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Suicidality and associated Risk Factors among Lesbian, Gay and Bisexual compared to Heterosexual

Austrian Adults

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Abstract

This is the first study in German-speaking countries to compare the suicidality of lesbian, gay and bisexual adults (N = 358) with matched heterosexual adults (N = 267). The former had significantly elevated incidences of current suicide ideation (28 vs. 13%) and lifetime suicide attempts defined in three ways (14 vs. 1% to 10 vs. 2%), including higher incidences for most suicidality-related risk factors. Increased psychosocial stress and vulnerability is indicated, especially with respect to a lack of family support. Controlling for risk factors in multivariate analysis diminished the association of sexual orientation on current suicide ideation.

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The mounting evidence has been suggesting that lesbian, gay and bisexual (LGB) youth and adults are at an increased risk of mental health problems and nonfatal suicidality compared to heterosexual individuals (Bagley & Tremblay, 2000; McDaniel, Purcell, & D'Augelli, 2001; Meyer, 2003). It was first speculated that the results were biased due to the LGB convenience samples reporting a high number of participants with mental health problems. Since the late 1990s, however, studies of large representative samples have also reported marked mental health and suicide problems in LGB individuals. Contrary to the selective recruitment hypothesis, meta-analytic aggregation of data revealed a tendency for convenient samples to produce similar or smaller prevalence differences for mental health disorders in LGB and heterosexual individuals, when compared to representative samples (Meyer, 2003). Thus, using convenience samples is a useful and low-cost method for a first estimation of mental health problems and plausibly also for associated suicidality. In German-speaking countries such a study with a control group design has not yet been carried out. Two studies with LGB youth from convenience samples without control groups reported lifetime suicide attempt incidences of 8% and 18% (Biechele, 2001; Berliner Senatsverwaltung für Bildung, Jugend und Sport, 1998). Adult data from the German-speaking countries is still missing.

Theoretical models such as the minority stress model of Meyer (2003) argue that negative mental health outcomes in LGB individuals are the result of general stressors and minority stress processes, mediated by coping strategies, social support and the characteristics of the minority identity. In this paper two hypotheses following the minority stress model will be tested. First, according to the *stress hypothesis* the reason for higher suicidality in LGB persons is the increased value in risk factors - or decreased values in protective factors - which are known to be associated with suicidality. These risk factors include depressive mood, hopelessness, less self-esteem, gender role nonconformity, substance abuse, less social support, victimization, positive HIV-status, and suicidality in the social network. For

these risk factors correlations with suicidality in LGB samples were found (D'Augelli, Hershberger, & Pilkington, 2001; Bagley & Tremblay, 2000; Bontempo & D'Augelli, 2002; Botnik et al., 2002; Carlson & Steuer, 1985; Diaz, Ayala, Bein, Henne, & Marin, 2001; van Heeringen & Vincke, 2000; Hershberger & D'Augelli, 1995; McBee-Strayer & Rogers, 2002; Remafedi, 1991; Russell & Joyner, 2001; Safren & Heimberg, 1999; Wichstrøm & Hegna, 2003). It can be anticipated that when risk factors for suicidality are controlled for through multivariate regression, suicidality and sexual orientation will show no association to one another. Second, the *vulnerability* hypothesis states that risk factors hold a stronger association with suicidality in LGB than in heterosexual individuals. The increased vulnerability might result from coping strategies that are sufficient in heterosexual but are not sufficient in LGB individuals because of the additional homophobia-related minority stress.

Method

Sample

LGB men and women were sampled via the address-lists of major LGB organizations in the cities of Salzburg, Linz, and Graz, and some smaller organizations throughout Austria. Participants received the questionnaire along with an instruction sheet and a pre-paid stamped envelope to be returned to the author by regular mail. Sexual orientation was assessed with the items: "In your sexual fantasies there are?", "You would like to have sex with?", with five multiple choice answers: only-, mostly women, men and women, mostly-, only men; and "How do you describe yourself" with six multiple choice answers: heterosexual, mostly heterosexual, bisexual, mostly homosexual, homosexual, transsexual, not sure. Participants were classified as bisexual if they answered all three items not on the exclusive heterosexual or homosexual end. Cronbachs' Alpha for the three items was $r_{\alpha} = .88$.

Cognitive dimensions appeared to be more valid than the assessed behavioral dimension (sexual contacts) given that 10% of the participants of the total sample identified as heterosexual or LGB did not have sexual contact to a member of either sex in the last 6 months. Also, all other combinations of

cognitive/behavioral questions resulted in less internal consistency.

Of the 877 potential participants contacted via the LGB organizations, 391 (44%) returned the questionnaire, with N = 358 being appropriate for analysis. Exclusions included: heterosexual orientation, being transgendered, incomplete or obvious joking answers, or arrival past the deadline.

A heterosexual control group was matched to the LGB-sample with respect to sex, age, and degree of education. Potential participants were recruited from organizations such as fire departments, the Red Cross of Salzburg or the University of Salzburg. Sampling continued until matching was achieved. Oversampled participants were deleted from the data set by date of questionnaire-return. Of the 848 contacted participants 303 (36%) returned the questionnaires. After exclusion of non-heterosexual participants (7%) and those who were not comparable to LGB participants, N = 267 remained for the final analysis. This gave a total N of 625 participants.

The mean age of the total group was 36.2 years (SD = 11.8), and 67% were male. There were significant differences found between the two groups in the area of family status ($\chi^2(3) = 127, p < .001$). More LGB participants were not married (86 vs. 51%), less were married (4 vs. 39%), and 10% were divorced or widowed in both groups. More LGB participants were living as a couple (independent of the sex of the spouse) (40 vs. 26%, $\chi^2(1) = 14, p < .001$), and more lived in cities exceeding 100000 inhabitants (50 vs. 40%, $\chi^2(1) = 6, p < .05$). Compared to the Austrian population unrepresentatively few LGB participants were older than 60 years (6% in the sample vs. 21% in the Austrian population); more LGB-participants were better educated (31 vs. 16% with A-level and 29 vs. 7% with academic degree), more were bachelors (86 vs. 43%) and more were living in towns exceeding 100000 inhabitants (50 vs. 28%).

Measures

Suicide ideation was assessed with the questions of Paykel, Myers, Lindethal, and Tanner (1974), covering death-wishes ["Have you ever wished you were dead (for instance, that you could get to sleep

and not wake up)?"], suicide ideation ("Have you ever thought of taking your life, even if you would not really do it?"), and serious suicide ideation ("Have you ever reached the point where you seriously considered taking your life, or perhaps made plans how you would go about doing it?"). These questions were followed by an item that assessed *aborted suicide attempts* ("I was already trying to kill myself but stopped the attempt at the last minute"). For each of these items participants were asked how often (often/sometimes/rarely/never) this happened in the last 12 months and - with a separate question – how often this was true in previous years. The item targeting aborted suicide attempts was included, because of the relation with fatal and nonfatal self harm (Barber, Marzuk, Leon, & Portera, 1998). *Current suicide ideation* was measured with the question "Do you think that you will make a suicide attempt in the near future?" with multiple-choice answers: definitely not, likely not, perhaps, quite sure, don't know. For the analysis the last four categories were collapsed into one because of infrequent appearance. This variable will be used for the multivariate analysis and is correlated significantly with suicide ideation and serious suicide ideation in the last 12 months (r = .45 and .45, both p < .01), hopelessness (r = .31, p < .01), and depressive mood (r = .28, p < .01).

Studies assessing *suicide attempts* with a single item leave the definition of "suicide attempt" open to the participant; and the seriousness of the attempts (the injuries) are often not assessed (Meehan, Saltzman, & O'Caroll, 1992; O'Carroll et al., 1996). To address this critique, Savin-Williams (2001) used probing questions that we included in our questionnaire, too (Appendix A). First, a gate question assessed suicide attempts: "Have you ever made a suicide attempt?" (no; yes; if yes, how many). On the next page, the probing questions were given. Two different criterions were used to separate true positive from false positive attempts. With criterion 1 a suicide attempt was classified as true attempt only if the participant confirmed via the probing questions (5 to 8) that the stated suicide attempt was either aborted or completed. With criterion 2 an attempt was classified as true only if it was confirmed as having been a completed attempted (probing questions 6 to 8). An attempt was classified as a suicide attempt needing medical care afterwards if the participant confirmed this with the

probing question 7.

Depressive mood in the past week was assessed with the Allgemeine Depressionsskala (ADS) (Hautzinger & Bailer, 1993), a German version of the CES-D scale. Cronbachs Alpha was r_{α} = .88 in this sample. Current *hopelessness* was measured with the short form HR-A (Krampen, 1994), a German version of the Beck-Hopelessness-Scale (r_{α} = .84), current *self-esteem* with a German version of Rosenbergs' scale (Ferring & Filipp, 1996) (r_{α} = .85), current gender role conformity with the translated sex role inventory of Bem (Schneider-Düker & Kohler, 1988). Men were categorized as nonconforming, if they were above the median in the femininity ($r_{\alpha} = .82$) and below it in the masculinity scale (r_{α} = .89), and vice versa for women (Alfermann, 1989). Drug-use was assessed with questions similar to those from the Center for Disease Control and Prevention's Youth Risk Behavior Survey (YRBS), as used by the Massachusetts Department of Education (1999). Harmful alcohol consumption (ml of pure alcohol) was calculated from the number of specific drinks in the last month, exceeding the amount of alcohol that is defined as harmful by the WHO (Anderson, 1990). The three items were "During the last month, on how many days did you have three or more beers (half liter) / more than two quarters of wine (quarter liter) / more than then 2 glasses of harder drinks (schnapps, whisky, vodka etc.)?" with multiple choice options 0/1-5/6-14/14-21/21-28/28-30. Usage of other drugs was assessed for the last year. The five items were "During the last year, how often did you use methamphetamines (e.g. speed, ecstasy, etc.) / poppers / tranquilizers / marihuana (e.g. hashish, grass etc.) / cocaine or heroine or other illegal drugs?" with multiple choice options 0/1-5/6-15/16-30/30-60/>60. These categories were collapsed to "never" vs. "at least once". To measure current perceived social support participants could name up to 7 persons - besides father and mother, which were already given - they judged as important. Four items measured social support (e.g. "I can contact him/her when I'm in trouble"), with a mean score ranging from one (negative) to four (positive). The following roles

have been used for the analysis (with reliability in brackets): Mother (r_{α} = .86), Father (r_{α} = .86), Family, i.e. parents and siblings, (r_{α} = .68), and friends (r_{α} = .67). Questions recommended by Herek (1990) were translated and used to assess *victimization* in the last year and in previous years including: verbal insults, being threatening with physical violence, damaged property, being thrown at with objects, being chased, spat upon, kicked/beaten, threatened with a weapon, assaulted with a weapon, sexual harassed with and without assault, and school/work abstinence because of fear. Participants had to state (yes/no) if such an incidence occurred in the last year, and with a separate item, in previous years [r_{α} = .65 (last year), r_{α} = .81 (previous years)]. *HIV-status* was measured with a single item. Lifetime *suicides and suicide attempts in the social net* were assessed with the two items ("Have any of these persons committed suicide"; "Have any of these persons attempted suicide"). For each of these items, participants had yes/no multiple choice options for the following persons: parent/sibling/ children/partner/relatives/friends/colleagues from school or work. "Yes"-responses were coded as 1, "no" as zero, and a summary score was calculated.

LGB-specific risk factors were assessed in the LGB-version of the questionnaire (e.g. internalized homophobia, victimization based on sexual orientation, age of coming out, openness in the social network). This is not reported, because the key issue is comparing LGB and heterosexual participants on risk factors and this is impossible for LGB-specific risk factors. Data was analyzed with *R 1.8.1* (R Development Core Team, 2003). Correlational effect sizes were calculated as described in Rosenthal, Rosnow, and Rubin (2000).

Results

Suicidality

Logistic binary regressions revealed no significant differences between men and women on any of the suicidality indicators, thus the results are presented in the aggregate (see Table 1). Suicide ideation, serious suicide ideation, aborted suicide attempts, suicide attempts, and current suicide

ideation are significantly elevated in LGB compared to heterosexual participants, with odds ratios increasing from suicide ideation to suicide attempts. The differences in suicidality (effect sizes) assessed for the last year were smaller than for previous years. Removing false positive suicide attempts showed a decrease in incidences from 14% to 13% with criterion 1 (where also aborted suicide attempts are judged as true suicide attempts); and further down to 10% with criterion 2 (only completed attempts). The differences remain significant with both criterions, and also for those suicide attempts requiring medical care. If the results are contrasted with those of a representative German sample (Weissman et al., 1999) with 3.4% suicide attempters, the lifetime suicide incidence in this sample remained significantly heightened, OR = 4.4, CI = 2.3-8.4 (criterion 1) and OR = 3.0, CI = 1.5-5.9 (criterion 2). If the results (criterion 1) are generalized assuming there are 10% LGB in the population (Gonsiorek, Sell, & Weinrich, 1995), 47% of all suicide attempts would then be by persons who are LGB. The percentages would be 25% and 62% for 4 and 17% LGB in the population (corresponding to the lower and upper estimates given Gonsiorek, Sell, & Weinrich, 1995). Stress-Hypothesis

Values on risk factors in LGB and heterosexual participants are summarized in Table 2. Results are presented for women and men separately if significant interactions were found for each. Compared to heterosexual participants, LGB participants report significantly higher depressive mood and hopelessness, lower self-esteem, more frequent tranquilizer intake, less perceived social support from mother, father and from the core-family, more suicide attempts in the social network, being less gender role conform (men only) and more often HIV positive (men only), and being more victimized (women only). The effect sizes are generally small (r < .20), except for victimization (women), social support from the family and especially from the father, where medium-sized effect sizes were found (r = .20-.28). Contrary to the stress hypothesis heterosexual men report having been more victimized then homo/bisexual men. No statistically significant differences and thus no support for the stress hypothesis were found for alcohol consumption, usage of all other drugs except tranquilizers, social support of

friends, victimization in the last year, and suicides in the social network. Heterosexual and homo/bisexual women did not differ with respect to gender role conformity and HIV status. *Vulnerability Hypothesis*

According to this hypothesis the association of a risk factor with suicidality is stronger in the LGB group. Logistic regression analysis with current suicide ideation as the dependent variable revealed no statistically significant interaction effect for sexual orientation × risk factor. However, some correlation coefficients with current suicide ideation are substantially different in LGB and heterosexual participants (see last two columns in Table 2), i.e. for depressive mood, hopelessness, self-esteem, other drugs, perceived social support from parents and family, victimization in the last year (for men also in previous years), and suicides in the social net. Thus, the vulnerability hypothesis is supported with these risk factors. Large correlational differences were not produced for alcohol intake, perceived social support from friends, gender role conformity, HIV-status and suicide attempts. Social support from friends was perceived as very high in both groups resulting in minimal variation (ceiling effect). Only 8 men reported being HIV positive, precluding an analysis based on HIV status. Contrary to the vulnerability hypothesis, smaller correlations in LGB than in the heterosexual participants were found for tranquilizer intake and suicide attempts in the social net.

Multivariate Analysis

Stepwise backwards binary logistic regressions were conducted to see if the association of sexual orientation with current suicide ideation is lowered after controlling for risk factors. Missing data exceeded 5% only for perceived family social support (10%) and was replaced with multiple imputing using the "transcan" function of Harrell (2001). Bootstrap validated multiple correlations are given in brackets (Harrell, 2001). Sociodemographic variables (age, sex, partnership, education, income) in the first step explained 8% of the variance, $R^2 = .08$ (.05), with age, partnership status and income being significant predictors. General risk factors were entered in the second step. The

interaction terms of sex \times gender role conformity and sex \times victimization were included in the model because of the detected sex differences (see Table 2). About 30% of the variance could be explained, $R^2 = .33$ (.24). Age, income, depressive mood, hopelessness, gender role, and gender role \times sex were significant predictors. Sexual orientation in the final third step was not significant and did not improve the model fitness, $R^2 = .33$ (.24).

Discussion

Consonant with international evidence, suicidality (suicide ideation, serious suicide ideation, aborted suicide attempts, and completed suicide attempts) was significantly higher in this sample of Austrian LGB participants compared to their heterosexual counterparts. These differences were smaller for suicidality in the last year compared to the previous years, possibly because of better adaptation over time to one's minority status. Notably, the odds-ratios increase for more serious forms of suicidality, thus replicating the Bagley & Tremblay (1997) study results, and Tremblay & Ramsay (2000, Table 2) report the same in five YRBS studies. In our study, 14% of the LGB participants (vs. 1% of heterosexual participants) had ever attempted suicide. Contrary to the Savin-Williams (2001) findings, even after eliminating false positive suicide attempts, the incidences remained significantly heightened for LGB participants. The same occurred in the Bagley and Tremblay (1997) study where the equivalent of false positive suicide attempters were placed in the self-harm category and homosexually oriented males in their random sample of 750 young adult males accounted for 63% of suicide attempters (5 out of 8). From our study it is estimated that about half (47%) of all suicide attempts are by LGB individuals if 10% of the population is assumed to be LGB. This estimate, however, appears to be conservative as also suggested by Meyer (2003) for study results of convenience samples compared to random samples.

One reviewer of this article suggested using the O'Carroll et al. (1996) definition to assess suicide attempts. Therefore, suicide intent needs to be assessed to separate suicide attempts from

instrumental suicide-related behavior - where suicide intent is absent. Furthermore, the validity of self report measures of suicide attempts is questionable. Independent verification sources (such as emergency rooms) would enhance the validity of suicide attempt reports, but it will decrease the likelihood that sexual orientation will be correctly reported. The assessment of suicide ideation with the Paykel et al. (1974) questions is controversial: despite the fact that it is used in many studies, the psychometric properties have not been explored.

Supporting the stress hypothesis, many of the risk factors were elevated in LGB participants, but the effect sizes were small. Medium sized effects were produced for victimization experiences in lesbian/bisexual women, and perceived social support from the family, especially from the father. Contrary to the stress hypothesis, gay/bisexual men reported less victimization than heterosexual men. This is not in line with results from a US-study on LGB youths (Bontempo & D'Augelli, 2002) and adults (Mays & Cochran, 2001), where victimization was marked in both homo- and bisexual men and women. This may be attributed to a culture specific effect. It may also indicate that the assessment of victimization did not capture the typical experience of Austrian homo- or bisexual men. Not finding differences in all of the risk factors weakens the hypothesis that LGB participants bias their self reports no matter what psychological variable is assessed.

The risk factors having stronger associations with current suicide ideation (and likely indicating increased vulnerability) in LGB participants as compared to heterosexual were depressive mood, hopelessness, self-esteem, other drugs, perceived social support from parents and family, victimization in the last year (for males also in previous years), and suicides in the social net.

After controlling for socio-demographic variables and risk factors, sexual orientation was no longer associated with current suicide ideation. This was not the case in a similar analysis where current depressive mood or suicide ideation in the last year was the dependent variable. Here, sexual orientation was still correlated with suicide ideation in the last year after controlling for risk factors (Plöderl, 2004).

The interplay between general and LGB-specific stressors remains unclear. Preliminary multivariate models on the LGB sample only, which added LGB-specific risk factors (internalized homophobia, less "outness" in the social network, anti-LGB violence, anti-LGB familial violence, and negative first/current reaction of the family concerning the homo-/bisexuality) to general risk factors did not improve the model (Plöderl, 2004). Further research is therefore needed to understand the processes leading from increased risk factors to self-harm in LGB individuals.

GLB specific suicide prevention programs should target suicidality related risk factors that are elevated in comparison to heterosexuals and more strongly correlated with their higher suicidality incidences. Ideal candidates are risk factors fulfilling more than one of these criterions. Depressive mood, hopelessness, and low self-esteem were highly correlated high with current suicidality and there was increased vulnerability in LGB individuals. But, according to Meyer (2003), those risk factors are the outcome of minority stress. Perceived social support from the father and from the family was lower in LGB individuals with increased vulnerability. It is likely that low familial support related to the homosexuality of offspring results in the elevation of other risk factors more strongly associated with suicidality (e.g., depression, low self-esteem). The association and mediating effect of parental support on suicidality of LGB individuals is stressed in the scientific literature (e.g. Diaz et al., 2001; Hershberger and D'Augelli, 1995). Parents' reaction to an offspring's homosexuality frequently includes rejection, and fear of the parents' reaction is the major concern of LGB individuals (e.g. Ben-Ari, 1995, Berliner Senatsverwaltung für Bildung, Jugend und Sport, 1998). Educating parents about homosexuality could be a promising approach to reduce LGB suicide related problems. Suicide prevention strategies that include family education remain widely absent and this especially applies for LGB specific suicide prevention programs.

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Table 1
Suicide ideation and behavior

	LGB heterosexual				
Suicidality measure	n (%)	n (%)	OR^{a}	CI^{b}	r^{c}
Current danger of attempting suicide	62 (17)	27 (10)	1.9	1.2-3.0	.10
Last year	98 (28)	35 (13)	2.5	1.6-3.9	.17
Suicide ideation	98 (28)	35 (13)	2.5	1.6-3.9	.17
Serious suicide ideation	65 (18)	18 (7)	3.7	1.8-5.3	.17
Aborted suicide attempt	18 (5)	2(1)	7.1	1.6-30.7	.11
Suicide attempt (gate question)	6 (2)	0 (0)	-	-	-
Previous years					
Suicide ideation	250 (70)	121 (45)	2.9	2.1-4.0	.25
Serious suicide ideation	179 (50)	58 (22)	3.6	2.5-5.2	.29
Aborted suicide attempt	75 (21)	17 (6)	3.9	2.2-6.8	.20
Suicide attempt (gate question)	47 (13)	3 (1)	13.3	4.1-43.2	.21
Lifetime Suicide attempts					
Suicide attempt (gate question)	51 (14)	3 (1)	14.6	4.5-47.4	.23
Suicide attempt, criterion 1	47 (13)	4 (2)	9.9	3.5-27.9	.20
Suicide attempt, criterion 2	34 (10)	4 (2)	6.9	2.4-19.6	.16
Suicide attempt, needing medical care	11 (3)	1 (0)	8.4	1.1-65.72	.09

Note. All ordinal scaled variables were dichotomized, i.e. all answers that do not negate the items are collapsed.

^aOdds ratio. ^b95% confidence interval of the odds ratio. ^cCorrelational effect size.

Table 2

Risk factors in LGB and heterosexual participants and correlations with current suicidality

	M (SD) or n (%)				Corr. wi	th curr. SI ^e
Risk Factor	LGB	heterosex.	test	r^{d}	LGB	heterosex.
Depressive mood	7.8 (2.7)	7.1 (2.4)	$F(1,622) = 11^{***}$.13	+.33***	+.17***
Hopelessness	25.3 (9.5)	23.5 (5.4)	$F(1,622) = 11^{***}$.13	+.37***	+.19***
Self esteem	33.6 (5.0)	34.7 (3.6)	$F(1,623) = 11^{***}$.13	36***	18***
Alcohol	208 (467)	160 (287)	n.s.	.14	+.04	+.00*
Tranquilizer	61 (17%)	19 (7%)	$\chi^2(1) = 13^{***}$.14	+.09	+.16*
Other drugs	70 (20%)	49 (18%)	n.s.	.14	+.13*	+.07
Perceived social	Social					
support	support					
mother	2.8 (0.8)	3.1 (0.7)	$F(1,536) = 14^{***}$.16	16**	04
father	2.4 (0.9)	2.9 (0.8)	$F(1,468) = 39^{***}$.28	16**	07
family ^a	2.7 (0.7)	3.0 (0.6)	$F(1,561) = 27^{***}$.21	18**	03
friends	3.4 (0.4)	3.4 (0.4)	n.s.	.02	05	05
Gender role $_b$						
Gender role ^b						
men	55 (23%)	21 (12%)	$\chi^2(1) = 7^{***}$.13	06	03
women	22 (19%)	9 (10%)	n.s.	.11	+.18	10

table continues

	M (SD) or n (%)				Corr. with curr. SI _e	
Risk Factor	LGB	heterosex.	test	$r_{ m d}$	LGB	heterosex.
Victimization (12mon)	0.5 (1.2)	0.5 (0.90)	n.s.	.04	+.14**	+.05
Victimization (before)						
Men	2.3 (2.6)	2.9 (2.6)	$F(1,419) = 5^*$.11	+.15*	+.00
Women	2.6 (2.8)	1.8 (2.1)	$F(1,202) = 8^{***}$.20	+.11	+.17
HIV-status (men) ^c	8 (3%)	0 (0%)	fisher-test*	.10	_	_
Suic. att. in social net	0.9 (1.1)	0.7 (0.9)	$F(1,614) = 6^*$.09	+.03	+.12*
Suicides in social net	0.7 (0.9)	0.7 (0.9)	n.s.	.05	+.12*	+.04
Suicide attempts (ever)	47 (13%)	4 (2%)	$\chi^2(1) = 26^{***}$.20	+.19***	+.16**

Note. ^aParents and siblings, ^bpercent sex-role-nonconforming, ^cpercent positive, ^deffect size, ^ecorrelation with current suicide ideation.

p < .05, p < .01, ***p < .001.

Appendix

Probing questions:

If you attempted suicide once or several times, how can it (i.e. the last one) be characterized?

- 1. Thought seriously about it.
- 2. I contacted a support institution just in time (e.g. crisis intervention centre).
- 3. I had a plan but did not carry it out.
- 4. I had everything prepared but did not try to attempt suicide.
- 5. I was already trying to kill myself but stopped the attempt at the last minute.
- 6. Made a suicide attempt and was hurt or ill afterwards.
- 7. Made a suicide attempt and required medical care because of it.
- 8. Made a suicide attempt and did not require medical care because of it.

Items 1, 3, 4, 7 and 8 are similar to those used by Savin-Williams (2001). Item 5 is similar to the one used by Barber et al. (1998). Items 2 and 6 were introduced by the author.