Bi-directional longitudinal associations between different types of bullying victimization, suicide ideation/attempts and depression among a large sample of European adolescents

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<td>klomek, Anat; IDC Hertzelyia, Psychology Barzilay, Shiria; Icahn School of Medicine Department of Psychiatry, Psychiatry Apter, Alan; Schneider Children’s Medical Center of Israel, Feinberg Child Study Center Carli, Vladimir; National Swedish Prevention of Mental Ill-Health and Suicide (NASP), Karolinska Institute, Department of Public Health Sciences W. Hoven, Christina; Columbia University, Department of Child and Adolescent Psychiatry Sarchiapone, Marco; University of Molise, Department of Health Sciences Balázs, Judit; Vadaskert Child Psychiatry Hospital, I.; Eötvös Loránd University, Institute of Psychology Brunner, Romuald; University of Heidelberg, Child and Adolescent Psychiatry Kaess, Michael; University of Bern, University Hospital of Child and Adolescent Psychiatry and Psychotherapy Wasserman, Danuta; National Swedish Prevention of Mental Ill-Health and Suicide (NASP), Karolinska Institute, Department of Public Health Sciences</td>
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Bi-directional longitudinal associations between different types of bullying victimization, suicide ideation/attempts and depression among a large sample of European adolescents

Running head: Bullying longitudinal associations with suicidality

Anat Brunstein Klomek, PhD, Shira Barzilay, PhD, Alan Apter, MD, Vladimir Carli, MD, PhD, Christina W. Hoven, DrPH, Marco Sarchiapone, MD, Gergő Hadlaczy, PhD, Judit Balazs MD, PhD, Agnes Kereszteny, Romuald Brunner, MD, Michael Kaess, MD, Julio Bobes, MD, PhD, Pilar A. Saiz, PhD, Doina Cosman, MD, Christian Haring, MD, PhD, Raphaela Banzer, Elaine McMahon, PhD, Helen Keeley, MD, Jean-Pierre Kahn, MD, PhD, Vita Postuvan, PhD, Tina Podlogar, Merike Sisask, PhD, Airi Varnik, MD, PhD, and Danuta Wasserman, MD, PhD.

*Equal contribution

a Feinberg Child Study Centre, Schneider Children’s Medical Centre, Tel Aviv University, Tel Aviv, Israel

b Baruch Ivcher School of Psychology, Interdisciplinary Center (IDC), P.O. Box 167, Herzliya 46150, Israel

c Department of Psychiatry, Icahn School of Medicine at Mount Sinai, New York City, NY U.S.A

d National Centre for Suicide Research and Prevention of Mental Ill Health (NASP), Karolinska Institute, Stockholm, Sweden
Department of Child and Adolescent Psychiatry, New York State Psychiatric Institute, Columbia University, New York, USA

Department of Epidemiology, Mailman School of Public Health, Columbia University, New York, USA

Department of Health Sciences, University of Molise, Campobasso, Italy

National Institute for Health, Migration and Poverty, Rome, Italy

Kazakh National Medical University, Almaty, Kazakhstan

Vadaskert Child Psychiatry Hospital, Lipótmezei str. 115, 1021 Budapest, Hungary

Institute of Psychology Eotvos Lorand University, Izabella str. 46, 1064 Budapest, Hungary

Clinic of Child and Adolescent Psychiatry, Centre of Psychosocial Medicine, University of Heidelberg, Heidelberg, Germany

University Hospital of Child and Adolescent Psychiatry and Psychotherapy, University of Bern, Bern, Switzerland

Department of Psychiatry, School of Medicine, Centro de Investigacion Biomedica en Red de Salud Mental, CIBERSAM, University of Oviedo, Oviedo, Spain

Clinical Psychology Department, Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania

Research Division for Mental Health, University for Medical Information Technology (UMIT), Hall in Tirol, Austria

Addiction help services B.I.N., Innsbruck, Austria
National Suicide Research Foundation, Cork, Ireland

Department of Psychiatry and Clinical Psychology, Centre Hospitalo-Universitaire (CHU) de Nancy, Universite de Lorraine, Nancy, France

Slovene Center for Suicide Research, UP IAM, University of Primorska, Koper, Slovenia

Estonian-Swedish Mental Health and Suicidology Institute (ERSI), Tallinn, Estonia

School of Governance, Law and Society, Tallinn University, Tallinn, Estonia

School of Natural Sciences and Health, Tallinn University, Tallinn, Estonia
Abstract

**Background:** The association between bullying victimization and depression, suicide ideation and suicide attempts was studied mainly in cross-sectional studies. The present study aims to test the bidirectional effect and the chronicity vs. sporadic effect of physical, verbal, and relational bullying victimization on suicidal ideation/attempts and depression.

**Methods:** Longitudinal assessments with an interval of 3- and 12-months were performed within a sample of 2933 adolescents (56.1% females; mean age 14.78, SD=.89) from 10 European countries, participating in the Saving and Empowering Young Lives in Europe (SEYLE) school-based multicenter control sample. Multi-level Structural Equation Models were used, controlling for sociodemographic variables. Victimization was considered chronic when a student was victimized in the first two time points and sporadic when it was reported only at one point but not in another.

**Results:** Bidirectional prospective association between all types of victimization and depression were found. Among participants, who reported victimization once (but not twice), physical victimization, but not verbal and relational, was associated with later suicidal ideation and attempts. Chronic victimization of any type increased likelihood for later depression compared with sporadic and no-victimization. Chronic relational victimization increased the likelihood of later suicidal ideation, and chronic physical victimization increased the likelihood for suicidal attempts.

**Conclusions:** The results support the bidirectional effect of victimization and depression, and indicate that there are complex longitudinal associations between
victimization and suicidal ideation/attempts. Physical victimization may especially
carry effect on suicidal risk over time. Interventions should focus on victimization as
a cause of distress but also aim to prevent vulnerable adolescents from becoming
targets of victimization.

Key words: bullying, victimization, prevention, suicide, suicide attempt, suicide
ideation, depression, SEYLE

Bullying is a public health problem associated with greater risk for both
mental health and behavior problems, including depression and suicidal ideation and
behaviors (Centers for Disease Control and Prevention, 2017). The association
between victimization by bullying and depression (Turner, Finkelhor, Shattuck,
Hamby, 2012), suicide ideation and suicide attempts (e.g. review by Brunstein
Klomek, Sourander, Elonheimo, 2015; Meta-analysis by Holt, Vivolo-Kantor, Polanin, 2015) has been studied mainly in cross-sectional studies. Among
those studies only very few have distinguished between different types of
victimization (e.g. Kodish et al., 2016). Longitudinal studies are crucial to determine
the direction of the association between victimization and adverse outcomes (Hong,
Kral, Sterzing, 2015). Most of longitudinal studies have examined the impact of
victimization on depression (Sweeting, Young, West, Der, 2006; Takizawa, Maughan,
Arseneault, 2014, Zwierzynska, Wolke, Lereya, 2013), while others have examined
the impact of depression on becoming victimized (Tran, Cole, Weiss, 2012). A few
longitudinal studies have examined the bidirectional association between
victimization and depression, generally indicating that there is a bidirectional
association between the two (Busch, Laninga-Wijnen, van Yperen, Schrijvers, De
Leeuw, 2015; Lester, Cross, Dooley, Shaw, 2012; Reijntjes, Kamphuis, Prinzie,
Telch, 2010; Tran et al., 2012) which may be different among genders (McMahon et al., 2010 a,b; Sentse, Prinzie, Salmivalli, 2016; Tran et al., 2012). These studies indicate that depression both precedes and follows victimization. It has also been found that there is a dose effect in which the more frequent the victimization, the higher the risk for depression (e.g. Geoffroy et al., 2016).

Longitudinal studies examining the association between victimization and suicidality, however, have mainly been in a single directional pathway—how victimization leads to suicidal ideation and behavior (Brunstein Klomek, Sourander, Elonheimo, 2015). These studies have also indicated a dose effect (Geoffroy, 2016) but have examined victimization in general and did not differentiate types of victimization (Geoffroy, 2016). Previous studies have prospectively examined whether different forms of victimization predict subsequent suicidal ideation and behavior and evaluated different forms of victimization. However, to the best of our knowledge there is no previous longitudinal study which has examined whether suicidal adolescents are at risk for victimization nor what is the mutual association between victimization and suicidal risk. Longitudinal evidence is important to unravel the bidirectional complex associations between bullying behaviors and suicidal ideation and behavior among adolescents.

The current study extends previous studies on the association between different types of victimization and suicide ideation and attempts by longitudinally investigating their mutual impact within two different time intervals (3- and 12-months) in a large representative European sample of adolescents. Specifically, the study questions are: 1. Does victimization at baseline or 3 months lead to new cases of suicide-related psychopathology (depression, suicide ideation, suicide attempts) or whether suicide-related psychopathology leads to new cases of victimization at 3 and
12 months? 2. Are chronic victims at higher risk for suicide-related psychopathology (depression, suicide ideation, suicide attempts) compared with sporadic victims and non-victims?

Methods

Data were collected as part of the Saving and Empowering Young Lives in Europe (SEYLE) study. SEYLE is a cluster randomized controlled trial (German Clinical Trials Register DRKS00000214) designed to evaluate the efficacy of school-based preventive interventions for suicidal behavior. Ten EU countries took part in the SEYLE study, including Austria, Estonia, France, Germany, Hungary, Ireland, Italy, Romania, Slovenia and Spain, with Sweden’s National Centre for Suicide Research and Prevention of Mental Ill-Health (NASP) at Karolinska Institute serving as coordinating center. The full protocol of the study and the characteristics of the sample have previously been published (Wasserman et al., 2010). All sites had approval from a local ethics committee approval. Schools located within the catchment area of each study site were chosen if they fulfilled certain inclusion and exclusion criteria (Wasserman et al., 2010). After the baseline assessment (fall 2009 to spring 2010), three different interventions, which targeted the prevention of suicide attempts and suicidal ideation were carried out and were compared to a control group (Wasserman et al., 2015). Randomization into one of the four study arms was done at the school level (Carli et al., 2013; Wasserman et al., 2015). To avoid contamination and confounding, only one type of intervention was performed in each school. Follow-up data was assessed 3 and 12 months after baseline. In order to diminish the potential influence of intervention effects, the present manuscript focuses on the control group, which received a minimal intervention. There were not differences
between the intervention and control group participants on baseline characteristics (Wasserman et al., 2015). The minimal intervention consisted of educational posters about mental health that were hung in the classroom for four weeks, as well as contact details for the local healthcare services (Wasserman et al., 2012). There were no differences between the intervention and control group participants on baseline characteristics (Wasserman et al., 2015).

Participants

The whole sample of the SEYLE-project comprises was drawn from 168 schools, comprising a total 11,110 students. The overall number of participants was approximately 1000 in each country with some variation between countries, and distributed equally across the study arms (Carli et al., 2013). The current study included the control group which comprised 2933 pupils at baseline assessment, 1281 boys (43.7%), 1647 girls (56.1%), and 6 who did not report their gender. In the control group number of participants ranged between 118 (Austria) and 429 (Slovenia). 2483 students (84.97% retention) participated at T2 (3 months) and 2389 students (81.42% retention) were part of T3 (12 months) assessment. Mean age of the control sample during the baseline assessment was 14.78, $SD = .89$, range 13-18. The study included classes in which the majority of students were 15 years old (Wasserman, 2015).

Measures

Participants were administered a self-report survey at three-time points: baseline (T1), after 3 months (T2) and at 12 months (T3), which included several
well-established questionnaires and items developed for SEYLE (Carli et al., 2013). It was conducted within the classroom. As part of a larger questionnaire, the students were asked about bullying victimization, suicide attempts, suicide ideation and depression. The primary study outcomes of interest were suicide attempts, suicide ideation and depression (lifetime and new onsets during the follow-up periods).

Bullying victimization: Assessed using ten yes/no questions from the Global School-Based Student Health Survey (GSHS) (WHO) (2009) about various types of victimization that participants reported had occurred often in the last 12 months (“In the past 12 months have others often…”). The 3 months questionnaire referred to victimization in the past 3 months. Three variables were created indicating three different types of victimization: physical (e.g. "others pushed, hit or kicked you"), verbal (e.g. "others called you names") and relational (e.g. "others spread rumors about you"). For each type of bullying a total was computed and if it was greater than one, the student was considered to be a victim of that type of bullying (Brunstein Klomek, 2016). Victimization was considered chronic when a student endorsed victimization (that had occurred often) at both T1 and T2 while sporadic victimization was determined when a student endorsed victimization (that had occurred often) only at T1 or T2. Any victimization includes both chronic or and sporadic.

Depression: was assessed by the Beck Depression Inventory (BDI-II; Beck, Steer, Ball, Ranieri, 1996). Internal reliability for this instrument was assessed through Cronbach’s alpha, which was high (BDI-II: 0.864) (Carli et al., 2013). Scores were dichotomized according to cut-off criteria (BDI-II ≥14) previously defined and established to sensitively detect at-risk students for the SEYLE study (Kaess et al., 2014).
Suicidal ideation and attempts: We used two items from the Paykel Hierarchical Suicidal Ladder (Paykel, Myers, Lindenthal, Tanner, 1974). Pupils were identified as having suicidal ideation if they answered: “sometimes, often, very often or always” to the question: “during the past 2 weeks, have you reached the point where you seriously considered taking your life, or perhaps made plans for how you would go about doing it?” Pupils were identified as having a history of suicide attempt if they answered “yes” to the question: “have you ever made an attempt to take your own life?” (Wasserman et al., 2015). All new cases (i.e. incident cases) of suicide ideation and suicide attempt(s) were identified at either the 3 month or 12 month follow-up (Wasserman et al., 2015).

**Data Analysis**

To examine whether victimization (physical, verbal, relational) reported once at baseline and 3-months leads to depression, suicide ideation and suicide attempts at 3 – and 12 months (respectively) or whether depression, suicide ideation and attempts at baseline and 3 months lead to new cases of victimization at 3- and 12 months (hypothesis 1), we conducted a series of multi-level autoregressive cross-lagged models (ARCL; Anderson, 1960). In these models, associations were analyzed from one time point to the next (i.e. baseline to 3-months, 3-months to 12-months). Multi-level models were selected because adolescents were nested within schools. In addition, analyses for partitioning of the variance between person- and school-level revealed significant variance between schools in victimization [physical ($\chi^2_s(33) > 94.92, ps < .0001$), verbal ($\chi^2_s(33) > 58.31, ps < .004$), relational ($\chi^2_s(33) > 60.86, ps < .002$)], depression ($\chi^2_s(33) > 48.75, ps < .038$) and suicide attempts (marginally significant at T2, $\chi^2_s(33) = 44.62, ps = .085$, and significant at T1 and T3, $\chi^2_s(33) > 48.32, ps < .04$) at all time points. (no significant variance was found in suicide
ideation between schools, \( \chi^2(33) < 42.10, ps > .13 \). In ARCL models, bidirectional effects of two constructs are estimated over time (baseline, 3 months, 12 months), such that a change in one construct is predicted by a second construct. Gender, age, whether the adolescent was living without his biological parents (yes, no), whether the adolescent is an immigrant (yes, no), and whether the adolescent's parents lost their job during the last 12 months (yes, no) were included as covariates to account for their effects (Wasserman et al., 2015). In the models predicting suicide ideation and/or suicide attempts, we also included depression as a covariate. To estimate the ARCLs, we used MPlus 6.1 (Muthén & Muthén, 1998-2010) Structural Equation Modeling (SEM) software, which allows the inclusion of dichotomous variables as predictors and as outcome measures (all our main variables were dichotomous) and to use the use of a logit link with Monte Carlo integration. Missing data (<1% missing for each individual characteristic) were handled with the multiple imputation procedure (MI; Rubin, 2009). To examine whether chronic victims (baseline + 3 months) at higher risk for suicide-related psychopathology (depression, suicide ideation, suicide attempts) at 12 months compared with sporadic victims (baseline or 3 months) and non-victims (not victims at baseline and at 3 months) (hypothesis 2), we conducted a series of multi-level logistic regression analyses. In these analyses, change in suicide attempts, suicide ideation, and depression served as the binary outcome measures (yes, no), victimization status as predictors, and gender, age, whether the adolescent was living without his biological parents (yes, no), whether the adolescent is an immigrant (yes, no), and whether the adolescent's parents lost their job during the last 12 months (yes no) as covariates. In the models predicting suicide attempts and ideation, depression also served as a covariate. In multi-level models with categorical measures and maximum likelihood estimators, traditional fit statistics (e.g., Chi
square, CLI, RMSEA) are not available and therefore are not reported (Muthén &
Muthén, 1998-2010).

Results

Table 1 summarizes the frequencies of any physical victimization, verbal
victimization and relational victimization, depression, suicide ideation and suicide
attempts in the three time points.

---Place Table 1 around here---

As for the first hypothesis, odd ratios are noted in the text. Regarding
depression, the ARCLs indicated that suffering from any type of victimization
(physical, verbal and/or relational) as reported once at baseline or 3 months led to new
cases of depression at 3 months and 12 months, respectively. Specifically, adolescents
who suffered from physical victimization at baseline were 2.24 times more likely to
suffer from depression at 3 months (p<.001), and 2.26 times more likely to suffer
from depression at 12 months (p<.001); adolescents who suffered from verbal
victimization were 1.84 times more likely to suffer from depression at 3 months
(p<.001), and 1.64 times more likely to suffer from depression at 12 months (p<.001);
adolescents who suffered from relational victimization were 1.66 times more likely to
suffer from depression at 3 months (p<.01), and 1.94 times more likely to suffer from
depression at 12 months (p<.001).

Depression also affected the likelihood of suffering from victimization.
Specifically, suffering from depression at baseline led to new cases of relational (OR
= 1.87, p<.001), physical (odd ratio, OR = 1.72, p<.01), and verbal (OR = 1.56,
p<.01) victimization at 3 months, and suffering from depression at 3 months led to
new cases of relational (OR = 2.02, p<.001) and verbal (OR = 1.71, p<.001) victimization at 12 months (but not physical victimization).

The ARCLs indicated that occurrence of physical victimization at baseline and/or 3 months but not the occurrence of verbal or relational victimization, led to new cases of suicide ideation and attempts at 3 months and 12 months, respectively. Specifically, adolescents who suffered from physical victimization at baseline were 2.18 times more likely to have experienced suicide ideation (p<.01) and/or attempt suicide (p<.05) at 3 months compared with those who did not suffer from physical victimization; adolescents who suffered from physical victimization at 3 months were 2.54 times more likely to have experienced suicide ideation at 12 months (p<.05) and 4.72 times more likely to attempt suicide at that time compared with those who did not suffer from physical victimization (p<.001). Suicide attempt but not ideation affected the likelihood of suffering from physical victimization (but not verbal or relational victimization). Specifically, those who attempted suicide between baseline and 3 months were 2.49 times more likely to suffer from physical victimization at 12 months compared with those who did not attempt suicide at that time (p<.01). These results were significant controlling for the contribution of socio-demographic factors and depression.

As for the second hypotheses, the analyses indicated that chronic physical, verbal and relational victimization significantly increased the likelihood for experiencing depression as compared with sporadic (only for verbal and relational) and no victimization (Table 2). Chronic relational victimization, but not verbal or physical, significantly increased the likelihood for experiencing suicide ideation as compared with sporadic and no victimization. Conversely, chronic physical
victimization, but not verbal or relational, significantly increased the likelihood for making a suicide attempt as compared with sporadic and no victimization.

---Place Table 2 around here---

Discussion

This study longitudinally investigated the mutual impact of bullying victimization and depression, suicidal ideation and suicide attempts in a large representative European sample of adolescents. The current study has a few main findings. First, there was a bidirectional association between victimization and depression. Suffering from any type of victimization (physical, verbal and/or relational) led to new cases of later depression. Depression also affected the likelihood to suffering from victimization (excluding physical at 12 months). These results support previous findings indicating that victimization predicts increases in a variety of internalizing problems while psychological problems precede increased victimization over time (Reijntjes, Kamphuis, Prinzie, Telch, 2010; Storch and Ledley, 2005; Sweeting., 2006; Kaltiala-Heino, Fröjd, Marttunen, 2010). Specifically, these results indicate that a student suffering from depression might be more likely to experience peer victimization. At the same time, once victimized by peers, a student might be more likely to experience depression. These results are also in line with previous findings demonstrating a bidirectional association between bullying and psychotic symptoms (Kelleher et al., 2013). The significance of the bi-directional association between depression and victimization is important since clinicians, educators and policy decision makers should aim to include both depression and victimization in prevention and intervention efforts among adolescents.
As for suicide ideation and attempts, the findings were more complex since they differed between the types of victimization. The occurrence of physical victimization as reported once at baseline or 3 months (but not the occurrence of verbal or relational victimization), led to new cases of suicide ideation and attempts at 3 months and 12 months, respectively. In the other direction, making a suicide attempt but not experiencing ideation affected the likelihood of suffering from physical victimization (but not verbal or relational victimization). These longitudinal findings expand on our previous cross-sectional findings (Barzilay et al., 2017) which indicated that suffering from physical victimization in the previous year was associated with current and severe suicide ideation. The current study therefore determines that the adverse effect of physical victimization on suicide ideation remains over time and may escalate to suicide attempts. Variances between the effects of different types of victimization on the risk of experiencing suicidal ideation and behaviors were also found in a previous study in the USA (Espelage and Holt, 2013), but were not demonstrated in other studies (e.g. Turner, Exum, Brame, Holt, 2013). These results highlight the importance of assessing and understanding the different types of victimization. The findings that suicidal ideation and attempts seem to be mostly associated bi-directionally to physical victimization may highlight the related to the fact that physical victimization among older adolescents may be less prevalent (Barzilay et al., 2017) and less normative (Thomas et al., 2016) compared to other types of victimization and therefore associated with more severe outcomes. Our findings are in line with those by Arango et al. (2016) which suggested that indirect victimization maybe more commonplace among youth, affecting risk to a lesser degree.
As for a dose effect, chronic physical, verbal and relational victimization significantly increased the likelihood of experiencing depression as compared with sporadic (only for verbal and relational) and no victimization. Results were again more complex when suicide ideation and attempts were examined. Chronic relational victimization (but not verbal or physical) significantly increased the likelihood of experiencing suicide ideation as compared with sporadic and no victimization. Conversely, chronic physical victimization (but not verbal or relational), significantly increased the likelihood for a suicide attempt as compared with sporadic and no victimization. These findings highlighting the importance of chronic relational victimization are in line with studies indicating that chronic relational victimization often leads to social isolation and loneliness (Rudolph et al., 2014), which are often associated with suicidal ideation (Joiner, 2005). Physical victimization during adolescents may be related to painful and provocative experiences that according to the Interpersonal Theory of suicide are associated with increased capacity for self-harm involved in suicidal behaviors (Barzilay et al., 2015; Van Orden et al., 2010).

There could be gene and environment interactions with childhood/adolescent physical assault in suicide attempters which has been shown in molecular genetic studies (Sokolowski, Wasserman, Wasserman, 2012). This is important from the prevention point of view since physical victimization may activate underlying genetic vulnerability in certain adolescents. These results are in line with molecular genetic studies (Sokolowski, Wasserman, Wasserman, 2012) indicating that suicidal behavior is complex and involves interactions between the subject's environmental influences and biology. Physical victimization may activate underlying genetic vulnerability in certain adolescents and not in others which is important for prevention. Previous studies on dose-effect of victimization did not distinguish between different types of
victimization and therefore future studies are needed to examine unique effects over time.

Conclusions

The main conclusions of the current study are that there is a clear bidirectional association between victimization and depression, while there are more complex longitudinal associations between victimization and suicidal ideation/attempts. This study has strengths and limitations. The strengths of this study include a large sample, longitudinal design, appropriate statistical analyses, and assessment of different types of bullying. A major limitation of the study is the use of only self-reports. Another limitation is that other variables were not included. It could be, for example, that the bidirectionality is related to shared underlying vulnerability, for example interpersonal problems.

The clinical implications of the study are very important. The findings highlight that professionals and policy decision makers should focus on victimization as a cause of distress but also should be aware that vulnerable children and young people are likely to be the targets of victimization. Clinicians working with youth affected by victimization and/or depression should assess the underlying dynamics between the two so the therapeutic intervention can focus on it to prevent future involvement. In the school-based bullying prevention efforts (Lee et al., 2015), school authorities should target all students who are victims and specifically those who are chronic victims. Physical victimization confers additional risk and should be monitored and prevented with the necessary means.

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Correspondence to:
Anat Brunstein Klomek, PhD
Baruch Ivcher School of Psychology, Interdisciplinary Center (IDC), Israel
Address: P.O. Box 167, Herzliya, Israel 46150
Tel: +1(201) 916-1973
Fax: +1(201) 8711-557
E-mail: bkanat@idc.ac.il
Table 1

Frequencies of study variables in the three-time points

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<th>Baseline (Time 1)</th>
<th>3 months (Time 2)</th>
<th>12 months (Time 3)</th>
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<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Any Physical victimization</td>
<td>251</td>
<td>8.7</td>
<td>167</td>
</tr>
<tr>
<td>Any Verbal victimization</td>
<td>1061</td>
<td>34.6</td>
<td>702</td>
</tr>
<tr>
<td>Any Relational victimization</td>
<td>949</td>
<td>32.3</td>
<td>675</td>
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<tr>
<td>Depression</td>
<td>540</td>
<td>19.2</td>
<td>416</td>
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<tr>
<td>Suicide ideation</td>
<td>103</td>
<td>3.6</td>
<td>60</td>
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<tr>
<td>Suicide attempts</td>
<td>88</td>
<td>3.0</td>
<td>79</td>
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Note. Any victimization- sporadic or chronic
Table 2

Regression coefficients predicting depression, suicide ideation and suicide attempts by victimization type at 12 months follow-up

<table>
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<tr>
<th></th>
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<td></td>
<td>b</td>
<td>OR</td>
<td>b</td>
<td>OR</td>
<td>b</td>
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<tr>
<td>Age</td>
<td>-0.03</td>
<td>0.97</td>
<td>-0.08</td>
<td>0.92</td>
<td>-0.12</td>
</tr>
<tr>
<td>Gender</td>
<td>0.19</td>
<td>1.21</td>
<td>-0.41</td>
<td>0.66</td>
<td>1.05***</td>
</tr>
<tr>
<td>Not living with parents</td>
<td>0.57</td>
<td>1.76</td>
<td>0.23</td>
<td>1.26</td>
<td>0.42**</td>
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<tr>
<td>Immigrant</td>
<td>0.52</td>
<td>1.68</td>
<td>-0.25</td>
<td>0.78</td>
<td>-0.38</td>
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<tr>
<td>Parental unemployment</td>
<td>-0.80*</td>
<td>0.45</td>
<td>0.11</td>
<td>1.12</td>
<td>-0.38</td>
</tr>
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<td>Depression at baseline</td>
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<td>2.71</td>
<td>2.18***</td>
<td>8.88</td>
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</tr>
<tr>
<td>Chronic physical victimization (0) vs. Sporadic (1)</td>
<td>-1.36*</td>
<td>0.26</td>
<td>0.13</td>
<td>1.14</td>
<td>-0.10</td>
</tr>
<tr>
<td>Chronic physical victimization (0) vs. No victimization (1)</td>
<td>-2.05**</td>
<td>0.13</td>
<td>-0.73</td>
<td>0.48</td>
<td>-0.82*</td>
</tr>
<tr>
<td>Chronic verbal victimization (0) vs. Sporadic (1)</td>
<td>-0.01</td>
<td>0.99</td>
<td>0.48</td>
<td>1.61</td>
<td>-0.43*</td>
</tr>
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<tr>
<td>Chronic verbal victimization (0) vs. No victimization (1)</td>
<td>0.67</td>
<td>1.95</td>
<td>0.56</td>
<td>1.74</td>
<td>-0.63**</td>
</tr>
<tr>
<td>Chronic relational victimization (0) vs. Sporadic (1)</td>
<td>-0.18</td>
<td>0.84</td>
<td>-0.83*</td>
<td>0.44</td>
<td>-0.87***</td>
</tr>
<tr>
<td>Chronic relational victimization (0) vs. No victimization (1)</td>
<td>-0.10</td>
<td>0.91</td>
<td>-0.97*</td>
<td>0.38</td>
<td>-1.13***</td>
</tr>
</tbody>
</table>

Note. * p < .05, ** p < .01, *** p < .001. OR = odds ratio. _Regression models predicting depression, suicidal ideation and attempts included the control variables (gender, age, whether the adolescent was living without his biological parents (yes, no), whether the adolescent is an immigrant (yes, no), and whether the adolescent's parents lost their job during the last 12 months (yes no) as covariates. In the models predicting suicide attempts and ideation, depression also served as a covariate._
References


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**Key Points:**

- There are known cross-sectional associations between bullying victimization and depression, suicide ideation and suicide attempts
- This study demonstrates bidirectional prospective effects between physical, verbal and relational victimization and depression.
- Chronic victimization of any type increased likelihood for later depression compared with sporadic and no-victimization.
- Physical victimization, but not verbal and relational, predicts later suicidal ideation and attempts and therefore confers increased risk over time
- Interventions should both prevent victimization and prevent victimized youth from developing severe psychological distress
For Peer Review

Verbal Victimization

Baseline

Verbal Victimization

3 months

Verbal Victimization

12 months

Suicide Attempts

1.86***

3.70***

1.79***

3.42***

Suicide Attempts

Baseline

3 months

12 months
Verbal Victimization

Depression

Baseline

1.86***

0.61***

0.45**

2.35***

3 months

Verbal Victimization

Depression

1.80***

0.50***

0.54***

2.74***

12 months

Verbal Victimization

Depression