

Changing attitudes of high school students in Israel toward homosexuality

Uri Eick, Tanya Rubinstein, Shai Hertz, and Aylon Slater

Hoshen, Tel Aviv-Jaffa, Israel

ABSTRACT

Hoshen, the Hebrew acronym for “Education & Change”, is a nonprofit, nationwide education and information center for the lesbian, gay, bisexual, and transgender (LGBT) community in Israel. The main educational method Hoshen uses is the personal story told by volunteers. The present study aimed to examine whether this activity, carried out in Israeli high schools, resulted in a change in participants’ attitudes. Questionnaires measuring Attitudes Towards Homosexuality were administered to 272 students in 3 high schools before and after the activity. Results showed an improvement in the general Attitudes Towards Homosexuality scale, and in all three subscales of the attitudes towards homosexuality construct measured in this study: emotional, cognitive and behavioral. A very significant impact was observed on the emotional subscale. Young men showed a sharper rise in acceptance of homosexuality than did women. Religiosity, form of residence (urban vs. nonurban), and previous acquaintance with LGBT people showed to also have an effect on attitudes. Results of this study indicate that the personal story method is effective in changing attitudes toward homosexuality. This change might help create a safer environment for LGBT teens. Social change organizations may be able to use this method to promote tolerance towards other minorities as well.

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Introduction

School is an educational institution where youth comes to acquire knowledge and skills, but it is also a social environment where students interact with peers and teachers. Hence, the school takes part in shaping students’ behavior, values, and norms. This social environment can encourage conformity and conservatism but can also lead to social change (Gaasholt & Togeby, 1995; Santor, Messervey, & Kusumaker, 2000). Specifically, school can promote tolerance by various means such as the spread of knowledge and peer modeling (Liebkind & McAllister, 1999).

CONTACT Uri Eick  uri@hoshen.org  Hoshen, PO Box 23038, Tel Aviv-Jaffa 61230, Israel.

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For lesbian, gay, bisexual, and transgender (LGBT) youth, school can also be a stressful environment (Russell, Seif, & Truong, 2001; Savin-Williams, 1994). These youths, along with those merely perceived as LGBT, are oftentimes victims of verbal and physical bullying at schools (Swearer, Espelage, Vaillancourt, & Hymel, 2010; Varjas et al., 2008). Exposure to bullying at school has been found to have a wide range of negative consequences on LGBT youths. In the educational realm, it has been found to affect their academic performance and motivation, as well as to increase their likelihood to drop out of school (Kosciw, Greytak, Bartkiewicz, Boesen, & Palmer, 2012). In the field of mental health, studies conducted in the United States have found that this bullying contributes to anxiety, depression, and lower self-esteem, and was shown to be associated with suicidal behavior, substance abuse, and prostitution (D'Augelli, 1998; Jordan, 2000; Ryan & Rivers, 2003; Savin-Williams, 1994).

One of the key causes of this kind of bullying is negative attitudes toward homosexuality and gender nonconformity (D'Augelli, 1998; Herek, 1990). Negative attitudes have been found to be highly correlated with homophobic behavior, including physical violence (Franklin 2000; Tomsen & Mason, 2001; Alden & Parker, 2005). The term *homophobia* is often used to refer to such negative attitudes toward homosexuality, and it is usually defined as a combination of cognitive and emotional components. For example, Bell (1991) defined *homophobia* as “any negative feelings or thoughts about homosexuals or homosexuality” (p. 24). Homophobia occurs in the context of heterosexism, which can be defined as “a system of dominance in which heterosexuality is privileged as the only normal and acceptable form of sexual expression” (Griffin, 1998, p. xv).

Although in the past two decades Israeli society has gone through significant changes in its approach to LGBT people, Israeli LGBT youths still face problems similar to those aforementioned. Even though homosexuality is not viewed as a disorder, sexual acts between two consenting adults (ages 16 years and older) are legal, and LGBT individuals are protected from discrimination by legislation—the manifestations of homophobia have not vanished, and lesbian, gay and bisexual teens are still victims of bullying, shaming, and violence (Pizmony-Levy, Kama, Shilo & Lavee, 2008).

LGBT youth in Israel are often exposed to homophobic remarks and negative remarks about the way they express their gender identity. These remarks are frequently overlooked by school staff, and on occasion may come from the staff itself. LGBT youths are also the victims of physical violence, and they suffer sexual harassments because of their sexual or gender identity (Pizmony-Levy, Shilo, & Pinhasi 2009; Shilo & Pizmony-Levy, 2012).

The difficulties faced by LGBT youth in schools call for educational activities aimed at reducing homophobia and negative attitudes toward sexual and gender nonconformity. For example, Pizmony-Levy and colleagues (2008) recommend that the educational system break the silence around homosexuality, and include LGBT issues in its activities as a means for achieving such a goal. However, general

studies in the field of attitude change reveal that prejudice tends to resist change (Allport, 1954), which poses a challenge for those who seek attitude change. Allport hypothesized that individuals display prejudice toward individuals who are not perceived as members of their own group, because generalization is a natural tendency among humans. Allport developed the *contact hypothesis*, which states that under certain conditions, contact between individuals from different social groups would lead to a decrease in stereotyping, and an increase in awareness and acceptance of others' values and culture.

Several studies have relied on Allport's contact hypothesis to develop interventions for reducing homophobic prejudices (Tucker & Potocky-Tripodi, 2006). A common intervention type is LGBT speaker panels, in which LGBT speakers share information about their personal lives (e.g., realizing their sexual identity, coming out to family and friends) and establish an open discussion with the audience concerning questions and issues important to audience members (Croteau & Kusek, 1992). Research has shown that such panels have a positive effect, and that participants display positive attitudes toward LGBT individuals afterwards (Kwon & Hugelshofer, 2012; Walch et al., 2012). However, existing research targeted college students, and not high school students.

In Israel, studies show that contact with LGBT people as a part of an academic course and taking part in LGBT speaker panels reduce negative attitudes toward homosexuality in university students studying therapeutic professions (Ben-Ari, 1998; Rechtman, 2002). However, to the best of our knowledge no study has been conducted to find the effectiveness of educational interventions in the general society and among high school students in Israel.

Hoshen (the Hebrew acronym for "Education & Change") is a nationwide non-profit volunteer organization in Israel whose purpose is to fight stereotypes regarding sexual orientation and gender identity. More than 300 volunteers work daily to achieve this goal through a wide array of educational activities aimed at many different target audiences: high school students and teachers, university students and faculty members, police and border guard corps officers, soldiers, army cadets and officers, medical staff, social workers, and guidance counselors. *Hoshen* is officially recognized by the Division of Psychological and Counseling Services (SHEFI) of the Ministry of Education as the most senior and trustworthy organization on LGBT matters, and is acknowledged by the Ministry of Education as its most valued advisor on these issues (thereby providing content for the SHEFI website, materials to serve as resources for teachers, assistance in creating educational programs, and so forth). SHEFI also actively encourages schools to conduct *Hoshen* activities in public schools in order to bring LGBT issues to classrooms and help reduce negative attitudes and behaviors toward LGBT students.

Hoshen's main educational activity is the personal story, which is rather similar to the aforementioned LGBT speaker panels. In this 90-min activity, two LGBT individuals each share a 20-min personal life story, usually focusing on the formation of their sexual and gender identity and their coming out. Typically, the two

speakers are of two different gender identities, to bring forth a more diverse representation of the LGBT community. After the two personal story segments, the volunteers allow and even encourage the audience to ask questions and discuss sexual and gender identity issues openly. It is assumed that the way that the personal stories are conveyed by the volunteers helps the audience relate to them, and sympathize with the difficulties and hardships they had to face and sometimes the price they had to pay. Hoshen targets various audiences, but the main audience for Hoshen's personal story activity is high school students.

It is worth noting the differences between Hoshen's activity and typical LGBT speaker panels: LGBT speaker panels usually consist of more than two speakers, which allows for a wider representation of the different components of the LGBT community. However, each speaker shares a rather limited coming out story (Croteau & Kusek, 1992; Kwon & Hugelshofer, 2012). In contrast, in Hoshen's activities, personal stories are significantly longer, which enables volunteers to unfold their life experiences in detail. Hoshen speakers refer to a broader spectrum of experiences related to their lives as LGBT individuals. Half of the activity is devoted to the volunteers' personal stories, which enables them to share candidly and in detail their life experiences.

Despite its uniqueness in the Israeli education system, only slight scholarly attention has been dedicated to Hoshen thus far. Kupper and Kaplan (2010) conducted ethnographic research on Hoshen's activities, which focused on the volunteers, their self-perception and the way they present themselves in various contexts, the authors had not examined the effect of Hoshen's activities on their audiences. Kupper and Kaplan (2010) reported that Hoshen's volunteers tend to avoid adopting a collective identity, and highlight their individuality and their own personal narrative. Furthermore, the volunteers base their demand for equality on liberal-individualistic grounds—the right for self-realization (and not minority rights in general).

Consistent with Allport's contact hypothesis, the personal story is an activity that is characterized by more contact between the target audience and LGBT individuals than the contact which is attained by speaker panels. Although the activity is only 90 min long, it is more intensive in that it exposes high school students to many aspects in the lives of LGBT individuals. Hoshen's volunteers often begin their personal story by saying that they might share with the students issues that they typically do not discuss with their families, partners, and friends, and that students are encouraged to ask anything that is on their mind.

The present study aimed to investigate whether Hoshen's Personal Story activities can change the attitudes of Israeli youths toward homosexuality, which, in turn, could help reduce violence and bullying toward gay and lesbian teens. We assessed the attitudes toward homosexuality before and after the personal story activity, and examined the difference in attitudes. We also measured several demographic factors (e.g., gender, religiosity, place of residence) to see how these correlate with attitudes toward homosexuality and the extent to which these attitudes

change following such an activity. We hypothesized that attitudes toward homosexuality among students would be less negative following the activity.

Method

This study was performed between March and June 2011 by using an anonymous questionnaire. Participants filled out questionnaires to assess their attitudes toward homosexuality.

Participants

The study was conducted in three high schools, in which students come from middle-class and upper-middle-class backgrounds. The population of the study consisted of 272 students, in the ninth through eleventh grades: 55 students from a high school in a large city in southern Israel (school A), 133 students from a high school in Central Israel (school B), and 84 students from a high school in a mid-size city in northern Israel (school C). In Israel, the public school system is divided into two sectors: one for the majority Jewish population and the other for the Arab population. The Jewish public school system in itself is divided in two: a religious and sector a secular sector. Hoshen currently only performs classroom activities in the secular Jewish sector. These schools were chosen because they represent different demographics of the Israeli Jewish population, and based on the school personnel's consent to participate in the study. All three schools are affiliated with the secular Jewish public school system.

Of the students who completed the questionnaire, 41% were young men and 59% were young women. The average age was 15.2 ($SD = 0.62$). In terms of religiosity, 65% of the participants were secular and 35% were religious in varying degrees. Of the participants, 93% were born in Israel, and 7% were born elsewhere. As for place of birth, 77% of the participants indicated that their parents were born in Israel and the parents of 23% of the students were born elsewhere. Regarding place of residence, 66% of the participants live in an urban form of residence and 34% live in nonurban forms (village, kibbutz, or moshav). Regarding previous acquaintance with LGBT, 43% of the participants have had no previous acquaintance with LGBT individuals before the Hoshen activity and 57% have had previous acquaintance with LGBT individuals.

Measures

Demographic questionnaire

A nine-item demographic questionnaire was constructed to determine gender, age, religiosity, subject's country of birth, parents' country of birth, the country in which the subject spent most of their life, their place of residence, and whether the subject has had previous personal acquaintance with the LGBT community. For

religiosity, it is important to note that we did not have any ultraorthodox (haredi) respondents; we termed all nonsecular respondents as *religious*.

Attitudes toward homosexuality (ATH)

Attitudes toward homosexuality were measured using the Hebrew version (Shilo, 2004) of the ATH scale introduced by Kite and Deux (1986). The questionnaire consists of 21 questions reported on a Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). We used the overall ATH score and the score of its three subscales: emotional (six items; e.g. “I would not be afraid for my child to have a homosexual teacher”), cognitive (eight items; e.g. “Homosexuality is a mental illness”), and behavioral (seven items, e.g., “I won’t associate with homosexuals if I can help it”). Internal consistency scores, as measured by Cronbach’s alpha, were reported to be satisfactory both for the original questionnaire and in this present study (Table 1).

Procedure

The study was conducted by the Hoshen volunteers who carried out the personal story activity. First, the demographic questionnaire was administered. Attitudes toward homosexuality were measured twice: once right before the Hoshen activity began (in the first few minutes of the 90-min activity) and once immediately afterwards (right before the activity ended and students had their recess). Hoshen volunteers collected the students’ responses to both measurements only after the activity and once both measurements were filled, so that the pre- and postquestionnaire responses were paired without impairing the anonymity of the respondents.

Results

The analysis was conducted in two phases. First, *t* tests were conducted to compare the pre- and postquestionnaire scores and to measure the extent of change. In accordance with our hypothesis, there was a difference in the pre- and postquestionnaire scores on all three scales and total scale of attitudes toward homosexuality: Attitudes were more positive following the activity on the total scale, as well as on all three subscales (Table 2).

We conducted a multivariate analysis (regression) to explore the mutual influences of all demographic variables, and the relationship between the pre- and postquestionnaire variables. Four demographics variables were included in analysis: gender, religiosity, place of residence and previous acquaintance with the LGBT community. For both the subjects’ and the subjects’ parents’ country of origin, and also the country in which the subject spent most of their lives, not enough of the subjects in this sample were born or have lived outside of Israel to show statistically significant findings and hence this variable was not taken in account.

Table 1. Descriptive statistics for ATH items and subscales.

Item	Pre		Post		Total scale		Emotional		Cognitive		Behavioral	
	Mean	SD	Mean	SD	Pre	Post	Pre	Post	Pre	Post	Pre	Post
	I would not mind having homosexual friends.	3.86	1.13	4.12	1.12	V	V	V	V			
Finding out that an artist was gay would have no effect on my appreciation of his/her work.	4.40	1.06	4.41	1.05	V	V	V	V				
I won't associate with known homosexuals if I can help it. ^R	1.95	1.10	1.88	1.08	V	V					V	V
I would look for a new place to live if I found out my roommate was gay. ^R	2.39	1.34	2.18	1.26	V	V					V	V
Homosexuality is a mental illness. ^R	1.48	0.96	1.39	0.90	V	V			V	V		
I would not be afraid for my child to have a homosexual teacher.	3.27	1.52	3.65	1.43	V	V	V	V				
Gays dislike members of the opposite sex. ^R	1.95	1.27	1.89	1.23	V	V			V	V		
Homosexuals are more likely to commit deviant sexual acts, such as child molestation, rape, and voyeurism (Peeping Toms), than are heterosexuals. ^R	1.54	0.92	1.38	0.78	V	V			V	V		
Homosexuals should be kept separate from the rest of society (i.e., separate housing, restricted employment). ^R	1.23	0.63	1.27	0.73	V	V			V	V		
Two individuals of the same sex holding hands or displaying affection in public is revolting. ^R	2.54	1.37	2.31	1.32	V	V	V	V				
The love between two males or two females is quite different from the love between two persons of the opposite sex. ^R	2.94	1.44	2.56	1.4	V	V			V	V		
I see the gay movement as a positive thing.	4.07	1.15	4.23	1.12	V	V			V	V		
Homosexuality, as far as I'm concerned, is not sinful.	3.94	1.42	4.12	1.29	V	V			V	V		
I would not mind being employed by a homosexual.	4.05	1.23	4.14	1.20	V	V	V	V				
Homosexuals should be forced to have psychological treatment. ^R	1.39	0.85	1.43	0.96	V	V					V	V
The increasing acceptance of homosexuality in our society is aiding in the deterioration of morals. ^R	2.28	1.40	2.11	1.43	V	V			V	V		
I would not decline membership in an organization just because it had homosexual members.	4.10	1.32	4.11	1.28	V	V					V	V
I would vote for a homosexual in an election for public office.	4.46	0.97	4.46	1.00	V	V					V	V
If I knew someone were gay, I would still go ahead and form a friendship with that individual.	3.98	1.15	4.11	1.12	V	V					V	V
If I were a parent, I could accept my son or daughter being gay.	3.40	1.38	3.60	1.33	V	V					V	V
Homosexuals are guilty for spreading the AIDS disease. ^R	1.75	1.08	1.57	1.02	V	V			V	V		
Reliability (alpha)					0.90	0.90	0.73	0.72	0.78	0.79	0.78	0.77
Mean					4.00	4.12	3.80	4.00	4.09	4.24	4.02	4.09
SD					0.70	0.71	0.88	0.85	0.70	0.68	0.77	0.78

Note. $N = 272$; R = item was recoded. Two items from the original scale were omitted, and the last item was added and adapted especially for Israeli respondents. We asked about both lesbians and homosexuals and not just homosexuals in the original questionnaire.

Table 2. ATH scores before and after the activity and *t*-tests.

	Before the activity			Following the activity			<i>t</i> -test
	<i>N</i>	Mean	<i>SD</i>	<i>N</i>	Mean	<i>SD</i>	
Total	266	4.00	0.70	250	4.12	0.71	4.85***
Emotional	266	3.80	0.88	250	4.00	0.85	5.28***
Cognitive	264	4.09	0.70	240	4.24	0.68	5.1***
Behavioral	264	4.02	0.77	240	4.09	0.78	2.09*

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

For the prequestionnaire scores, the four demographic variables were inserted into the model. For the prequestionnaire scores, two different regressions were calculated: first with the same four independent variables as well as the appropriate prequestionnaire score and then the same as well as interactions between four demographics and the appropriate prequestionnaire score (i.e., four interactions for each regression). Coding for the independent variables was done the following way: gender (young woman), religiosity (secular), place of residence (urban), and previous acquaintance with the LGBT community (no acquaintance with LGBT individuals) (Table 3).

In the prequestionnaire analysis, gender and religiosity were found significant for all four attitude scales: total scale and three subscales; young women and secular participants had higher scores (except for the regression for cognitive prequestionnaire and religiosity). In addition, for the total scale and the emotional and behavioral subscales, but not for the cognitive, participants with previous acquaintance with the LGBT community had higher scores. Place of residence was not found significant.

In the postquestionnaire analysis (without interactions), the relevant prequestionnaire scores were found highly positively significant. None of the other variables was found significant, except for the place of residence, for the cognitive subscale. The negative coefficient means that nonurban participants had lower scores in their cognitive subscale.

In the postquestionnaire analysis with interactions, the relevant prequestionnaire scores were found highly positively significant. Gender was found significant for total and the cognitive scales; young women had higher scores. No other demographics were found significant. As for the interaction, only the interaction of gender and precognitive was found significant. The negative coefficient means that young men had higher extent of change in their cognitive subscale.

Discussion

The present study examined, for the first time in Israel, the change of attitudes toward homosexuality among adolescents following educational activities conducted in high schools by Hoshen. It is also the first time, to the best of our knowledge, that a study measuring the effects of an activity similar to LGBT Speaker



Table 3. Regression analyses for ATH scores.

Measures	Total						Emotional						Cognitive						Behavioral					
	Pre		Post		Pre		Post		Pre		Post		Pre		Post		Pre		Post		Pre		Post	
	B	β	B	β	B	β	B	β	B	β	B	β	B	β	B	β	B	β	B	β	B	β		
Constant	3.62 (0.11)***	0.64 (0.16)***	1.21 (0.32)***	3.35 (0.15)***	1.04 (0.18)***	1.37 (0.33)***	3.76 (0.12)***	1.12 (0.17)***	1.89 (0.35)***	3.64 (0.12)***	0.69 (0.21)**	0.73 (0.42)	0.55 (0.08)***	0.05 (0.06)	0.65 (0.33)*	0.01 (0.08)	0.27 (0.36)	0.52 (0.09)***	0.10 (0.06)	1.17 (0.34)***	0.50 (0.08)***	0.09 (0.08)	0.60 (0.42)	
Gender	0.20 (0.08)**	-0.01 (0.05)	-0.14 (0.31)	0.26 (0.11)*	0.05 (0.08)	0.06 (0.34)	0.14 (0.09)	0.06 (0.06)	0.20 (0.33)	0.25 (0.09)**	-0.03 (0.07)	-0.41 (0.41)	0.07 (0.09)	-0.09 (0.05)	0.18 (0.32)	-0.02 (0.08)	0.17 (0.36)	0.03 (0.09)	-0.13 (0.06)*	-0.25 (0.33)	0.13 (0.09)	-0.09 (0.07)	-0.30 (0.41)	
Religiosity	0.07 (0.09)	-0.09 (0.05)	0.18 (0.32)	0.05 (0.11)	-0.02 (0.08)	0.17 (0.36)	0.03 (0.09)	-0.13 (0.06)*	-0.25 (0.33)	0.13 (0.09)	-0.09 (0.07)	-0.30 (0.41)	0.07 (0.09)	-0.09 (0.05)	0.18 (0.32)	-0.02 (0.08)	0.17 (0.36)	0.03 (0.09)	-0.13 (0.06)*	-0.25 (0.33)	0.13 (0.09)	-0.09 (0.07)	-0.30 (0.41)	
Place of residence	-0.19 (0.08)*	0.07 (0.05)	0.55 (0.32)	-0.21 (0.11)*	-0.02 (0.07)	0.33 (0.35)	-0.15 (0.08)	0.04 (0.05)	0.49 (0.33)	-0.24 (0.09)**	0.05 (0.07)	0.11 (0.42)	0.07 (0.09)	0.07 (0.05)	0.55 (0.32)	-0.02 (0.07)	0.33 (0.35)	-0.15 (0.08)	0.04 (0.05)	0.49 (0.33)	-0.24 (0.09)**	0.05 (0.07)	0.11 (0.42)	
Acquaintance with LGBT	0.87 (0.04)***	0.73 (0.08)***	-0.15 (0.08)	0.04 (0.08)	0.77 (0.05)***	0.69 (0.08)***	0.75 (0.04)***	0.58 (0.08)***	0.84 (0.05)***	0.84 (0.05)***	0.84 (0.05)***	0.84 (0.10)***	0.87 (0.04)***	0.73 (0.08)***	-0.15 (0.08)	0.04 (0.08)	0.77 (0.05)***	0.69 (0.08)***	0.75 (0.04)***	0.58 (0.08)***	0.84 (0.05)***	0.84 (0.10)***	0.87 (0.04)***	
Gender * Pre ¹																								
Religiosity * Pre ¹																								
Place of residence * Pre ¹																								
Acquaintance with LGBT * Pre ¹																								
R ²	0.22	0.73	0.73	0.19	0.63	0.64	0.18	0.67	0.69	0.20	0.62	0.62	0.22	0.73	0.73	0.19	0.63	0.64	0.67	0.69	0.20	0.62	0.62	
F	16.98***	114.73***	65.42***	14.14***	75.46***	41.68***	12.85***	84.74***	50.15***	15.00***	67.43***	37.47***	16.98***	114.73***	65.42***	14.14***	75.46***	41.68***	84.74***	50.15***	15.00***	67.43***	37.47***	

¹Relevant Pre – for each post measurement only the relevant pre included in analysis, i.e., for the total post the total pre were included, for the emotional post the emotional pre.
* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Panels was conducted not on college students, but on high school students (see Ben-Ari, 1998; Rechtman, 2002, previously mentioned; and also Tucker & Potocky-Tripodi, 2006; Kwon & Hugelshofer, 2012; Walch et al., 2012).

The positive change brought about following this brief activity, suggests that personal story activities are a useful tool for promoting tolerance and acceptance of a stigmatized minority group. Hence, this study is significant not only for Hoshen as an educator for the general public on LGBT issues, but can also provide schools with one of the means in which attitudes toward gay and lesbian students can be changed, and bullying toward them can possibly be reduced. Furthermore, the results of the study may be significant for the plethora of organizations that conduct activities that promote diversity and inclusion, and for institutions—such as high schools—in which these activities take place.

The results of the study show that the personal story activity can provide a positive change in the attitudes of participating adolescents toward homosexuals. These results are consistent with previous studies (such as Kwon & Hugelshofer, 2012; Walch et al., 2012). The change was observed across most of the demographic variables which were measured: gender, religiosity, place of residence and previous acquaintance with LGBT individuals. As for place of birth (that of respondents' and of their parents')—a larger sample, as well as more extensive research, is required to determine the impact of this variable on the attitude change of adolescents toward homosexuals.

The attitude component which changed the least was the behavioral component. Presumably, committing oneself toward a change of attitudes and toward positive action toward lesbian and gay people, and having others witness this commitment and its implications, is a big step for adolescents—most of whom are assumed to be heterosexual and heteronormative, have more fragile sexual orientations and identities, and tend to adopt homophobic attitudes and behaviors as a result of peer pressure and social desirability (Poteat, 2007). A major concern for future studies would be to examine if and how the emotional change can be more effectively transformed into a behavioral change toward homosexuals in society.

Results show that gender has a significant effect on attitudes and attitude change. Young men's attitudes in the preactivity questionnaires were less positive than young women's, and the activity had a more significant impact on the young men on the cognitive subscale. This finding is an accordance with other sources (e.g. Herek, 2009), which state that young women are more tolerant toward sexual minorities, and can be explained by the stronger stigmas that young men typically have toward LGBT people, which leads to less positive attitudes initially. This can also explain why women were less affected by the activity—because their attitudes were more positive to begin with, there was not much room for them to improve (ceiling effect). Future studies should delve deeper into the nature of this gender difference, as well as into the reasons why this face-to-face encounter had such an impact on young men.

In terms of religiosity, both secular and religious respondents have shown a positive change in attitudes, with this change being of a similar magnitude—the same difference in attitudes was measured between the pre- and postquestionnaire scores. Nevertheless, it is noteworthy that as in the case with gender, those who have indicated that they are secular have had more positive attitudes to begin with. This similarity is again supported by other sources (e.g. Herek, 2009), which claim that there is a correlation between various measures of religiosity and a prejudice toward LGBT people.

Both urban and nonurban respondents have shown an improvement in attitudes toward homosexuality. However, those who have indicated that they live in a nonurban environment have lower scores in their postquestionnaire cognitive subscale. Prior qualitative studies have shown a stronger tendency for the acceptance of nonheterosexuals in urban areas (Valentine & Skelton, 2003; Weston, 1995), but to the best of our knowledge this is the first time this is found in Israel. This suggests that this tendency might be universal to other country contexts. This difference between people of different forms of residence is in accordance with other differences found in the study.

In addition to the aforementioned demographic variables, respondents who had had previous acquaintance with a member of the LGBT community had more positive attitudes than those who had no such previous personal contact. Allport's hypothesis (1954), as previously described, can provide some of the explanation for the differences in the preactivity responses: respondents who experienced previous contact with LGBT people had already gone through the favorable attitude change that comes with personal acquaintance. This also supports our hypothesis about the personal contact being the key element in the personal story method that brings about attitude change.

The multivariate analysis showed two points: first, the influence of several demographic variables together is correlated with the differences in the initial attitudes. The combination of being secular (religiosity), young woman (gender) as well as previous acquaintance with LGBT individuals is the one that explains more positive attitudes. There might be, of course, other external demographic variables not measured in the present study, or intrinsic personality traits, which might influence the initial attitudes. Second, the activity itself, in some cases, seems to decrease the gap in initial attitudes between those who had a previous acquaintance with LGBT individuals and those who did not have such an acquaintance; the effect of the previous acquaintance, in some cases, disappears during the activity. These two points, as well as the previous discussion, strengthen both the conclusions on the effect of the activity on attitudes (the activity changes attitudes positively), and the finding regarding the correlation between the demographic variables and attitudes.

In conclusion, this study shows that the personal story activity, conducted by Hoshen volunteers achieves its goal of reducing stigmas and stereotypes and creates a positive change in the perception of homosexuals. The present

study showed, for the first time in Israel, a snapshot of the attitudes of adolescents toward homosexuality, as well as to portray a highly effective tool for attitude change, and hopefully—for the reduction of bullying toward gay and lesbian students.

Limitations

The study has several limitations that should be addressed. First, although it includes several hundred respondents from three Israeli high schools, it is not possible to generalize the findings to high school students all across Israel. Specifically, respondents of the present study attend high schools that have asked Hoshen for an activity (which is approved by the Israeli Ministry of Education, but is not mandatory), and more often than not are located in areas that supposedly are characterized by a more positive approach toward homosexuality. For example, Hoshen activities are significantly less frequent in Israel's periphery and in religious high schools.

Another limitation of the study is the fact that it is based on self-reporting. It is impossible to know whether respondents' answers represent their true attitudes, whether they originate from social desirability, or whether they originate from a desire to please the person administering the questionnaire, who was the Hoshen volunteer in the classroom. It is noteworthy, however, that the statistical significance of the findings increases the likelihood that they reflect the true attitudes of respondents.

A third limitation was that the pre- and postquestionnaires were administered immediately before and after the Hoshen activity in the classroom, and there was no later follow-up with the students. This might have created identification and empathy among the majority of respondents, which could have influenced the way they chose to respond. Subsequent studies should measure attitudes in larger time intervals, both before and after the activity. In addition, further studies are needed to determine how long-lasting the effect of this intervention is.

A final limitation of the study is that there was no control group in the present study's design. Thus, we cannot know whether the changes in attitude were truly related to the effect of the Hoshen program. Future research should include a control group in which participants are asked without having gone through any activity whatsoever or having gone through a lecture on a general, unrelated topic.

The present study focused on measuring the attitudes of Israeli adolescents toward homosexuality before and after a Hoshen activity in their classroom. It is recommended to expand the sample, and include adolescents from more diverse socioeconomic backgrounds, as well as those from high schools in which Hoshen does not usually conduct its activities. Similarly, other target audiences should be measured for attitude change, and not just adolescents: Hoshen's activities for teachers, school counselors, mental health professionals, military, and police personnel could also serve as a platform for this type of research.

The Hoshen volunteers who conducted the personal story activity in this study were gay and lesbian men and women, and the attitudes measured were toward homosexuality. In future studies, attitudes toward bisexuals and toward transgender people should also be measured, with such volunteers conducting the personal story activity.

Future research is also needed to understand whether this type of face-to-face encounter reduces bullying toward homosexuals in schools; in other words, if the program affects student attitudes, does that result in less negative behavior toward gay and lesbian people. It is noteworthy that despite the short-term nature of the intervention (only 90 min in the classroom), attitudes changed in a favorable direction toward homosexuality. Now, it is time to see whether this can be translated to less bullying and violence toward homosexuals in the school setting.

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Notes on contributors

Uri Eick received his MSc in statistics from The Technion (Israel Institute for Technology), and his MA in Social Work from The University of Haifa. For more than a decade, he has been an activist, mainly in the fields of feminism, human rights, and the LGBTQ community.

Tanya Rubinstein received her BSc in Neuroscience from Tel Aviv University. She is a radical activist in various fields, including LGBTQ rights, feminism, animal rights, and peace activism in Israel/Palestine.

Shai Hertz, a computer scientist and a musician, received his MSc in computer science from Tel Aviv University. He has been a volunteer in Hoshen since 2007, and has been a member of its research team and its story building team.

Aylon Slater received his MA in social-organizational psychology from Teachers College, Columbia University. He is an Adjunct Professor at Tel Aviv University's Group Facilitation Program, and has been a volunteer in Hoshen since 2003.

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