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Increasing Awareness of the Risks of Tobacco Use among Lesbian, Gay, Bisexual and Transgender Youth

A Report from the Gay, Lesbian, Bisexual and Transgender
Community Center of Colorado

www.glbtcolorado.org

**Increasing Awareness of the
Risks of Tobacco Use among
Lesbian, Gay, Bisexual and
Transgender Youth**

By

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The **Gay, Lesbian, Bisexual and Transgender Community Center of Colorado** is the only statewide, nonprofit community center dedicated to providing support and advocacy for Colorado's gay, lesbian, bisexual and transgender (GLBT) population. We serve as a catalyst for community organizing, support services, social activities and cultural events.

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ABOUT THE AUTHORS

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INTRODUCTION

Research has documented the increased risk of tobacco use among the lesbian, gay, bisexual, and transgender (LGBT) community for both adults (Harris Interactive, 2001; Heck & Jacobsen, 2006; Ryan, Wortley, Easton, Pederson, & Greenwood, 2001;) and youths (Petrov, 2004; Ryan et al., 2001). Part of this increased risk arises from tobacco company strategies that has conducted targeted marketing to the LGBT community (American Legacy Foundation, 2007; Goebel, 1994). In addition to direct advertising in LGBT community publications, strategies have included sponsorship of events, corporate grants to social service agencies that serve the community, and promotions in LGBT bars and gathering places (National LGBT Tobacco Control Network, n.d.; Ryan et al., 2001).

Because smokers tend to start their tobacco use during their adolescence or young adulthood (CDC, 2006), interventions seeking to decrease the prevalence of smoking among the LGBT community must likewise target this age group with factual education and tobacco awareness messages. This is particularly important given that smoking cessation is difficult and the younger initiation of smoking takes place, the more likely the individual will become an adult smoker (Center for the Advancement of Health, 1997; Khuder, Dayal, & Mutgi, 1999). Among LGBT youths and young adults, once study found that the mean age of first smoking a cigarette was 12.7 years old (Walls, Hancock, & Wisneski, 2007).

This study examines the effectiveness of a series of tobacco awareness campaigns and events conducted in Colorado that targeted LGBT youths and young adults. These campaigns were undertaken by five different agency partners located in different areas of the state. The campaign was funded through a grant to the Gay, Lesbian, Bisexual, and Transgender Community Center of Colorado (The Center) from the Colorado Department of Public Health & Environment. The campaigns sought not only to increase awareness of tobacco-related messages, but also to empower LGBT youths and young adults to take a leadership role in increasing awareness among their peers of the costs of the use of tobacco products individually and to the LGBT community.

AGENCY PARTNERS

Rainbow Alley, a program of The Center that serves LGBT youths and young adults, and four additional partners (GLBT Resource Center – UC/Boulder, GLBT Student Services – Auraria, Inside/Out, and Lambda Community Center) who subcontracted with The Center were responsible for developing and administering the awareness campaigns and events, as well as collecting evaluation data on their effectiveness. Each partner agency is briefly described in this section.

GLBT Resource Center at University of Colorado, Boulder

The mission of the GLBT Resource Center is to promote equal opportunity for successful academic, social, and personal development for all GLBT students, staff, faculty and their allies in a safe and supportive environment. The Center formally opened its doors to the CU community in March of 1995 and is dedicated to education, outreach, information referral and dissemination, advocacy for Gay, Lesbian, Bisexual, Transgender (GLBT) issues.

GLBT Student Services at Auraria

GLBT Student Services is a tri-institutional office on the Auraria Campus serving the students, faculty and staff of Metropolitan State College of Denver, Community College of Denver, and University of Colorado at Denver and Health Sciences Center. Services are available to all Auraria students as a resource for exploring issues of sexual orientation and gender identity.

Inside/Out Youth Services

Inside/Out Youth Services is the sole lesbian, gay, bisexual, transgender, intersex and questioning (LGBTIQ) youth organization in the El Paso County region. Inside/Out emphasizes a broad range of support services and programs for youth between the ages of 13-22 including support groups, peer counseling, safe recreation activities, community referrals, HIV/STD prevention education, community education and advocacy, and youth leadership development.

Rainbow Alley

Rainbow Alley, a program of the GLBT Community Center of Colorado, is a drop-in center designed to support GLBT youth and their allies ages 12-21 in the Denver-metro area. Rainbow Alley provides health services, counseling and referral, youth-led events and activities, and life resources in a safe and supportive space. The drop-in center is a drug, alcohol, tobacco, and hate free space. All Rainbow Alley activities are created and run by youth-participants with trained adults providing supervision. The program believes in honoring individuality, empowerment, respect in our youth-adult partnership model of service delivery.

Rainbow Peaks

Rainbow Peaks Youth Group is a service of Lambda Community Center in Fort Collins for GBLTIQ and allied youth in Northern Colorado. The goal of the program is to provide a safe place for youth to meet for fun, activities, and support.

AWARENESS CAMPAIGNS AND EVENTS

Campaigns and events conducted to increase the awareness of tobacco-related issues among LGBT youths and young adults and to empower LGBT youth to become peer educators, fell into five primary categories, some of which were organized specifically around the topic of tobacco use and others where the tobacco-related messaging was embedded into some other type of event. Within these categories, 10 different strategies were utilized. In this section we outline the specific awareness campaigns and events that were undertaken.

Media Critique Events

A number of events that focused on increasing critical thinking about the portrayal of tobacco products in various forms of media were developed. Events in this category typically followed a pattern that began with the provision of factual information about tobacco products, usage, and marketing. After that, a dialogue about how to critically consume media was undertaken and tools for assisting the participants in tracking messages about tobacco use were

distributed. Once the participants had been adequately prepared, the media were examined. Following the consumption of the media, the participants compared their notes and responses to the media in a debriefing discussion. The events typically ended with participants sharing new information, insights, or questions that had arisen from taking part in the activity.

Events in this category might include smoke-free movie nights, book discussion groups, television show premier parties (Oscar parties, the L-Word new season premier parties), magazine review groups, and other similar media literacy activities. Only one of the five partner agencies held a media critique events at which an evaluation was conducted.

Social Events

A number of campaigns were embedded in social events that partner agencies have found particularly appealing to LGBT youths and young adults. In these types of events, the primary purpose for youth participating was actually the social activity, with the tobacco-related messaging incorporated into the activity. The messaging could take the form of sharing tobacco-related information and facts, skits, a brief discussion about tobacco usage in the LGBT community, or a question and answer session.

Events of this type might include drag free drag shows, pizza parties, queer proms, symposia on topics of interest to LGBT youths and young adults, or civic engagement activities. Four of the five partner agencies held a total of seven social events. Social events were the most commonly held event type.

Physical Activity Events

As with the social events, the physical activity events occurred when tobacco-related messaging was embedded into some type of experience that was more physical in nature. Similarly, the forms in which the messaging took place varied by event and frequently took the forms outlined above in the social events section.

Possible events of this type might include courses and one-time classes in martial arts, yoga, or mediation, utilization of Ropes courses, and one time runs or treks (Jingle Bell Run, Walk for the Cure, White Hare Snowshoe Trek, etc.). Only one of the five partner agencies held physical activity events where evaluations were collected, and that organization held three events of this type.

Smoking-related Events

Unlike the social and physical activity events where smoking-related messaging is embedded into some other activity, smoking-related events have almost a sole focus on tobacco usage. They might include participation in smoke-outs, butt walks, preparing smoking-related materials such as posters, flyers, or zines. Only one of the five partner agencies undertook a smoking-related events, and that group conducted three different events in this category.

Process campaigns

Some activities to increase awareness about tobacco are not the types of events that occur once or a few times, but actually take the form of distributing information on tobacco-related topics, engaging in discussions during outreach activities, providing access to a lending library, and referrals to quit lines and other quit aids. All of the five partner agencies engaged in some aspects of awareness process campaigns.

METHODOLOGY

Developing an evaluation strategy for such a diverse conglomerate of activities required a collaborative effort to identify the aspects of the events that were common across all events, as well as identifying what unique characteristics and messages each of the different types of events offered. All of the categories of campaigns lend themselves to pre- and post-test evaluations with the exception of process campaigns which require a monitoring system to determine the amount of dissemination of information that has taken place.

Evaluations were developed for the four types of events that included six pre- and post-test questions, and three post-test only questions that were the same on evaluations for all categories of campaigns. There were six additional questions that were included only on the evaluations for specific categories of events.

Given that the evaluation questions were Likert scales, we used the Wilcoxon rank sum tests – which is appropriate for ordinal level variables – to determine if there were significant differences in the pre- and post-test distributions. Stata 9.2 was the statistical software used for all analyses.

Measures

The six questions that were included as pre- and post-test questions on all of the evaluations are listed include the following: (1) I feel comfortable talking to other youth about issues related to smoking; (2) Tobacco companies target the GLBT community; (3) I feel confident about my leadership capability; (4) I am now interested in getting more involved in peer education related to smoking prevention and healthy living messages; (5) I have a desire to keep my body healthy; and (6) Answer this question only if you currently smoke: I plan to quit smoking in the next 30 days. Respondents indicated their level of agreement on all statements with a 5-point Likert scale response set ranging from *Strongly Agree* to *Strongly Disagree*. All variables were recoded so that higher numbers indicate higher levels of agreement.

Three questions of interest were deemed only appropriate for the post-test and were included in the evaluations for all categories of events. They are: (1) Today's event strengthened my confidence; (2) The information presented today on smoking is scientifically supported; and (3) I feel comfortable encouraging my friends to stop smoking. The response set was the same 5-point Likert response set used above.

FINDINGS – PROCESS CAMPAIGNS

Two of the participating partners maintained extensive records of the distribution of smoking cessation aids, and referrals to smoking cessation quitlines and other related services. This section includes a brief overview of the data from these two sites.

In all, 269 contacts with LGBT youths and young adults were documented through outreach and other interactions outside the scope of the events reported herein. Of those who reported age of contact, we find an average age of 20.2 years. Of the contacts, 48.3% were interactions with males, 43.5% were with females, 4.1% were trans identified youths and young adults, and the remaining 4.1% were unknown. With regard to race and ethnicity, 40.5% of the contacts were white, 21.2% were Latino/a, 8.6% were African American, 4.5% were Asian/Pacific Islander, 3.7% were bi- or multi-racial, less than 1% was American Indian/Native American. The remaining 19.7% did not report a race or ethnicity.

With regard to readiness to quit, 43.6% of the contacts who identified as current smokers indicated that they were not considering quitting, 35.7% indicated that they may quit in the future, and 18.6% indicated that they were ready to quit.

FINDINGS – EVENTS

Descriptives, Events

In this section, we provide information specific to the types of the events as well as specific to each partner agency site. Overall, 461 youths and young adults participated in the various smoking awareness campaigns administered by the partner agencies for which evaluations were collected. (This count, no doubt, has some duplication since the data do not allow us to track individual youths' participation.)

In Table 1 is a breakdown of the number of events and the number of attendees that attended that type of event. Table 2 examines the type of events administered by partner agency. All events occurred between November, 2007 and May, 2008.

Descriptives, Pre-test

This section describes the youths' and young adults' responses to the six questions that were asked in all evaluations prior to the events. In response to the statement that they feel comfortable talking to other youth about issues related to smoking, we find that 60.9% ($n=272$) report that they strongly agree, 19.9% ($n=89$) somewhat agree, 11.2% ($n=50$) neither agree nor disagree, 3.6% ($n=16$) somewhat disagree, and 4.5% ($n=20$) strongly disagree. The mean level of agreement was 4.3 (slightly above somewhat agree) with a standard deviation of 1.1.¹

With regard to how much the youths agreed with the statement that tobacco companies target the LGBT community, 11.0% ($n=15$) strongly disagreed, 5.2% ($n=7$) somewhat disagreed, 27.9% ($n=38$) neither agreed nor disagreed, 22.1% ($n=30$) somewhat agreed, and 33.8% ($n=46$) strongly agreed. The mean level of

¹ While technically means and standard deviations are typically only reported for interval level variables, we have chosen to report them here for ordinal level variables to give the reader a sense of the distribution of responses.

Table 1: Events and Attendees

EVENT	NUMBER OF EVENTS	NUMBER OF ATTENDEES
Media Critique Events		
Smoke Free Movie Night	1	2
Social Activity Events		
Drag Free Drag Shows	4	96
Queer Symposium	1	23
Smoke Free Shut In	1	14
Queer Prom	1	259
Physical Activity Events		
Martial Arts Program	3	23
Smoking-Related Events		
Queer American Smokeout	1	24
Speakers Bureau Training	1	6
Zine Making	1	14
TOTAL	14	461

agreement was 3.6 (approximately half-way between neither agree nor disagree and somewhat agree) with a standard deviation of 1.3.

Only 3.9% ($n=17$) of the youth and young adult respondents strongly disagreed with the statement that they felt confident about their leadership ability, while 4.5% ($n=20$) somewhat disagreed, 12.2% ($n=54$) neither agreed nor disagreed, 27.8% ($n=123$) somewhat agreed, and 51.6% ($n=228$) strongly agreed. The mean

Table 2: Event Type, by Partner Agency

EVENT	AU	BO	IO	LC ¹	RA
Smoke Free Movie Night		X			
Drag Free Drag Shows					X
Queer Symposium	X				
Smoke Free Shut In			X		
Queer Prom					X
Martial Arts Program			X		
Queer American Smokeout					X
Speakers Bureau Training					X
Zine Making					X
TYPES OF EVENTS	1	1	2		5

Note: AU= GLBT Student Services – Auraria; BO – GLBT Resource Center – UC/Boulder; IO = Inside/Out; LC = Lambda Community Center; RA = Rainbow Alley. ¹Because of staffing change issues, evaluations were not available for events conducted by the Lambda Community Center.

response to this question was 4.2 (slightly above somewhat agree) with a standard deviation of 1.1.

The fourth question asked if the respondent was interested in becoming more involved in peer education related to smoking prevention and healthy living messages², to which 7.6% ($n=34$) strongly disagreed and 9.4% ($n=42$) somewhat disagreed. In the middle category neither agreeing nor disagreeing with the statement, we find 31.5% ($n=140$). On the agreed side, 20.7% ($n=92$) somewhat agreed, and 30.8% ($n=137$) strongly agreed. The mean response was 3.6

² On a small number of surveys the question did not ask about their interest in peer education, but rather asked about their confidence in their knowledge to engage in peer education ($n=20$).

(approximately halfway between neither agree nor disagree and somewhat agree) with a standard deviation of 1.2.

The two final questions in this section asked about healthy living attitudes. Respondents indicated how much they agreed with a statement that they had a strong desire to keep their bodies healthy. Surprisingly, 4.1% ($n=18$) stated that they strongly disagreed, 3.6% ($n=16$) somewhat disagreed, and 16.2% ($n=72$) neither agreed nor disagreed. Slightly more than one-fifth (20.3%, $n=90$) somewhat agreed and 55.9% ($n=248$) strongly agreed. We find a mean of 4.2 (slightly above somewhat agree) and a standard deviation of 1.1.

The second question in this section targeted respondents who currently smoked, and ask if they planned on quitting in the next 30 days. Slightly less than a third (30.0%, $n=68$) strongly disagreed, 13.7% ($n=31$) somewhat disagreed, and 25.1% ($n=57$) neither agreed nor disagreed. Of those respondents who agreed that they were planning to quit smoking in the next 30 days, 8.4% ($n=19$) somewhat agreed, and 22.9% ($n=52$) strongly agreed. This suggests that slightly less than 1 in 4 smokers were indicated readiness to quit in the next month prior to the event occurring. This question has the lowest mean of the six common questions at 2.8 (almost to neither agree nor disagree) and a standard deviation of 1.5.

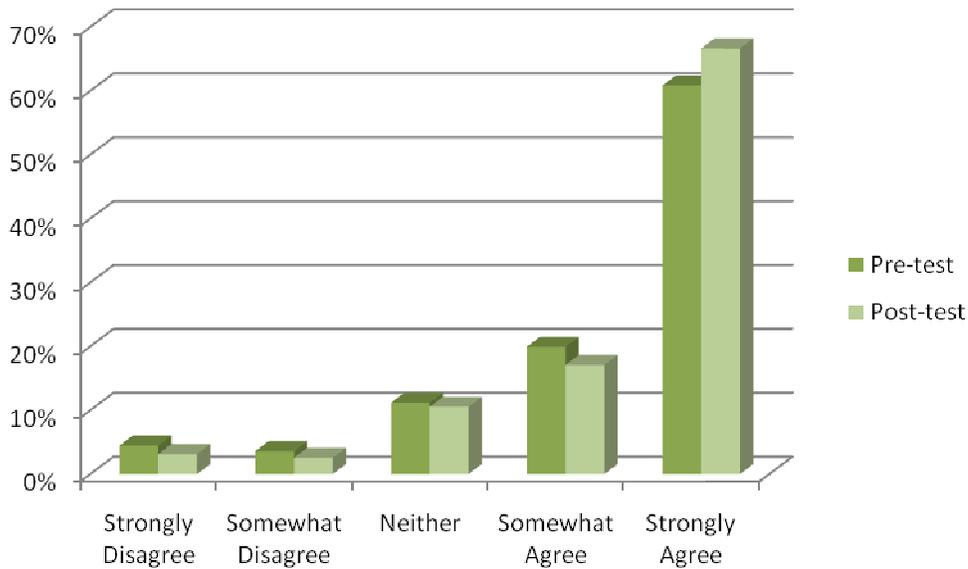
Descriptives, Post-test and Comparison of Pre- and Post-test Responses

We now turn our attention to the same six questions examined in the previous section, but this time examining the data for the respondents' answers immediately after the event. In addition, we compare whether there was significant change from pre-test to post-test (for those who are not missing data on either of the questions.)

Regarding feeling comfortable talking to their peers about issues related to smoking, we find that 3.1% ($n=11$) strongly disagree, 2.6% ($n=9$) somewhat disagree, and 10.5% ($n=37$) neither agree nor disagree. The majority of the sample is in agreement with this statement with 17.1% ($n=60$) somewhat agreeing and 66.7% ($n=234$) strongly agreeing. See Figure 1 for a visual comparison of the pre-test and post-test responses side-by-side.

Using a Wilcoxon signed-rank test to compare the pre- and post-test scores, we find a Z-score of -2.96 which is statistically significant at the .01 level of significance ($p=.003$, $n=337$). Examining the direction of the shifts we find that 26 respondents (7.7%) rated their confidence lower, 52 (15.4%) rated their

Figure 1: Comparison of Respondents' Comfort in Talking to Their Peers about Smoking Issues, Pre- and Post-test



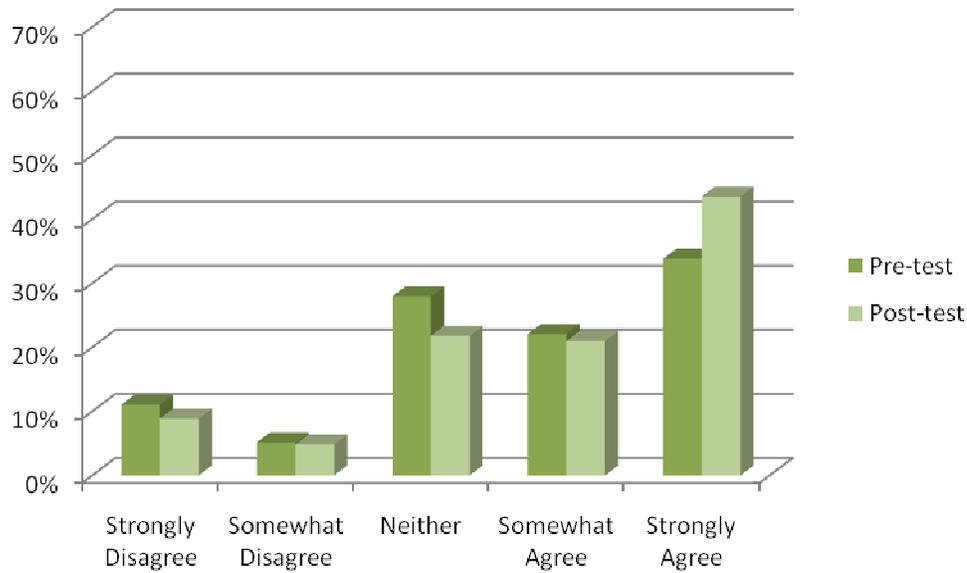
confidence higher, and 259 (76.9%) demonstrated no change in confidence before and after the smoking awareness event.

Moving on to the question regarding how much respondents agree with the statement that tobacco companies are targeting the LGBT community, we find that 8.9% ($n=11$) strongly disagree even after the smoking awareness event has occurred, 4.8% ($n=6$) somewhat disagree, and 21.8% ($n=27$) neither agree nor disagree. On the agreement side, we find that 21.0% ($n=26$) somewhat agree and 43.6% ($n=54$) strongly agree. Figure 2 compares the pre- and post-test percentages of agreement.

The Wilcoxon signed-rank test returns a Z -score of -2.39 which is statistically significant ($p=.02$, $n=110$). Examination of the patterns of the shifts in responses reveals that 8 (7.3%) shifted toward greater disagreement, 81 (73.6%) demonstrated no shift, and 21 (19.1%) shifted toward greater agreement.

After the smoking awareness event, 3.2% ($n=11$) strongly disagreed with the statement that they felt confident in their leadership ability, and 3.5% ($n=12$) somewhat disagreed. Neither agreeing nor disagreeing were 10.8% ($n=37$), while 23.0% ($n=79$) somewhat agreed and 59.5% ($n=204$) strongly agreed. Comparison of pre- and post-test percentages can be found in Figure 3.

Figure 2: Comparison of Respondents' Beliefs that Tobacco Companies Target the LGBT Community, Pre- and Post-test



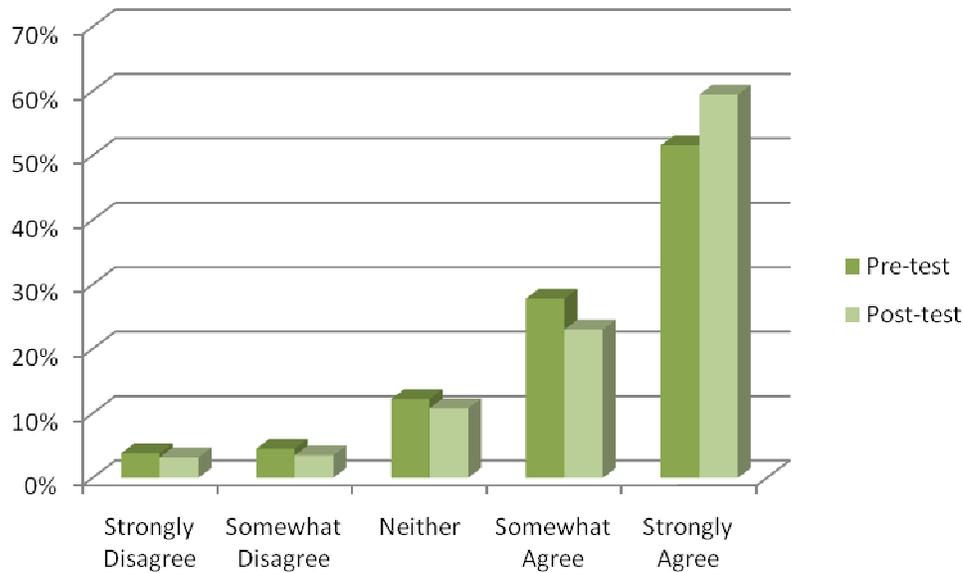
A Z-score of -3.42 was calculated using the signed-rank test which is statistically significant at the .001 level ($p=.0006$, $n=327$). Nineteen (5.8%) respondents shifted toward less agreement that they felt confident in their leadership ability, 261 (79.8%) remained the same, and 47 (14.4%) reported more strongly agreeing with the statement after the smoking awareness event.

In terms of increased interest in becoming involved in smoking-related peer education activities, 5.1% ($n=18$) strongly disagreed, 6.9% ($n=24$) somewhat disagreed, and 25.7% ($n=90$) neither agreed nor disagreed. Approximately a fifth (20.9%, $n=73$) somewhat agreed and 41.4% ($n=145$) strongly agreed. Figure 4 illustrates the percentages at pre- and post-test.

Again we find that there is a significant difference (Z-score = -5.75, $p=.0000$) in the pre- and post-test distributions. Twenty-six (7.8%) shifted toward greater disagreement, 220 (65.7%) stayed the same, and 89 (26.6%) shifted toward greater agreement.

Figure 5 compares the pre- and post-test results to the question regarding desire to keep a healthy body. After the smoking awareness event, 2.6% ($n=9$) strongly disagreed, 3.8% ($n=13$) somewhat disagreed, and 13.6% ($n=47$) neither agreed

Figure 3: Comparison of Respondents' Confidence in the Leadership Abilities, Pre- and Post-test



nor disagreed. Almost a fifth (19.9%, $n=69$) somewhat agreed and 60.1% ($n=208$) strongly agreed.

Figure 4: Comparison of Respondents' Interest in Becoming Involved in Smoking Related Peer Education, Pre- and Post-test

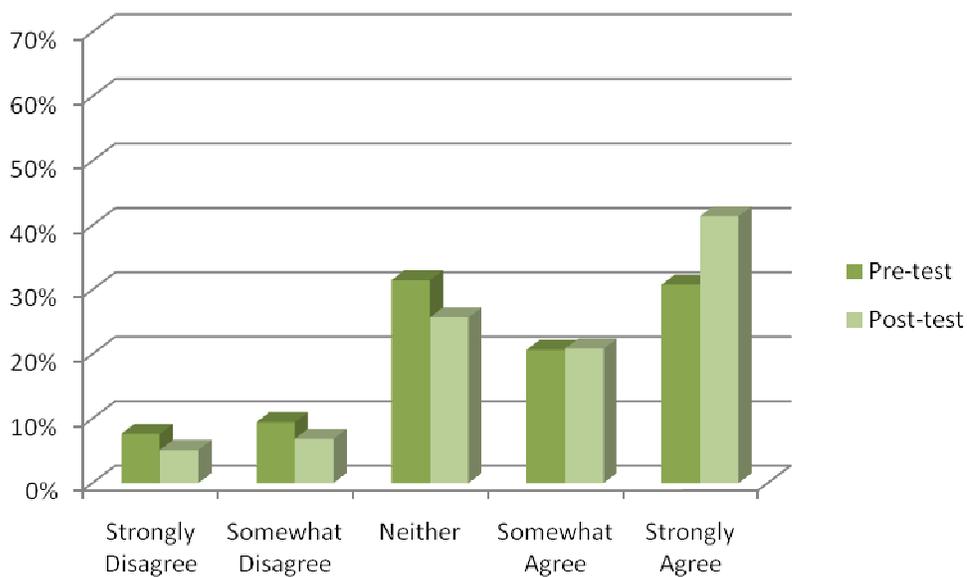
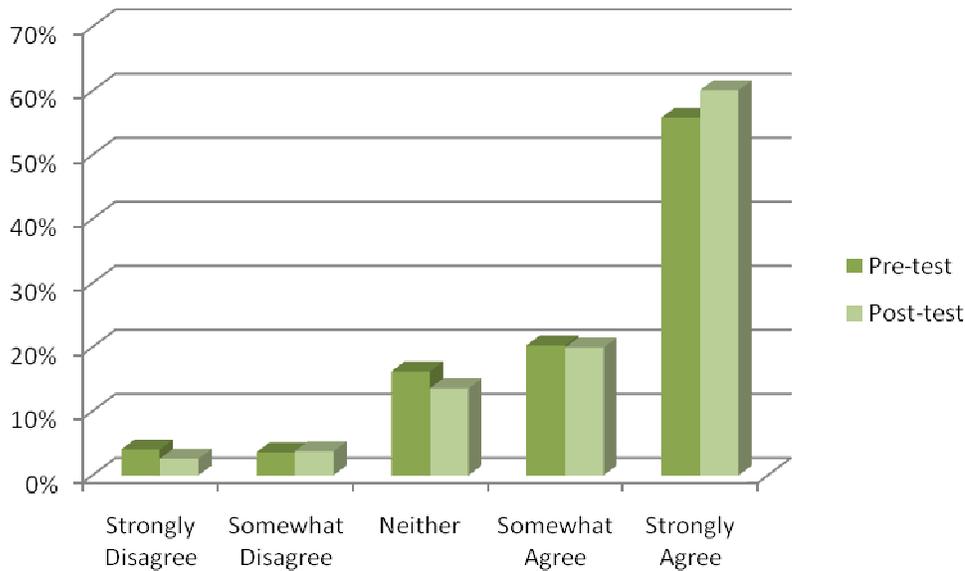


Figure 5: Comparison of Respondents' Desire to Keep Their Bodies Health, Pre- and Post-test

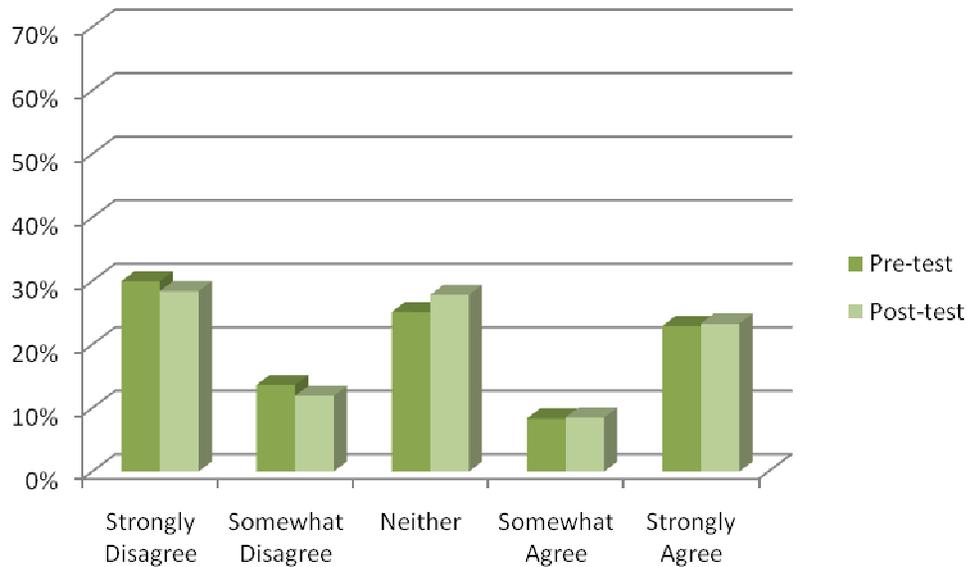


The Wilcoxon signed-rank test results in a Z-score of -2.71 which is statistically significant ($p=.007$). The shift between pre- and post-test was toward greater disagreement for 25 (7.6%) of the youth, unchanged for 257 (77.9%), and toward greater agreement for 48 (14.5%) of the youth.

Examination of the final common variable that was included both in the pre- and post-test evaluations only targets current smokers as it asks about the intention to quit in the next 30 days. Strongly disagreeing with this intention is 28.4% ($n=5$) of the youth, while 11.9% ($n=21$) somewhat disagree. Slightly more than a quarter of the youths (27.8%, $n=49$) neither agree nor disagree, 8.5% ($n=15$) somewhat agree, and 23.3% ($n=41$) strongly agree. See Table 6.

While there is a slight increase toward greater agreement with the intention to quit in the next 30 days, it does not reach a level of statistical significance ($Z\text{-score}=0.86$, $p=.392$), suggesting that smokers were not significantly more likely to agree that they intend to stop smoking in the next 30 days after exposure to the smoking awareness messages than they were before exposure. It should be remembered that this test of significance was using a much more restricted sample ($n=156$) than most of the previous explorations of significant change which weakens the ability of the Wilcoxon signed-rank test to detect a difference even when one exists.

Figure 6: Comparison of Intention to Quit Smoking among Current Smokers Only, Pre- and Post-test



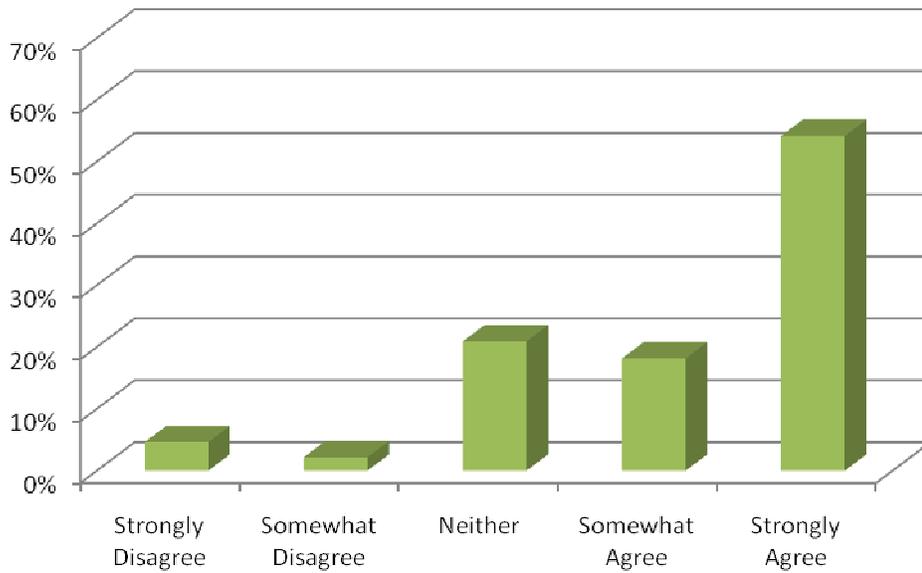
Descriptives, Post-test Only Variables

Three questions were asked only on post-tests for all the different categories of events. This section provides information on the findings related to those variables.

Participants in the smoking awareness events were asked after the event how much they agreed with the statement that the event had strengthened their confidence. Less than 5% (4.6%, $n=15$) reported that they strongly disagreed with the statement, and 2.2% ($n=7$) reported that they somewhat disagreed with it. Approximately a fifth of the sample (20.9%, $n=68$) reported that they neither agreed nor disagreed with the statement, 18.2% ($n=59$) somewhat agreed, and 54.2% ($n=176$) strongly agreed. Figure 7 illustrates the pattern visually.

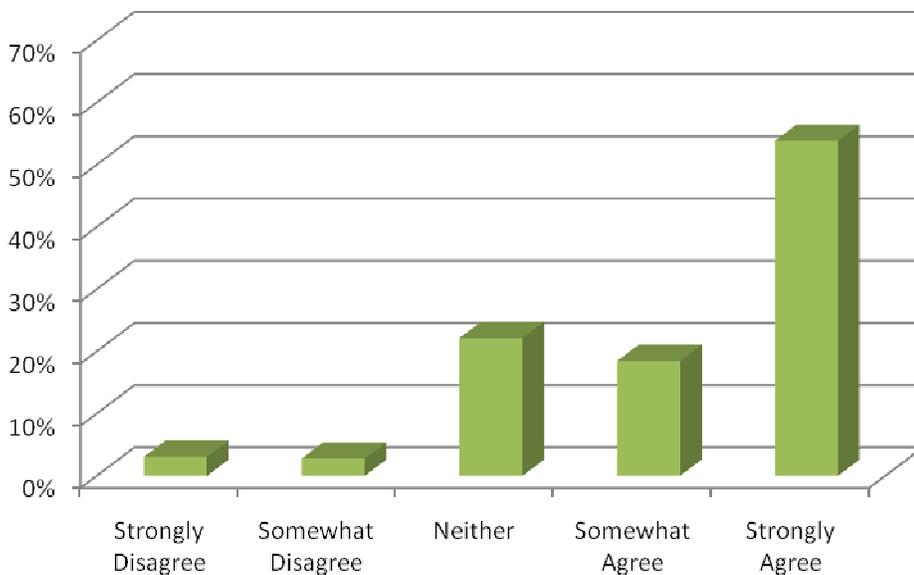
The second question sought to determine how much the youths believed that the information provided during the smoking awareness event was based on scientific evidence. The strongly disagree group made up 3.1% ($n=10$) of the sample, while 2.8% ($n=9$) somewhat disagreed, and 22.1% ($n=72$) neither agreed nor disagreed. On the agreement side, 18.4% ($n=60$) somewhat agreed and 53.7% ($n=175$) strongly agreed. See Figure 8.

Figure 7: Responses to Statement that Today's Event Strengthened Confidence



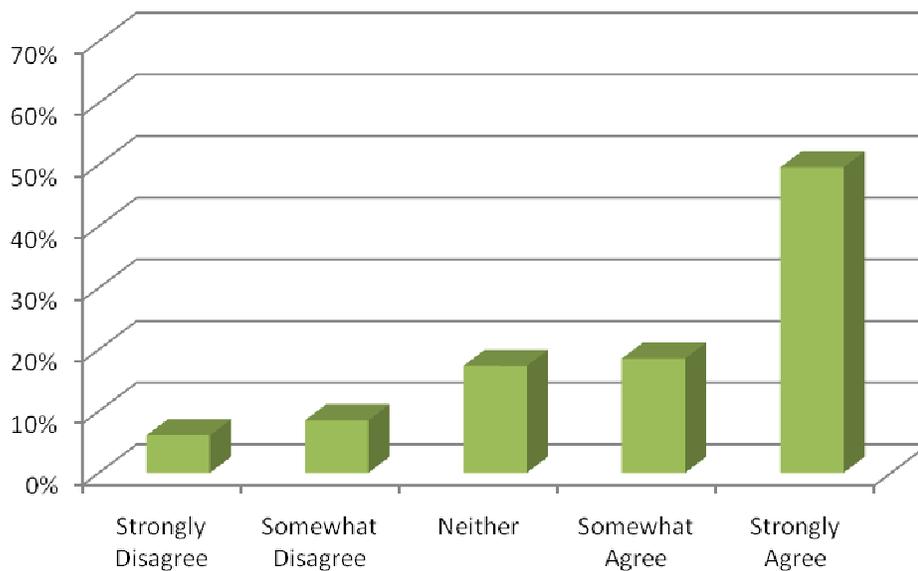
The final post-only question that was contained in all of the evaluations for all event types asked how much the youths agree to feeling comfortable encouraging their friends to stop smoking. Slightly under 6.1% ($n=20$) stated

Figure 8: Responses to Statement that Information Presented was Scientifically Supported



that they strongly disagreed with the statement and 8.5% ($n=28$) somewhat disagreed with the statement, while 17.3% ($n=57$) neither agreed nor disagreed. For somewhat agreed, we found 18.5% ($n=61$) falling into that category and 49.5% ($n=163$) strongly agreed. Figure 9 provides a visual representation of this pattern.

Figure 9: Responses to Statement that Respondent Would Feel Comfortable Encouraging Friends to Stop Smoking



FINDINGS – EVENT SPECIFIC MEASURES

Coming together with other queer youth motivates me to make positive changes

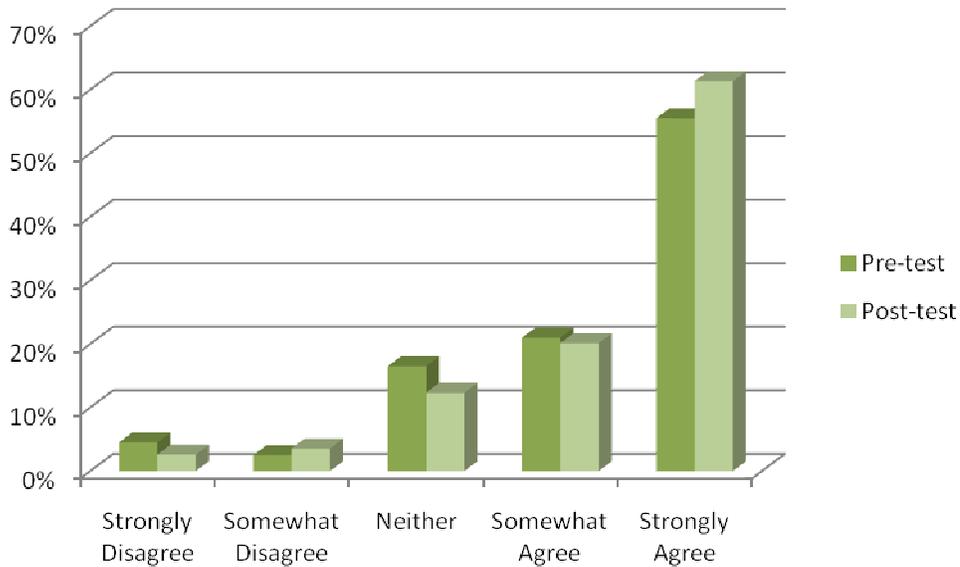
In a number of events that involved groups of lesbian, gay, bisexual, and transgender youth coming together for an activity, participants were asked their level of agreement with the statement, “Coming together with other queer youth motivates me to make positive changes” with the 5-point Likert response set used for previous questions. Agreement with the statement was measured both prior to the event and again after the event was over.

Prior to the events, 4.5% ($n=18$) of the participants indicated that they strongly disagreed, 2.5% ($n=10$) somewhat disagreed, and 16.5% ($n=66$) neither agreed

nor disagreed. On the agreement end of the scale, 21.0% ($n=84$) somewhat agreed and 55.5% ($n=222$) strongly agreed.

After the event was over, 2.6% ($n=8$) strongly disagreed, 3.6% ($n=11$), and 12.3% neither agreed nor disagreed. In terms of agreement, 20.1% ($n=62$) somewhat agreed and 61.4% ($n=189$) strongly agreed. Figure 10 illustrates the comparison of the two distributions.

Figure 10: Comparison of Responses to Whether Coming Together with Peers Motivates Positive Change, Pre- and Post-test



The Wilcoxon signed rank test of significance indicates that there is a statistically significant difference ($Z=-2.18, p=.030, n=296$) between the two distributions. Comparing the shifts of the respondents we find that 29 (9.8%) shifted toward greater disagreement after the event, 219 (74.0%) stayed the same, and 48 (16.2%) shifted toward greater agreement.

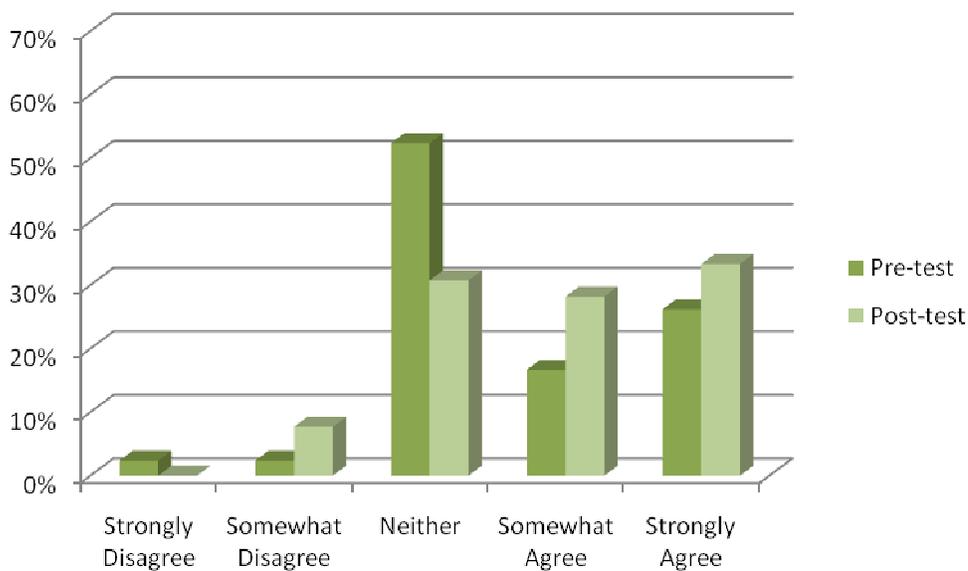
Martial arts motivates me to take better care of my body

For the three events where youth participated in martial arts trainings as part of the awareness campaign, participants were asked both before and after the event their level of agreement with the statement, “Martial arts motivates me to take better care of my body.” Prior to the event, 2.4% ($n=1$) reported that they strongly disagreed or that they somewhat disagreed with the statement.

Reporting that they neither agreed nor disagreed were 52.4% ($n=22$), while 16.7% ($n=7$) and 26.2% ($n=11$) reported that they somewhat agreed or strongly agreed with the statement, respectively.

After the event, no participants reported that they strongly disagreed with the statement, 30.8% ($n=3$) reported that they somewhat disagreed, and 30.8% ($n=12$) that they neither agreed nor disagreed. Agreeing somewhat with the statement were 29.2% ($n=11$) and 33.3% ($n=13$) reported that they strongly agreed once the event was over. See Figure 11 for a comparison of percentages in each category.

Figure 11: Comparison of Responses to Whether Martial Arts Motivated Taking Better Care of One's Body, Pre- and Post-test



Examining the results of the signed rank test of significance finds that a statistically significant shift did not occur ($Z=-1.62, p=0.11, n=37$), although it should be remembered that this was a very small sample and the results approached marginal significance. In terms of shifts, 4 (10.8%) moved toward greater disagreement, 23 (62.2%) did not shift, and 10 (27.0%) shifted toward greater agreement.

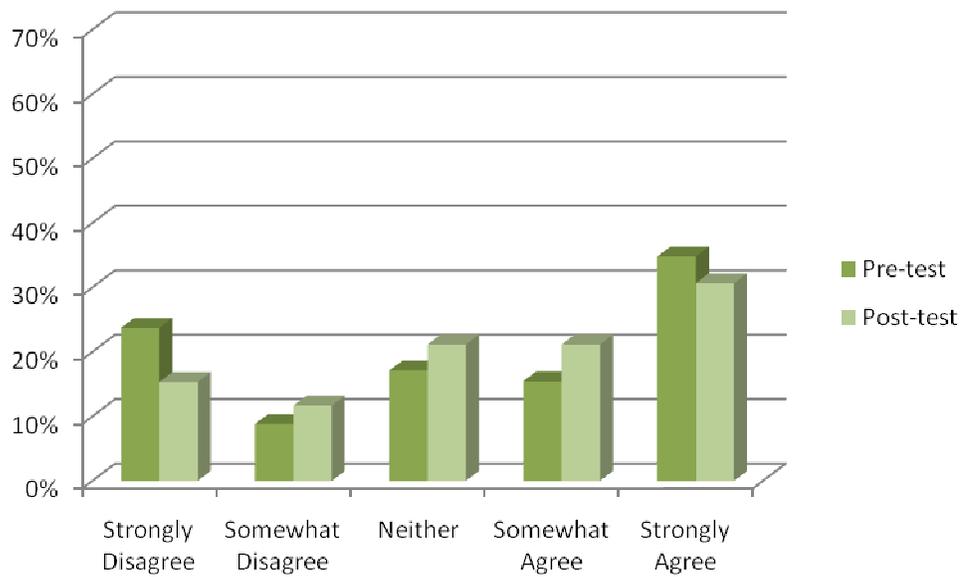
Difficulty in staying smoke-free for the duration of the event.

For those participants that currently smoked, they indicated their level of agreement with the statement, “I think staying smoke free for the duration of tonight’s event will be difficult” prior to the event, and “It was difficult staying smoke free for the duration of tonight’s event” after the event.

Prior to the event, 23.8% ($n=43$) of the smokers indicated strong disagreement with the statement, 8.8% ($n=16$) indicated that they somewhat disagreed, and 17.1% ($n=31$) indicated that they neither agreed nor disagreed. On the agreement side, 15.5% ($n=28$) somewhat agreed and 34.8% ($n=63$) strongly agreed. Almost half of the smokers agreed to some level that they believed it would be hard to stay smoke-free for the event.

After the event, 15.3% ($n=21$) strongly disagreed, 11.7% ($n=16$) somewhat disagreed, and 21.2% ($n=29$) neither agreed nor disagreed with the statement. Slightly more than a fifth (21.2%, $n=29$) somewhat agreed and 30.7% ($n=42$) strongly agreed. While the percentages in each category shifted somewhat, slightly more than one half of the smokers agreed to some level that it had been hard to stay smoke-free for the event. Figure 12 visually displays the comparison.

Figure 12: Comparison of Responses to Difficulty of Staying Smoke-Free During the Event, Pre- and Post-test



The Wilcoxon test indicates that the shift between responses prior to the event and those after the event were not statistically significantly different ($Z=-1.09$, $p=0.28$, $n=125$). On the side of underestimated the difficulty in staying smoke-free during the event were 28 participants (22.4%), while 37 (29.6%) participants overestimated the difficulty. Almost half (48.0%, $n=60$) were fairly accurate in their assessment of how difficult staying smoke-free would be for them.

First-time attendee, pre-test only

To gauge whether this was the first time that the respondent participated in this particular type of smoke-free event, the question, “Is this your first [type of event]?” Almost 2/3rds of the respondents (65.9%, $n=259$) indicated that they had never attended this type of event before, with the remaining 34.1% ($n=134$) indicated that they had.

Attend again, post-test only

To gauge how likely it would be that the youth would attend another event like the one they had just attended, the youth were asked to indicate their level of agreement to the statement, “I would attend another smoke-free [event type].” Less than 5% (4.8%, $n=13$) indicated that they strongly disagreed, 1.5% ($n=4$) that they somewhat disagreed, and 9.9% ($n=27$) that they neither agreed nor disagreed with the statement about attendance. Most of the youth agreed that that they would attend a similar event with 8.1% ($n=22$) somewhat agreeing and 75.7% ($n=206$) strongly agreeing.

From the data, we are not able to discern whether disagreement with this statement is a comment on whether the youth disliked the specific type of event (e.g., drag show, shut-in, movie night) or whether the youth disliked the fact that the event was smoke-free. Regardless, we are encouraged by the fact that slightly more than 3/4ths of the youth strongly agreed that they would attend another event like the event they just attended and that more than 83% either strongly or somewhat agreed. This suggests that the vast majority of the youth were not offended by the smoking-related messaging that was a part of all of the events (or at least not to the degree that it would deter them from attending a similar event), and that most of the youth are open to attending smoke-free events.

CONCLUSION

Because smoking initiation most frequently occurs in adolescence or young adulthood, awareness campaigns that target this age group are critical to decrease the likelihood of smoking initiation. In this study we have examined the impact of a series of smoking awareness campaigns conducted by different youth-serving agencies that provide services to LGBT youths and young adults.

For most events, we found that there was an overall shift in the direction desired in knowledge or attitudes, with the shift usually occurring for between 15-18% of the youths and young adults who participated. Because data were not available that allowed tracking the number of smoking awareness events that each respondent had participated in, we are unable to determine the cumulative effective of participating in numerous events. Given that reiteration of messaging should be more effective than single exposure, having access to this type of information could provide important information about the effectiveness of repeated exposure to anti-tobacco messaging.

The current analyses do not allow us to determine if the anti-tobacco messaging had a differential effect on LGBT youths and young adults who were smokers, those who were in the process of initiation, those who were in the process of cessation, and those who were non-smokers. Given documented resistance to anti-tobacco messaging, we would anticipate that it is likely that the awareness campaigns did impact different groups differently.

Some of the more positive outcomes of the study indicate that smoking awareness messaging does appear to be useful in giving youth confidence to discuss tobacco-related issues with their peers, and increasing the intention of youth to do so. The vast majority of the youth reported that they were open to attending smoke-free events, and did not appear to be deterred from participating in events that had smoking awareness messaging embedded within them.

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