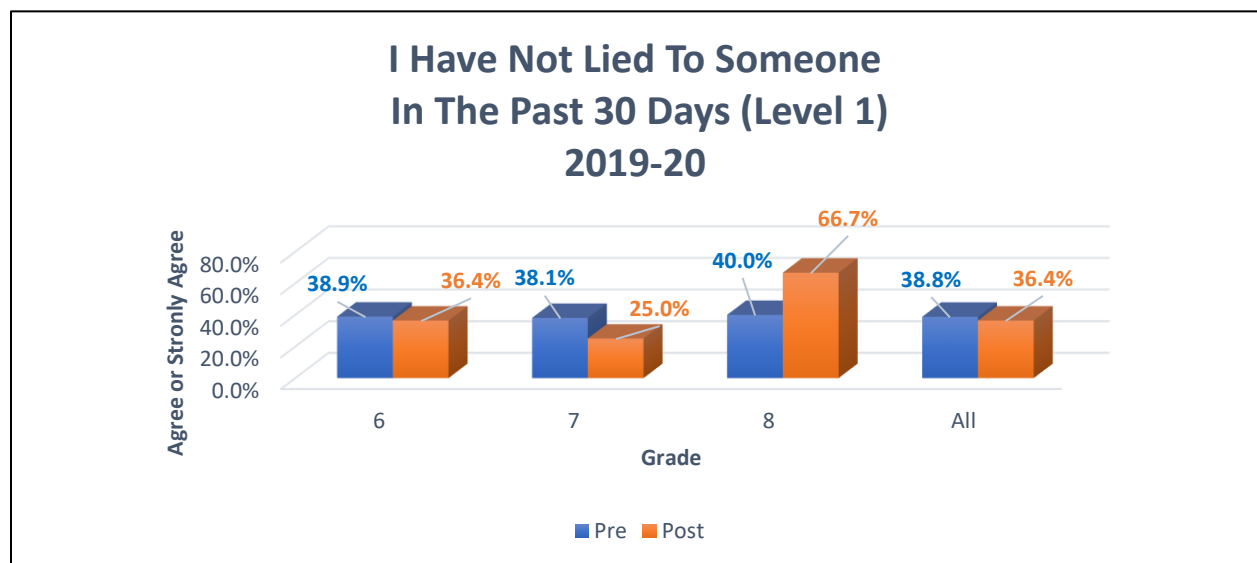


In the Past 30 Days I Have Lied to Someone

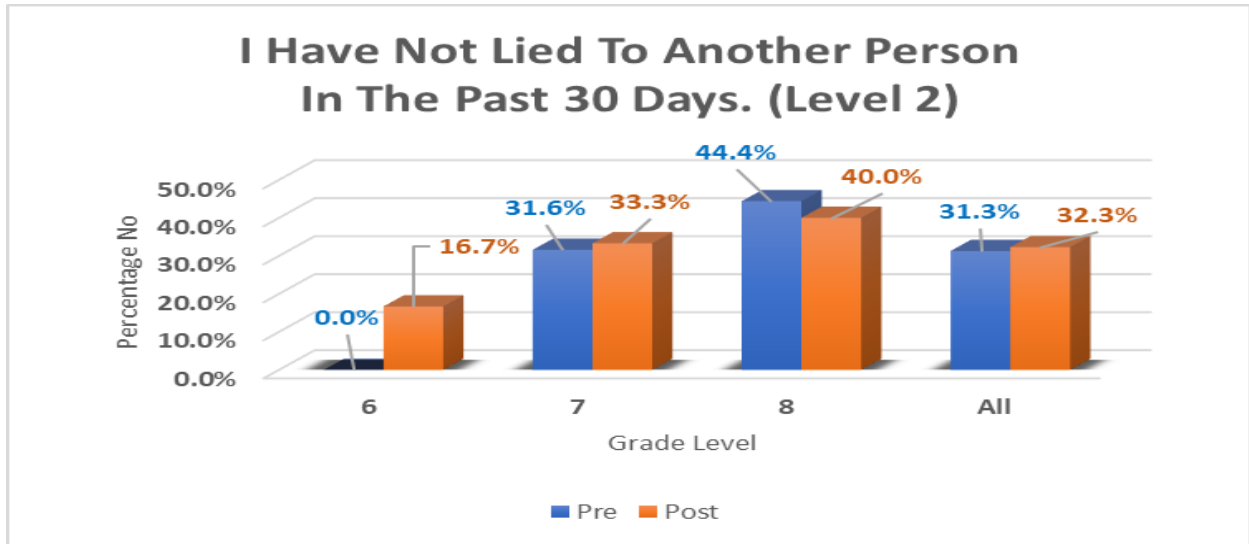
In 2018-19 the Level 1 eighth graders showed a 66.7% improvement in not lying in the past 30 days after participating in the LCH program. This change was not statistically significant because of the sample sizes ($n_{pre} = 6$ and $n_{post} = 3$). The sixth and seventh graders reported a decline of -7.2% and -0.9% respectively in not lying to someone in the past 30 days. These negative changes were not statistically significant at the 0.05 alpha level. The overall increase of 0.8% from pre to post intervention was not statistically significant at 0.05 alpha level [$Z = 0.0879$, $p < 0.930$].



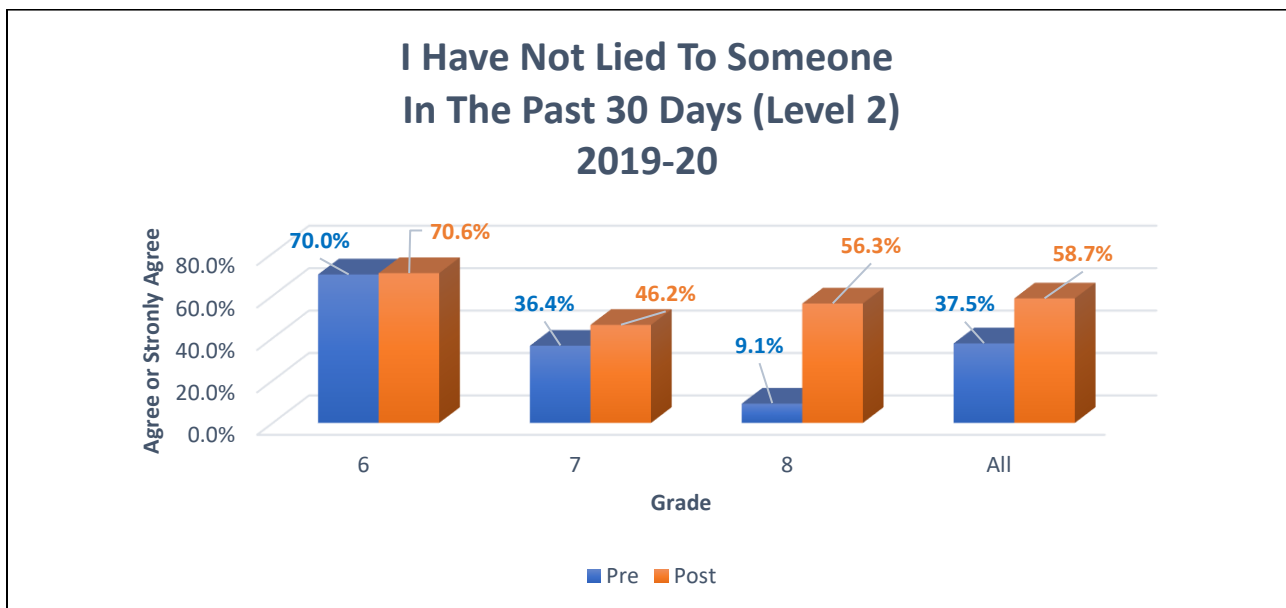
In 2019-20 the Level 1 eighth graders showed a 26.7% improvement in not lying in the past 30 days after participating in the LCH program. The sixth and seventh graders reported a decline of -2.5% and -13.1% respectively in not lying to someone in the past 30 days. These negative changes were not statistically significant at the 0.05 alpha level. The overall decreased of -2.4% from pre to post intervention was not statistically significant at 0.05 alpha level [$Z = -0.165$, $p < 0.873$].



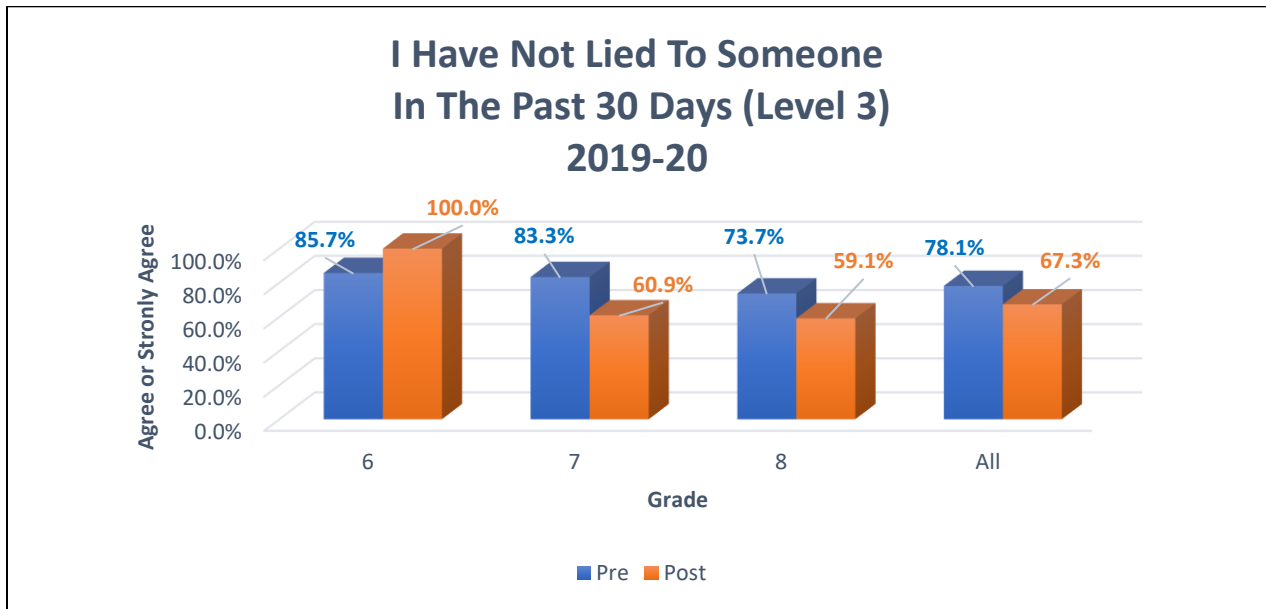
Except for the eighth graders in 2018-19, the sixth and seventh graders showed an improvement in their response rates from pre to post intervention assessments of 16.7% and 1.7% respectively. The 1.0% positive change for all Level 2 participants from pre to post intervention was not statistically significant at 0.05 alpha level [$Z = 0.0838$, $p < 0.933$].



All the Level 2 grades in 2019-20 showed an improvement in their response rates from pre to post intervention assessments in not lying to another person. The eighth graders showed the largest percentage improvement of 47.2% which statistically significant at the 0.05 alpha level [$Z = 2.495$, $p < 0.0124$]. Overall, there was a 21.2% positive change for all Level 2 participants from pre to post intervention which was statistically significant at 0.10 alpha level [$Z = 1.842$, $p < 0.0658$].



The Level 3 sixth graders in 2019-20 showed a +14.3% improvement in their response rates from pre to post intervention assessments in not lying to another person. The seventh and eighth graders showed the reported an increase in the lying to another person. The -22.4% change for the seventh graders was not statistically significant at the 0.05 alpha level [Z = -1.028, p < 0.303]. The -14.6% change for the eighth graders was not statistically significant at the 0.05 alpha level [Z = -0.983, p < 0.327]. Overall, there was a -10.8% positive change for all Level 3 participants from pre to post intervention which was statistically significant at 0.10 alpha level [Z = -1.085, p < 0.280].



Self-Esteem Composite Mean Score Analysis

A higher mean score for **Self-Esteem** is a favorable outcome. The Level 1 participants showed a decline in their mean scores of 5.7% from the pre to the post intervention assessments. The Level 2 participants showed an improvement in their self-esteem mean scores of 3.3%. All of the changes in the mean scores were not statistically significant at the 0.05 alpha level.

Self-Esteem Mean Score Comparison 2018-19						
		n	Mean	Standard Deviation	Student t-test	p
Level 1	Pre	70	6.13	2.16	-0.973 df = 119	0.333
	Post	51	5.78	1.74		
	Percent Change		-5.7%			
Level 2	Pre	32	6.31	2.40	0.310 df = 61	0.757
	Post	31	6.52	2.78		
	Percent Change		+3.3%			

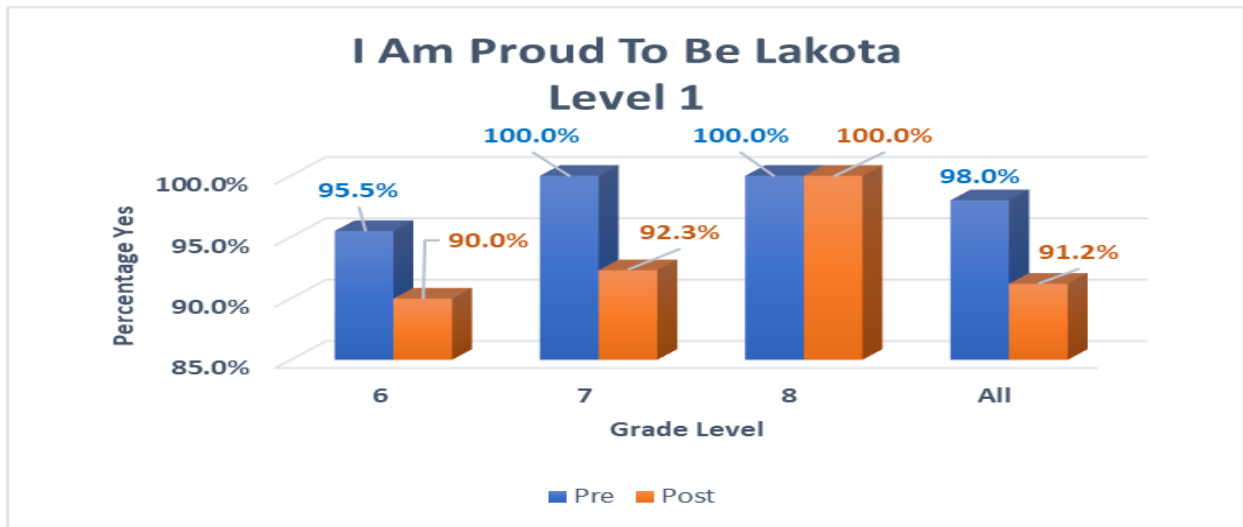
In 2019-20 the Level 1 participants showed an improvement in their mean scores by +2.9% from the pre to the post intervention assessments. The Level 2 participants showed a decline in their self-esteem mean scores of -1.3% and the Level 3 participants had a similar decline of -1.4%. The changes in the mean scores for all levels were not statistically significant at the 0.05 alpha level.

Self-Esteem Mean Score Comparison 2019-20						
		n	Mean	Standard Deviation	Student t-test	p
Level 1	Pre	49	11.31	2.20	0.635 df = 69	0.528
	Post	22	11.64	1.56		
	Percent Change		+2.9%			
Level 2	Pre	32	12.53	2.16	-0.322 df = 76	0.748
	Post	46	12.37	2.19		
	Percent Change		-1.3%			
Level 3	Pre	32	13.31	1.40	-0.446 df = 85	0.657
	Post	55	13.12	2.09		
	Percent Change		-1.4%			

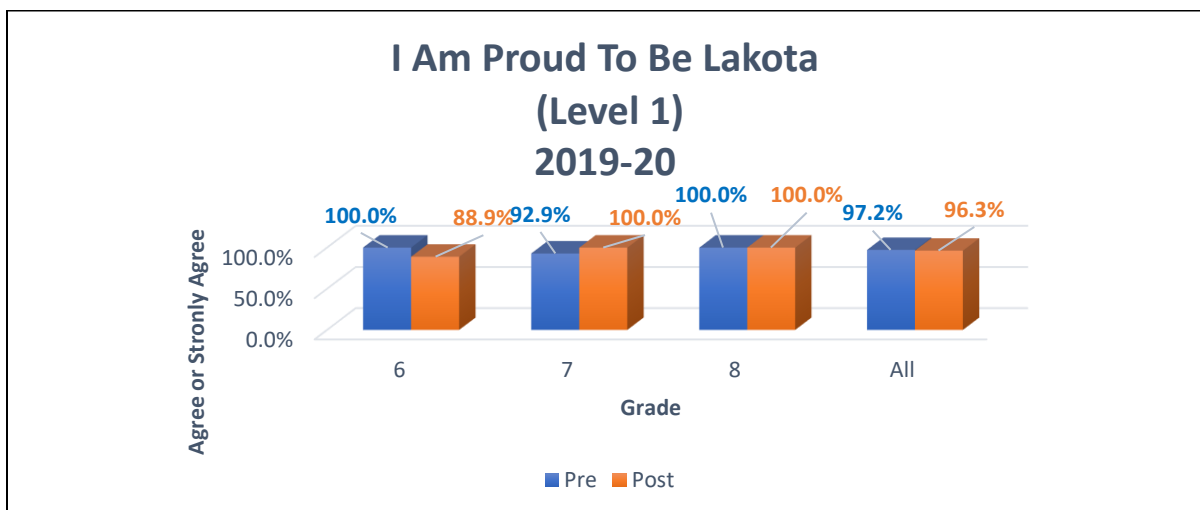
Lakota Identity

I Am Proud To Be Lakota or Dakota

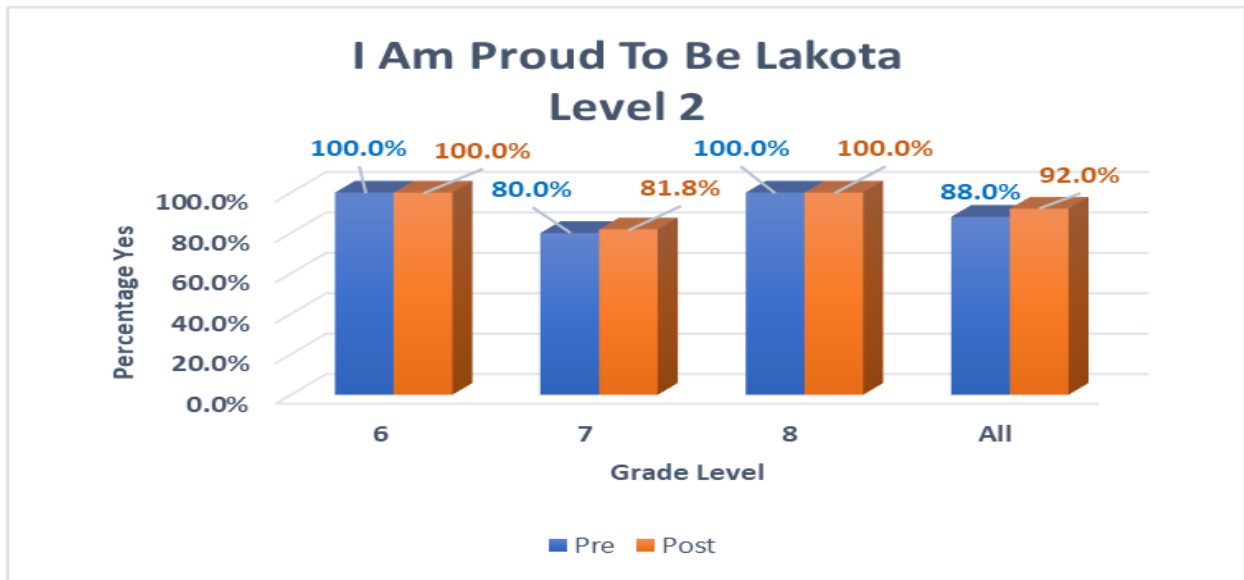
Except for the Level 1 eighth graders in 2018-2019, the sixth and seventh graders after participating in the LCH program reported a decline in their response rates of being proud of being Lakota or Dakota at the pre and the post intervention assessments. The eighth graders remained at 100% at the pre and post intervention assessments. The -6.8% decline from pre to post intervention for the whole sample size was not statistically significant at the 0.05 alpha level [$Z = -1.583, p < 0.114$].



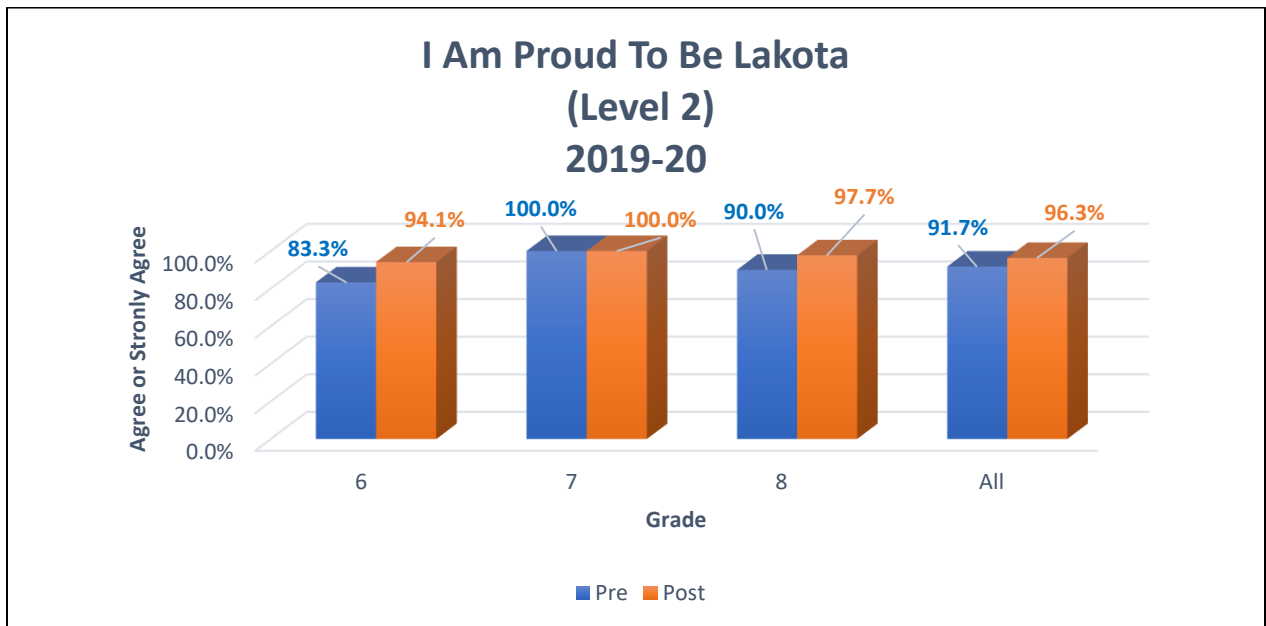
Except for the Level 1 sixth graders in 2019-2020, the seventh graders after participating in the LCH program reported an improvement in their response rates of being proud of being Lakota or Dakota at the pre and the post intervention assessments while the eighth graders remained at 100% at the pre and post intervention assessments. The -0.9% decline from pre to post intervention for the whole sample size was not statistically significant at the 0.05 alpha level [$Z = -0.174, p < 0.865$].



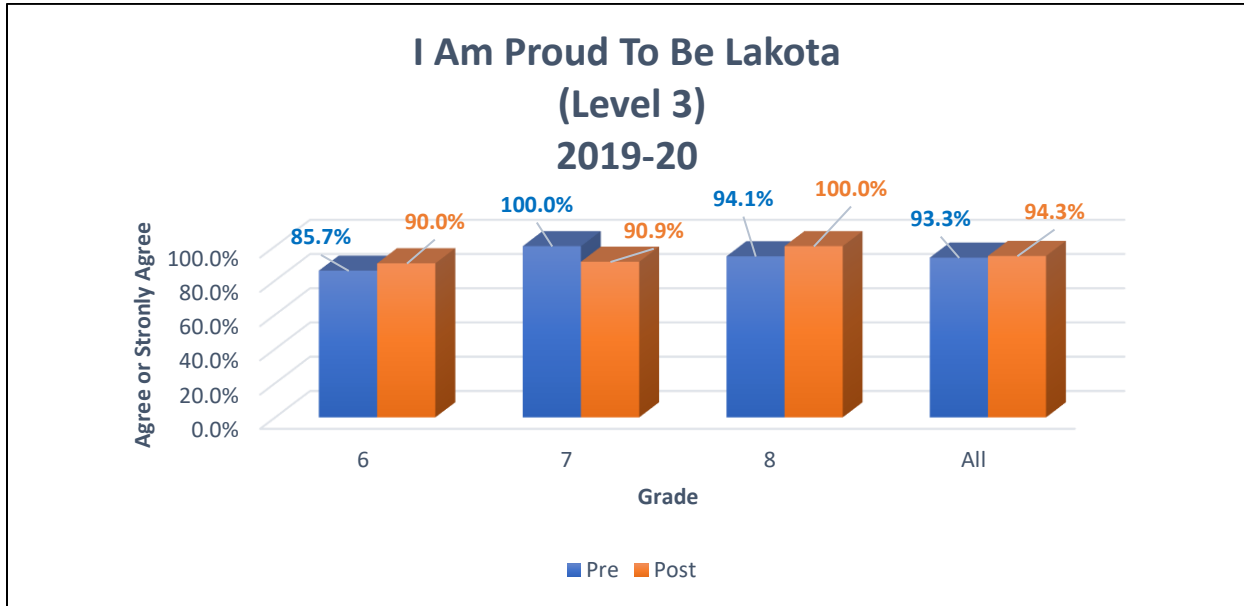
In 2018-29 all of the response rates in Level 2 showed a positive improvement from pre to post intervention assessments in being proud to be Lakota or Dakota. The sixth and eighth graders remained at the 100% response rate in the pre and post intervention assessments. The 4.0% improvement for all of the Level 2 respondents was not statistically significant at the 0.05 alpha level [$Z = 0.523$, $p < 0.601$].



In 2019-20 all of the response rates in Level 2 showed a positive improvement from pre to post intervention assessments in being proud to be Lakota or Dakota. The seventh graders remained at the 100% response rate in the pre and post intervention assessments. The 4.6% improvement for all of the Level 2 respondents was not statistically significant at the 0.05 alpha level [$Z = 0.807$, $p < 0.418$].

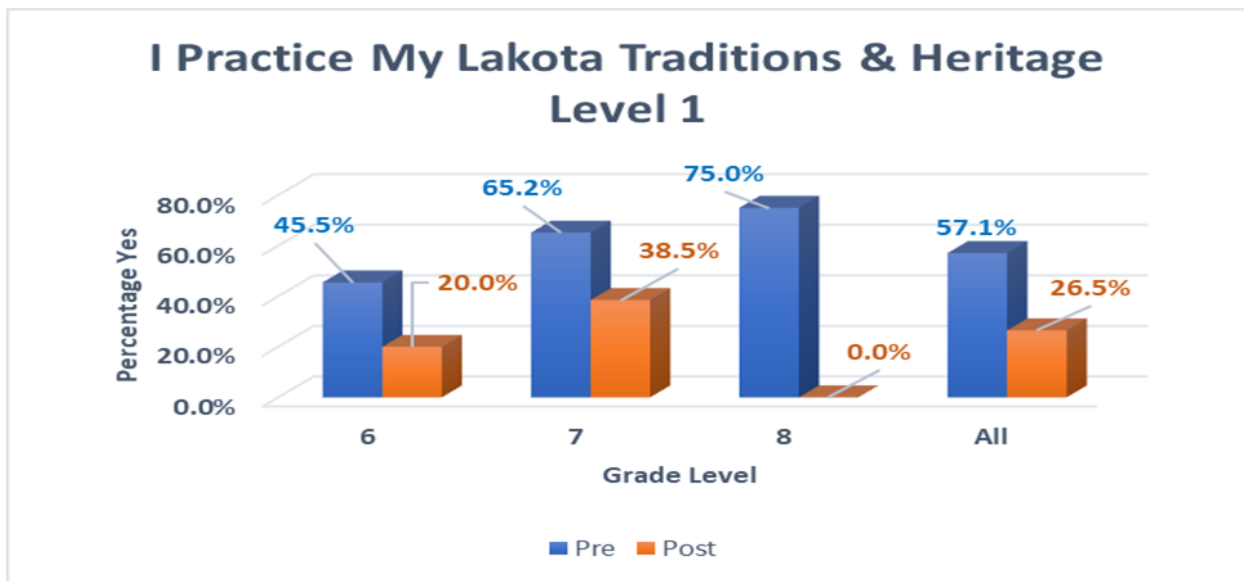


Except for the seventh graders in 2019-20 the sixth and eighth grade response rates in Level 3 showed a positive improvement from pre to post intervention assessments in being proud to be Lakota or Dakota. The seventh graders showed a -9.1% decline in the response rate from pre to post intervention assessments. The +1.0% improvement for the Level 3 respondents was not statistically significant at the 0.05 alpha level [$Z = 0.183, p < 0.857$].

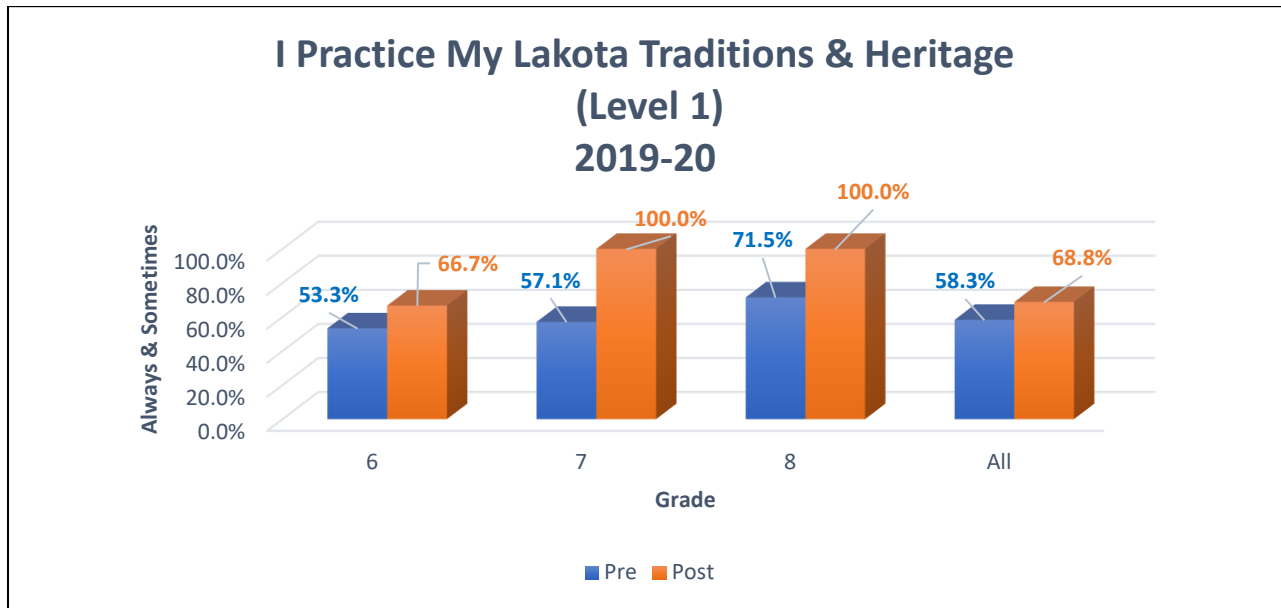


I Practice My Lakota or Dakota Traditions

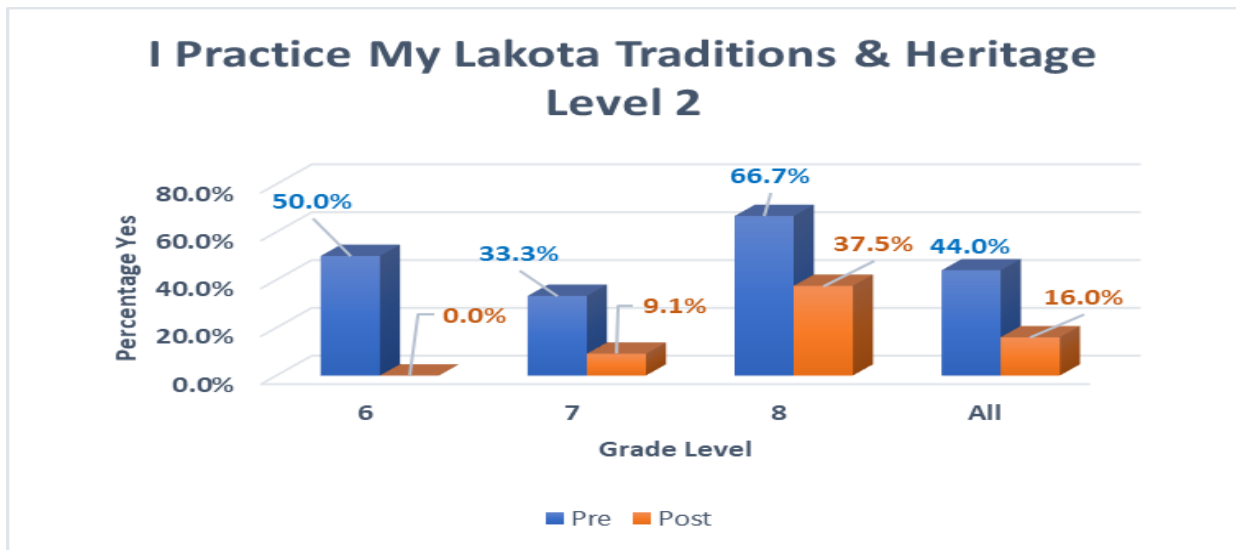
In 2018-19 all of the response rates in Level 1 showed a decline from pre to post intervention assessments in practicing Lakota traditions and heritage. The -30.6% decline for all of the Level 1 respondents was statistically significant at the 0.01 alpha level [$Z = -3.601, p < 0.0003$].



In 2019-20 all of the response rates in Level 1 showed an improvement from pre to post intervention assessments in practicing Lakota traditions and heritage. The 10.5% increase from pre to post assessment for all of the Level 1 respondents was not statistically significant at the 0.05 alpha level [Z = 0.718, p < 0.472].

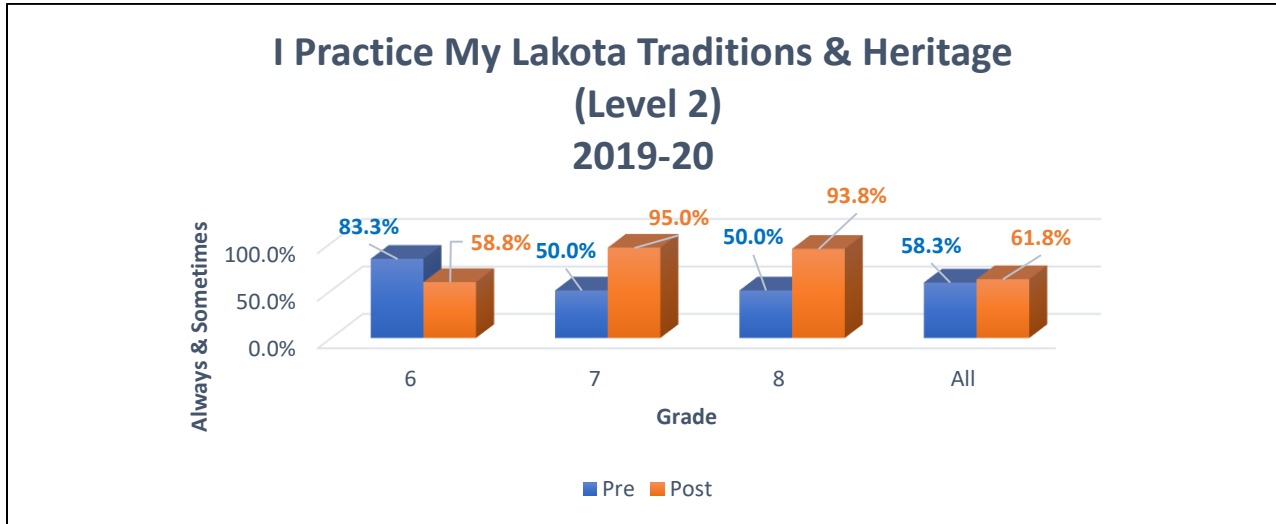


In 2018-19 all of the response rates in Level 2 showed a decline from pre to post intervention assessments in practicing the respondents Lakota traditions and heritage. The -28.0% decline for all of the Level 2 respondents was statistically significant at the 0.05 alpha level [Z = -2.511 p < 0.012].

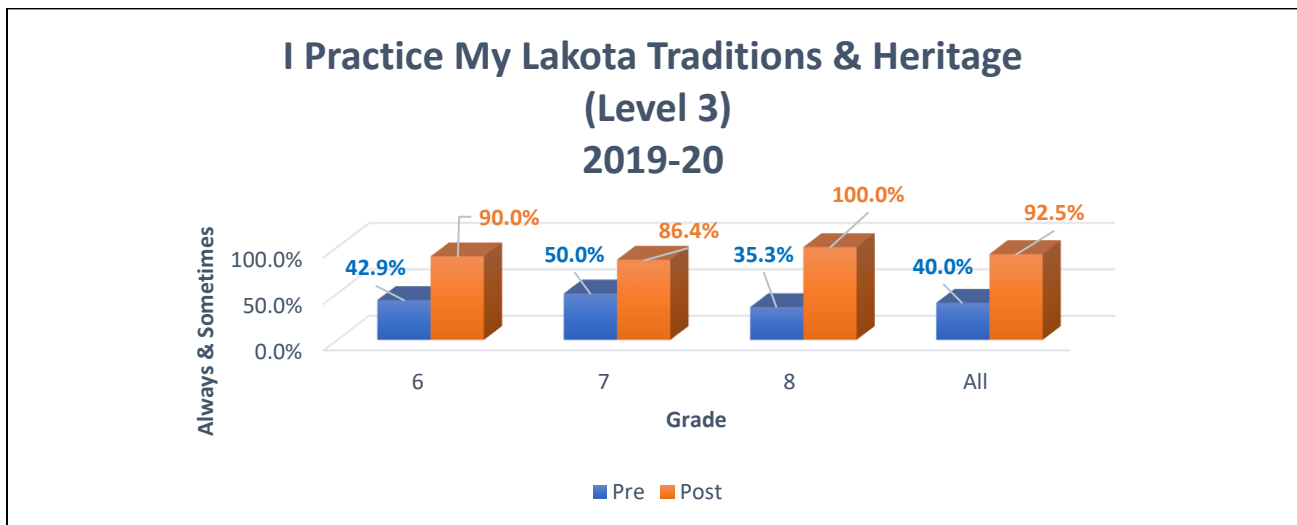


In 2019-20 the seventh and eighth graders in Level 2 showed an improvement from pre to post intervention assessments in practicing the respondents Lakota traditions and heritage. The sixth graders

showed -24.5% decline which was not statistically significant at the 0.05 alpha level [$Z = -1.083$, $p < 0.280$]. The seventh graders showed a 45.0% improvement which was statistically significant at the 0.01 alpha level [$Z = 2.639$, $p < 0.0083$]. The eighth graders showed a 43.8% improvement which was statistically significant at the 0.01 alpha level [$Z = 2.580$, $p < 0.0099$]. The overall 3.5% improvement the Level 2 respondents was statistically significant at the 0.05 alpha level [$Z = 2.099$, $p < 0.0357$].



In 2019-20 all the grades in Level 3 showed an improvement from pre to post intervention assessments in practicing the respondents Lakota traditions and heritage. The sixth graders showed +47.1% increase which was statistically significant at the 0.05 alpha level [$Z = 2.10$, $p < 0.0357$]. The seventh graders showed a +36.4% improvement which was statistically significant at the 0.10 alpha level [$Z = 1.927$, $p < 0.0536$]. The eighth graders showed a +64.7% improvement which was statistically significant at the 0.01 alpha level [$Z = 4.37$, $p < 0.0001$]. The overall +52.5% improvement for the Level 3 respondents was statistically significant at the 0.01 alpha level [$Z = 5.21$, $p < 0.0001$].



Lakota Identity Composite Score Analysis

A lower mean score for **Lakota Identity** is a favorable outcome. In 2018-19 the Level 2 participants showed an improvement in their Lakota Identity mean scores by 1.6%. The Level 1 showed a positive change in the Lakota Identity mean score of 13.4%. This change was statistically significant at the 0.05 alpha level. The Level 2 change in the mean scores was statistically significant at the 0.05 alpha level.

Lakota Identity Mean Score Comparison 2018-19						
		n	Mean	Standard Deviation	Welch t-test	p
Level 1	Pre	49	4.25	1.217	2.063 df = 81	0.0423*
	Post	34	4.82	1.314		
	Percent Change		+13.4%			
Level 2	Pre	25	4.88	1.716	-0.199 df = 48	0.843
	Post	25	4.80	1.041		
	Percent Change		-1.6%			

In 2019-20 the Level 1 participants showed an improvement in their Lakota Identity mean scores by 9.6%. The Level 2 showed a change in the Lakota Identity mean scores of -4.2% which indicates an increase in Lakota Identity. This change was not statistically significant at the 0.05 alpha level. The Level 3 mean scores changed by 20.3% and was found to be statistically significant at the 0.01 alpha level.

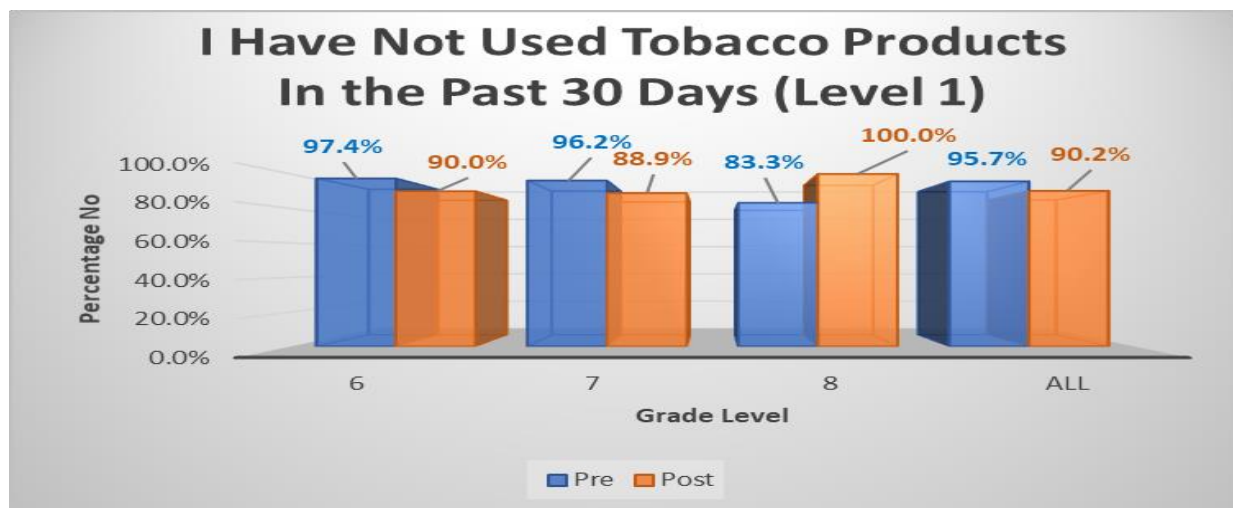
Lakota Identity Mean Score Comparison 2019-20						
		n	Mean	Standard Deviation	Welch t-test	p
Level 1	Pre	36	3.14	0.867	1.063 df = 50	0.298
	Post	16	3.44	0.964		
	Percent Change		+9.6%			
Level 2	Pre	24	3.08	1.060	-0.519 df = 68	0.607
	Post	44	2.95	0.806		
	Percent Change		-4.2%			
Level 3	Pre	30	3.50	1.07	-3.478 df = 81	0.0008*
	Post	53	2.79	0.769		
	Percent Change		-20.3%			

Risk Behaviors

The earlier appropriate decision-making tools are introduced to youth so good habits can be established with the probability of poor choices in early and middle age adolescence is reduced. Many studies document how substance use, anti-social behaviors, and depression prevalence, intentions, and practices increase with grade level at a moderate increase between the 4th to 6th grades and a larger increase between the 7th and 8th grades. Thus, the Lakota Circles of Hope program and the Ateyapi Wicozani activities are an age appropriate intervention scaled to the depth and understanding of particular topics distributed throughout the year long prevention program. Additionally, families and communities are embedded as a major component of the curriculum. It is realized that they have a great effect on child rearing practices, attitudes, values and behaviors which may in turn influence whether children will abuse drugs, be involved in violence or antisocial behavior, or consider suicide. The children are encouraged to share what they have learned with their parents, families, and trusted adults, which in turn serves to reinforce what has been taught and learned in the classroom.^{19,20}

Use of Tobacco Products in the Past 30 Days

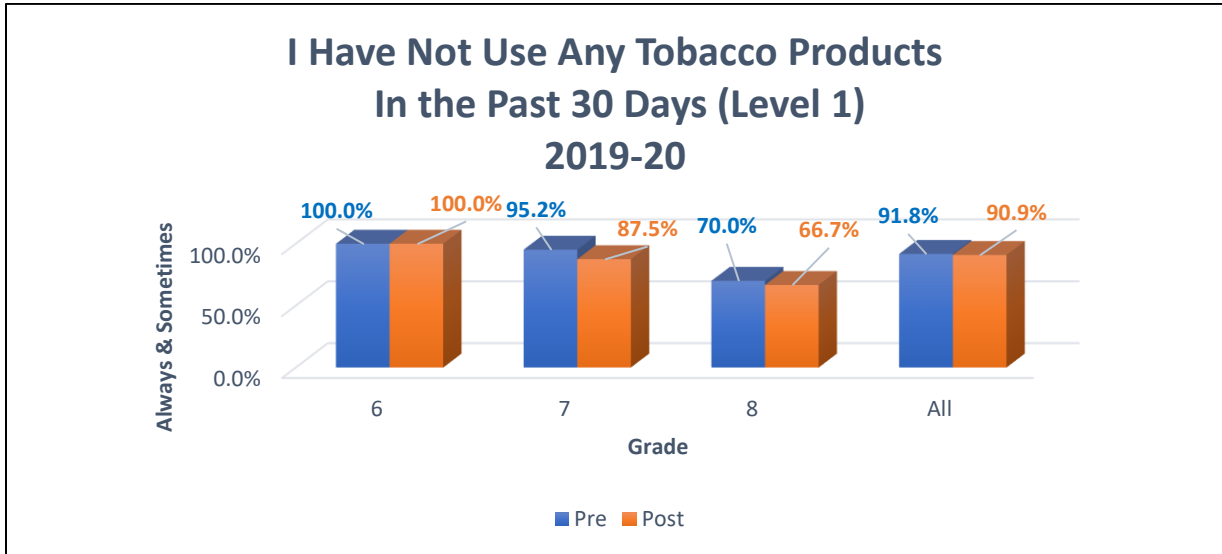
All of the Level 1 grades in 2018-19 reported an increase in the use products in the past 30 days from the pre to the post intervention assessments except in the eighth grade. The nonuse of tobacco products increased from 83.3% to 100% in the eighth grade, an improvement of a 16.7% in the response rate. The overall decrease of -5.5% response rate from pre to post intervention was not statistically significant at the 0.05 alpha level [$Z = -1.146, p < 0.252$].



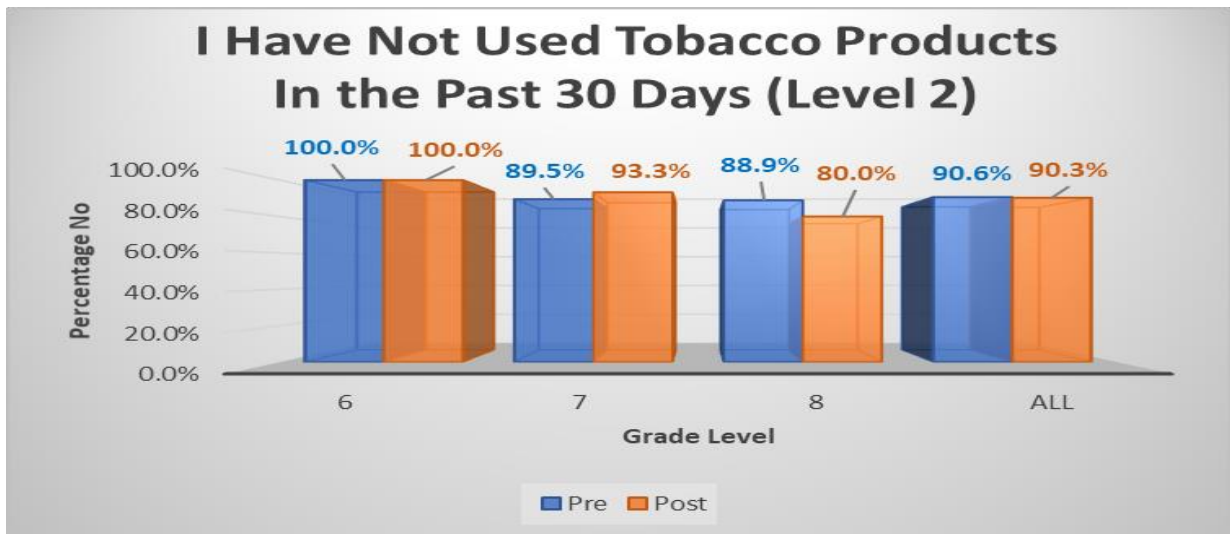
¹⁹ Lowe J., Liang H., Riggs C. & Henson J. (2012). Community partnership to affect substance abuse among Native American adolescents. *American Journal of Drug and Alcohol Abuse*, 38(5), 450-455.

²⁰ McKennitt, D. & Currie, C. (2012). Does a cultural sensitive smoking prevention program reduce smoking intentions among aboriginal children?: A pilot study. *American Indian and Alaska Native Mental Health Research*, 19(2), 55-63. doi: 10.5820/aian.1902.2012.55

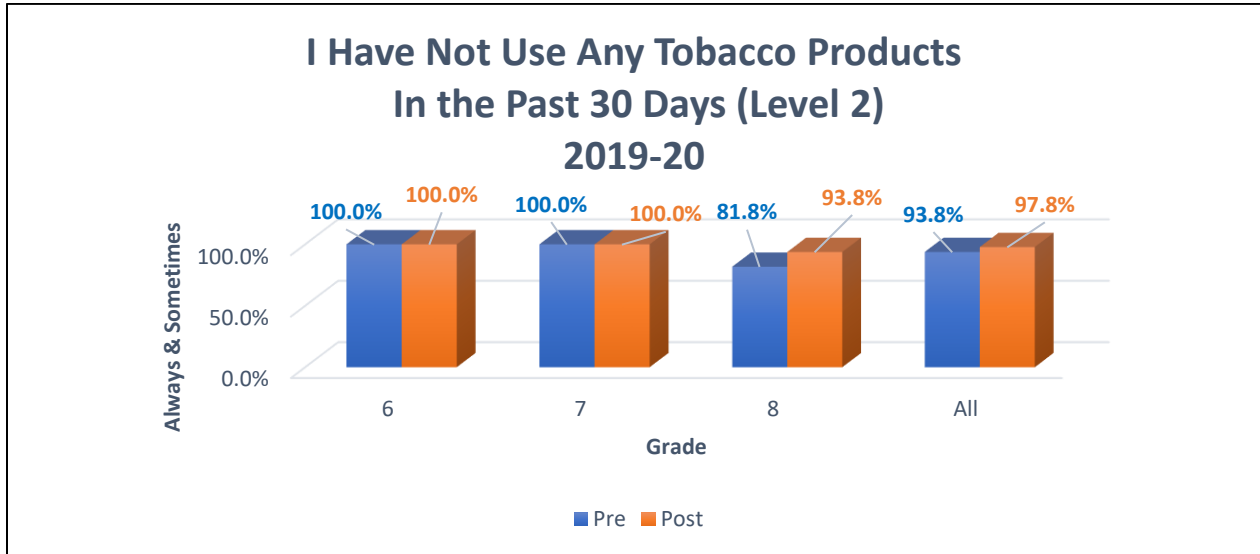
In 2019-20, only the sixth graders in Level 1 reported no use of tobacco products at the pre and post intervention assessment. The seventh and eighth graders reported an increase in the rate in the use of tobacco products in the past 30 days from the pre to the post intervention assessments. Overall, the decrease in non-use of tobacco products from pre to post intervention was not statistically significant at the 0.05 alpha level [$t(69) = -0.118, p < 0.907$].



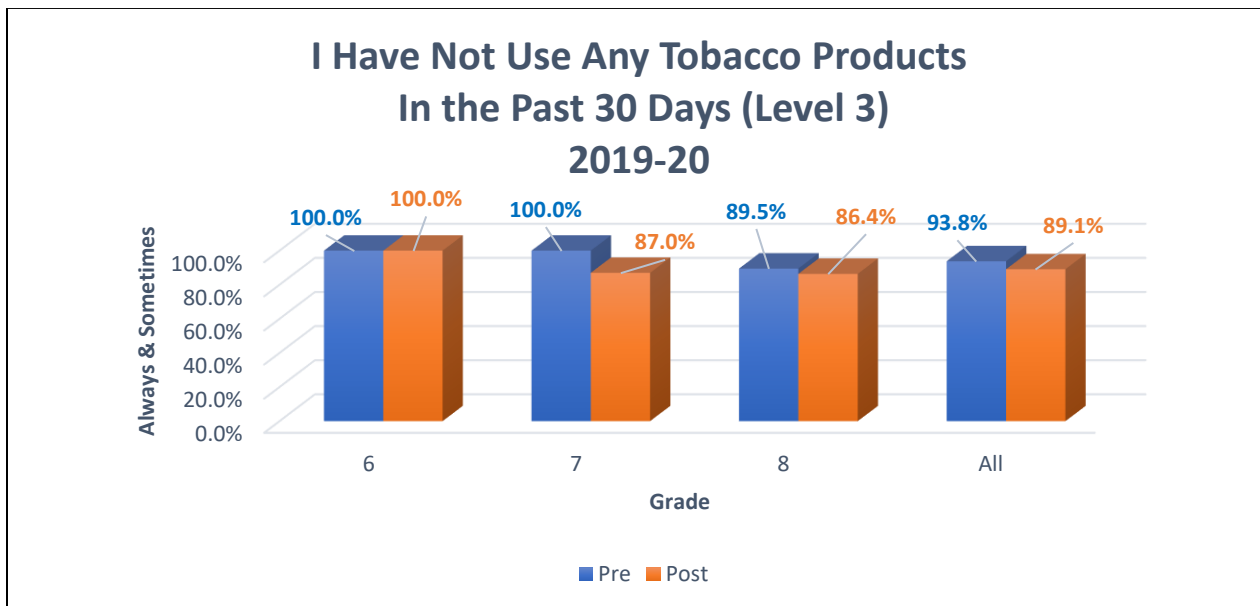
In 2018-19 the Level 2 the sixth and seventh grades reported an increase in the non-use of tobacco products from pre to post intervention assessments. The eighth grade reported a decrease of 8.9% from pre to post intervention in the non-use of tobacco products. Overall, there was 0.3% decrease in the non-use of tobacco products. This change was not statistically significant at the 0.05 alpha level [$Z = -0.0399, p < 0.968$].



In 2019-20 the Level 2 the sixth and seventh grades reported no use of any tobacco products at pre and post intervention assessments. The eighth grade reported a decrease of 8.9% from pre to post intervention in the non-use of tobacco products. At post intervention 6.2% of the respondents reported using tobacco products in the past 30 days. Overall, there was 4.0% decrease in the use of tobacco products. This change was not statistically significant at the 0.05 alpha level [$Z = 0.904, p < 0.368$].

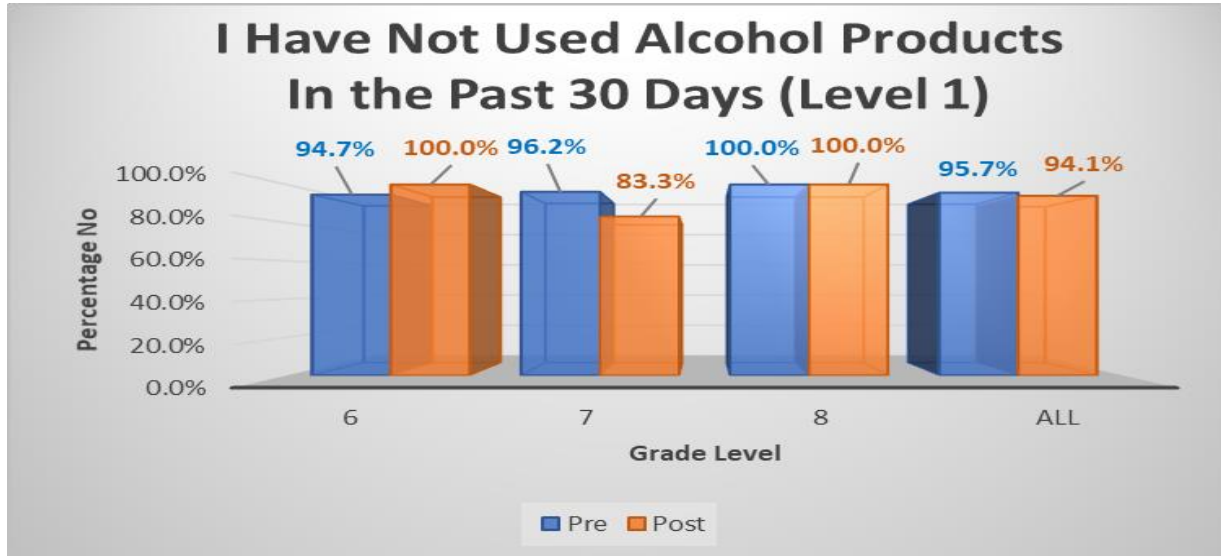


In 2019-20 the Level 3 the sixth graders reported no use of any tobacco products at pre and post intervention assessments. The seventh and eighth graders reported a decrease of -13.0% and -3.1% from pre to post intervention in the non-use of tobacco products. Overall, there was a 4.7% increase in the use of tobacco products or a total of 10.9% use of tobacco in the past 30 days. This change was not statistically significant at the 0.05 alpha level [$Z = -0.732, p < 0.465$].

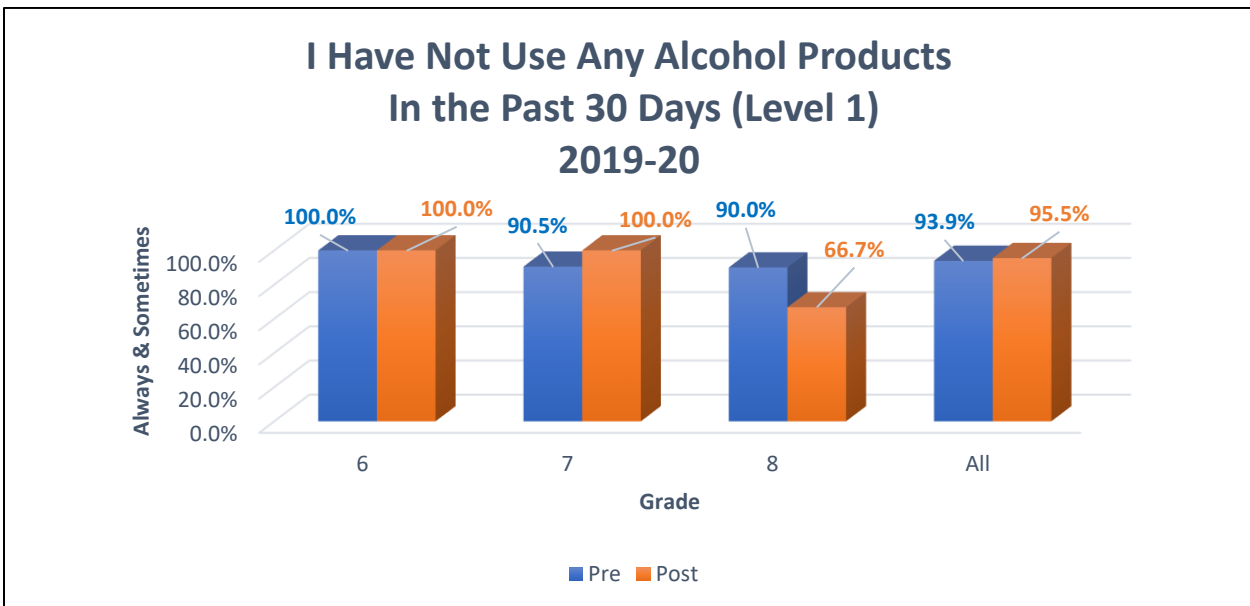


Use of Alcohol Products in the Past 30 Days

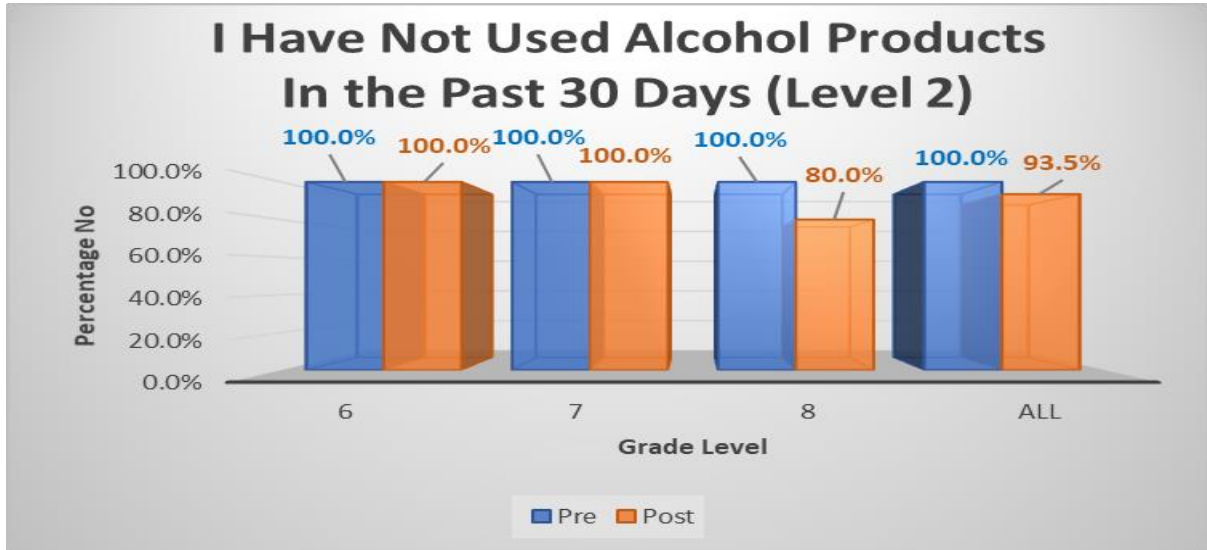
In 2018-19 the sixth and eighth grades in Level showed an improvement to a 100% non-use of alcohol in the past 30 days at post intervention. The seventh graders declined by 12.9% in the non-use of alcohol from pre to post intervention assessments. Overall, there was a -1.6% decline in the non-use of alcohol product. This change was not statistically significant at the 0.05 alpha level [$Z = -0.393, p < 0.695$].



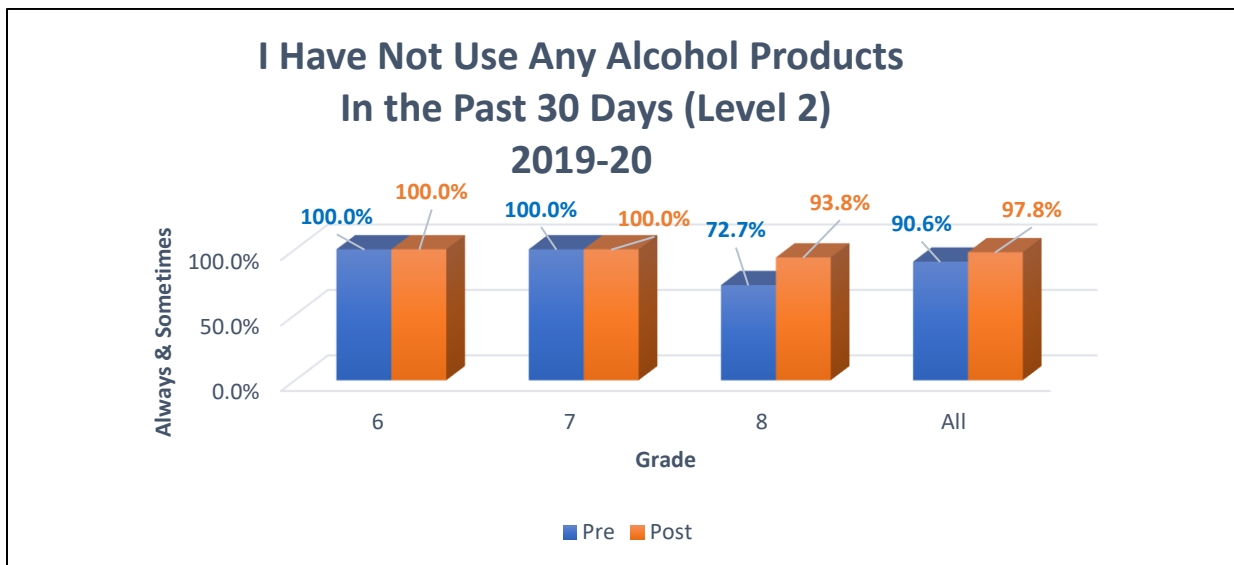
In 2019-20 the sixth and seventh graders in Level 1 showed an improvement to a 100% non-use of alcohol in the past 30 days at post intervention. The eighth graders declined by 23.3% in the non-use of alcohol from pre to post intervention assessments. Overall, there was a +1.6% improvement in the non-use of alcohol product. This change was not statistically significant at the 0.05 alpha level [$t(69) = 0.455, p < 0.651$].



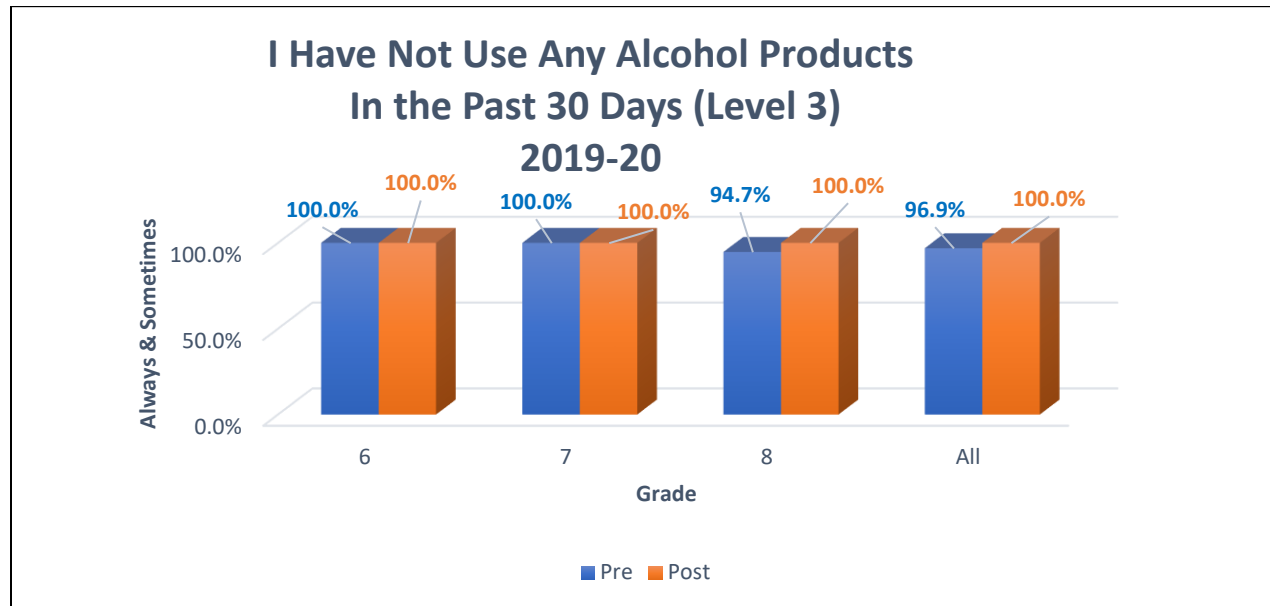
Except for the eighth graders in 2018-19 the Level 2 respondents for sixth and seventh grades was 100% response rate of no use of alcohol in the past 30 days from the pre to post intervention assessments. The eighth grades showed a 20% decline in the non-use of alcohol. Overall, there was a -6.5% decline in the non-use of alcohol products in the past 30 days in which the negative change was not statistically significant at 0.05 alpha level [$Z = -1.444$, $p < 0.149$].



In 2019-20 the sixth and eighth graders reported no use of any alcohol products at pre and post intervention. The eighth grades showed a 21.1% decline in the use of alcohol. This change positive change was not statistically significant at the 0.05 alpha level [$Z = 1.517$, $p < 0.129$]. Overall, there was a +7.2% improvement in the non-use of alcohol products in the past 30 days in which the change was not statistically significant at 0.05 alpha level [$Z = 1.415$, $p < 0.159$].

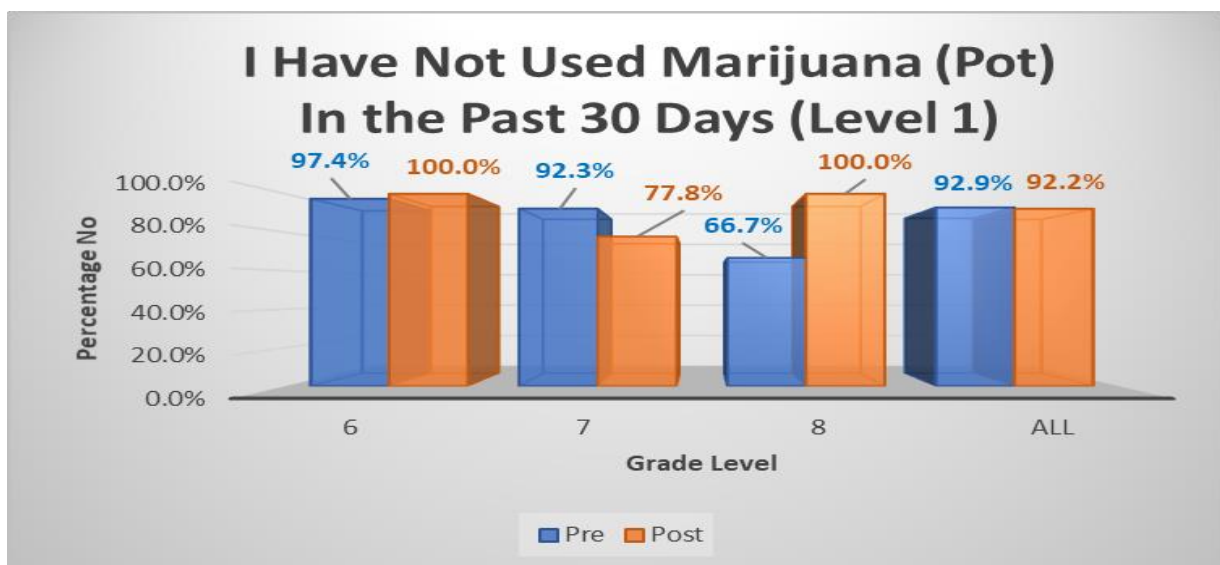


In 2019-20 the sixth and seventh graders in Level 3 reported no use of any alcohol products at pre and post intervention. The eighth grades showed a +5.3% increase in the no use of alcohol. Overall, there was a +3.1% increase in the nonuse of alcohol products in the past 30 days which was not statistically significant at 0.05 alpha level [$Z = 1.31, p < 0.190$].

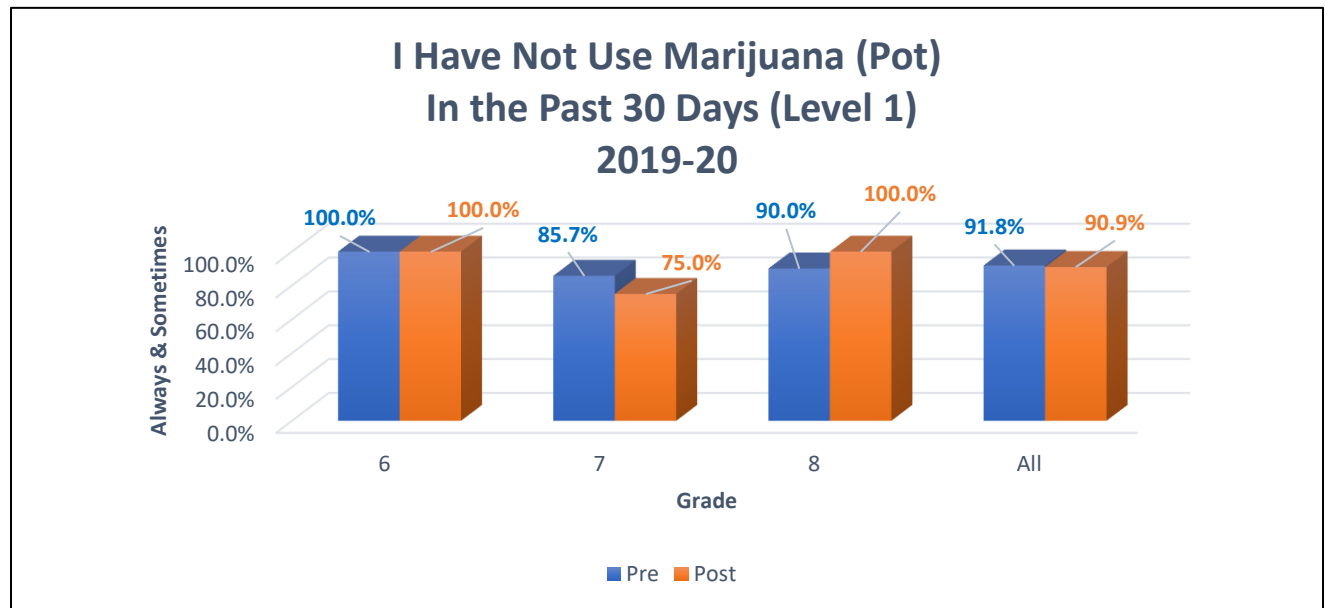


Use of Marijuana (pot) in the Past 30 Days

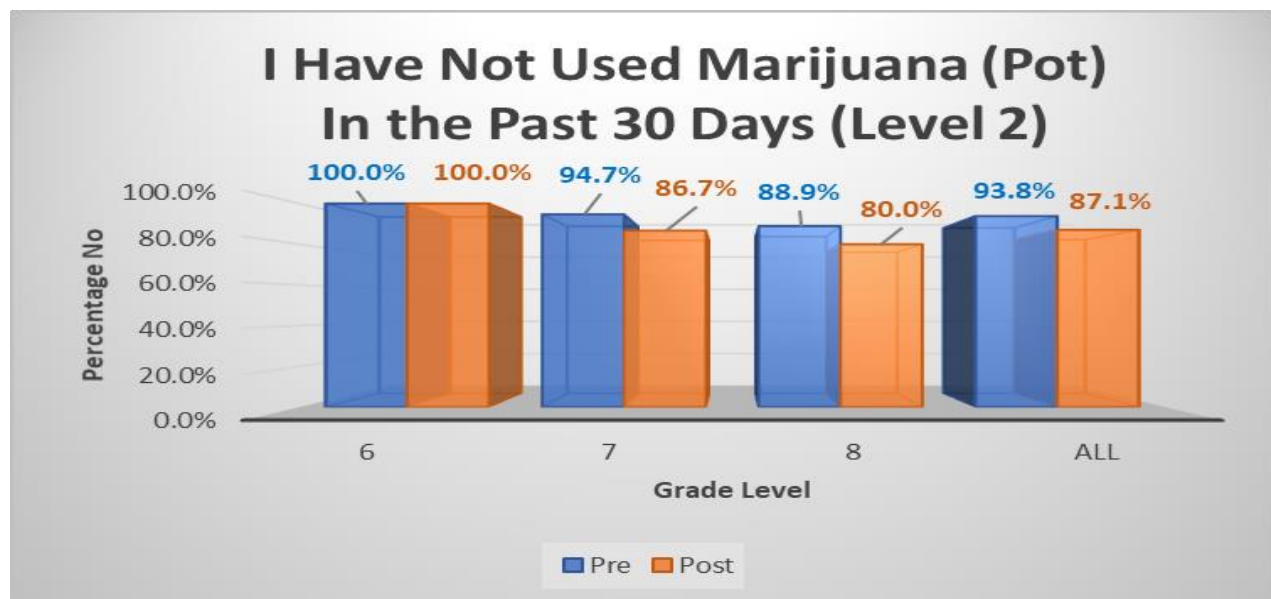
In 2018-19 the sixth and eighth grades showed an improvement at post intervention of 100% non-use of marijuana in the past 30 days. There was a -14.5% change for the seventh graders from pre to post intervention. Overall, there was -0.7% decline in the non-use of marijuana in the past 30 days. This change was not statistically significant at the 0.05 alpha level [$Z = -0.145, p < 0.885$].



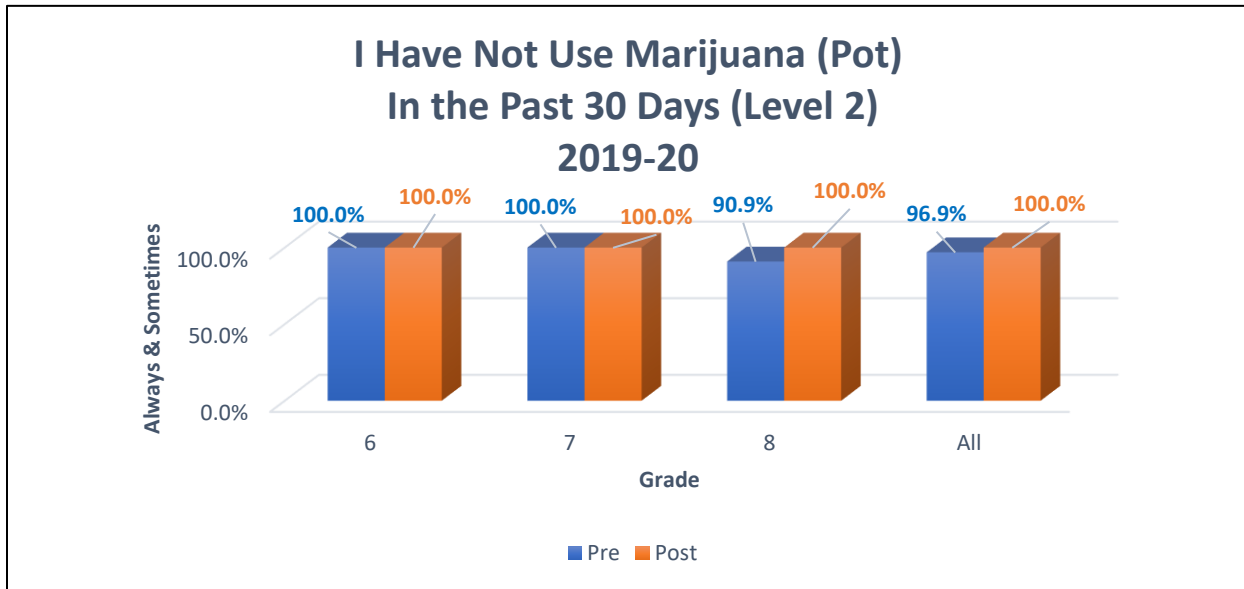
In 2019-20 the sixth and eighth grades showed an improvement at post intervention of 100% non-use of marijuana in the past 30 days. There was a -10.7% change for the seventh graders from pre to post intervention. Overall, there was -0.9% decline in the non-use of marijuana in the past 30 days. This change was not statistically significant at the 0.05 alpha level [$t(69) = -0.686, p < 0.495$].



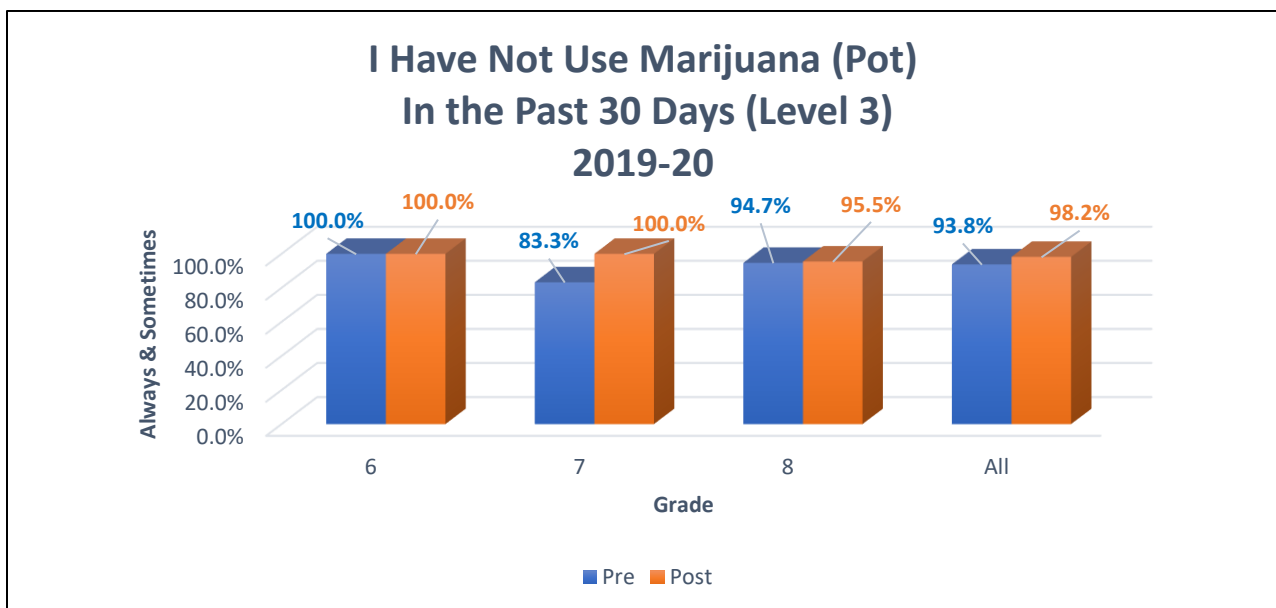
Except for the Level 2 sixth graders in 2018-19 there was a decline in the non-use of marijuana in the past 30 days from pre to post intervention assessments. There was an overall decline of -6.7% in the response rate in the non-use of marijuana from pre to post intervention. This negative change was not statistically significant at the 0.05 alpha level [$Z = -0.894, p < 0.372$ Cohen's $h = 0.22 \Rightarrow$ small effect size;].



In 2019-20 all the Level 2 respondents for all three grades report no use of marijuana at the post intervention assessment. The eighth grades report 9.1% improvement in not using marijuana in the past 30 days. Overall, there 3.1% positive change in marijuana use in the past 30 days from pre to post intervention. The change was not statistically significant at the 0.05 alpha level [$Z = 1.201, p < 0.230$].

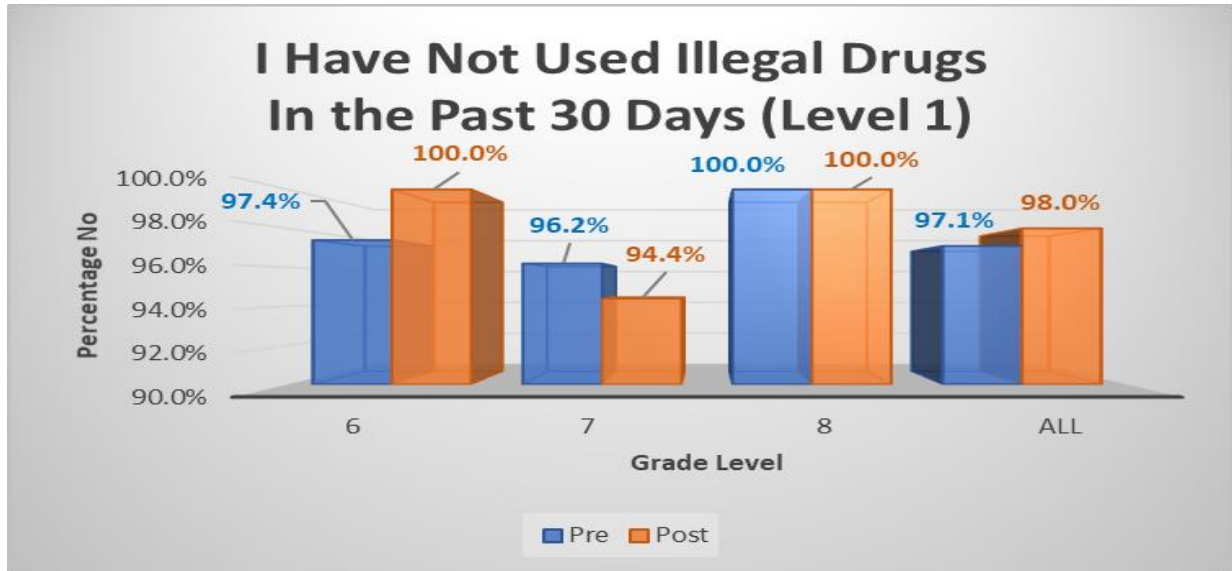


In 2019-20 all the Level 3 sixth grade respondents reported no use of marijuana at the pre and post intervention assessment. The seventh grade showed a +16.7% improvement and the eighth grades reported +0.80% improvement in not using marijuana in the past 30 days. Overall, there +4.4% positive change in the nonuse of marijuana in the past 30 days from pre to post intervention. The change was not statistically significant at the 0.05 alpha level [$Z = 1.09, p < 0.276$; Cohen's $d = 0.24 \Rightarrow$ small effect size].

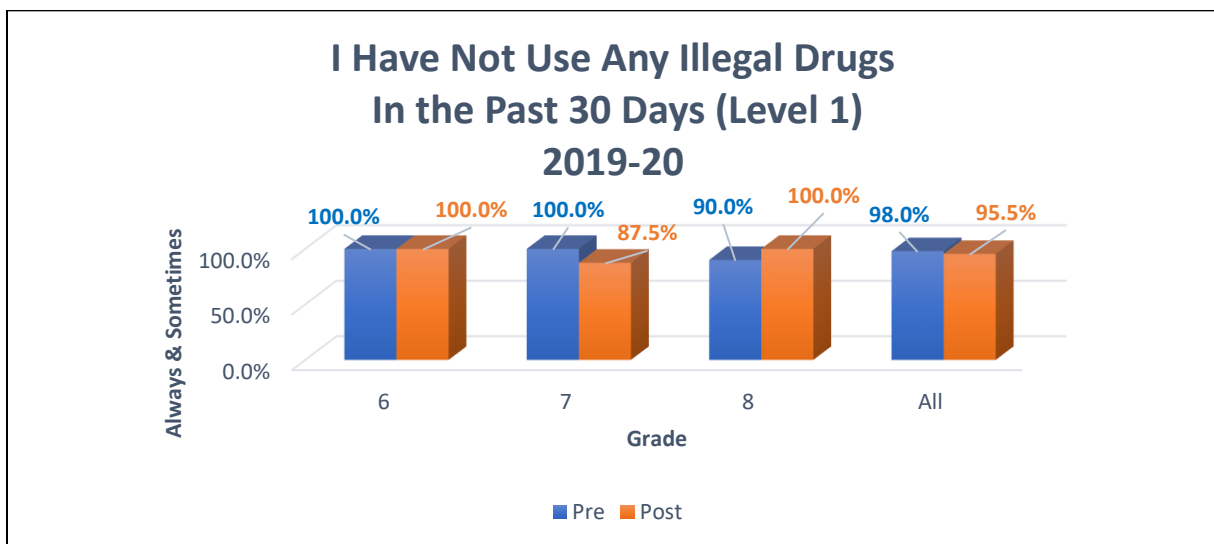


Use of Illegal Drugs in the Past 30 Days

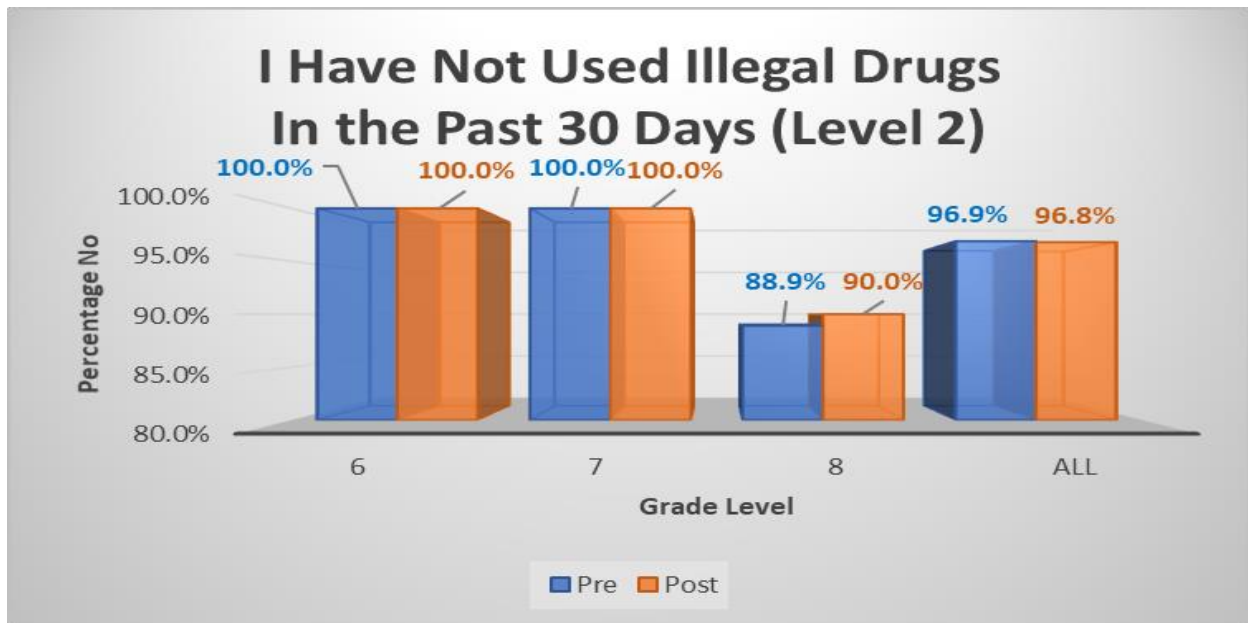
Except for the Level 1 seventh graders in 2018-19 the participants in the sixth and eighth grades reported a 100% non-use of illegal drugs in the past 30 day at the post intervention assessment. There was an overall 0.9% change in response rate from pre to post intervention in the non-use of illegal drugs. This change was not statistically significant at the 0.05 alpha level [$Z = 0.323, p < 0.747$].



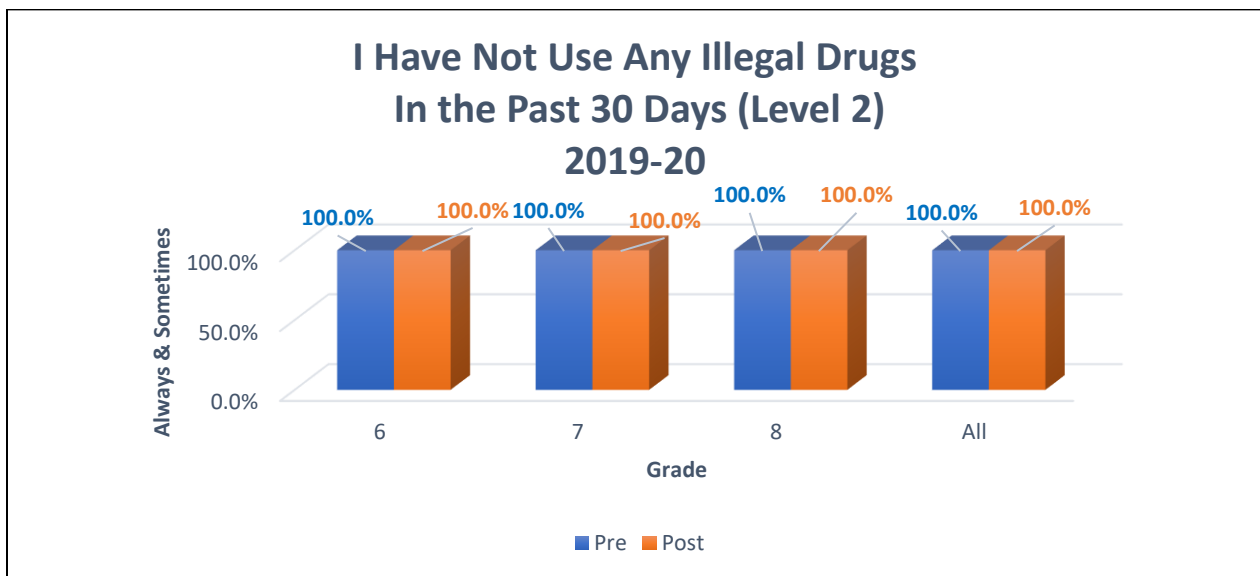
In 2019-20 the participants in the sixth and eighth grades reported a 100% non-use of illegal drugs in the past 30 day at the post intervention assessment. The seventh graders reported a 12.5% increase in the use of illegal drugs in the past 30 days. There was an overall decrease (-2.5%) in response rate from pre to post intervention in the non-use of illegal drugs. This change was not statistically significant at the 0.05 alpha level [$t(69) = 1.042, p < 0.301$].



In 2018-19 the participants in Level 2 showed an improvement in the non-use of illegal drugs in the past 30 days from pre to post intervention assessments. The overall change from pre to post intervention was -0.1% and thus was not statistically significant at the 0.05 alpha level.

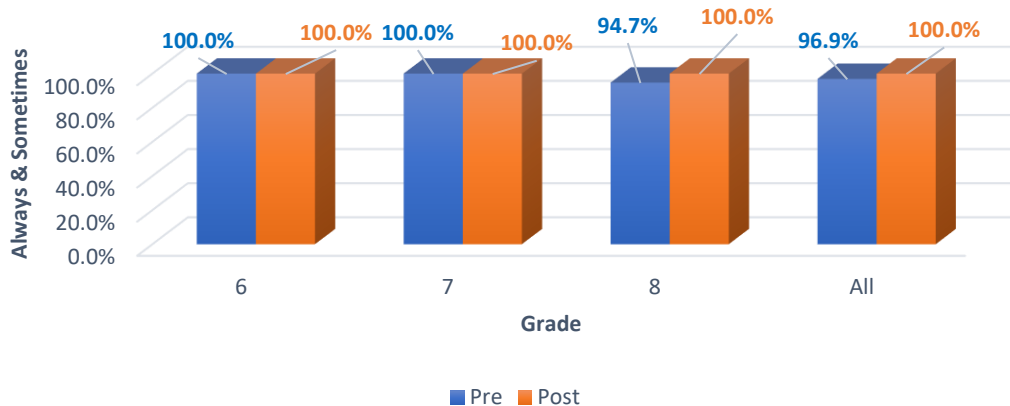


In 2019-20 all of the participants in Level 2 no use of illegal drugs in the past 30 days at the pre and post intervention assessments. There were no changes from pre to post intervention to report.



In 2019-20 the sixth and seventh graders in Level 3 no use of illegal drugs in the past 30 days at the pre and post intervention assessments. The eighth graders moved from a 5.3% drug use to zero use in the past 30 days. Overall, there was a change of 3.1% of drugs to zero use of drugs. This change was not statistically significant at 0.05 alpha level [Z = 1.313, p < 0.190].

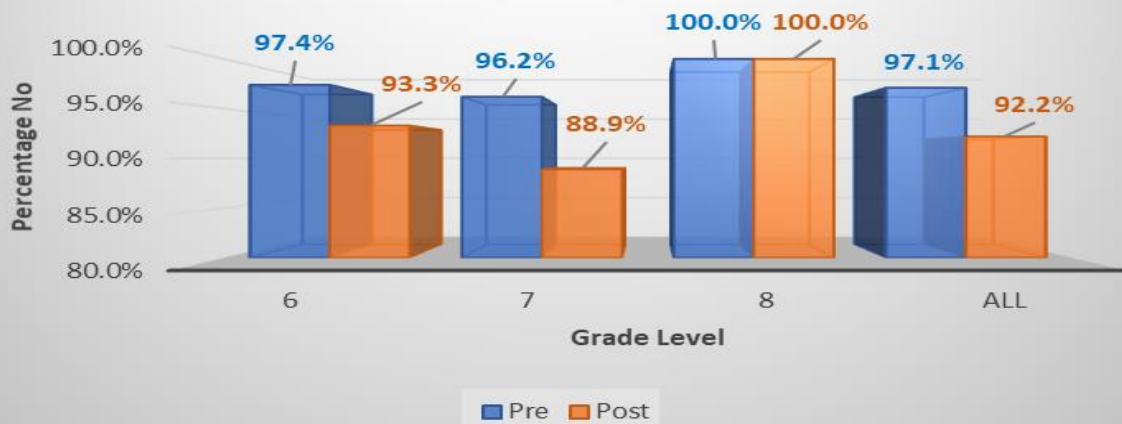
I Have Not Use Any Illegal Drugs In the Past 30 Days (Level 3) 2019-20



Huffed or sniffed inhalants in the Past 30 Days

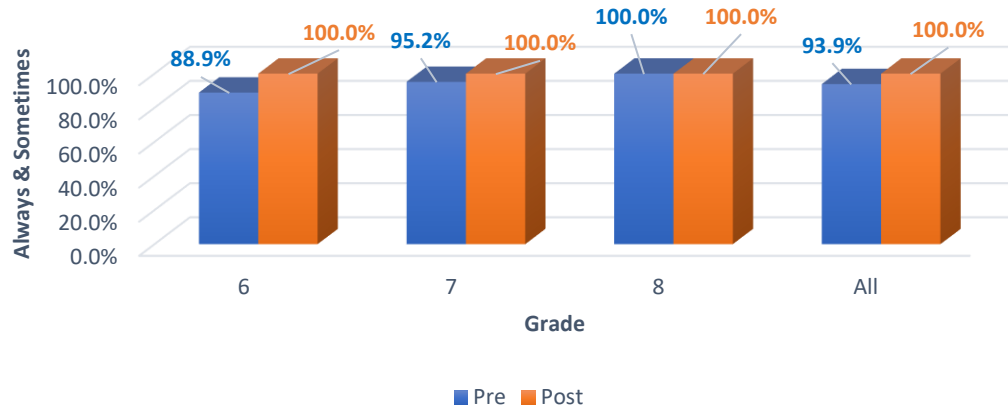
In 2018-19 the Level 1 eighth graders showed no change in the non-use of inhalants. The sixth and sevenths reported a decline in the response rates in the non-use of inhalants at the pre and post intervention assessments. Overall, there was a -4.9% decline in the response rate for the non-use of inhalants. This change was not statistically significant at the 0.05 alpha level [$Z = -1.155, p < 0.248$].

I Have Not Used Inhalants (Huffed) In the Past 30 Days (Level 1)



In 2019-20 all the grades showed an improvement in the non-use of inhalants from pre to post intervention assessment. Overall, there was a 6.1% increase in the response rate for the non-use of inhalants. This change was not statistically significant at the 0.05 alpha level [$Z = 1.168, p < 0.243$].

I Have Not Use Any Inhalants (Huffing) In the Past 30 Days (Level 1) 2019-20



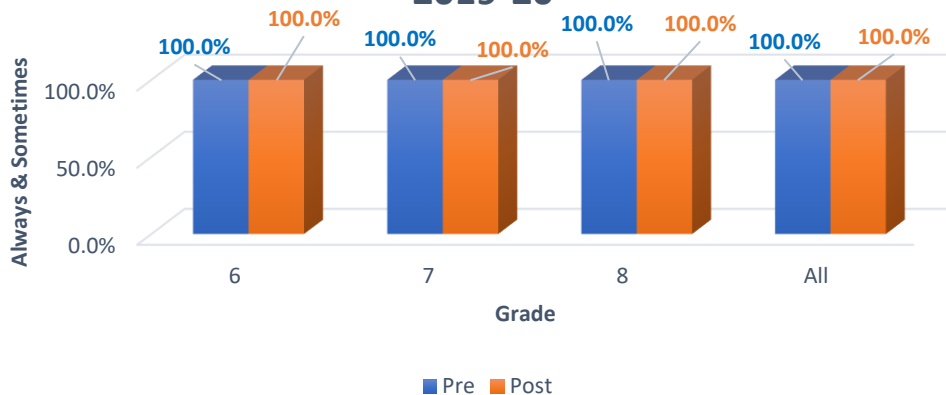
Except for the Level 2 in 2018-19 the sixth, seventh and eighth graders reported a no use of inhalants in the past 30 days at the pre intervention. Overall, there was a 22.9% decline in the non-use of inhalants from pre to post intervention assessments. This change was statistically significant at the 0.05 alpha level [$Z = -2.108, p < 0.035$].

I Have Not Used Inhalants (Huffed) In the Past 30 Days (Level 2)



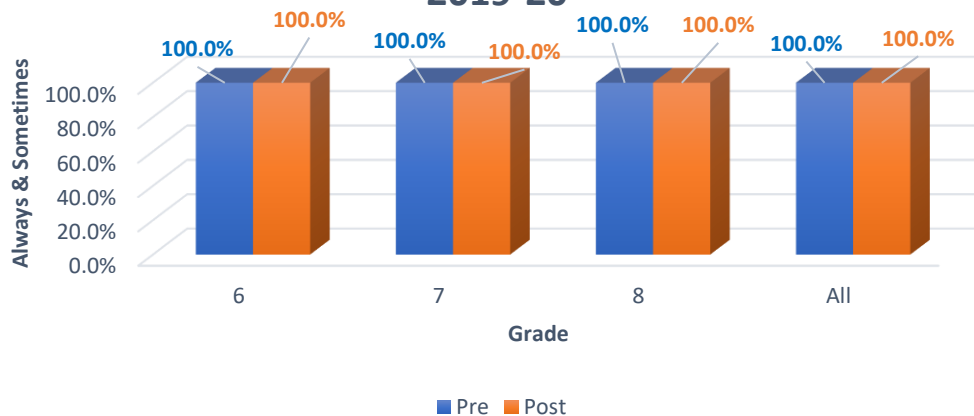
In 2019-20 all the respondents in Level 2 (sixth, seventh and eighth graders) reported a non-use of any inhalants the past 30 days at the pre and post intervention assessments. There were no changes to be reported for this variable.

I Have Not Use Any Inhalants (Huffing) In the Past 30 Days (Level 2) 2019-20



In 2019-20 all the respondents in Level 3 (sixth, seventh and eighth graders) reported a non-use of any inhalants in the past 30 days at the pre and post intervention assessments. There were no changes to be reported for this variable.

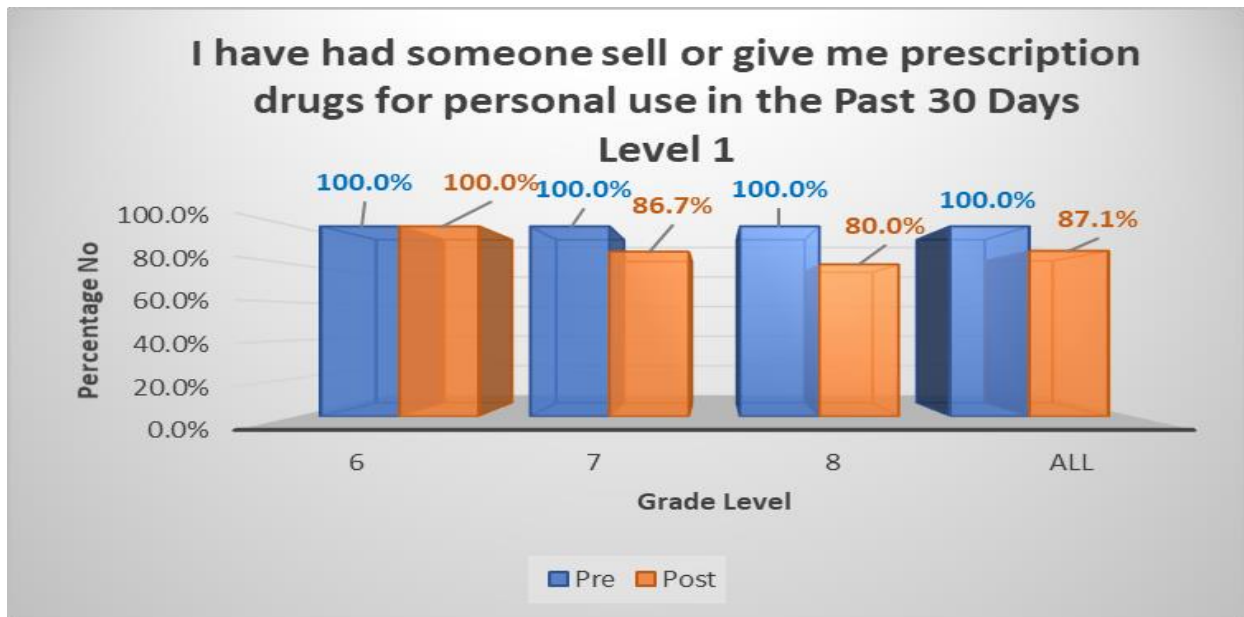
I Have Not Use Any Inhalants (Huffing) In the Past 30 Days (Level 3) 2019-20



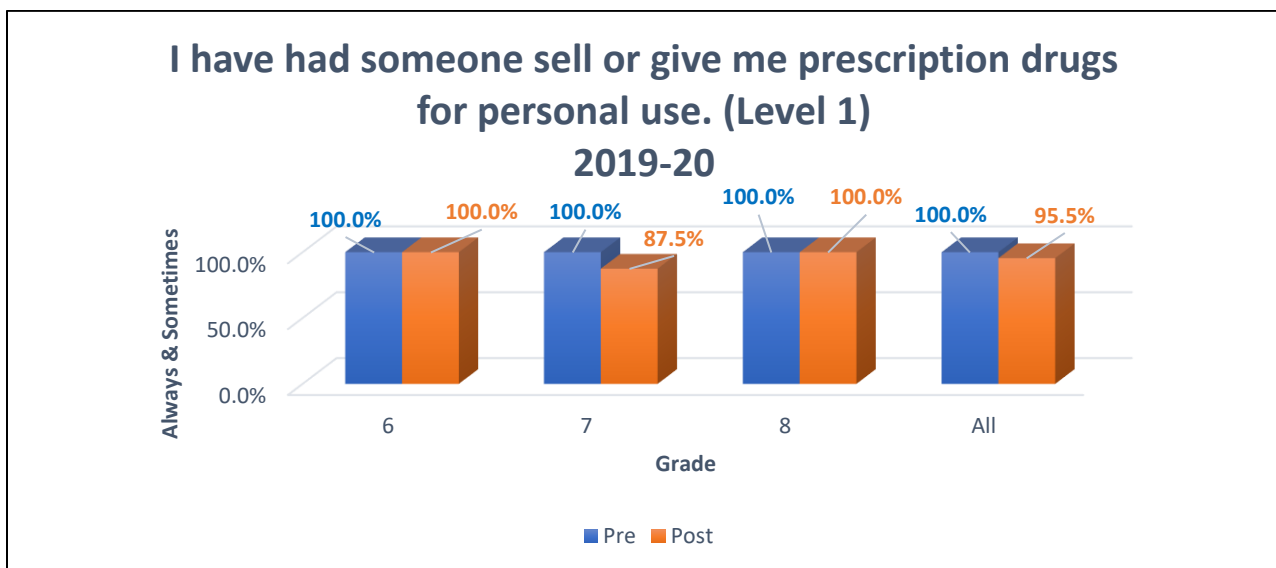
Drug Purchase or Acquisition

Except for Level 1 sixth graders in 2018-19 the seventh and eighth graders reported having someone approach them to buy and give them prescription drugs for personal use. The sixth graders had 100% negative response rates at both the pre and post intervention in which some approach them about prescription drugs. Overall, -12.9% of the response rate reported a change from pre to post intervention in

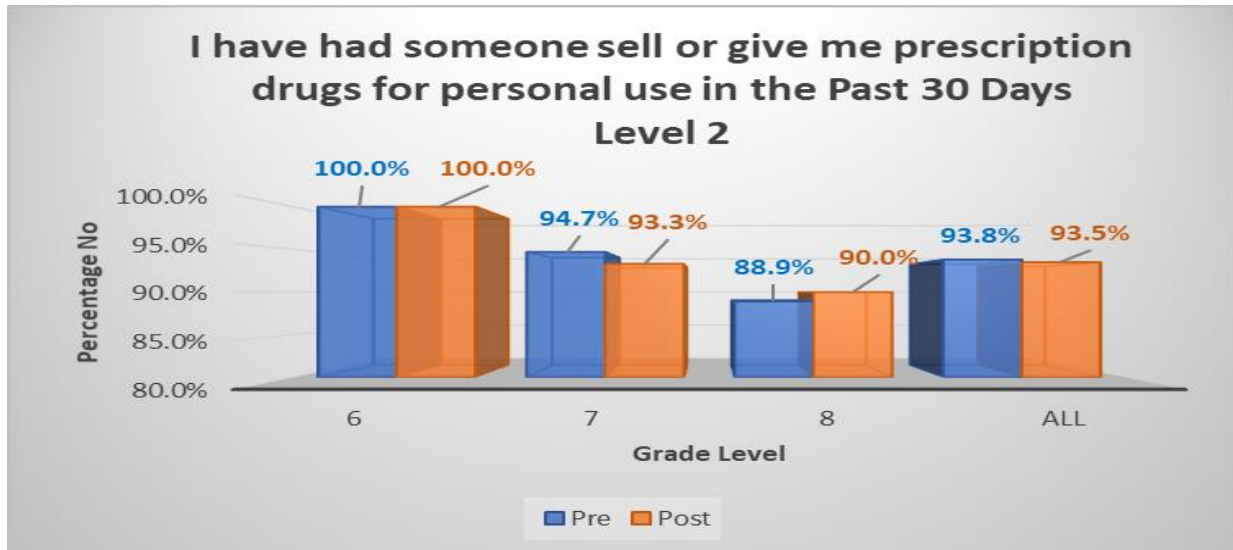
having no one approach them to buy or give them some prescription drugs for personal use. This change was statistically significant at 0.01 alpha level [$Z = -2.748, p < 0.006$].



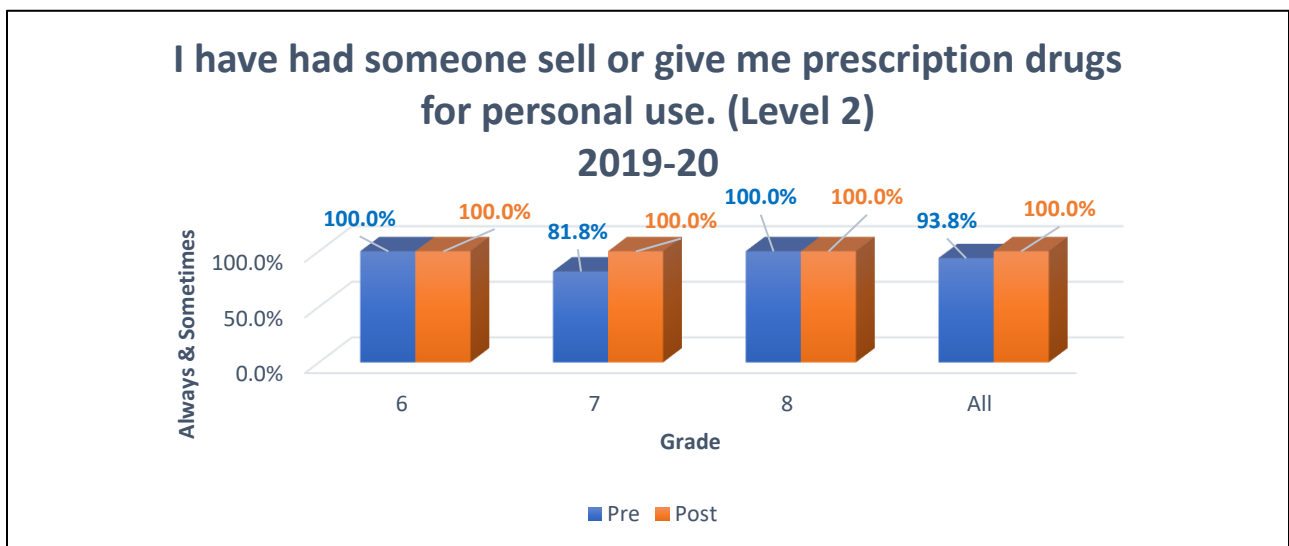
In 2018-19 the sixth and eighth graders reported having no one approach them to buy and give them prescription drugs for personal use. The seventh graders had a 12.5% increase in being approach by someone about buying or being given drugs for person use from the pre and post intervention assessment. Overall, there was a 4.5% change in the response rate from pre to post intervention in which someone approached the respondent to buy or received drugs for personal use. This change was not statistically significant at 0.05 alpha level [$Z = -0.971, p < 0.332$].



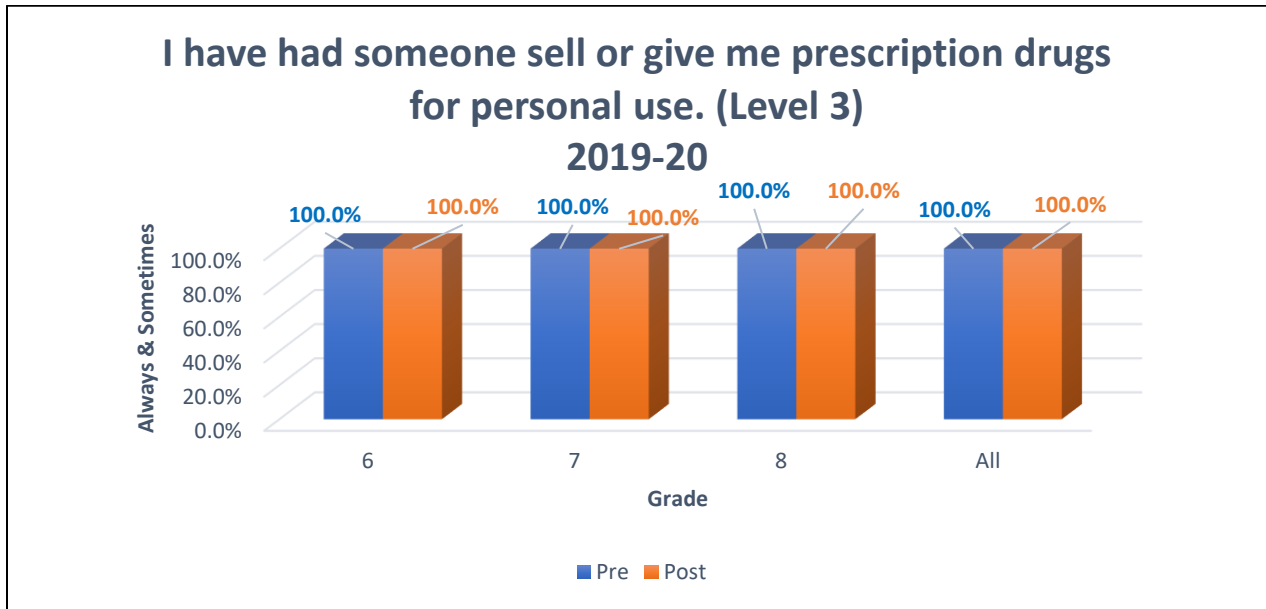
In 2018-19 the Level 2 sixth graders had a 100% response rates at both the pre and post intervention in which no one approach them to buy or using prescription drugs. The seventh graders reported a decline in their response rates while the eighth graders reported an improvement in their response rates from pre to post intervention assessments in being approached to buy or be given prescription drugs for personal use. Overall, -0.5% of the response rate reported a change from pre to post intervention in having someone approach them to buy or give them some prescription drugs for personal use. This change was not statistically significant at 0.05 alpha level.



In 2019-20 the Level 2 all the grades reported a 100% response rates at post intervention in that no one had approached them to buy or using prescription drugs. The seventh graders reported a 18.2% change in their response rates while overall there was 6.2% positive change. Overall, 6.2% of the response rate reported a change from pre to post intervention was statistically significant at 0.10 alpha level [Z = 1.711, p < 0.0873].

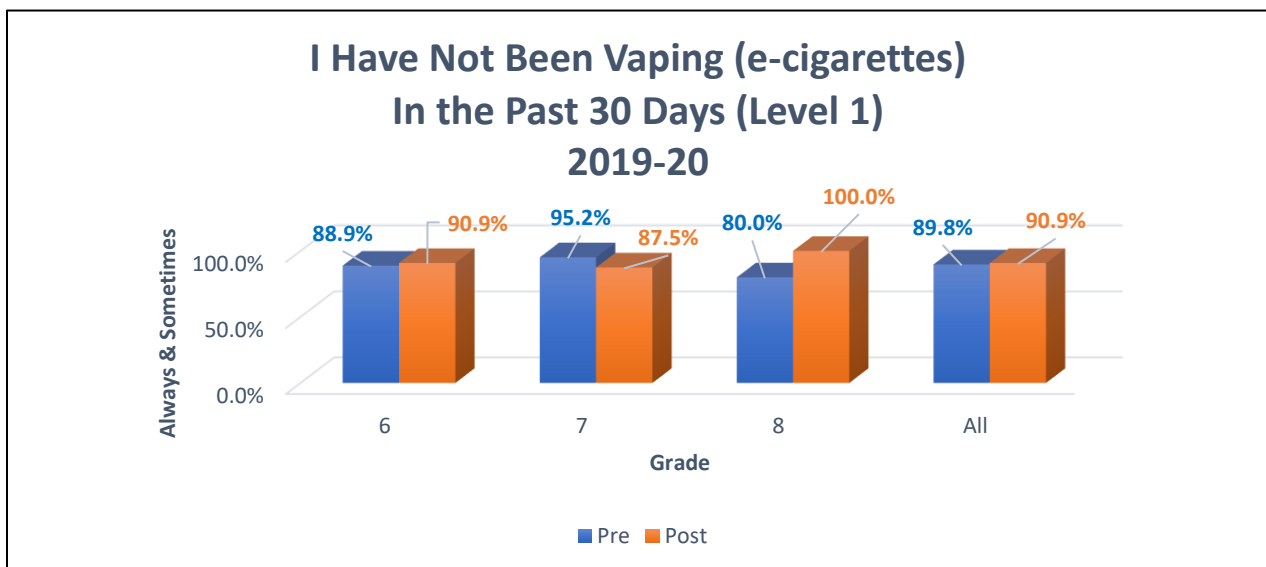


In 2019-20 the Level 2 all the grades reported a 100% response rates at pre and post intervention in that no one had approached them to buy or using prescription drugs.

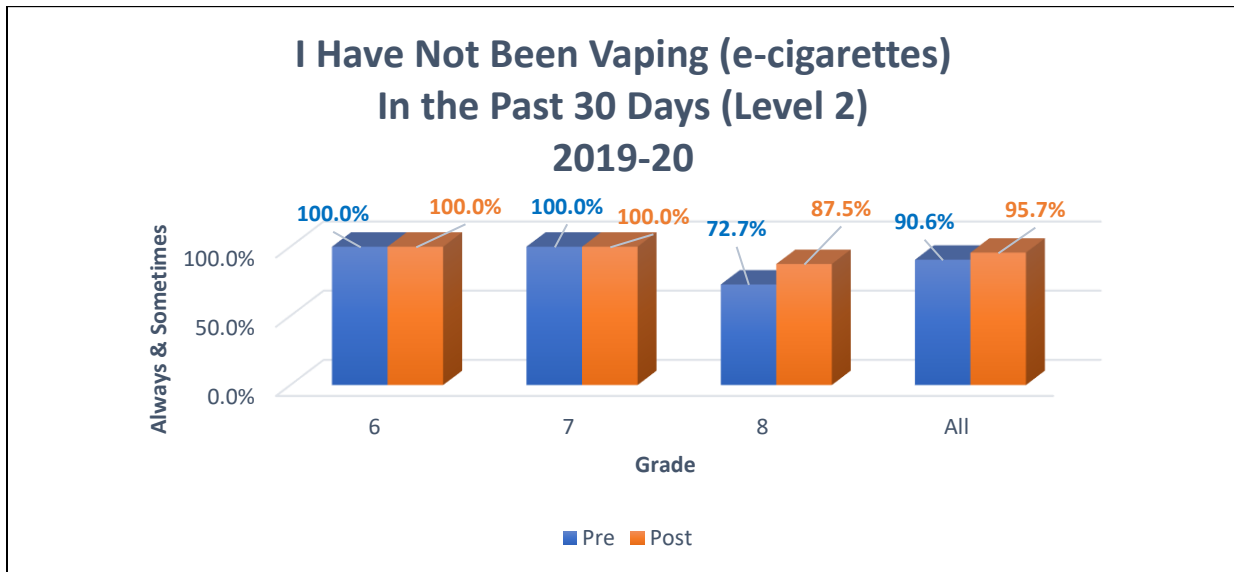


Vaping or Use of E-cigarettes

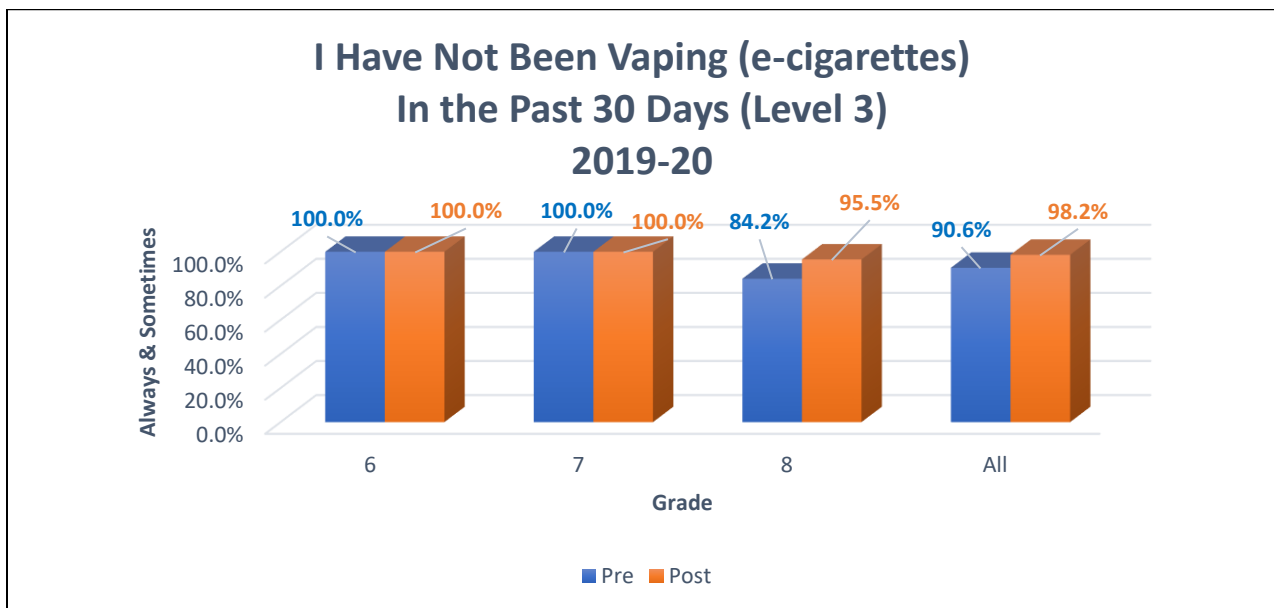
In 2019-20 data on vaping in the past 30 days was introduced as part of the pre and post assessment questionnaire. The sixth and eighth graders reported an increase in the non-use of e-cigarettes. The seventh grades reported 7.7% increase in vaping in the past 30 days. Overall, there was 0.9% improvement in the non-use of e-cigarettes in the past 30 days. This change was not statistically significant at 0.05 alpha level [$Z = 0.891, p < 0.137$].



In 2019-20 the Level 2 sixth and seventh graders had a 100% response rates at both the pre and post intervention in which they did not performed any vaping or used e-cigarettes. The eighth graders reported a 14.8% decline in vaping. Overall, 5.1% decline in vaping was reported from pre to post intervention. This change was not statistically significant at 0.05 alpha level [Z =0.906, P < 0.363].



In 2019-20 the Level 2 sixth and seventh graders had a 100% response rates at both the pre and post intervention in which they did not performed and vaping or used e-cigarettes. The eighth graders reported a 11.3% decline in vaping with 4.5% of respondents reporting vaping in the past 30 days at post intervention. Overall, there was -7.6% decline in vaping reported by the participants from pre to post intervention. This change was not statistically significant at 0.05 alpha level [Z = 1.63, P < 0.103].



Risk Behaviors Composite Score Analysis

A lower mean score for risk behaviors is a favorable outcome. The Level 1 participants showed a 2.6% increase in their mean scores from pre intervention to post intervention. The Level 2 participants showed a 1.0% increase in their mean scores for risk behaviors from the pre to the post intervention assessments. All the changes were not statistically significant at the 0.05 alpha level.

Risk Behaviors Mean Score Comparison 2018-19						
		n	Mean	Standard Deviation	Students t-test	p
Level 1	Pre	70	5.429	2.356	0.388 df = 119	0.699
	Post	51	5.569	1.313		
	Percent Change		+2.6%			
Level 2	Pre	32	5.781	2.992	0.0821 df = 61	0.935
	Post	31	5.839	2.609		
	Percent Change		+1.0%			

The Level 1 participants showed a -1.1% decrease in their mean scores from pre intervention to post intervention. The Level 2 participants showed a -5.2% decrease in their mean scores from pre intervention to post intervention. The Level 3 participants showed +1.1% change in the mean scores. The negative changes in the mean scores showed that overall there was a reduction in risk behaviors from the pre to the post intervention. All the changes were not statistically significant at the 0.05 alpha level.

Risk Behaviors Mean Score Comparison 2019-20						
		n	Mean	Standard Deviation	Students t-test	p
Level 1	Pre	49	6.94	2.286	-0.132 df = 69	0.895
	Post	22	6.86	2.054		
	Percent Change		-1.1%			
Level 2	Pre	32	7.56	1.625	1.400 df = 76	0.166
	Post	46	7.17	0.797		
	Percent Change		-5.2%			
Level 3	Pre	32	7.28	0.958	0.340 df = 85	0.735
	Post	55	7.36	1.161		
	Percent Change		+1.1%			

School Engagement and Belonging

A student's sense of belonging, and other closely associated constructs of school community, have been shown to relate to a large variety of psychological, health-related, and academic factors in school.^{21,22} Conversely, for all students, a lack of school belonging is associated with loneliness, emotional distress, psychosocial disturbance, suicide, mental illness, and depression. School connectedness and belonging has been found to be second only to family connection in protecting children and adolescents against emotional distress, eating disorders, and suicide.²³ In fact, it has been suggested that connectedness to school is the strongest protective factor in decreasing negative behaviors such as substance abuse, school absenteeism, early sexual involvement, and violence for both boys and girls in 6th through 12th grades.

Having a sense of belonging in school is protective for students and supports the psychosocial and academic wellbeing of students. This is particularly interesting in middle level education during which time students are in a crucial transition time. Unfortunately, there has not been consensus in the field on ways to conceptualize and measure student belonging. One commonly used measure has been the *Psychological Sense of School Membership* (PSSM) assessment tool, which has generally been applied unidimensionally and without much psychometric substantiation. It is argued that a unidimensional measure of student belonging in schools is warranted to assist researchers, evaluators, and practitioners in intervention-based work and increase insight into helpful approaches for student belonging.²⁴

The main contribution from this evaluation reports is the presentation of a new measure of school belonging, the *Simple School Belonging Scale* (SSBS). The SSBS contains 10 items, 5 taken from the PSSM and 5 from a set of new items collected for this study. The SSBS has been added to the pre and post LCH questionnaire in order measure the effectiveness of the program in helping students develop positive school engagement and an improved feeling of school belonging. Results from this analysis will measure if

²¹ Allen, K. A., & Bowles, T. (2012). Belonging as a Guiding Principle in the Education of Adolescents. *Australian Journal of Educational and Developmental Psychology*, 12, 108-119.

²² Voelkl, K. E. (2012). School identification. In *Handbook of research on student engagement* (pp. 193-218). Christenson, S., Reschly, A. L., & Wylie, C. [Eds.]. York, NY: Springer.

²³ Centers for Disease Control and Prevention. (2009a). *Fostering School connectedness: improving student health and academic achievement*. Atlanta, GA: U.S. department of health and human services. Retrieved from Centers for disease control and prevention. Accessed at http://www.cdc.gov/healthyyouth/protective/pdf/connectedness_administrators.pdf

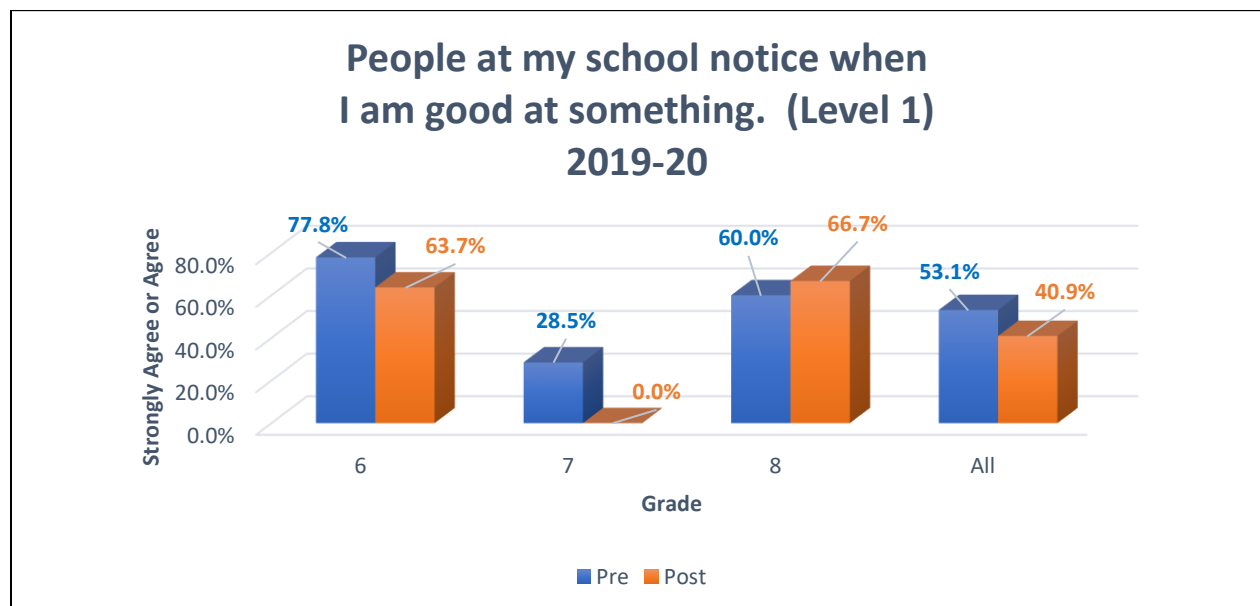
²⁴ Ye, F., & Wallace, T. L. (2014). Psychological Sense of School Membership Scale Method Effects Associated With Negatively Worded Items. *Journal of Psychoeducational Assessment*, 32(3), 202-215.

any changes have taken place. It is good to know that the SSBS is psychometrically sound with preliminary evidence of construct validity.²⁵

In this report four of the SSBS items are highlighted. There were no improvements from disagree to strongly agree for any of the ten statements presented in the questionnaire. From the pre to the post questionnaire there was a decline in the percentage of students agreeing or strongly agreeing with a particular statement with a few exceptions for a given grade level.

People at School Notices When I Am Good at Something

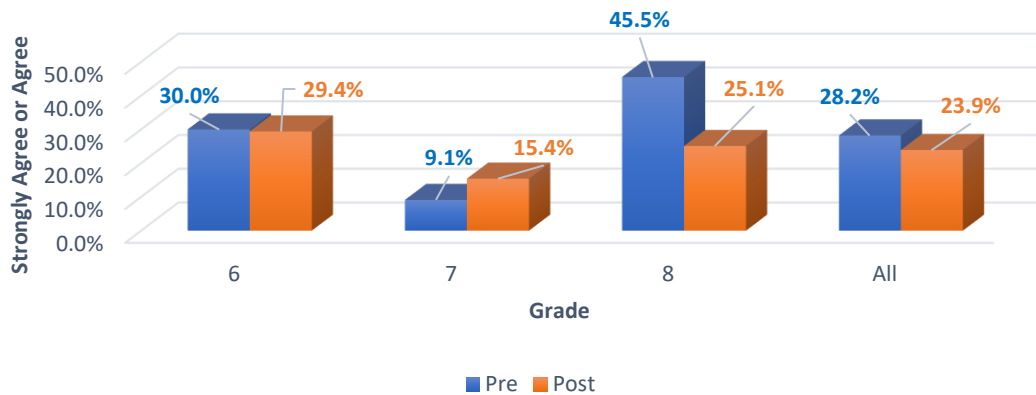
In this acceptance statement the sixth and seventh graders showed a decline in the percentage of students agreeing with this statement. The eighth graders showed a 6.7% improvement. Overall, the -25.8% decline in agreement with statement from pre to post questionnaire was found not to be statistically significant at the alpha 0.05 level [$Z = -0.944, p < 0.345$].



Only the Level 2 seventh graders showed a 6.3% improvement in the response rates about people noticing them being good at something from the pre to the post intervention assessments. The sixth and eighth graders showed a decline in their response rates. Overall, the -4.3% decline in agreement with the statement from pre to post questionnaire was found not to be statistically significant at the alpha 0.05 level [$Z = -0.428, p < 0.667$].

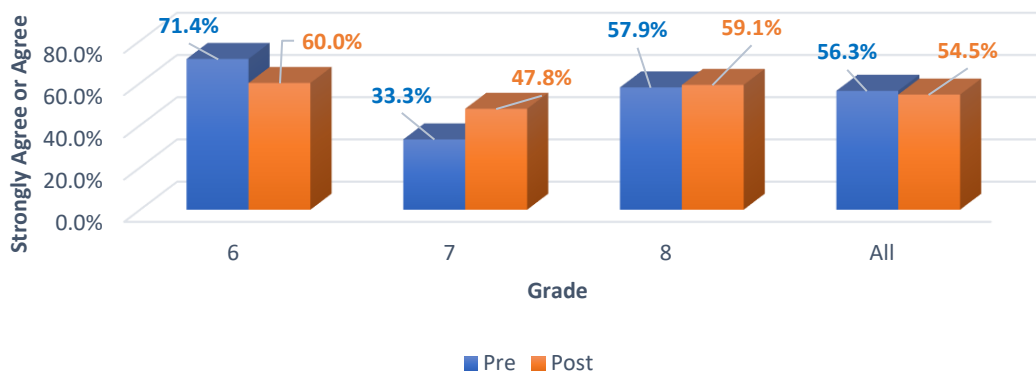
²⁵ Whiting, E. F., Everson, K., & Feinauer, E. (2017). The Simple School Belonging Scale: Working towards a unidimensional measure of student belonging. *Measurement and Evaluation in Counseling and Development*. DOI: doi.org/10.1080/07481756.2017.1358057

People at my school notice when I am good at something. (Level 2) 2019-20



The Level 3 seventh and eighth graders showed a +14.5% and +1.2%, respectively, improvement in the response rates about people noticing them being good at something from the pre to the post intervention assessments. The sixth graders showed a decline in their response rates of -11.4%. Overall, the -1.8% decline in agreement with the statement from pre to post questionnaire was found not to be statistically significant at the alpha 0.05 level [$Z = -0.163$, $p < 0.873$].

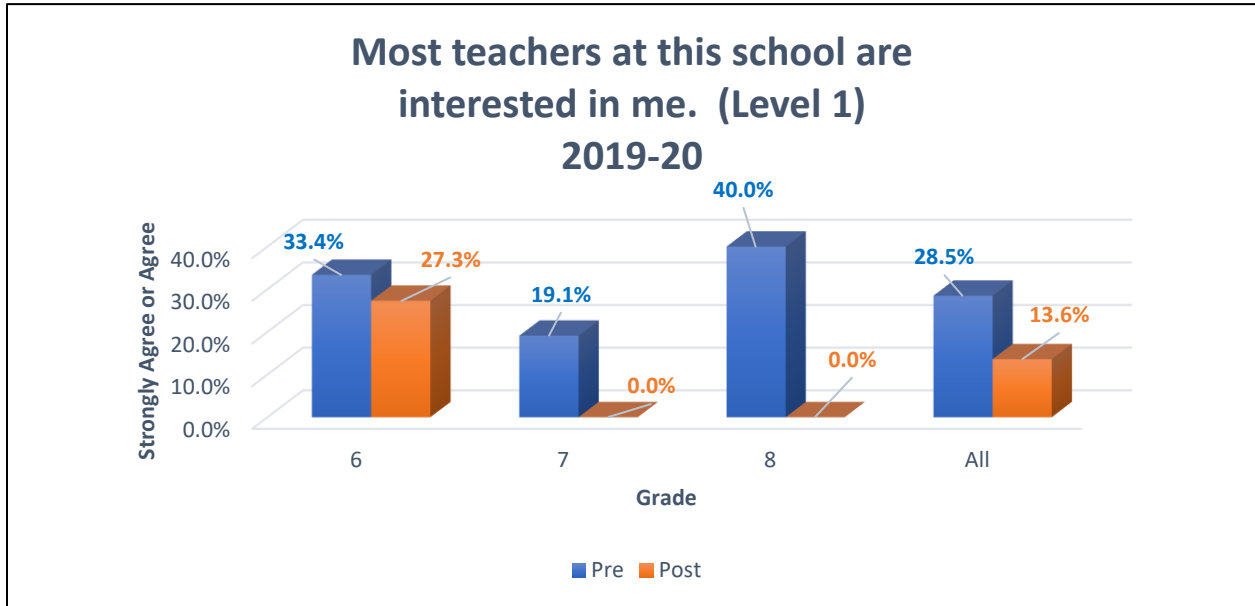
People at my school notice when I am good at something. (Level 3) 2019-20



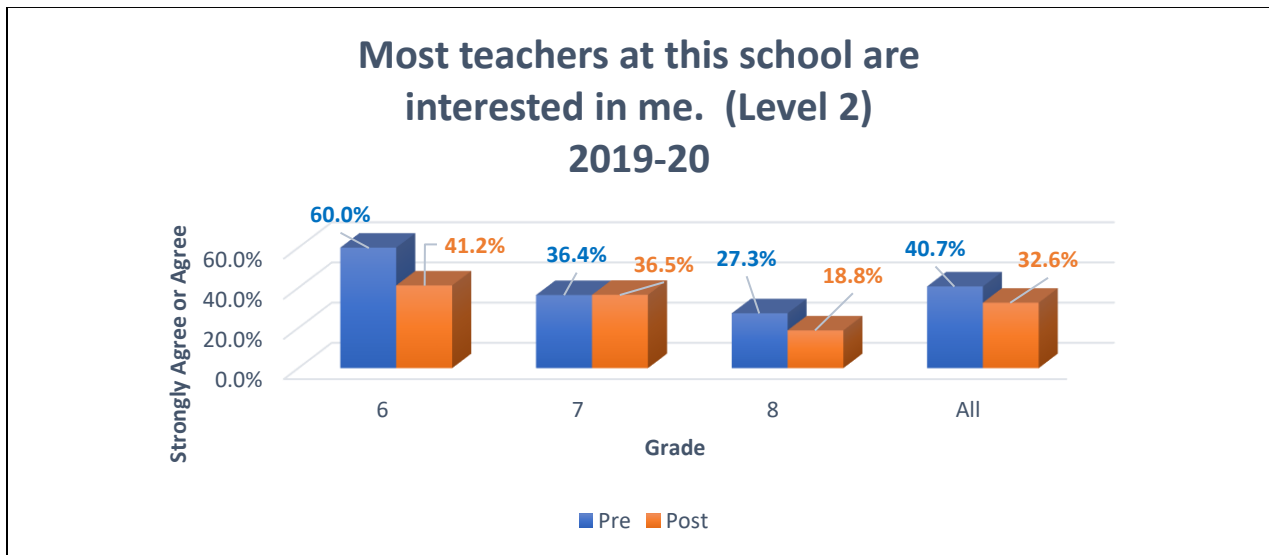
Teachers Are Interested in Me

There was a decline in the response rate by the respondents in all three grade levels. For the sixth graders the -6.1% change was not statistically significant at the 0.05 alpha level [$Z = -0.336$, $p < 0.737$]. For the seventh graders the -19.1% change was statistically significant at the 0.05 alpha level [$Z = -2.173$, p

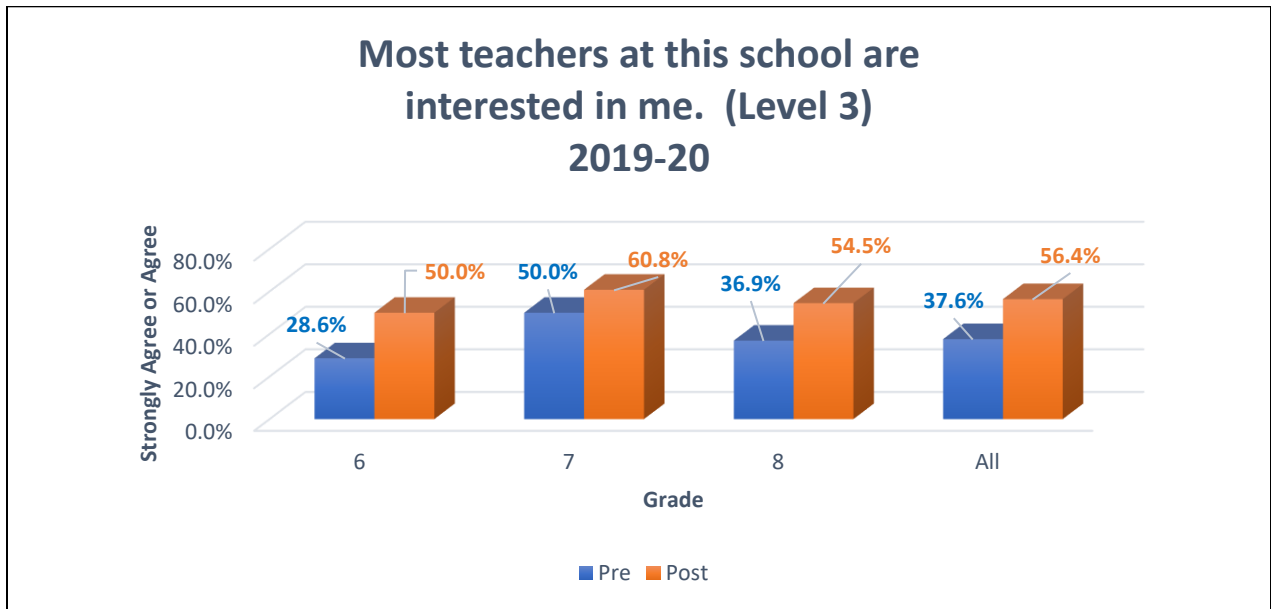
<0.0298]. For the eighth graders the -40.0% change was statistically significant at the 0.05 alpha level [$Z = -2.45$, $p < 0.0143$]. Overall, the -14.9% change from pre to post intervention assessment was not statistically significant at 0.05 alpha level [$Z = -1.502$, $p < 0.133$].



In Level 2 there was a decline in the response rate by the respondents in all three grade levels. For the sixth graders the -18.8% change was not statistically significant at the 0.05 alpha level [$Z = -0.944$, $p < 0.347$]. For the seventh graders there was no change from the pre to the post intervention assessment. For the eighth graders the -8.5% change was not statistically significant at the 0.05 alpha level [$Z = -0.522$, $p < 0.603$]. Overall, the -8.1% change from pre to post intervention assessment was not statistically significant at 0.05 alpha level [$Z = -0.733$, $p < 0.465$].



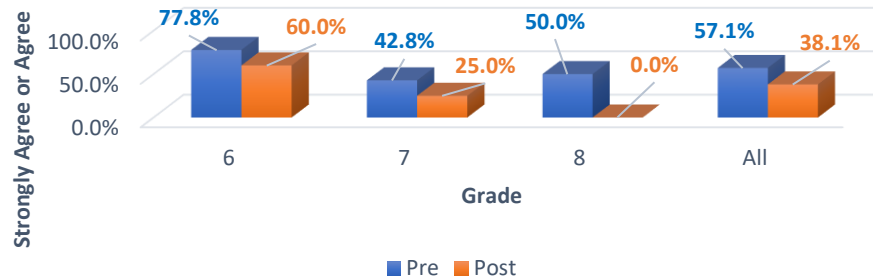
All the Level 3 grades showed an improvement in their response rates. For the sixth graders the +21.4% change was not statistically significant at the 0.05 alpha level [$Z = 0.882, p < 0.379$]. For the seventh graders there was a +10.8% change from the pre to the post intervention assessment. This was not statistically significant at 0.05 alpha level [$Z = 0.478, p < 0.631$]. For the eighth graders the +17.5% change was not statistically significant at the 0.05 alpha level [$Z = 1.323, p < 0.187$]. Overall, the +18.9% change from pre to post intervention assessment was statistically significant at 0.10 alpha level [$Z = 1.691, p < 0.091$].



Treated With Respect

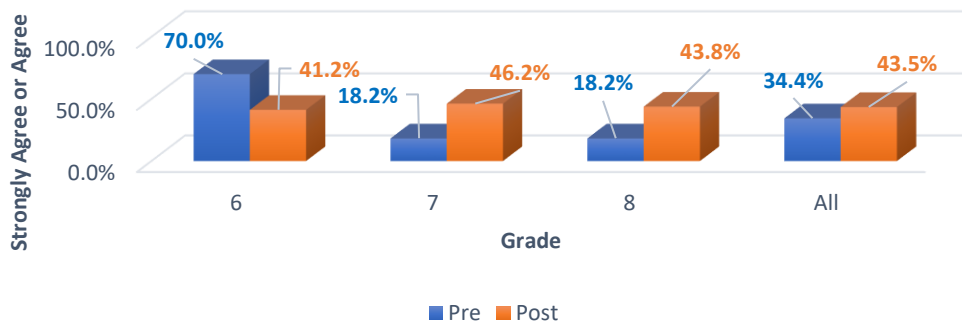
In Level 1 there was a decline in all the response rates by the respondents in all three grade levels for this item. For the sixth graders the -17.8% change was not statistically significant at the 0.05 alpha level [$Z = -0.928, p < 0.354$]. For the seventh graders the -17.8% change was not statistically significant at the 0.05 alpha level [$Z = -0.901, p < 0.368$]. For the eighth graders the -50.0% change was statistically significant at the 0.05 alpha level [$Z = -3.00, p < 0.0027$]. Overall, the -19.0% change from pre to post intervention assessment was not statistically significant at 0.05 alpha level [$Z = -1.462, p < 0.144$].

I am treated with as much respect as other students. (Level 1) 2019-20



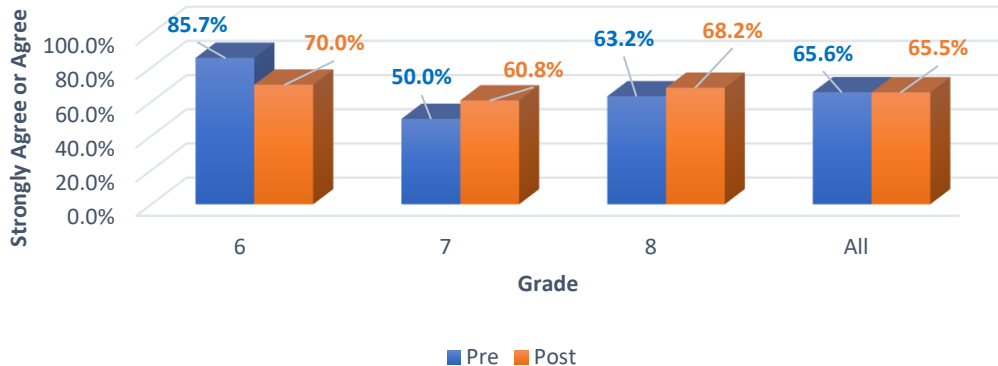
In Level 2 there was a - 28.8% decline the response rates by the sixth grade for this item. For the sixth graders the change was not statistically significant at the 0.05 alpha level [Z = -1.45, p < 0.147]. For the seventh graders the +28.0% change which was not statistically significant at the 0.05 alpha level [Z = 1.45, p < 0.147]. For the eighth graders the +25.1% change was not statistically significant at the 0.05 alpha level [Z = 1.386, p < 0.165]. Overall, the +9.1% change from pre to post intervention assessment was not statistically significant at 0.05 alpha level [Z = 0.808, p < 0.418].

I am treated with as much respect as other students. (Level 2) 2019-20



In Level 3 there was a - 15.7% decline the response rates by the sixth grade for this item. For the sixth graders the change was not statistically significant at the 0.05 alpha level [Z = -0.751, p < 0.453]. For the seventh graders the +10.8% change which was not statistically significant at the 0.05 alpha level [Z = 0.478, p < 0.631]. For the eighth graders the +5.0% change was not statistically significant at the 0.05 alpha level [Z = 0.337, p < 0.728]. Overall, the -0.1% change from pre to post intervention assessment was not statistically significant at 0.05 alpha level [Z = -0.0095, p < 0.992].

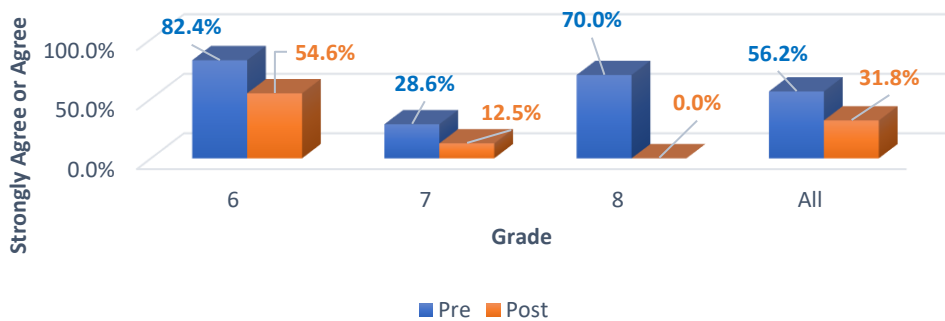
I am treated with as much respect as other students. (Level 3) 2019-20



Proud of Belonging To School

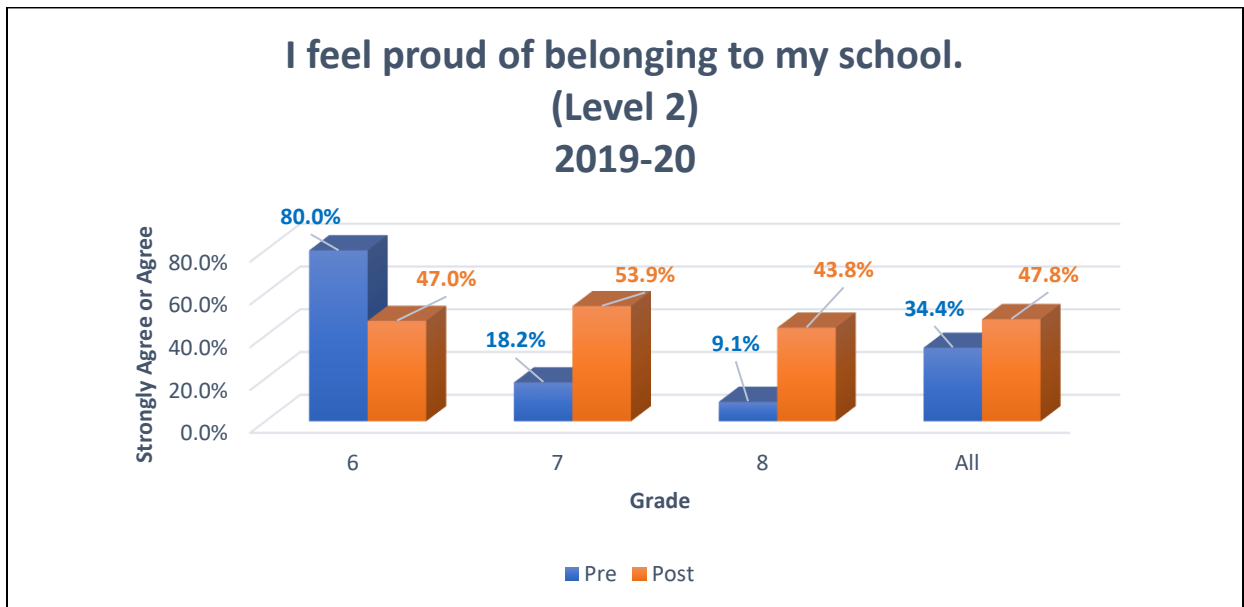
In Level 1 there was a decline in all the response rates by the respondents in all three grade levels for this item. For the sixth graders the -27.8% change was not statistically significant at the 0.05 alpha level [$Z = -1.511, p < 0.131$]. For the seventh graders the -16.1% change was not statistically significant at the 0.05 alpha level [$Z = -1.002, p < 0.317$]. For the eighth graders the -70.0% change was statistically significant at the 0.01 alpha level [$Z = -4.58, p < 0.001$]. Overall, the -24.2% change from pre to post intervention assessment was statistically significant at 0.10 alpha level [$Z = -1.939, p < 0.0525$].

I feel proud of belonging to my school. (Level 1) 2019-20

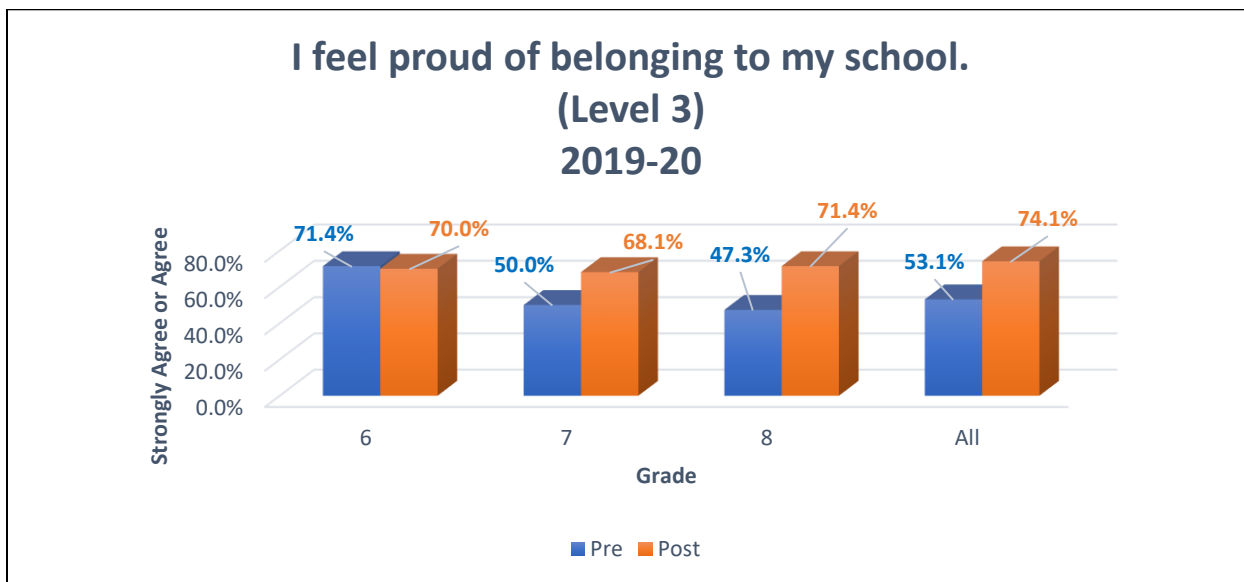


In Level 2 there was a - 33.0% decline the response rates by the sixth grade for this item. For the sixth graders the change was statistically significant at the 0.10 alpha level [$Z = -1.685, p < 0.091$]. For the seventh graders the +35.7% change which was statistically significant at the 0.10 alpha level [$Z = 1.80, p <$

0.0719]. For the eighth graders the +34.7% change was statistically significant at the 0.10 alpha level [$Z = 1.931, p < 0.0536$]. Overall, the +13.4% change from pre to post intervention assessment was not statistically significant at 0.05 alpha level [$Z = 1.178, p < 0.238$].



In Level 3 there was a – 1.4% decline the response rates by the sixth grade for this item. For the sixth graders the change was not statistically significant at the 0.10 alpha level [$Z = -0.0623, p < 0.952$]. For the seventh graders the +18.1% change which was not statistically significant at the 0.05 alpha level [$Z = 0.824, p < 0.412$]. For the eighth graders the +24.1% change was not statistically significant at the 0.05 alpha level [$Z = 1.572, p < 0.112$]. Overall, the +21.0% change from pre to post intervention assessment was statistically significant at 0.05 alpha level [$Z = 1.999, p < 0.0455$].



School Engagement Composite Score Analysis

A high mean score for school engagement is a favorable outcome. The Level 1 participants showed a 9.8% negative change in their mean scores from pre intervention to post intervention. The Level 2 participants showed a 0.4% improvement in their mean scores from pre intervention to post intervention. Both percentage changes were not statistically significant at the 0.05 alpha level. The Level 3 participants showed a +8.9% improvement in their mean scores from pre to post intervention. This change statistically significant at the 0.05 alpha level.

School Engagement Mean Score Comparison 2019-20						
		n	Mean	Standard Deviation	Students t-test	p
Level 1	Pre	46	34.59	7.461	1.637 df = 64	0.107
	Post	20	31.20	8.320		
	Percent Change			-9.8%		
Level 2	Pre	32	33.13	7.156	0.116 df = 76	0.908
	Post	46	33.27	7.829		
	Percent Change			+0.04%		
Level 3	Pre	32	34.97	7.128	2.035 df = 81	0.045*
	Post	51	38.08	6.548		
	Percent Change			+8.9%		

Cognitive Test Results of LCH Program Content

Students who participated in the LCH Level 1 and Level 2 classes were tested on their mastery of the subject content of the ten lessons taught for each level. The test included items on Lakota language and practices, social skills, and other topics covered during the classes.

In 2018-19 the Level 1 students (n = 69) completed the pretest with an average score of 45.7% and 50 students completed the posttest with an average score of 48.7%. The 6.6% improvement in the average scores was not statistically significant at the 0.05 alpha level [$t(117) = 0.890, p < 0.375$]. The Level 2 students (n = 32) completed the pretest with an average score of 41.3% and 31 students completed the posttest with an average score of 39.4%. The decline in average scores was a -4.6% change. There was no statistically significant differences between the two average scores at the 0.05 alpha level [$t(61) = -0.365, p < 0.716$].

In 2019-20 the Level 1 students (n = 49) completed the pretest with an average score of 39.2% and 22 students completed the posttest with an average score of 47.4%. The 8.2% improvement in the average scores was not statistically significant at the 0.05 alpha level [t(69) = 1.47, p < 0.146].

The Level 2 students (n = 32) completed the pretest with an average score of 39.9% and 46 students completed the posttest with an average score of 36.0%. There was a 3.9% decline the average scores which was not statistically significant at the 0.05 alpha level [t(76) = -0.830, p < 0.409].

The Level 3 students (n = 32) completed the pretest with an average score of 42.4% and 55 students completed the posttest with an average score of 53.9%. There was a 11.6% improvement in the average scores which was statistically significant at the 0.05 alpha level [t(85) = +2.011, p < 0.0475].

Lakota Circles of Hope Pre & Post Tests Mean Scores 2019-20						
Level	Status	% Correct (Average)	n	T-Test	p value	Range
1	Pre	39.22%	49	+1.47	0.146	0% to 78%
	Post	47.44%	22			0% to 89%
2	Pre	39.89%	32	-0.830	0.409	0% to 88%
	Post	35.99%	46			0% to 78%
3	Pre	42.36%	32	+2.011	0.0475*	0% to 100%
	Post	53.94%	55			11% to 100%

**Statistically significant at the 0.05 alpha level*

Student Assessment of LCH Program

Level 1

In 2018-19 there were fifty (50) students who completed this section of the Lakota Circles of Hope post intervention assessment. The students were asked if the program had helped them make good healthy decisions and if they enjoyed participating in the program. All of the students liked the LCH activities, learning about their culture, and the presentations given by the instructors. Except for one student, the participants would recommend LCH to their friends.

Table 3 Level 1 Assessment of LCH Program 2018-2019 Agree - Disagree			
Statements	Agree	Not Sure	Disagree
1. I am planning to avoid making bad choices.	92.0%		8.0%
2. I learned a lot about Lakota values.	96.0%	4.0%	
3. I like the LCH activities.	100%		
4. I plan to avoid being around peers who use alcohol and drugs.	92.0%		8.0%
5. I learned how to control my anger.	94.0%	4.0%	2.0%
6. I wish the LCH program was longer.	86.0%	12.0%	2.0%
7. I enjoyed the LCH program and learned a lot about my culture.	100%		
8. I enjoyed the presentations given by the instructors.	100%		
9. I would recommend LCH to my friends.	98.0%		2.0%

In 2019-20 there were twenty-two (22) students who completed this section of the Level 1 Lakota Circles of Hope post intervention assessment. The students were asked if the program had helped them make good healthy decisions and if they enjoyed participating in the program. Eighty-six percent (86.3%) of the students liked the LCH activities; 81.8% enjoyed learning about their culture; and 59.1% liked the presentations given by the instructors. Eighty-two percent (81.8%) would recommend the program and the Lakota Circles of Hope lessons to their friends.

Table 4
Level 1 Assessment of LCH Program
2019-2020
Agree - Disagree

Statements	Agree	Not Sure	Disagree
1. I am planning to avoid making bad choices.	68.1%	27.3%	4.5%
2. I learned a lot about Lakota values.	86.4%	9.1%	4.5%
3. I like the LCH activities.	86.3%	13.6%	
4. I plan to avoid being around peers who use alcohol and drugs.	77.3%	13.6%	9.1%
5. I learned how to control my anger.	59.1%	31.8%	9.1%
6. I wish the LCH program was longer.	68.2%	27.3%	4.5%
7. I enjoyed the LCH program and learned a lot about my culture.	81.8%	18.2%	
8. I enjoyed the presentations given by the instructors.	59.1%	27.3%	13.6%
9. I would recommend LCH to my friends.	81.8%	13.6%	4.5%

Level 2

In 2018-19 there were 31 students who completed this section of the Lakota Circles of Hope post intervention assessment. The students were asked to rate a set of statements about the LCH program from excellent to poor. About 60% of the students rated the majority of the statements as excellent and 30% to 40% of the respondents rated the statements as good. All of the students rated the LCH program excellent to good in recommending the program to their friends. One student rated most of the four statements poor while 2 or 3 students rated three of the statements poor. (Table 4)

Table 4
Level 2 Assessment of LCH Program
Rating of Selected Statements From Excellent to Poor
2018-19

Statements	Excellent	Good	Poor
1. All the lessons delivered.	56.7%	40.0%	3.3%
2. The activities for each lesson	56.7%	33.3%	10.0%
3. What I learned about the Lakota culture.	58.6%	37.9%	3.4%
4. What I learned about various Lakota practices and traditions	58.6%	38.7%	3.2%
5. The videos presented in the lessons.	54.8%	41.9%	3.2%
6. The stories and readings for lesson.	60.0%	30.0%	10.0%
7. How I would rate the program to my friends.	67.7%	32.3%	
8. How I would rate the program to my parents.	64.5%	29.0%	6.5%

Table 5
Level 2 Assessment of LCH Program
Rating of Selected Statements From Excellent to Poor
2019-20

Statements	Excellent	Good	Poor
1. All the lessons delivered.	47.8%	52.2%	0%
2. The activities for each lesson	54.3%	45.7%	0%
3. What I learned about the Lakota culture.	63.0%	34.8%	2.2%
4. What I learned about various Lakota practices and traditions	58.7%	34.8%	6.5%
5. The videos presented in the lessons.	47.8%	46.7%	6.5%
6. The stories and readings for lesson.	63.0%	34.8%	2.2%
7. How I would rate the program to my friends.	76.1%	21.7%	2.2%
8. How I would rate the program to my parents.	80.4%	19.6%	0%

In the spring of 2019-20 there were 46 Level 2 students who completed this section of the Lakota Circles of Hope post intervention assessment. The students were asked to rate a set of statements about the LCH program from excellent to poor. About half or more (48% to 80%) of the respondents rated the statements as excellent. Three-fourths of the students (76.1%) rated the LCH program excellent and would recommend the program to their friends. Eighty percent (80.4%) reported that their parents would rate the LCH program as excellent and 19.6% would rate it good. One student rated three of the statements as poor while 3 students rated two of the statements poor. (Table 5)

In the summer of 2019-20 there were 55 Level 3 students who completed this section of the Lakota Circles of Hope post intervention assessment. The students were asked to rate a set of statements about the LCH program from excellent to poor. About three-fourths or more (72% to 82%) of the respondents rated the statements as excellent. Three-fourths of the students (81.8%) rated the LCH program excellent and would recommend the program to their friends. Eighty-two percent (81.8%) reported that their parents would rate the LCH program as excellent and 19.6% would rate it good. Only one student rated one of the statements as poor. (Table 6)

Table 6
Level 3 Assessment of LCH Program
Rating of Selected Statements From Excellent to Poor
2019-20

Statements	Excellent	Good	Poor
1. All the lessons delivered.	72.2%	27.8%	
2. The activities for each lesson	72.7%	27.3%	
3. What I learned about the Lakota culture.	76.4%	23.6%	
4. What I learned about various Lakota practices and traditions	72.7%	27.3%	
5. The videos presented in the lessons.	65.4%	29.1%	5.5%
6. The stories and readings for lesson.	74.5%	25.5%	
7. How I would rate the program to my friends.	81.8%	18.2%	
8. How I would rate the program to my parents.	81.8%	18.2%	



Conclusion

There were many positive differences noted in the six areas (factors) of study. Using the composite score for each of the six factors the mean scores were computed and analyzed to determine any statistically significant changes from the pre to the post intervention assessments. In this report the first and second years of program implementation were presented by levels of the LCH program. There were no statistically significant changes noted in many of the pre and post composite mean scores. It should be noted that the sample sizes in this evaluation report were small and thus impacted the statistical power. Statistical power refers to the probability that your test will find a statistically significant difference when such a difference actually exists. Thus, the lack of statistical significance in many of the analyses from pre to post intervention were influenced by the small percentage of statistical power. For example, in computing the statistical power for the self-esteem composite scores the statistical power for the Level 1 it was 27.0% and for Level 2 it was 6.1%. The ideal statistical power is 80% or higher.²⁶

Therefore, it is important when considering statistical significance and p-value for a particular variable that sample size, effect size, and statistical power be considered as part of the analysis of the calculations. This does not impact the percentage change from pre to post intervention assessments.

In answering the six evaluation questions the following trends were found:

Question #1: Do the middle school students completing LCH show an improved understanding of the Lakota values, traditions, and practices? [Lakota Identity]

Year 1 (2018-19): *After completing the LCH program Level 2 participants showed an increase in being proud of their Lakota or Dakota heritage by 4.0% while the Level 1 participants showed a decrease of 6.8% from pre intervention to post intervention. The Level 1 and Level 2 participants showed a statistically significant decline in practicing their Lakota tradition from pre intervention to post intervention. The Level 1 decline was 30.6% and the Level 2 decline was 28.0%. Both of these changes were statistically significant at the 0.01 alpha level [Level 1 $p < 0.0003$ and Level 2 $p < 0.012$].*

The Lakota Identity factor for 2018-19 showed an improvement in all the grade levels in their composite mean scores. The Level 2 participants had a 1.6% improvement in their mean composite scores while Level 1 participants showed a 13.4% decline in their mean composite scores from pre to post intervention. The mean scores change from pre to post intervention was statistically significant at the 0.05 alpha level for Level 1 [$p < 0.0423$] while the Level 2 mean scores change was not statistically significant [$p < 0.843$].

²⁶ Rosner, B. (2016). Fundamentals of biostatistics. Eighth Edition. New York: Cengage Learning.

Year 2 (2019-20): After completing the LCH program Level 1 participants showed a decrease in being proud of their Lakota or Dakota heritage by 0.9%. The Level 2 participants showed a 4.6% increase, and the Level 3 participants showed a 1.0% increase in being proud to be Lakota. None of the changes from pre to post intervention assessments were statistically significant at the 0.05 alpha level. The Level 1 participants showed a 10.5% improvement in practicing their Lakota traditions from pre to post intervention. Level 2 participants showed a 3.5% improvement, and the Level 3 participants showed a 52.5% improvement. The Level 2 and Level 3 changes were statistically significant at the 0.05 alpha level [Level 1: $p < 0.0357$ and Level 2: $p < 0.001$].

The Lakota Identity composite scores for 2019-20 showed an improvement in Level 2 and Level 3 composite mean scores from pre to post intervention. The Level 2 participants had a 4.2% improvement in their mean composite scores while Level 3 participants showed a 20.3% change in the mean composite scores from pre to post intervention. The Level 1 participants had a decline of 9.6%. The mean scores change from pre to post intervention was statistically significant at the 0.05 alpha level for Level 3 [$p < 0.0008$] while the Levels 1 and 2 mean scores change was not statistically significant [$p < 0.298$ and $p < 0.607$, respectively].

Question #2: Do the middle school students completing LCH show an understanding of the health impediments caused by the use of alcohol, tobacco, and chemical substances? [Risk Behaviors]

Year 1 (2018-19): The Level 1 and Level 2 students showed a small decline in the non-use of tobacco products from pre to post intervention. The change for Level 1 was -5.5% and the change for Level 2 was -0.3%. The Level 1 and Level 2 students showed a small decline in the non-use of alcohol products from pre to post intervention. The change for Level 1 was -1.6% and the change for Level 2 was -6.5%. The Level 1 and Level 2 students showed a small decline in the non-use of marijuana from pre to post intervention. The change for Level 1 was -0.7% and the change for Level 2 was -6.7%. None these changes were statistically significant at the 0.05 alpha level.

The Level 1 students reported a small increase in the non-use of illegal drugs at a +0.9% response rate, while the Level 2 students remained unchanged from pre to post intervention. The Level 1 students reported a decrease in the non-use of inhalants at a -4.9% response rate while the Level 2 students reported a -22.9% response rate change. The Level 2 decrease in non-use of inhalants was statistically significant at the 0.05 alpha level [$p < 0.035$]. The other changes were not statistically significant.

The Risk Behavior composite score for 2018-19 showed an increase from pre to post intervention assessments. The Level 1 mean scores reflected a +2.6% change while the Level 2 had +1.0% change in mean scores which implied a small increase in the use of chemical substances, alcohol, and tobacco reported by all grade levels. The mean score changes for all

the grades from pre to post intervention were not statistically significant at the 0.05 alpha level.

Year 2 (2019-20): *The Level 1 and Level 3 students showed a decline of the non-use of tobacco products from pre to post intervention. The change for Level 1 was -0.9% and for Level 3 it was -4.7%. The Level 2 students showed an improvement of 4.0% improvement in the non-use of tobacco. Levels 1, 2, and 3 students showed an improvement in the non-use of alcohol products from pre to post intervention. The change for Level 1 was 1.6%, for Level 2 it was 7.2% and for Level 3 it was 3.1%. The Level 1 students showed a small decline in the non-use of marijuana from pre to post intervention. The change for Level 1 was -0.9%. Level 2 and Level 3 showed an improvement in the non-use of marijuana. The change for Level 2 was 3.1% and for Level 3 it was 4.4%. None of the above changes were statistically significant at the 0.05 alpha level.*

The Level 1 students reported a small decline in the non-use of illegal drugs at a -2.5% response rate, while the Level 2 students remained unchanged from pre to post intervention at 100% non-use at both the pre and post intervention assessments. The Level 3 students showed a 3.1% improvement in the non-use of illegal drugs. The Level 1 students reported an improvement at 6.1% in the non-use of inhalants. Both the Level 2 and Level 3 students reports 100% non-use of inhalants at the pre and post intervention assessments. All the levels (1, 2, & 3) reported an improvement in not vaping in the past 30 days. Level 1 improved by +0.9%. Level 2 improved by +5.1% and Level 3 improved by 7.6% in not vaping from pre to post intervention. All of the above changes were not statistically significant at 0.05 alpha level.

The Risk Behavior composite scores for 2019-20 Level 1 and Level 2 showed a negative decline from pre to post intervention assessments. The Level 1 mean scores reflected a -1.1% change while the Level 2 had -5.2% change in mean scores which implied a decrease in the use of chemical substances, alcohol, and tobacco reported by all grade levels. The Level 3 composite mean scores showed an increase of +1.1% from pre to post intervention. This change implied a small increase in the use of chemical substances, tobacco, and alcohol. The mean scores changes for all the levels from pre to post intervention were not statistically significant at the 0.05 alpha level.

Question #3: After completing LCH, will the participating middle school students be able to resolve conflicts using learned skills and techniques? [Conflict Resolution]

Year 1 (2018-19): *The Level 1 and Level 2 participants showed 4.8% and 6.0%, respectively, improvement in their response rates from pre to post intervention in being able to say no to their friends in addressing negative behaviors. These changes in response rates were not statistically significant at the 0.05 alpha level. The Level 1 and Level 2 participants showed -3.9% and -4.2%, respectively, decline in their response rates from pre to post intervention in*

being able not to get into a fight in the past 30 days. None of the changes in response rates were statistically significant at the 0.05 alpha level for all levels.

The Level 1 showed a small increase in their response rates (2.2%) in not being teased in the past 30 days. There was a decline of 7.5% in the Level 2 response rates for not being teased from pre to post intervention assessments. Level 1 and Level 2 noted a -9.3% -4.3%, respectively, decline in not being bullied in the past 30 days. Level 1 and Level 2 showed an improvement in being able to control their anger from pre to post intervention of the response rates 2.1% and 5.5%, respectively. None of the changes in the response rates were statistically significant at the 0.05 alpha level for all both levels.

The Conflict Resolution composite scores for 2018-19 showed a -4.4% decline for Level 1 while Level 2 had a -2.0% decline in their mean composite scores. The mean score changes for both levels from pre to post intervention were not statistically significant at the 0.05 alpha level.

Year 2 (2019-20): *The Level 1, Level 2, and Level 3 participants showed 19.8%, 11.6% and 15.1%, respectively, improvement in their response rates from pre to post intervention in being able to say no to their friends in addressing negative behaviors. The Level 1 and Level 3 changes in response rates were statistically significant at the 0.10 alpha level. The Level 2 participants showed -4.4% decline in their response rates from pre to post intervention in being able not to get into a fight in the past 30 days. This was statistically significant at the 0.10 alpha level [$p < 0.0873$]. The Level 1 participants showed a 9.3% increase, and the Level 3 participants showed a 3.7% increase in getting into a fight in the past 30 days. The Level 1 and Level 3 changes in response rates were not statistically significant at the 0.05 alpha level for all levels [$p < 0.395$ and $p < 0.595$, respectively].*

The Level 1 showed a small increase in their response rates (5.6%) in not being teased in the past 30 days. There was a decline of -1.4% in the Level 2 response rates and a -1.8% decline in Level 3 response rates in not being teased in the past 30 days from pre to post intervention assessments. Level 2 noted a -1.7% decline in not being bullied in the past 30 days. Level 1 and Level 3 showed a 9.6% and 6.1%, respectively, increase in being bullied in the past 30 days.

Level 2 and Level 3 participants showed an improvement in being able to control their anger from pre to post intervention at the response rates changes of 24.6% and 1.2%, respectively. The Level 2 change the response rates was statistically significant at the 0.05 alpha level [$p < 0.0316$]. Level 1 participants showed a -7.4% decline in being able to control their anger. Both the Level 1 and Level 3 response rates changes were not statistically significant at the 0.05 alpha level [$p < 0.617$ and $p < 0.904$, respectively].

The Conflict Resolution composite scores for 2019-20 showed a -1.8% decline in the mean scores from pre to post intervention for Level 1. Level 2 had a +7.4% increase in their mean

composite scores and Level 3 had a +0.6% change from pre to post intervention. This implied an improvement in being able to handle conflicts. The mean score changes for Level 2 was statistically significant at the 0.10 alpha level [$p < 0.0544$]. The mean score changes from pre to post intervention were not statistically significant at the 0.05 alpha level for Level 1 and Level 3.

Question #4: After completing LCH, will the participating middle school students have improved self-esteem and self-efficacy qualities? [Self-esteem]

Year 1 (2018-19): At pre and post intervention response rates decline for Level 1 (-0.3%) and Level 2 (-3.5%) participants in seeing themselves as a good person. Another measure of self-esteem is the consideration of a person's body as being sacred. The Level 1 participants reported a positive change of 1.4% in agreement that their bodies are sacred from the pre to the post intervention assessments. The Level 2 participants showed a -0.5% decline in their response rates regarding their bodies being sacred. None of these changes in response rates from pre to post intervention were statistically significant at 0.05 alpha level.

The Self-Esteem composite mean scores for 2018-19 showed 5.7% decline by Level 1 respondents and a 3.3% improvement for the Level 2 respondents in their mean composite scores from pre to post intervention. None of mean score changes for both levels from pre to post intervention were statistically significant at the 0.05 alpha level.

Year 2 (2019-20): At pre and post intervention the response rates declined for Level 1 (-0.9%) and Level 2 (+0.8%) participants improved in seeing themselves as a good person. The Level 3 participants did not have a change from pre to post intervention. None of these changes were statistically significant at the 0.05 alpha level. Another measure of self-esteem is the consideration of a person's body as being sacred. The Level 1 and Level 3 participants reported positive changes of +12.3% and +11.6%, respectively, agreeing that their bodies are sacred from the pre to the post intervention assessments. The Level 2 participants showed a -5.4% decline in their response rates regarding their bodies being sacred. None of these changes in response rates from pre to post intervention were statistically significant at 0.05 alpha level.

The Self-Esteem composite mean scores for 2019-20 showed -1.3% decline by Level 2 respondents and a -1.4% decline for the Level 3 respondents in their mean composite scores from pre to post intervention. The Level 1 mean scores showed a +2.9% change. The positive change indicated an improvement in self-esteem. None of mean score changes for all the levels from pre to post intervention were statistically significant at the 0.05 alpha level.

Question #5: After completing LCH, will the participating middle school students have improved communication skills with their parents, elders, and other adults? [Communication]

Year 1 (2018-19): *The Level 1 students in each of the grades at post intervention reported listening more to their parents and elders after participating in the LCH program at a 98.0% response rate. Level 2 students reported a decline of 3.4% response rates from pre to post intervention. When students were asked about talking about their personal problems to their parents the Level 1 reported a -8.2% decline from pre to post intervention assessment. The Level 2 students reported a -3.4% decline in their response rates after participating in the LCH program. None of the changes were statistically significant at the 0.05 alpha level.*

When students were asked about talking about their personal problems to a trusted adult the Level 1 students reported a -8.3% and the Level 2 students reported a -14.2% decline their response rates after participating in the LCH program. None of the changes were statistically significant at the 0.05 alpha level.

The Communication composite mean scores for 2018-19 showed an 8.5% increase for the Level 1 participants from pre to post intervention. There was a 5.9% increase for the Level 2 participants in the composite mean scores from pre to post intervention. This implied a decrease in the level of communication from pre to post intervention for the participants. The mean score changes for all both levels from pre to post intervention were not statistically significant at the 0.05 alpha level.

Year 2 (2019-20): *The Level 1 students in Level 1 and Level 3 at post intervention reported listening more to their parents and elders after participating in the LCH program at improved response rates of 68.2% and 83.6%, respectively. Level 2 students reported a decline of -2.3% response rates from 71.1% at pre to 69.6% at post intervention. When students were asked about talking about their personal problems to their parents the Level 1 reported a +3.5% positive change from 42.0% at pre to 45.5% at post intervention assessment. The Level 2 students reported a +5.1% improvement in their response rates and Level 3 participants reported a +14.5% improvement after participating in the LCH program. None of the changes were statistically significant at the 0.05 alpha level.*

When students were asked about talking about their personal problems to a trusted adult the Level 1 students reported a -3.3% and the Level 2 students reported a -8.9% decline their response rates after participating in the LCH program. The Level 3 participants showed a +20.6% improvement in being able to talk to adults from pre at 30.3% to post at 50.9% intervention. The Level 3 change was statistically significant at the 0.10 alpha level [$p < 0.0588$]. The Level 1 and Level 2 changes were statistically significant at the 0.05 alpha level.

The Communication composite mean scores for 2019-20 showed an +23.5% increase for the Level 1 participants from pre to post intervention. This change was statistically significant at 0.05 alpha level [$p < 0.043$]. There was a 0.3% increase for the Level 2 participants in the composite mean scores from pre to post intervention. This change was not statistically significant at the 0.05 alpha level. There was a -11.3% decrease in the mean composite

scores for Level 3. This change implied there was an improvement in communication for the participants from pre to post intervention. The Level 3 mean score changes from pre to post intervention was statistically significant at the 0.05 alpha level [$p < 0.025$].

Question #6: After completing LCH, will the participating middle school students show an increase in their respect for themselves, others, peers, and adults in their lives? [Respect]

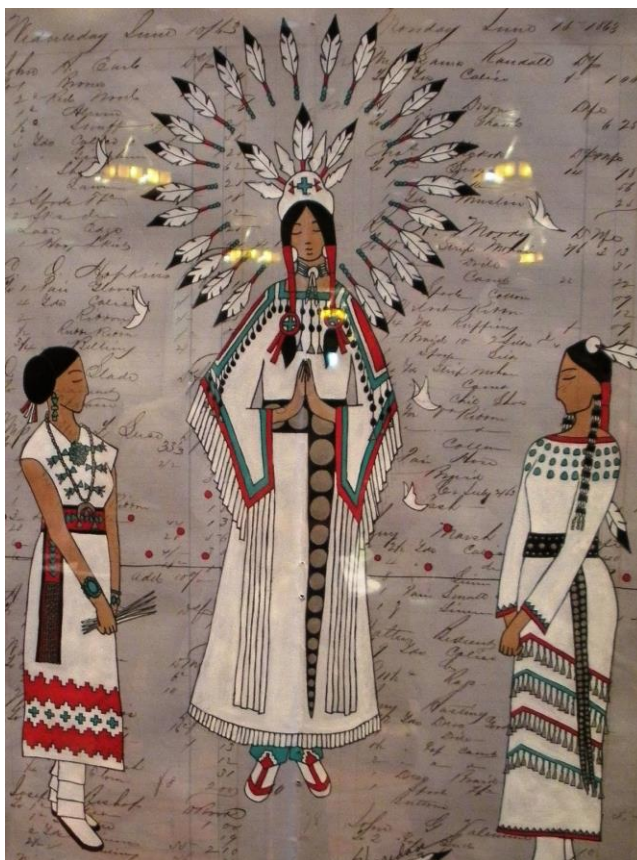
Year 1 (2018-19): The Level 1 students reported an increase of 10.3% response rates in being respectful of other people's property from pre to post intervention. The Level 2 students reported a decrease of 16.4% in being respectful of other people's property. The Level 1 students in each of the levels at post intervention reported being respectful of other people at a 100% response rate. Overall Level 2 students reported a decline of 3.3% response rates from pre to post intervention in being respectful of other people. When students were asked about practicing the value of generosity the Level 1 reported a 1.7% improvement from pre to post intervention assessment. The Level 2 students reported a -3.4% decline in their response rates after participating in the LCH program. None of the changes were statistically significant at the 0.05 alpha level.

The Respect composite mean scores for 2018-19 showed an 0.8% decline for the Level 1 participants from pre to post intervention and a 12.8% decline the Level 2 participants in the composite mean scores from pre to post intervention. The mean score changes for all both levels from pre to post intervention were not statistically significant at the 0.05 alpha level.

Year 2 (2019-20): The Level 1 students reported an increase of 1.3% response rates and Level 3 students reported an increase of 12.8% in being respectful of other people's property from pre to post intervention. The Level 2 students reported a decrease of -5.2% in being respectful of other people's property. The Level 1 students showed an improvement of 10.4% from pre to post intervention in being respectful of other people. Level 2 and Level 3 students reported a decline of -4.9% and -2.5% response rates, respectively, from pre to post intervention in being respectful of other people. When students were asked about practicing the value of generosity the Level 1 reported a 25.1% improvement from pre to post intervention assessment which was statistically significant at the 0.05 alpha level [$p < 0.0478$]. The Level 2 students reported a -17.8% decline in their response rates after participating in the LCH program. The Level 3 participants reported a 12.1% increase in their practice of generosity from pre to post intervention. The Level 2 and Level 3 changes were not statistically significant at the 0.05 alpha level.

The Respect composite mean scores for 2019-20 showed a -9.5% decline for the Level 1 participants and a -8.7% decline for the Level 3 from pre to post intervention. There was an increase in mean scores of 2.9% for Level 2 participants from pre to post intervention. A decrease in the means scores favored an improvement in being respectful to others. The mean score changes for all three levels from pre to post intervention were not statistically significant at the 0.05 alpha level.

It should be noted that the analysis in this report is based on self-report rating questions answered by the LCH participants. Since the response to the questions in the pre and post assessments are based upon the student's reading proficiency, mental acuity, and maturity care must be used in interpreting the findings in the context of child's personal cognitive and behavioral status. It is important to note that self-report rating measures are not considered objective reports of behavior. Self-report measures can be used to determine the effectiveness of a program if bias, subjectivity, and maturity are factored into the interpretation of the findings. With these limitations in mind, the effectiveness of the LCH program can be ascertain with appropriate insights and conclusions.²⁷



²⁷ Eckert, T.L., Dunn, E.K., Guiney, K.M., & Coddling, R.S. (2000). Self-Reports: Theory and Research in Using Rating Scale Measures. In E.S. Shapiro. & T.R. Kratochwill (Eds.), *Behavioral Assessment In Schools: Theory, Research, and Clinical Foundations* (pp 288-322). New York: The Guildford Press.

Appendix A: Questionnaire Subscales (Factors).

Factors	Question	Values	Score	Reliability Coefficient
Risk Behaviors	In the past 30 days, I used tobacco. In the past 30 days, I drank alcohol. In the past 30 days, I used marijuana. In the past 30 days, I used bad drugs. In the past 30 days, I have huffed or sniffed.	1 to 5	5 to 25	0.91
Communication	In the past 30 days, I talked to my parents about my problems. In the past 30 days, I talked to another adult about my problems. In the past 30 days, I listened to my parents and elders.	1 to 5	6 to 15	0.87
Respect	In the past 30 days, I respected other people's property. In the past 30 days, I was kind to another person. I am polite to other people. I practice wacantognaka (generosity to others).	1 to 4	4 to 12	0.88
Lakota Identity	I consider myself to be Lakota, Dakota, or Nakota. I am proud to be Lakota, Dakota, or Nakota. I practice my Lakota, Dakota, or Nakota traditions. I am learning my Lakota language.	1 to 4	4 to 12	0.85
Conflict Resolution	In the past 30 days, I got into a fight. In the past 30 days, some teased me or picked on me. In the past 30 days, I knew when to say no. I am able to control my anger.	1 to 6 1 to 6 1 to 6 1 to 5	4 to 23	0.89
Self-Esteem	I think I am a good person. I believe my body is sacred. I am proud to be Lakota. In the 30 days, I have lied to someone.	1 to 5	4 to 20	0.82