Recent stressful life events and suicidal behaviors and NSSI in adolescents: Examining the role of socio-emotional strengths

BRIEF TITLE: Stressful Life Events and Suicide: Examining the Role of Socio-Emotional Strengths

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Background: Stressful Life Events (SLEs) during adolescence are linked to a higher risk of suicidal behavior and nonsuicidal self-injury (NSSI). However, the specific impact of each type of SLE has been under-researched. Socio-emotional strengths, including belief in self, belief in others, Emotional Competence, and Engaged Living, are key promotive factors for mental health and may mitigate the impact of SLEs on suicidal behavior and NSSI. This study aims to systematically explore the potential indirect effects of socio-emotional strengths in the relationship between SLEs over the past year, grouped by functional areas, and indicators of suicidal behavior and NSSI. Method: 2,283 adolescents aged 10 to 19 years (M = 13.99; SD = 1.40) participated in the study, completing scales on SLEs, socio-emotional strengths, and suicidal behavior and NSSI reported over the past year. Results: From the sample, 13.4% of participants reported suicidal desire, 10.5% suicidal ideation, 6.6% NSSI, 5.5% suicide planning, and 2.2% suicide attempts. In the main analyses, Suicidal Behavior (Death Wishes, Ideation, Plans, Attempts) and NSSI were modeled separately. Belief-in-Self and Engaged

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Living were negatively associated with both outcomes, while Emotional Competence showed a small positive link with suicidal behavior. Peer and Health-Related SLEs had direct effects on both suicidal behavior and NSSI. Indirect effects emerged through Belief-in-Self and Engaged Living. Conclusions: Socio-emotional strengths may play a protective and mediating role in the association between SLEs and Suicidal Behaviors and NSSI in adolescents. Findings highlight the relevance of targeting these strengths in school-based prevention efforts.

Keywords: stressful life events, covitality, socioemotional strengths, psychosocial assets, suicidal behavior, adolescents

Introduction

Adolescence is a vulnerable period during which young people may face risk-inducing situations, with the average onset age for lifetime mental disorders being 14.5 years (Solmi et al., 2022). In this developmental stage, exposure to stressful or traumatic events are at higher risk for mental health problems (Hogg et al., 2023; McLaughlin et al., 2012).

Contextual factors like exposure such as to stressful life events (SLEs) are crucial in understanding suicide risk (Yıldız & Solakoglu, 2019). Chronic exposure to SLEs can lead to suicidal behavior indirectly through mental health problems such as depression and anxiety (Al-Halabí & Fonseca-Pedrero, 2021). These factors contribute to an elevated suicide risk during adolescence (Göbel et al., 2022), making it the second leading cause of death among 15- to 29-year-olds globally (*WHO*, 2021). In Spain, suicide is the leading cause of death for individuals aged 15 to 29, with 273 deaths reported in the last available year (*Instituto Nacional de Estadística (National Statistics Institute)*, 2023).

Suicidal behavior is a multifaceted phenomenon influenced by diverse biological, psychological, cultural, and socioeconomic factors (Meade, 2021; Save the Children, 2021; Singh et al., 2020). Prior episodes of suicidal ideation, suicide planning, suicide attempts, and nonsuicidal self-injury (NSSI) are recognized as proximal risk factors for future suicide

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attempts (Franklin et al., 2017; Halicka, 2018; Turecki & Brent, 2016), even when considered independently of mental disorders (Kiekens et al., 2018). However, their individual predictive power remains generally weak and imprecise when examined in isolation (Huang et al., 2020).

Although suicidal behaviors and NSSI are conceptually distinct, the primary difference is the presence or absence of intent to die. This distinction can be difficult to assess in practice due to ambivalence or concealment of suicidal intent (Fox et al., 2016; Nock et al., 2010). In fact, individuals engaging in NSSI may still harbor a non-negligible wish to die. These behaviors also differ in their psychological functions: while suicidal behaviors aim to end life, NSSI is more often linked to emotion regulation, either by alleviating intense distress (negative reinforcement) or generating desired emotional states (positive reinforcement) (Halicka, 2018; Nock et al., 2010). Despite these differences, both behaviors are prevalent in adolescence and frequently co-occur (Nock, 2006; Turecki & Brent, 2016), with NSSI identified as a significant predictor of subsequent suicide attempts (Falcó et al., 2020). This co-occurrence suggests shared vulnerability pathways, such as emotional dysregulation and exposure to psychosocial stressors.

Some authors propose that self-injurious behaviors lie on a continuum of lethality (Stanley et al., 1992; Wong et al., 2007), while others emphasize distinct motivations and clinical profiles. For instance, NSSI may function as a coping mechanism to endure life, whereas suicidal acts reflect a desire to escape or end life (Favazza, 1998; Muehlenkamp & Gutierrez, 2004). Although methods and intent often differ, comorbidity between NSSI and suicidal behaviors is common, and shared risk factors likely contribute to their overlap (Grøholt et al., 1998; Owens et al., 2002). Still, causal relationships remain unclear, and no specific univariate predictor has proven capable of reliably differentiating the two (Franklin et al., 2017; Turecki & Brent, 2016).

Given this empirical overlap, grouping these behaviors in research has been adopted to facilitate a more comprehensive understanding of self-injurious and suicide-related phenomena. This approach supports the identification of common risk factors and informs

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broader, more inclusive prevention strategies (Blasco et al., 2016; Marques-Feixa et al., 2021), while still acknowledging their conceptual distinctions, as emphasized in clinical classifications (Posner et al., 2011).

Research has explored various mediators in the relationship between negative life events and self-injurious thoughts and behaviors (SITBs), focusing mainly on negative psychological mechanisms such as rumination, loneliness, hopelessness, depression, anxiety, substance abuse, social isolation, loss of meaning in life, and lack of belongingness (Bonner & Rich, 1987; Chang et al., 2009, 2015, 2017; Czyz et al., 2019; Hill & Pettit, 2013; King & Lamontagne, 2021; Van Orden et al., 2008). Positive psychological mechanisms have also been studied; for instance, psychopathology and positive affect are central in explaining SITBs, with socioemotional skills being particularly influential (Fonseca-Pedrero et al., 2024). Personal resources such as emotional intelligence (Domínguez-García & Fernández-Berrocal, 2018) and problem-solving skills (Sastre-Buades et al., 2021) play protective roles. These variables can mitigate (i.e., mediate) the association between distal risk factors and SITBs. Furthermore, social support (Hur et al., 2011), self-esteem (Soto-Sanz et al., 2019), reasons for living (Bagge et al., 2014), and self-compassion (Chang et al., 2017) also act as significant protective factors against SITBs.

The covitality model is a meta-construct designed to counterbalance psychopathological comorbidity by incorporating positive intra- and interpersonal self-schemas (Paz & Kim, 2022). Developed from elements of positive psychology, this model integrates multiple positive psychological assets to create a holistic framework for mental well-being. It consists of 12 first-order latent factors, which are systematically grouped into four second-order factors and an overarching higher-order factor, covitality. These factors include: 1) Belief-in-Self (self-efficacy, self-awareness, persistence); 2) Belief-in-Others (school, family, peer support); 3) Emotional Competence (emotional regulation, empathy, self-control); and 4) Engaged Living (optimism, enthusiasm, gratitude). By combining these elements, the covitality model provides a comprehensive approach to understanding and promoting mental

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health. Studies have shown that covitality can protect against the effects of victimization and negative mental health outcomes (Furlong et al., 2014; O'Malley et al., 2022). It has also been identified as a protective factor against suicide risk in adolescents (Larson, 2021; Lenzi et al., 2015). However, to date its potential protective effects between risk factors (e.g., SLEs) and suicidal behaviors and NSSI in adolescents have not been examined yet.

The objective of this study was to explore the to explore the potential mediating effects of socioemotional strengths according to the covitality model (Furlong et al., 2014, 2020) in the relationship between the occurrence of stressful life events (SLEs), such as peer problems, victimization, love relationships, sexuality, abortion, death, health, academic, and legal problems, and indicators of suicidal behavior and NSSI in adolescents over the past year.

Method

Participants

Participants were recruited from 34 secondary schools in 2 areas of southeastern Spain (65.2/34.8% of public/non-public and 87/13% of secular/Catholic schools of the total number of centers). The quota sampling method and the large sample recruited ensured the representativeness of our sample concerning the universe population of adolescents aged 12-18 years in the regions where the study was conducted. The sample was comprised of 2,283 adolescents (M_{age} = 13.99, *SD* = 1.39, aged from 12 to 19 years, 52.2% girls).

Instruments

Stressful Life Events Checklist for Adolescents (*SLECA*). Based on a previous instrument which evaluates life events in different life domains (Sandín et al., 2010), the SLECA was developed to comprehensively assess the occurrence of SLEs in adolescents and showed suitable validity evidence (López-Fernández et al., 2024). We employed the recent 36 major SLEs, experienced in the last 12 months, and grouped by psychosocial domains: Peer Problems, Victimization, Love Relationships, Sexuality, Abortion, Death, Health, Academic, and Legal Problems.

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Social-Emotional health Survey-Secondary (SEHS-S; Furlong et al., 2014). This instrument was developed to measure the level of socio-Emotional Competence through the components of the Covitality latent construct among youth. We used the Spanish version of the Social Emotional health Survey-Secondary (SEHS-S; Piqueras et al., 2019). The SEHS-S presents 36 items, that are rated on a four-point scale ranging from 1 (not at all true) to 4 (very much true). The instrument assesses core psychosocial traits based on a higher-order model comprising 12 first-order traits, grouped into 4 second-order latent domains (each one with 3 subscales), and 1 general higher-order factor (Covitality). We employed the 4 second-order latent domains: Belief-in-Self, Belief-in-Others, Emotional Competence, and Engaged Living. Reliability indices (Cronbach's α and McDonald's ω) were respectively the following: .82 in both indices for Belief-in-Self, .81 and .75 for Belief-in-Others, .80 and .76 for Emotional Competence, and .92 in both indices for Engaged Living.

Measure of Suicidal and Self-Injurious Thoughts and Behaviors. Suicidal thoughts and behaviors, along with nonsuicidal self-injury (NSSI), were assessed using a self-report instrument developed within the UNIVERSAL study (Blasco et al., 2016). This instrument was based on a combination of items from the Columbia-Suicide Severity Rating Scale (C-SSRS; Posner et al., 2011) and the Self-Injurious Thoughts and Behaviors Interview (SITBI; Nock et al., 2007), and has demonstrated validity in Spanish-speaking adolescent and young adult populations (Blasco et al., 2016; López-Fernández et al., 2024).

Participants responded to five dichotomous items (yes/no), indicating whether they had experienced in the past 12 months: (1) death wishes, (2) suicidal ideation, (3) suicide plans, (4) suicide attempts, and (5) Nonsuicidal Self-Injury (NSSI). In the main analyses, suicidal behaviors (items 1–4) and NSSI (item 5) were modeled as separate outcomes to reflect their distinct clinical profiles and etiologies (Crosby et al., 2011; Muehlenkamp, 2014; Wichstrøm, 2009).

A supplementary analysis examined a combined latent construct including both NSSI and suicidal behaviors, labeled *"Suicidal Behavior and NSSI"*, to capture the broader spectrum

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of self-directed harmful behaviors with or without suicidal intent (Franklin et al., 2017; Marques-Feixa et al., 2021). Those results are presented in the Supplementary Material (Figure S1).

Procedure

The study followed a cross-sectional, observational, descriptive-correlational, and multicenter design, and was approved by the Ethics Committee for Responsible Research at Miguel Hernández University (Ref. DPS.JPR.02.17). After formal collaboration agreements were established with each of the 34 participating schools, informational materials were distributed to students and their parents or legal guardians. Participation required double informed consent and adequate comprehension of the Spanish language. The overall participation rate was 85%.

Data collection was conducted between October 2018 and February 2019 using the LimeSurvey® online platform (LimeSurvey GmbH, Hamburg, Germany). Assessments were completed in school facilities during regular school hours in group sessions, under the supervision of trained researchers specialized in child and adolescent mental health. Tablets, network amplifiers, and computer labs were provided as needed to accommodate school resources. Some participants used their personal mobile devices.

All participants were assigned a pseudonymized identification code, and personal data were kept confidential and protected in accordance with Spain's Organic Law 3/2018 on Data Protection. No incentives were offered for participation. Schools received an individualized descriptive feedback report outlining general results on mental health indicators, which served as a resource to support school guidance programs.

Additionally, a risk protocol was activated in the case of participants showing indications of suicidal thoughts or behavior. Depending on the province, follow-up procedures involved either the school counseling team or coordinated actions with the local Education Department and therapeutic services, always in collaboration with families.

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Data Analysis

Descriptive statistics, internal consistency, and correlation analyses were conducted with SPSS, version 28. McDonald's ω was estimated through a macro for SPSS (Hayes & Coutts, 2020). This coefficient is currently considered a more accurate and robust indicator of internal consistency than Cronbach's α, especially when the assumption of tau-equivalence is not met (Stensen & Lydersen, 2022). It is based on the strength of the factor loadings rather than item intercorrelations and is less sensitive to the number of items. Acceptable values typically range between 0.70 and 0.90. Structural equation models were performed using Mplus 5.21 (Muthén & Muthén, 2007).

Two fully saturated path models were specified, with suicidal behavior (M1) and NSSI (M") as the dependent variable, to examine the relationships between recent major SLEs and socio-emotional strengths. In the first model (M1), Suicidal Behavior, consisting of death wishes, suicidal ideation, suicidal plans, and suicide attempts, was analyzed as the primary outcome. In a parallel model (M2), NSSI was analyzed separately as an outcome to explore its unique associations with SLEs and socio-emotional strengths. In each path analysis, recent major SLEs according to psychosocial domains (e.g., Peer problems, Victimization, Love Relationship, etc.) were associated with the second-order latent traits of the SEHS (Belief-in-Self, Belief-in-Others, Emotional Competence, and Engaged Living). We conducted these path analyses to estimate the total and indirect associations of SLEs on suicidal behavior and NSSI through socio-emotional strengths, controlling for gender and age, using bias-corrected bootstrapped estimates (Efron & Tibshirani, 1994) based on 10,000 bootstrapped samples. This approach provides a robust test of indirect associations (Fritz & Mackinnon, 2007) and is robust to small deviations from normality (Erceg-Hurn & Mirosevich, 2008). Statistical significance was determined using 99% bias-corrected bootstrapped confidence intervals not containing zero. In addition, indirect effects of SLEs on Suicidal Behavior and NSSI were estimated via SEHS factors. Given the exploratory nature of the study and the limited prior evidence to

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support specific mediation hypotheses, fully saturated models allowed for a comprehensive examination of all possible paths.

Additionally, a supplementary analysis was conducted using a combined latent construct integrating both NSSI and suicidal behavior as a single outcome, to compare it with the separate models (M1 and M2). These findings are presented in the supplementary material (Figure S1).

Results

The responses of the 2,283 adolescents are presented in Table 1. For Suicidal Behavior in the last year, 13.4% reported "suicidal desire" and 10.5% reported "suicidal ideation." Additionally, 6.6% exhibited NSSI, 5.5% had detailed plans, and 2.2% had made a suicide attempt. Specific SLEs prevalences are available in López-Fernández et al (2024)'s Table S1 (Appendix S2, Table S1).

Table 1 also presents descriptive statistics for study variables in the whole sample and gender independently. In this sense, t-test statistics demonstrated small but significant differences according to gender in study variables. Girls presented higher peer problems and academic SLEs as well as more suicidal behaviors and NSSI, whereas boys had more scores in the Covitality factors of Belief-in-Self and Engaged Living.

[Table 1 near here]

The correlation matrix in Figure 1 shows that most variables had statistically significant correlations.

[Figure 1 near here]

Specifically, variables such as suicide attempt, suicide plan, suicidal ideation, NSSI, and several psychosocial domains (e.g., Peer Problems, Victimization, Love Relationships) showed highest positive correlations. In contrast, constructs related to socioemotional beliefs (Belief-

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in-Self, Belief-in-Others, Emotional Competence and Engaged Living) generally displayed negative correlations with suicidal behaviors and NSSI, suggesting potential protective effects.

Figure 2 illustrates the model (M1), which examines suicidal behavior as the outcome.

[Figure 2 near here]

In the M1, path model with Suicidal Behavior (death wishes, ideation, plans, attempts) as the outcome, significant direct effects were observed for Peer Problems, Sexuality-Related SLEs, and Health-Related SLEs. Abortion was negatively associated with suicidal behavior. Indirect effects were observed through socio-emotional strengths. Specifically, peer problems influenced suicidal behavior via Belief-in-Self, Emotional Competence, and Engaged Living. Additional indirect paths through socio-emotional strengths included: peer problems via Belief-in-Self (β = .023, 99% CI [.009, .042]), Emotional Competence (β = -.02, 99% CI [-.038, -.009]), and Engaged Living (β = .05, 99% CI [.028, .079]); abortion via Engaged Living (β = -.03, 99% CI [-.060, -.001]); health via Engaged Living (β = .02, 99% CI [.002, .040]); academic SLEs via Belief-in-Self (β = .04, 99% CI [.016, .060]), Emotional Competence (β = -.02, 99% CI [-.034, -.009]), and Engaged Living (β = .04, 99% CI [.022, .061]); and legal SLEs via Engaged Living (β = .02, 99% CI [.005, .041]).

The other model treating NSSI as the outcome (M2, Figure 3), Peer Problems, Victimization, and health-related SLEs showed significant direct effects. Emotional Competence were negatively associated with NSSI. Indirect effects included peer problems via Engaged Living (β = .03, 99% CI [.010, .047]), abortion via Engaged Living (β = -.02, 99% CI [-.035, -.003]), loss via Engaged Living (β = -.01, 99% CI [-.020, -.001]), health via Engaged Living (β = .01, 99% CI [.001, .023]), academic SLEs via Emotional Competence (β = -.01, 99% CI [-.02, -.001]) and Engaged Living (β = .02, 99% CI [.008, .036]), and legal SLEs via Engaged Living (β = .01, 99% CI [.002, .025])..

[Figure 3 near here]

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For comparison purposes, a supplementary model integrating Suicidal Behavior and NSSI into a single latent construct was tested. Path coefficients in this combined model were largely similar to those observed in the separate models.

Total effects for all three models, representing the sum of direct and indirect associations, are presented in Table 2. Examination of total effects (Table 2) indicates that peer problems and victimization had the largest overall impact on suicidal behavior, while the effect of sexuality-related SLEs was higher for NSSI than for suicidal behavior. This pattern suggests that peer problems and victimization are more strongly associated with suicidal behavior, whereas sexuality-related SLEs contribute comparatively more to NSSI.

[Table 2 near here]

Discussion

The aim of this study was to explore the relationship between SLEs and Suicidal Behavior and NSSI over the past year, considering the potential indirect role of socio-emotional strengths (Covitality) in adolescents. Our data suggest that different types of SLEs and socio-emotional strengths vary in their importance in explaining adolescent Suicidal Behavior and NSSI, with some socio-emotional strengths potentially mitigating the impact of SLEs.

Firstly, our findings reveal that suicidal desires are the most common form of suicidal behavior in adolescents, followed by suicidal ideation, NSSI, and suicide attempts. These patterns align with prior research highlighting the prevalence of NSSI, suicidal thoughts and behaviors during adolescence (Bousoño Serrano et al., 2017; Fonseca-Pedrero et al., 2024; Lim et al., 2019). Regarding risk factors, for suicidal behavior, peer problems, victimization, and health-related SLEs showed significant positive associations, whereas abortion appeared as a negative predictor. For, NSSI was primarily associated with sexuality- and health-related SLEs, with abortion again displaying a protective relationship. These findings align with previous studies emphasizing the central role of interpersonal and health-related stressors in adolescent self-injurious and suicidal phenomena (Halicak et al., 2017; Marques-Feixa et al., 2021; Steinhoff et al., 2020; Yang et al., 2022).

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The separate path models revealed both consistent and differential associations between SLEs, socio-emotional strengths, and the two outcomes. While the overall structure of relationships was comparable, suicidal behavior was more strongly linked to peer problems and victimization, whereas NSSI showed higher associations with sexuality-related SLEs. The supplementary model, which integrated Suicidal Behavior and NSSI into a single latent construct, produced path coefficients highly similar to those of the separate models, confirming the robustness of the observed associations. Collectively, these findings underscore the central role of socio-emotional strengths in moderating the impact of SLEs on self-injurious and suicidal phenomena during adolescence.

Socio-emotional competencies, such as Belief-in-Self, Engaged Living and Emotional Competence, demonstrated protective effects against both Suicidal Behaviors and NSSI. These findings are aligned with the literature. For instance, gratitude has been found to mitigate the link between bullying victimization and suicide risk among adolescent girls, correlating with lower depressive symptoms and less suicidal ideation and behavior (Rey, Quintana-Orts, et al., 2019). Optimism, as an expectation of positive future outcomes, has been negatively associated with suicidal ideation, even after controlling for depression (Lee et al., 2020). Similarly, zest for life has been identified as a first-order protective factor related to decreased suicidal desires, ideation, and method planning (Shahram et al., 2021). However, our findings suggest a negative association between Emotional Competence and suicidal behavior, while no such effect was found for NSSI, potentially due to greater awareness of distressing thoughts and emotions among adolescents with high Emotional Competence (Merikangas et al., 2010). Furthermore, these competencies acted as intermediaries between SLEs and suicidal behaviors and NSSI, with peer problems and health-related issues being mediated through Engaged Living and Belief-in-Self.

Beyond to socio-emotional competencies, other contextual factors such as prior mental health treatments, family support, and pre-existing conditions may play a role in shaping adolescent responses to SLEs. Experiences of abuse and familial violence have been identified as significant contributors to suicide risk and NSSI (Andreo-Jover et al., 2014; Castellví et al.,

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2016; Marques-Feixa et al., 2021; McLaughlin et al., 2023). Integrating these contextual dimensions into future research and prevention programs could enhance our understanding of how environmental and intrapersonal factors interact with socio-emotional strengths to shape risk trajectories in adolescence.

The present findings suggest that interventions targeting socio-emotional competencies, such as Belief-in-Self and Engaged Living, could be effective in mitigating the impact of SLEs on suicidal behavior and NSSI among adolescents. Evidence supports the implementation of these interventions by teachers within school settings, as this approach enhances trust, sustainability, and integration within the school environment (Celio et al., 2011). Teacher-led programs are particularly beneficial in contexts where universal interventions are needed to reach large populations, ensuring accessibility and long-term effectiveness (Bagge et al., 2014; Rey, Mérida-López et al., 2019; Furlong et al., 2014).

The results of the present study should be interpreted considering certain limitations. Firstly, a convenience sample consisting of Spanish adolescents was used, limiting the ability to generalise findings to a broader population. Additionally, self-assessment instruments were used at a specific time point with a cross-sectional design, which may be affected by biases such as social desirability and recall accuracy, as well as the inability to reflect causality.

Furthermore, although the model included certain covariates previously identified as relevant in the literature (such as experiences of abuse and familial support) other potentially influential factors, like prior mental health treatments, were not assessed in this study. The absence of this information could have impacted the observed relationships, given that previous psychological or psychiatric interventions are well-documented contributors to suicide risk and NSSI (Franklin et al., 2017; Nock et al., 2009). Future research should incorporate this variable and prioritize longitudinal designs to provide a more comprehensive understanding of the interplay between stressors, socio-emotional strengths, and suicidal behaviors and NSSI.

Finally, it should be noted that associations observed for the suicidal thoughts and behaviors variable may reflect suicidal thinking, suicidal behavior, or both. This distinction is particularly relevant given the relatively low representation of suicidal behavior in our sample

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compared with suicidal desire/ideation. Accordingly, and in line with literature (e.g., Crosby et al., 2011; Wichstrøm, 2009), future research should continue to disaggregate these behaviors to explore specific predictors and mechanisms more accurately.

Despite these limitations, the present framework provides a valuable contribution by integrating risk and protective mechanisms through the lens of socio-emotional strengths in the context of SITBs among adolescents.

Conclusion

The current study highlights that both SLEs and socio-emotional strengths play significant roles in shaping suicide behaviors and NSSI in this population. SLEs are risk factors that are part of the daily reality for many adolescents and demonstrate detrimental effects on their quality of life, physical health, and psychosocial adaptation. As reflected in this work and previous literature, they are associated with an increased risk of suicidal behaviors and NSSI. Preventing these events presents a challenge. The World Health Organization (*WHO*, 2021) advocates for suicide prevention strategies that focus on promoting protective factors in adolescents, stressing the importance of addressing prevention through modifiable variables. The current research demonstrates how socio-emotional strengths can act as protective resources, helping adolescents confront and navigate the challenges they face. These data can be useful to develop preventive and intervention program in youths

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References

Al-Halabí, S., & Fonseca-Pedrero, E. (2021). Suicidal Behavior Prevention: The Time to Act is Now. *Clinical and Health*, *32*(2), 89-92. https://doi.org/10.5093/clysa2021a17

Andreo-Jover, J., Curto Ramos, J., Bobes, J., Bravo-Ortiz, M., Cebrià, A. I., Crespo-Facorro, B., De la Torre-Luque, A., Díaz-Marsá, M., Fernández-Rodrigues, V., Garrido-Torres, N., Grande, I., López Peña, M. P., Pemau, A., Roberto, N., Ruiz-Veguilla, M., Saiz, P., Rodríguez-Vega, B., Pérez-Sola, V., Palao-Tarrero, A., … Carrasco, J. L. (2024). The mediating role of reflective functioning in the association between childhood trauma and suicide attempt. *Journal of Psychiatric Research, 171*, 30-37. https://doi.org/10.1016/j.jpsychires.2024.01.005

Bagge, C. L., Lamis, D. A., Nadorff, M., & Osman, A. (2014). Relations between hopelessness, depressive symptoms and suicidality: Mediation by reasons for living. *Journal of Clinical Psychology*, *70*(1), 18-31. https://doi.org/10.1002/jclp.22005

Blasco, M. J., Castellví, P., Almenara, J., Lagares, C., Roca, M., Sesé, A., Piqueras, J. A., Soto-Sanz, V., Rodríguez-Marín, J., Echeburúa, E., Gabilondo, A., Cebrià, A. I., Miranda-Mendizábal, A., Vilagut, G., Bruffaerts, R., Auerbach, R. P., Kessler, R. C., Alonso, J., & UNIVERSAL study group. (2016). Predictive models for suicidal thoughts and behaviors among Spanish University students: Rationale and methods of the UNIVERSAL (University & mental health) project. *BMC Psychiatry*, *16*, 122. https://doi.org/10.1186/s12888-016-0820-y

Bonner, R. L., & Rich, A. R. (1987). Toward a Predictive Model of Suicidal Ideation and Behavior: Some Preliminary Data in College Students. *Suicide and Life-Threatening Behavior*, *17*(1), 50-63. https://doi.org/10.1111/j.1943-278X.1987.tb00061.x

This is a preprint of the following article:
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https://doi.org/10.1080/13811118.2025.2590678

Bousoño, M., Al-Halabí, S., Burón, P., Garrido, M., Díaz-mesa, M., Galván, G., Bobes, J. (2017). Uso y abuso de sustancias psicotrópicas e internet, psicopatología e ideación suicida en adolescentes Substance use or abuse, internet use, psychopathology and suicidal ideation in adolescents? *Adicciones, 29*, 97–104. https://doi.org/10.20882/adicciones.811

Castellví, P., Miranda-Mendizábal, A., Parés-Badell, O., Almenara, J., Alonso, I., Blasco, M. J., Cebrià, A., Gabilondo, A., Gili, M., Lagares, C., Piqueras, J. A., Roca, M., Rodríguez-Marín, J., Rodríguez-Jimenez, T., Soto-Sanz, V., & Alonso, J. (2016). *Exposure to violence, a risk for suicide in youths and young adults. A meta-analysis of longitudinal studies. Acta Psychiatrica Scandinavica*, *135*(3), 195–211. https://doi.org/10.1111/acps.12679

Celio, C. I., Durlak, J. A., & Dymnicki, A. (2011). *A Meta-Analysis of the Impact of Service-Learning on Students. Journal of Experiential Education*, *34*(2), 164–181. https://doi.org/10.1177/105382591103400205

Chang, E. C., D'Zurilla, T. J., & Sanna, L. J. (2009). Social Problem Solving as a Mediator of the Link Between Stress and Psychological Well-being in Middle-Adulthood. *Cognitive Therapy and Research*, *33*(1), 33-49. https://doi.org/10.1007/s10608-007-9155-9

Chang, E. C., Yu, T., Najarian, A. S.-M., Wright, K. M., Chen, W., Chang, O. D., Du, Y., & Hirsch, J. K. (2017). Understanding the Association Between Negative Life Events and Suicidal Risk in College Students: Examining Self-Compassion as a Potential Mediator. *Journal of Clinical Psychology*, *73*(6), 745-755. https://doi.org/10.1002/jclp.22374

Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*(1), 155–159. https://doi.org/10.1037//0033-2909.112.1.155

This is a preprint of the following article:
Soto-Sanz, V., Marzo Campos, J. C., Falcó, R., Moreno-Amador, B., Piqueras, J. A., & López-Fernández, F. (2026). *Recent stressful life events and suicidal behaviors and NSSI in adolescents: Examining the role of socio-emotional strengths*. *Archives of Suicide Research*.
https://doi.org/10.1080/13811118.2025.2590678

Crosby, A., Ortega, L., & Melanson, C. (2011). Self-directed violence surveillance; uniform definitions and recommended data elements.

Czyz, E. K., Horwitz, A. G., Arango, A., & King, C. A. (2019). Short-term change and prediction of suicidal ideation among adolescents: A daily diary study following psychiatric hospitalization. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *60*(7), 732-741. https://doi.org/10.1111/jcpp.12974

Domínguez-García, E., & Fernández-Berrocal, P. (2018). The Association Between Emotional Intelligence and Suicidal Behavior: A Systematic Review. *Frontiers in Psychology*, *9*, 2380. https://doi.org/10.3389/fpsyg.2018.02380

Efron, B., & Tibshirani, R. J. (1994). *An Introduction to the Bootstrap*. Chapman and Hall/CRC. https://doi.org/10.1201/9780429246593

Erceg-Hurn, D. M., & Mirosevich, V. M. (2008). Modern robust statistical methods: An easy way to maximize the accuracy and power of your research. *American Psychologist*, *63*(7), 591-601. https://doi.org/10.1037/0003-066X.63.7.591

Falcó, R., Marzo, J. C., & Piqueras, J. A. (2020). Covitality as a protective factor against internalized and externalized problems in Spanish. adolescents. *Behavioral Psychology, 28*(3), 393–413. https://doi.org/10.1080/13811118.2023.2262553

Favazza, A. R. (1998). The coming of age of selfmutilation. *Journal of Nervous and Mental Disease*, *186*(5), 259–268.

Fonseca-Pedrero, E., Díez-Gómez, A., de la Barrera, U., Sebastian-Enesco, C., Ortuño-Sierra, J., Montoya-Castilla, I., Lucas-Molina, B., Inchausti, F., & Pérez-Albéniz, A. (2024). Suicidal behavior in adolescents: A network analysis. *Spanish Journal of Psychiatry and Mental Health*, *17*(1), 3-10. https://doi.org/10.1016/j.rpsm.2020.04.007

Fox, K. R., Huang, X., Guzmán, E. M., Funsch, K. M., Cha, C. B., Ribeiro, J. D., & Franklin, J. C. (2020). Interventions for suicide and self-injury: A meta-analysis of randomized

This is a preprint of the following article:
Soto-Sanz, V., Marzo Campos, J. C., Falcó, R., Moreno-Amador, B., Piqueras, J. A., & López-Fernández, F. (2026). *Recent stressful life events and suicidal behaviors and NSSI in adolescents: Examining the role of socio-emotional strengths*. *Archives of Suicide Research*.
https://doi.org/10.1080/13811118.2025.2590678

controlled trials across nearly 50 years of research. *Psychological bulletin*, *146*(12), 1117.

Franklin, J. C., Ribeiro, J. D., Fox, K. R., Bentley, K. H., Kleiman, E. M., Huang, X., Musacchio, K. M., Jaroszewski, A. C., Chang, B. P., & Nock, M. K. (2017). Risk factors for suicidal thoughts and behaviors: A meta-analysis of 50 years of research. *Psychological Bulletin*, *143*(2), 187-232. https://doi.org/10.1037/bul0000084

Fritz, M. S., & Mackinnon, D. P. (2007). Required sample size to detect the mediated effect. *Psychological Science*, *18*(3), 233-239. https://doi.org/10.1111/j.1467-9280.2007.01882.x

Furlong, M. J., Nylund-Gibson, K., Dowdy, E., Wagle, R., Hinton, T., & Carter, D. (2020). Modification and Standardization of Social Emotional Health Survey-Secondary—2020 Edition. En *Grantee Submission*. https://eric.ed.gov/?id=ED600109

Furlong, M. J., You, S., Renshaw, T. L., Smith, D. C., & O'Malley, M. D. (2014). Preliminary Development and Validation of the Social and Emotional Health Survey for Secondary School Students. *Social Indicators Research*, *117*(3), 1011-1032. https://doi.org/10.1007/s11205-013-0373-0

Göbel, K., Ortelbach, N., Cohrdes, C., Baumgarten, F., Meyrose, A.-K., Ravens-Sieberer, U., & Scheithauer, H. (2022). Co-occurrence, stability and manifestation of child and adolescent mental health problems: A latent transition analysis. *BMC Psychology*, *10*(1), 267. https://doi.org/10.1186/s40359-022-00969-4

Halicka, J., & Kiejna, A. (2018). Non-suicidal self-injury (NSSI) and suicidal: Criteria differentiation. *Advances in Clinical and Experimental Medicine*, *27*(2), 257-261. https://doi.org/ 10.17219/acem/66353

This is a preprint of the following article:
Soto-Sanz, V., Marzo Campos, J. C., Falcó, R., Moreno-Amador, B., Piqueras, J. A., & López-Fernández, F. (2026). *Recent stressful life events and suicidal behaviors and NSSI in adolescents: Examining the role of socio-emotional strengths*. *Archives of Suicide Research*.
https://doi.org/10.1080/13811118.2025.2590678

Hayes, A. F., & Coutts, J. J. (2020). Use Omega Rather than Cronbach's Alpha for Estimating Reliability. But…. *Communication Methods and Measures*, *14*(1), 1-24. https://doi.org/10.1080/19312458.2020.1718629

Hill, R. M., & Pettit, J. W. (2013). The Role of Autonomy Needs in Suicidal Ideation: Integrating the Interpersonal-Psychological Theory of Suicide and Self-Determination Theory. *Archives of Suicide Research*, *17*(3), 288-301. https://doi.org/10.1080/13811118.2013.777001

Hogg, B., Gardoki-Souto, I., Valiente-Gómez, A., Rosa, A. R., Fortea, L., Radua, J., Amann, B. L., & Moreno-Alcázar, A. (2023). Psychological trauma as a transdiagnostic risk factor for mental disorder: An umbrella meta-analysis. *European Archives of Psychiatry and Clinical Neuroscience*, *273*(2), 397-410. https://doi.org/10.1007/s00406-022-01495-5

Huang, X., Ribeiro, J. D., & Franklin, J. C. (2020). The differences between individuals engaging in nonsuicidal self-injury and suicide attempt are complex (vs. complicated or simple). *Frontiers in psychiatry*, *11*, 239. https://doi.org/10.3389/fpsyt.2020.00239

Hur, J.-W., Kim, W.-J., & Kim, Y.-K. (2011). The mediating effect of psychosocial factors on suicidal probability among adolescents. *Archives of Suicide Research: Official Journal of the International Academy for Suicide Research*, *15*(4), 327-336. https://doi.org/10.1080/13811118.2011.615701

Instituto Nacional de Estadística. (National Statistics Institute). (2023). INE. https://www.ine.es/dynt3/inebase/es/index.htm?padre=5453&capsel=5454

Kiekens, G., Hasking, P., Boyes, M., Claes, L., Mortier, P., Auerbach, R. P., Cuijpers, P., Demyttenaere, K., Green, J. G., Kessler, R. C., Myin-Germeys, I., Nock, M. K., & Bruffaerts, R. (2018). The associations between nonsuicidal self-injury and first onset

This is a preprint of the following article:
Soto-Sanz, V., Marzo Campos, J. C., Falcó, R., Moreno-Amador, B., Piqueras, J. A., & López-Fernández, F. (2026). *Recent stressful life events and suicidal behaviors and NSSI in adolescents: Examining the role of socio-emotional strengths*. *Archives of Suicide Research*.
https://doi.org/10.1080/13811118.2025.2590678

suicidal thoughts and behaviors. *Journal of Affective Disorders, 239,* 171–179. https://doi.org/10.1016/j. jad.2018.06.033

King, T. L., & Lamontagne, A. D. (2021). COVID-19 and suicide risk in the construction sector: Preparing for a perfect storm. *Scandinavian Journal of Public Health, 49*(7), 774-778. https://doi.org/10.1177/1403494821993707

Larson, I. (2021). *Psychosocial Risk of Bullying Among Foster And Homeless Youth: The Moderating Role Of Covitality*. California State University, Sacramento.

Lee, C.-Y., Chiang, Y.-C., Li, A., Li, X., Wu, Y.-T., Lin, Y.-J., Zhao, Y., & Zhang, X. (2020). Influence of humor expression on suicidal ideation among adolescents: Mediating effects of depressive emotion and positive emotion. *BMC Psychiatry, 20*(1), 421. https://doi.org/10.1186/s12888-020-02814-7

Lenzi, M., Furlong, M. J., Dowdy, E., Sharkey, J., Gini, G., & Altoè, G. (2015). The quantity and variety across domains of psychological and social assets associated with school victimization. *Psychology of Violence*, *5*(4), 411-421. https://doi.org/10.1037/a0039696

Lim, K.-S., Wong, C. H., McIntyre, R. S., Wang, J., Zhang, Z., Tran, B. X., Tan, W., Ho, C. S., & Ho, R. C. (2019). Global Lifetime and 12-Month Prevalence of Suicidal Behavior, Deliberate Self-Harm and Non-Suicidal Self-Injury in Children and Adolescents between 1989 and 2018: A Meta-Analysis. *International Journal of Environmental Research and Public Health*, *16*(22), 4581. https://doi.org/10.3390/ijerph16224581

López-Fernández, F., Moreno-Amador, B, B., Falcó, R., Soto-Sanz, V., Marzo, J. C., Ibáñez, M. I., Cervin, M., & Piqueras, J. A. (2024). Suicidal Behavior, Mental Health, and Stressful Life Events Among Adolescents. *Psicothema*, *36*(4), 351–360. https://doi.org/10.7334/psicothema2023.126

This is a preprint of the following article:
Soto-Sanz, V., Marzo Campos, J. C., Falcó, R., Moreno-Amador, B., Piqueras, J. A., & López-Fernández, F. (2026). *Recent stressful life events and suicidal behaviors and NSSI in adolescents: Examining the role of socio-emotional strengths*. *Archives of Suicide Research*.
https://doi.org/10.1080/13811118.2025.2590678

Marques-Feixa, L., Moya-Higueras, J., Romero, S., Santamarina-Pérez, P., Rapado-Castro, M., Zorrilla, I., Martín, M., Anglada, E., Lobato, M. J., Ramírez, M., Moreno, N., Mayoral, M., Marín-Vila, M., Arias, B., Fañanás, L., & EPI-Young Stress GROUP. (2021). Risk of Suicidal Behavior in Children and Adolescents Exposed to Maltreatment: The Mediating Role of Borderline Personality Traits and Recent Stressful Life Events. *Journal of Clinical Medicine*, *10*(22), Article 22. https://doi.org/10.3390/jcm10225293

McLaughlin, K. A., Greif Green, J., Gruber, M. J., Sampson, N. A., Zaslavsky, A. M., & Kessler, R. C. (2012). Childhood adversities and first onset of psychiatric disorders in a national sample of US adolescents. *Archives of General Psychiatry*, *69*(11), 1151-1160. https://doi.org/10.1001/archgenpsychiatry.2011.2277

Meade, J. (2021). Mental Health Effects of the COVID-19 Pandemic on Children and Adolescents. *Pediatric Clinics of North America*, *68*(5), 945-959. https://doi.org/10.1016/j.pcl.2021.05.003

Merikangas, K. R., He, J.-P., Burstein, M., Swanson, S. A., Avenevoli, S., Cui, L., Benjet, C., Georgiades, K., & Swendsen, J. (2010). Lifetime prevalence of mental disorders in U.S. adolescents: Results from the National Comorbidity Survey Replication--Adolescent Supplement (NCS-A). *Journal of the American Academy of Child and Adolescent Psychiatry*, *49*(10), 980-989. https://doi.org/10.1016/j.jaac.2010.05.017

Muehlenkamp, J. J. (2014). Distinguishing between suicidal and nonsuicidal self-injury. *The Oxford handbook of suicide and self-injury*, 23-46.

Muehlenkamp, J. J., & Gutierrez, P. M. (2004). *An investigation of differences between self-injurious behavior and suicide attempts in a sample of adolescents.* Suicide and Life-Threatening Behavior, 34(1), 12-23. https://doi.org/10.1521/suli.34.1.12.27769

Muthén, L. K., & Muthén, B. O. (2007). *Mplus User's Guide. 5th* (Vol. 7).

This is a preprint of the following article:
Soto-Sanz, V., Marzo Campos, J. C., Falcó, R., Moreno-Amador, B., Piqueras, J. A., & López-Fernández, F. (2026). *Recent stressful life events and suicidal behaviors and NSSI in adolescents: Examining the role of socio-emotional strengths*. *Archives of Suicide Research*.
https://doi.org/10.1080/13811118.2025.2590678

Nock, M. K. (2010). Self-injury. *Annual review of clinical psychology*, *6*(1), 339-363. https://doi.org/10.1146/annurev.clinpsy.121208.13125

Nock, M. K., Holmberg, E. B., Photos, V. I., & Michel, B. D. (2007). Self-Injurious Thoughts and Behaviors Interview: Development, reliability, and validity in an adolescent sample. *Psychological Assessment*, *19*(3), 309-317. https://doi.org/10.1037/1040-3590.19.3.309

Nock, M. K., Joiner Jr, T. E., Gordon, K. H., Lloyd-Richardson, E., & Prinstein, M. J. (2006). Non-suicidal self-injury among adolescents: Diagnostic correlates and relation to suicide attempts. *Psychiatry research*, *144*(1), 65-72. https://doi.org/10.1016/j.psychres.2006.05.010

O'Malley, M. D., Cerna, R., Romero, L., Zhang, G., & Furlong, M. J. (2022). Reducing the Impact of Bias-Based Bullying on Suicidal Thoughts Among Sexual and Gender Minority Youth: Are Psychological Strengths Enough? *School Mental Health*, *14*(3), 655-671. https://doi.org/10.1007/s12310-021-09490-2

Paz, J. L., & Kim, E. K. (2022). Covitality: Cultivating Psychosocial Strengths and Well-Being. En *Handbook of Positive Psychology in Schools* (3.ª ed.). Routledge.

Piqueras, J. A., Rodriguez-Jimenez, T., Marzo, J. C., Rivera-Riquelme, M., Martinez-Gonzalez, A. E., Falco, R., & Furlong, M. J. (2019). Social Emotional Health Survey-Secondary (SEHS-S): A Universal Screening Measure of Social-Emotional Strengths for Spanish-Speaking Adolescents. *International Journal of Environmental Research and Public Health*, *16*(24), Article 24. https://doi.org/10.3390/ijerph16244982

Posner, K., Brown, G. K., Stanley, B., Brent, D. A., Yershova, K. V., Oquendo, M. A., Currier, G. W., Melvin, G. A., Greenhill, L., Shen, S., & Mann, J. J. (2011). The Columbia-Suicide Severity Rating Scale: Initial validity and internal consistency findings from three multisite studies with adolescents and adults. *The American*

This is a preprint of the following article:
Soto-Sanz, V., Marzo Campos, J. C., Falcó, R., Moreno-Amador, B., Piqueras, J. A., & López-Fernández, F. (2026). *Recent stressful life events and suicidal behaviors and NSSI in adolescents: Examining the role of socio-emotional strengths*. *Archives of Suicide Research*.
https://doi.org/10.1080/13811118.2025.2590678

Journal of Psychiatry, *168*(12), 1266-1277. https://doi.org/10.1176/appi.ajp.2011.10111704

Rey, L., Mérida-López, S., Sánchez-Álvarez, N., & Extremera, N. (2019). When and How Do Emotional Intelligence and Flourishing Protect against Suicide Risk in Adolescent Bullying Victims? *International Journal of Environmental Research and Public Health*, *16*(12), 2114. https://doi.org/10.3390/ijerph16122114

Rey, L., Quintana-Orts, C., Mérida-López, S., & Extremera, N. (2019). Being Bullied at School: Gratitude as Potential Protective Factor for Suicide Risk in Adolescents. *Frontiers in Psychology*, *10*. https://doi.org/10.3389/fpsyg.2019.00662

Sandín, B., Chorot, P., Valiente, R. M., & Chorpita, B. F. (2010). Development of a 30-Item version of the revised child anxiety and depression scale. *Revista de Psicopatología y Psicología Clínica*, *15*(3). https://doi.org/10.5944/rppc.vol.15.num.3.2010.4095

Sastre-Buades, A., Alacreu-Crespo, A., Courtet, P., Baca-Garcia, E., & Barrigon, M. L. (2021). Decision-making in suicidal behavior: A systematic review and meta-analysis. *Neuroscience and Biobehavioral Reviews*, *131*, 642-662. https://doi.org/10.1016/j.neubiorev.2021.10.005

Save the Children. (2021, diciembre 14). *Informe: Crecer saludable(mente). Análisis sobre la salud mental y el suicidio en la infancia y la adolescencia.* Save the Children. https://www.savethechildren.es/actualidad/informe-crecer-saludablemente-analisis-sobre-la-salud-mental-y-el-suicidio-en-la

Shahram, S. Z., Smith, M. L., Ben-David, S., Feddersen, M., Kemp, T. E., & Plamondon, K. (2021). Promoting "Zest for Life": A Systematic Literature Review of Resiliency Factors to Prevent Youth Suicide. *Journal of Research on Adolescence*, *31*(1), 4-24. https://doi.org/10.1111/jora.12588

This is a preprint of the following article:
Soto-Sanz, V., Marzo Campos, J. C., Falcó, R., Moreno-Amador, B., Piqueras, J. A., & López-Fernández, F. (2026). *Recent stressful life events and suicidal behaviors and NSSI in adolescents: Examining the role of socio-emotional strengths*. *Archives of Suicide Research*.
https://doi.org/10.1080/13811118.2025.2590678

Singh, S., Roy, D., Sinha, K., Parveen, S., Sharma, G., & Joshi, G. (2020). Impact of COVID-19 and lockdown on mental health of children and adolescents: A narrative review with recommendations. *Psychiatry Research*, *293*, 113429. https://doi.org/10.1016/j.psychres.2020.113429

Solmi, M., Radua, J., Olivola, M., Croce, E., Soardo, L., Salazar de Pablo, G., Il Shin, J., Kirkbride, J. B., Jones, P., Kim, J. H., Kim, J. Y., Carvalho, A. F., Seeman, M. V., Correll, C. U., & Fusar-Poli, P. (2022). Age at onset of mental disorders worldwide: Large-scale meta-analysis of 192 epidemiological studies. *Molecular Psychiatry*, *27*(1), 281-295. https://doi.org/10.1038/s41380-021-01161-7

Soto-Sanz, V., Piqueras, J.A., Rodriguez-Marin, J., Perez-Vazquez, M.T, Rodriguez-Jimenez, T., Castellvi, P., Miranda-Mendizabal, A., Pares-Badell, O., Almenara, J., Blasco, M. J., Cebria, A., Gabilondo, A., Gili, M., Roca, M., Lagares, C., & Alonso, J. (2019). Self-esteem and suicidal behavior in youth: A meta-analysis of longitudinal studies. *Psicothema*, *31*(3), 246-254. https://doi.org/10.7334/psicothema2018.339

Stanley, B., Winchel, R., Molcho, A., Simeon, D., & Stanley, M. (1992). Suicide and the self-harm continuum: Phenomenological and biochemical evidence. *International Review of Psychiatry*, *4*(2), 149-155. https://doi.org/10.3109/09540269209066312

Steinhoff, A., Bechtiger, L., Ribeaud, D., Eisner, M., & Shanahan, L. (2020). Stressful Life Events in Different Social Contexts Are Associated With Self-Injury From Early Adolescence to Early Adulthood. *Frontiers in Psychiatry*, *11*. https://doi.org/10.3389/fpsyt.2020.487200

Stensen, K., & Lydersen, S. (2022). Internal consistency: from alpha to omega. *Tidsskr Nor Laegeforen*, *142*(12), 10–4045. https://doi.org/10.4045/tidsskr.22.0084

Turecki, G., & Brent, D. A. (2016). Suicide and suicidal behavior. *Lancet (London, England)*, *387*(10024), 1227-1239. https://doi.org/10.1016/S0140-6736(15)00234-2

This is a preprint of the following article:
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Van Orden, K. A., Witte, T. K., Gordon, K. H., Bender, T. W., & Joiner, T. E. (2008). Suicidal desire and the capability for suicide: Tests of the interpersonal-psychological theory of suicidal behavior among adults. *Journal of Consulting and Clinical Psychology*, *76*(1), 72-83. https://doi.org/10.1037/0022-006X.76.1.72

World Health Organization. (2021b). *Helping Adolescents Thrive Toolkit: Strategies to promote and protect adolescent mental health and reduce self-harm and other risk behaviors.* https://www.who.int/publications/i/item/9789240025554

Wichstr⊘m, L. (2009). Predictors of non-suicidal self-injury versus attempted suicide: similar or different?. *Archives of Suicide Research*, *13*(2), 105-122. https://doi.org/10.1080/13811110902834992

Wong, J. P., Stewart, S. M., Ho, S. Y., & Lam, T. H. (2007). Risk factors associated with suicide attempts and other self-injury among Hong Kong adolescents. *Suicide and Life-Threatening Behavior*, *37*(4), 453-466.

Yang, K., Kim, S. Y., Kim, H., & Hwang, J.-W. (2022). Association Among Self-Injury, Suicidal Tendency, and Personality and Psychological Characteristics in Korean Adolescents. *Psychiatry Investigation*, *19*(1), 37-43. https://doi.org/10.30773/pi.2021.0184

Yıldız, M., & Solakoglu, Ö. (2019). Strain, Negative Emotions, and Suicidal Behaviors Among Adolescents: Testing General Strain Theory. *Youth & Society*, *51*(5), 638-658. https://doi.org/10.1177/0044118X17700318

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Tables

Table 1. Descriptive statistics and t-tests according to gender of study variables

	Whole sample Mean (*SD*)	Boys Mean (*SD*)	Girls Mean (*SD*)	t-Test (*p*)	Cohen's *d*	Range
SLEs (ocurrence)						
Peer problems	2.79 (2.42)	2.48 (2.40)	3.08 (2.40)	-6.01 (.000)	0.25	0—8
Victimization	.44 (1.05)	.41 (1.08)	.46 (1.02)	-1.17 (.241)	0.05	0—7
Love relationships	.49 (1.06)	.44 (1.03)	.54 (1.07)	-2.26 (.024)	0.09	0—4
Sexuality	.13 (.41)	.12 (.43)	.13 (.40)	-.51 (.611)	0.02	0—2
Abortion	.06 (.33)	.08 (.38)	.04 (.28)	2.38 (.016)	0.12	0—2
Death	.79 (.92)	.80 (.95)	.77 (.89)	.766 (.444)	0.03	0—4
Health	.55 (.84)	.51 (.83)	.60 (.84)	-2.61 (.009)	0.11	0—3
Academic	1.51 (.74)	1.43 (.77)	1.57 (.70)	-4.31 (.000)	0.19	0—2
Legal	.67 (.93)	.59 (.89)	.74 (.95)	-3.87 (.000)	0.16	0—4
Covitality factors						
Belief-in-Self	26.05 (5.10)	26.80 (4.86)	25.37 (5.22)	6.77 (.000)	0.28	9—36
Belief-in-Others	29.54 (4.97)	29.67 (4.85)	29.42 (5.08)	1.23 (.219)	0.05	9—36
Emotional Competence	27.37 (4.58)	26.96 (4.65)	27.74 (4.49)	-4.07 (.000)	0.17	9—36
Engaged Living	27.63 (6.11)	28.49 (5.82)	26.85 (6.26)	6.45 (.000)	0.27	9—36
SITBs						
NSSI	.07 (.25)	.04 (.19)	.09 (.29)	-5.55 (.000)	0.20	0—1
Death Wishes	.13 (.34)	.08 (.28)	.18 (.39)	-7.14 (.000)	0.29	0—1
Suicidal ideation	.11 (.31)	.07 (.26)	.14 (.34)	-5.24 (.000)	0.23	0—1
Detailed plans	.05 (.23)	.03 (.18)	.07 (.26)	-4.08 (.000)	0.18	0—1
Suicide attempt	.02 (.15)	.01 (.10)	.03 (.18)	-3.59 (.000)	0.14	0—1

SLEs, stressful life events; SITBs, self-injurious thoughts and behaviors; NSSI, non-suicidal self-injury. Effect size (Cohen, 1992): 0.2, small, 0.5, medium; and 0.80, large.

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Figures

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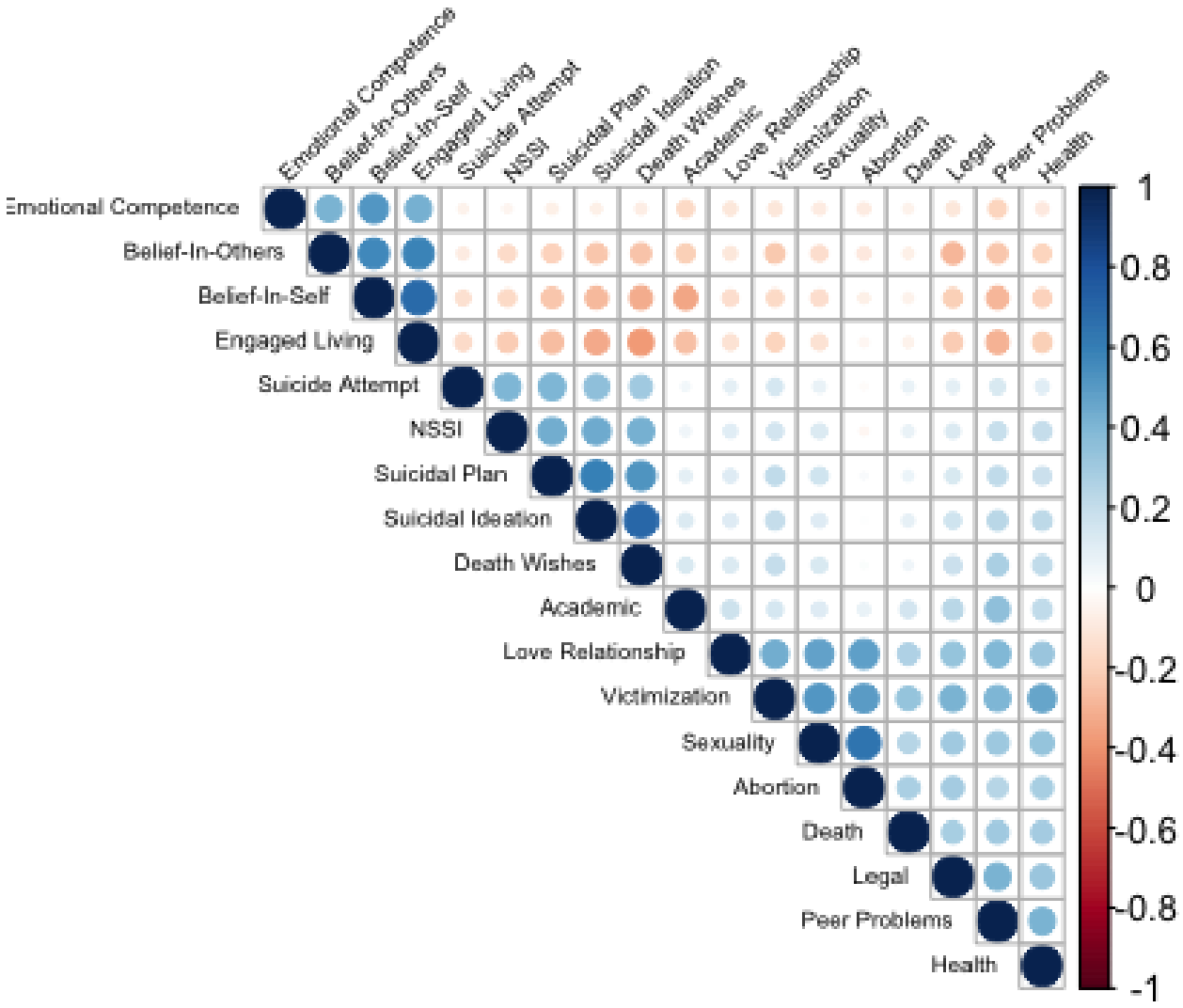

Figure 1. Correlations coefficients of the study variable

Table 2. Total effects of recent SLEs on suicidal behavior and NSSI

SLEs	**Model 1: Suicidal Behavior** (*β*)	**Model 2: NSSI** (*β*)	**Supplementary model: Suicidal Behavior and NSSI** (*β*)
Peer Problems	**.17**	**.09**	**.17**
Victimization	**.17**	.08	**.17**

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Love Relationship	.02	.05	.02
Sexuality	.11	**.15**	**.13**
Abortion	**-.23**	**-.25**	**-.25**
Death	-.04	.00	-.04
Health	**.12**	**.13**	**.13**
Academic	.03	-.03	.02
Legal	.05	.03	.05

Significant associations are in bold typeface for emphasis and were determined by 99% bias-corrected standardized bootstrapped confidence intervals (based on 10,000 bootstrapped samples) that did not contain zero.

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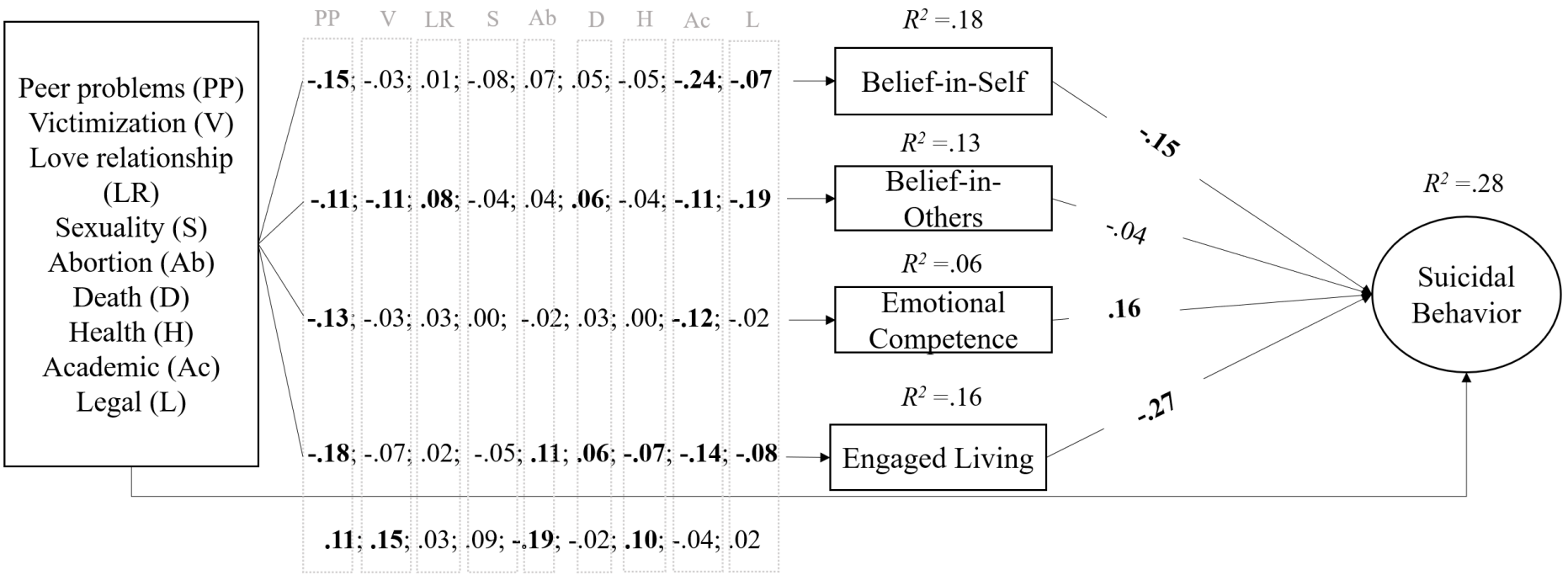

Figure 2 (M1). Mediational model (for each SLEs thematic area) of the path coefficients between variables for Suicide risk as dependent variable. Gender and age were included as control variables. The first values (left) describe the model path representing in order SLEs thematic areas being independent variables respectively. For clarity, covariances between SLEs thematic areas to each other and social-emotional competences to each other are not depicted in the figure. Significant associations are in bold typeface for emphasis and were determined by 99% bias-corrected standardized bootstrapped confidence intervals (based on 10,000 bootstrapped samples) that did not contain zero.

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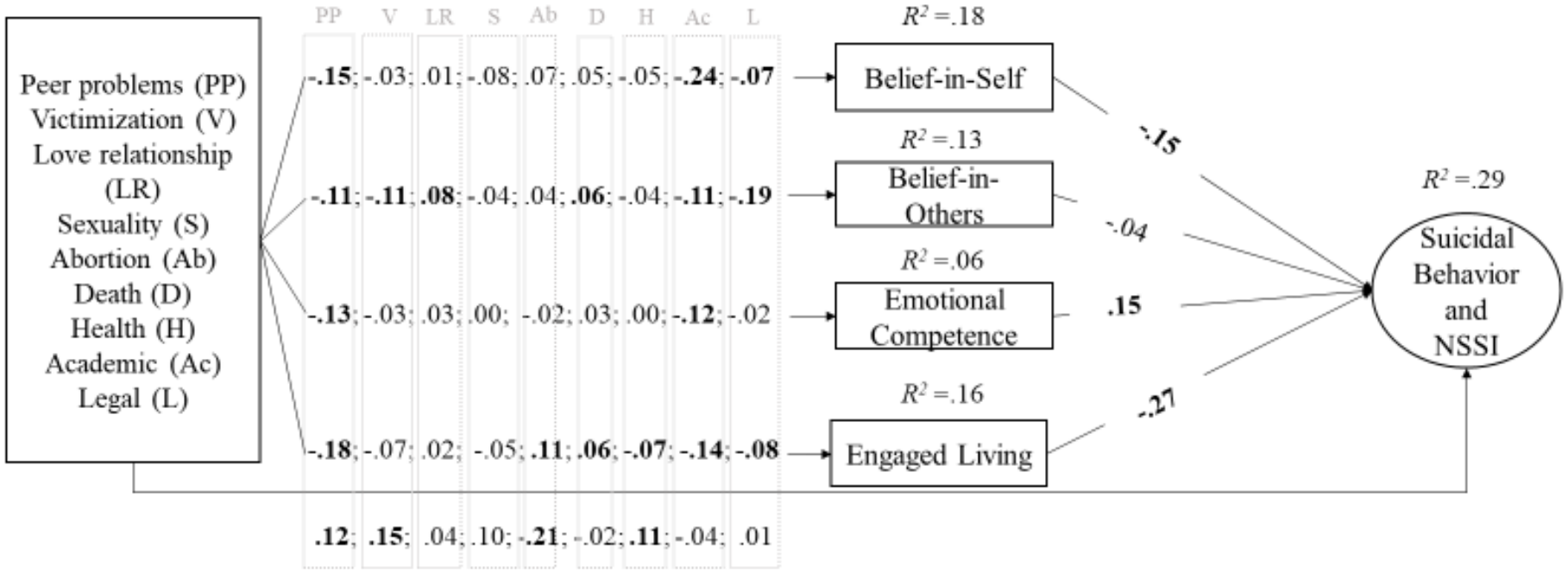

Figure 3 (M2). Mediational model (for each SLEs thematic area) of the path coefficients between variables for NSSI as dependent variable. Gender and age were included as control variables. The first values (left) describe the model path representing in order SLEs thematic areas being independent variables respectively. For clarity, covariances between SLEs thematic areas to each other and social-emotional competences to each other are not depicted in the figure. Significant associations are in bold typeface for emphasis and were determined by 99% bias-corrected standardized bootstrapped confidence intervals (based on 10,000 bootstrapped samples) that did not contain zero.

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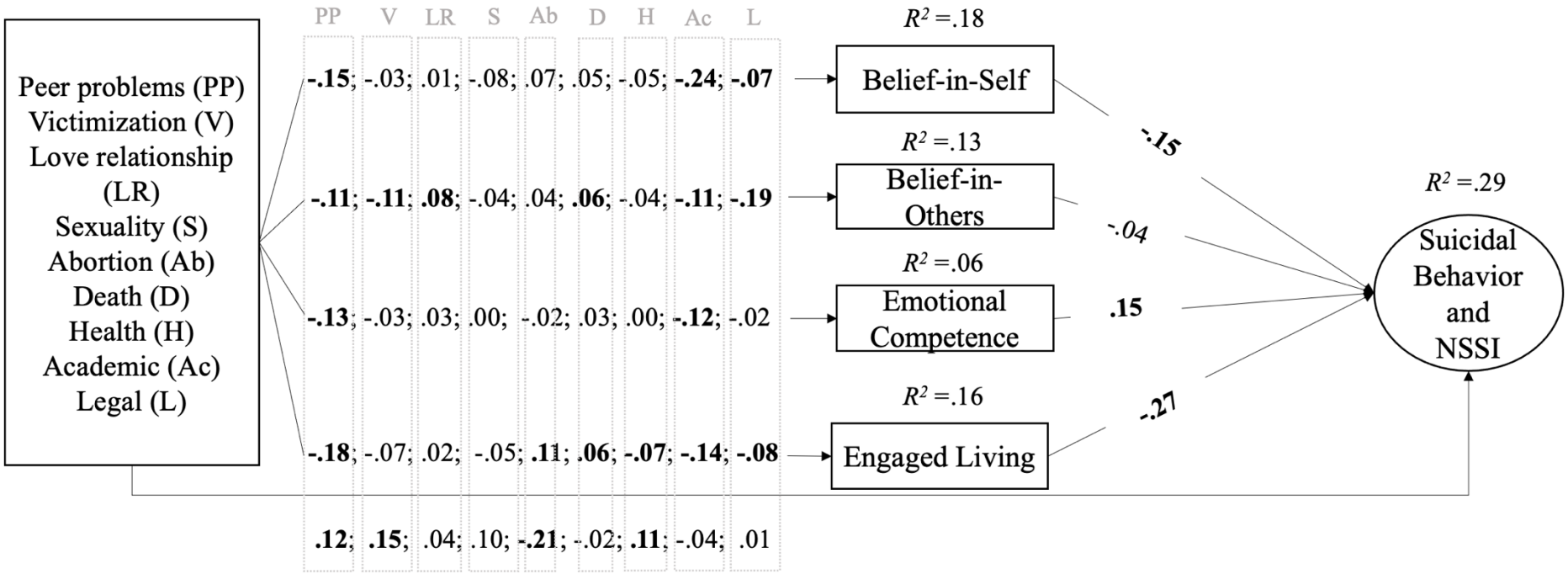

Figure S1. Mediational model, (for each SLEs thematic area) of the path coefficients between variables for suicidal behavior as dependent variable. Gender and age were included as control variables. The first values (left) describe the model path representing in order SLEs thematic areas being independent variables respectively. For clarity, covariances between SLEs thematic areas to each other and social-emotional strengths to each

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Table S1. Total effects of recent SLEs on suicidal behavior and NSSI

SLEs	**Suicidal Behavior and NSSI** (*β)*
Peer Problems	**.17**
Victimization	**.17**
Love Relationship	.02
Sexuality	**.13**
Abortion	**-.25**
Death	-.04
Health	**.13**
Academic	.02
Legal	.05

Significant associations are in bold typeface for emphasis and were determined by 99% bias-corrected standardized bootstrapped confidence intervals (based on 10,000 bootstrapped samples) that did not contain zero.

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