Journal of Adolescence

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Bidirectional Associations Between Civic Engagement, Depressive Symptoms, and Suicidality in Youth: A Population-Based Study

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Received: 22 December 2024 | **Revised:** 22 July 2025 | **Accepted:** 30 July 2025

Keywords: civic engagement | depression | longitudinal | suicidality | youth

ABSTRACT

Introduction: Civic engagement is common in youth, yet its longitudinal association with mental health remains understudied. This study aims to document bidirectional associations between civic engagement, depressive symptoms, and suicidality at 20 and 23.

Methods: We included 1451 participants born in 1997/98 from the Québec Longitudinal Study of Child Development in Canada. At 20 and 23, youth self-reported their engagement in five types of civic activities, namely political engagement, volunteering, activism, charitable actions, community involvement, depressive symptoms, and suicidality. Cross-lagged path models adjusted for sex and parental socioeconomic status were used to test associations between civic engagement and mental health outcomes.

Results: Concurrently, individuals who engaged in political engagement and activism were more likely to experience increases in depressive symptoms and suicidality at 20, while those who engaged in volunteering tended to report fewer depressive symptoms. At 23, political engagement remained positively associated with depressive symptoms. Longitudinal analyses revealed that individuals who engaged in activism at 20 were more likely to experience increases in depressive symptoms over time ($\beta = 0.17$) and those who participated in charitable actions ($\beta = -0.14$) and volunteering ($\beta = -0.11$) at 20 tended to report fewer depressive symptoms at 23, though these associations were not independent. Mental health at 20 was not associated to later civic engagement.

Conclusions: Types of civic engagement were differentially associated with later depressive symptoms, but not suicidality. Further research is needed to clarify the mechanisms underlying these associations, including the potential role of engagement frequencies, motivations, and contextual factors.

1 | Introduction

Youth is a pivotal developmental period marked by identity exploration, new rights (e.g., voting), and an emerging sense of personal and social agency (Arriagada et al. 2022; Flanagan and Levine 2010). These developmental shifts often align with increased civic involvement (Arriagada et al. 2022), encompassing activities such as volunteering, political participation, and advocacy, which aim to promote the common good and strengthen democratic societies (Cho et al. 2020; Hershberg et al. 2015). Specifically, youth demonstrated higher rates of volunteerism than any other age group (46%), with a significant proportion (14%–48%) engaging in activism, such as signing petitions or participating in demonstrations/marches (Arriagada et al. 2022). In recent years, digital technology has further expanded the landscape of civic engagement, particularly among young people (Korich and Fields 2023). Notably, digital platforms now facilitate civic expression, with 12%–27% of youth engaging in online discussions about political issues (Global Kids Online 2019; Arriagada et al. 2022). These platforms serve as spaces to express civic identity, advocate sociopolitical positions, and connect with communities—ultimately expanding how youth engage with civic life (Korich and Fields 2023).

Beyond participation rates, growing evidence underscores the importance of civic engagement as a developmental asset for youth. The Positive Youth Development framework emphasizes youth's natural strengths and growth in supportive settings (Lerner et al. 2019). The "5 Cs"—competence, confidence, connection, character, and caring—supports a successful transition to adulthood and culminates in a sixth "C," contribution, expressed through civic engagement as a driver of personal growth and social change (Shek et al. 2019; Lerner et al. 2014; Sherrod 2007). Building on this framework, civic engagement has been associated with individual growth and social connectedness—both known to support well-being—as well as long-term outcomes such as a stronger sense of purpose, higher self-esteem, educational attainment, and income (Ballard and Syme 2016; Pavlova and Lühr 2023; Wray-Lake et al. 2024; Ballard et al. 2019; Ballard and Ozer 2016).

Given its links to youth development, civic engagement might be expected to support mental health. However, its relationship with mental health is complex and may be bidirectional, varying by type of civic activity and influenced by prior mental health status. Prior studies often treated civic engagement as a broad, undifferentiated category (Brewer and Nicotera 2023; Wiium et al. 2023; Kiely et al. 2021; Fenn et al. 2021; Fenn et al. 2023), overlooking important distinctions between activity types (e.g., volunteering vs. activism) that may relate differently to mental health (Fenn et al. 2022; Mužík et al. 2024). For instance, volunteering has been associated with fewer depressive symptoms during young adulthood (Ballard et al. 2019; Nakamura et al. 2024; Pai and Kim 2021; Thompson et al. 2024), whereas findings for political engagement, community involvement, and activism are mixed—some studies report no association, while others find either increased or decreased depressive symptoms (Ballard et al. 2019; Landstedt et al. 2016; Wray-Lake et al. 2019; Kiely et al. 2021).

Further, as prior research often relies on cross-sectional designs (Fenn et al. 2022; Mužík et al. 2024), it is difficult to determine directionality—while civic engagement may influence mental health, individuals with better or worse mental health may also be more likely to participate in certain types of civic activities (Wray-Lake and Ballard 2023). Evidence on the association from mental health to civic engagement is limited, but studies suggest that higher self-esteem and sense of control may foster greater motivation and capacity to engage in civic activities (Li and Ferraro 2005; Thoits and Hewitt 2001). Moreover, those with better mental health may have more emotional resources to support others and contribute to their communities (Flanagan and Bundick 2011). This raises the possibility of a bidirectional relationship, where mental health and civic engagement may mutually influence each other over time.

To our knowledge, only few longitudinal studies have examined potential bidirectional associations between youth civic engagement and mental health, and their findings have been inconsistent (Kiely et al. 2021; Soucie et al. 2025; Landstedt et al. 2016; Wray-Lake et al. 2019). For instance, Kiely et al. (2021), found no bidirectional associations between nonpolitical (i.e., volunteering and joining a community group) or political (i.e., involvement in local political activity) civic activities and depressive or anxiety symptoms among Australian youth aged 15 to 30 years. Soucie et al. (2025) similarly found that civic engagement—defined as participation in a range of activities such as political campaigns and volunteering—was not associated with changes in depressive symptoms among Canadian youth at ages 23, 26, and 32, nor were depressive symptoms associated with changes in civic engagement. Furthermore, Landstedt et al. (2016) examined bidirectional associations between community involvement and depressive symptoms as a function of sex in a Swedish youth cohort at 16, 21, 30, and 42 years. For males only, greater community involvement at 16 years was associated with lower depressive symptoms at 21 years, but no other associations were found. Lastly, Wray-Lake et al. (2019) reported that, in a nationally representative U.S. sample of students in grades 7 to 12, community involvement was associated with lower depressive symptoms 6 years later, while political engagement was associated with higher depressive symptoms. Additionally, adolescents with higher depressive symptoms were less likely to engage in community activities or vote in early adulthood (Wray-Lake et al. 2019).

While these studies suggest some mixed bidirectional associations between civic engagement and mental health, methodological limitations make it difficult to draw firm conclusions. For instance, the US study was inconsistent in assessing civic engagement, measuring different types at different ages with varied methods (Wray-Lake et al. 2019). Moreover, the data in these four studies, collected between 1981 and 2014, may not capture the evolving dynamics of civic engagement and mental health among today's youth (McGorry et al. 2024). Contemporary cohorts are shaped by distinct generational factors—including the rise of digital civic engagement, increased participation in global movements (e.g., Black Lives Matter), greater awareness of systemic issues such as climate justice and discrimination, and declining trust in political institutions (McGorry et al. 2024; Vergunst et al. 2024; Paquin et al. 2025). These shifts may influence not only the ways youth engage civically, but also how such engagement is associated with their mental health. In short, more research is needed to understand the bidirectional associations between distinct types of civic engagement and mental health in today's youth.

Lastly, to our knowledge, no study has examined the potential bidirectional associations between specific civic engagement types and suicidality—including suicidal ideation and self-harm—which are common in youth. By age 21 approximately 21% report suicidal ideation, 7% report a suicide attempt, and 17% report self-harm, with higher rates among females (Muehlenkamp et al. 2012; Orri et al. 2020; Van Meter et al. 2023). Civic engagement can foster hope, but when social and political aspirations remain unmet, it may also contribute to hopelessness, underscoring the need to examine its complex link to depressive symptoms and suicidality (Keshoofy et al. 2023).

Using a large population-based sample of Canadian youth, our study explored the potential bidirectional associations between specific types of civic engagement and depressive symptoms and suicidality at 20 and 23 years. Given that past research suggests differential mental health associations across civic engagement types, we distinguished between multiple civic activities, namely, political engagement, volunteering, activism, charitable actions, and community involvement. Understanding how civic engagement relates to mental health is crucial for informing efforts to address the growing mental health crisis among youth (McGorry al. 2024).

2 | Methods

2.1 | Participants

Data were drawn from the Québec Longitudinal Study of Child Development (QLSCD) an ongoing population-based birth cohort, managed by Institut de la Statistique du Québec (ISQ), which includes 2120 singletons born in Québec, Canada. Participants and their parents were recruited through stratified sampling from birth registries. Data collection covered all regions, except for Cree and Inuit territories and Indigenous communities due to differences in institutional services and socio-cultural context. The cohort was socioeconomically representative of Québec's general population in the late 1990s; with 90% self-identifying as White, reflecting the province's demographic at that time (Statistics Canada 1998). Further details about the QLSCD can be found online (http://www.iamillbe.stat.gouv.qc.ca) and in the cohort profile (Orri et al. 2021). Cohort protocols were approved by the ethics committees of the ISQ, Sainte-Justine Hospital Research Center, and Montreal West Island Integrated University Health and Social Services Center. Informed written consent, assent, or both were obtained from participants and/or their parents at each data collection. Of the original 2120 participants, 1451 (68% of the total) were included in the analyses as they had at least one measure of civic engagement, depressive symptoms, or suicidality at either 20 or 23 years.

2.2 | Measures

2.2.1 | Civic Engagement

Participation in civic activities over the past year was self-reported at 20 and 23 years (2018 and 2021) using 11 and 10 items, respectively. Items originated from the International Study of City Youth and l'Évaluation du Renouveau auprès des élèves du secondaire (Tu and Groleau 2023). Items were combined to reflect five types of civic activities (see Appendix S1): political engagement (2 items; e.g., "Be a member of a political party"), activism (5/4 items at 20/23 years, respectively; e.g., "Sign a petition"), volunteering (1 item; e.g., "Willingly volunteer for a charity or non-profit organization"), charitable actions (2 items; e.g., "Raise funds for a cause, a charity, or non-profit organization"), and community involvement (1 item; e.g., "Be a member of an association or committee"). For each type of civic engagement, participants were classified as engaging in (0) *no activity* or (1) *any activity in that category*.

2.2.2 | Depressive Symptoms

Depressive symptoms experienced during the past week at 20 and 23 years were self-reported using the Center for Epidemiological Studies Depression scale short-form (Radloff 1977; Poulin et al. 2005). The measure includes 12 items (e.g., "I felt depressed"; see Appendix S2) rated on a 4-point Likert scale: (0) *rarely/none of the time*, (1) *some/a little of the time*, (2) *occasionally/a moderate amount of time*, and (3) *most/all of the time*. Items were summed into scores ranging from 0 to 36, with higher scores representing higher symptom severity. The scales had good internal reliability (Cronbach $\alpha = 0.85/0.87$ at 20/23 years) and are well-validated (Radloff 1977; Poulin et al. 2005).

2.2.3 | Suicidality

As in previous studies (Orri et al. 2020; Geoffroy et al. 2016), serious suicidal ideation and attempts over the past year were self-reported at 20 and 23 years. The suicidality measure includes three items at each age (e.g., "I tried to kill myself"), with slight variations in wording and coding (see Appendix S3). At 20 years, items were averaged to create a mean score, while at 23 years, items 2 and 3 were dichotomized to (0) *never* or (1) *at least once*, then all three items were averaged. For scales with fewer than 10 items, average inter-item correlations are recommended (Clark and Watson 1995), and the suicidality scales showed strong internal consistency with inter-item correlations of 0.67 and 0.60 at ages 20 and 23, respectively.

2.2.4 | Covariates

We adjusted the model for sex and parental socioeconomic status (SES), which have been associated to civic participation and mental health (Landstedt et al. 2016; Lechner et al. 2018; Alegría et al. 2018). Sex assigned at birth (male or female) was obtained from medical records. Parental SES at ages 15/17 was assessed using a standardized index of education, occupation, and income (range: −3 to 3; higher scores = higher SES; Willms and Shields 1996).

2.3 | Statistical Analyses

All analyses were conducted in *R* version 4.2.3 (R Core Team, R. C. T. 2023). Significance thresholds were set at 0.05 and all tests were two-tailed.

2.3.1 | Descriptive Analyses

We reported prevalence of civic engagement activities at both the item and composite score level, and the means and standard deviations of depressive symptoms and suicidality at 20 and 23 years. Paired sample *t*-tests were used for depressive symptoms and suicidality, while McNemar tests were used to assess potential changes in civic engagement between 20 and 23 years. Moreover, bivariate correlations were performed to assess unadjusted associations among study variables and potential multicollinearity.

2.3.2 | Cross-Lagged Path Model: Testing Bidirectional Associations

A cross-lagged path model (via *lavaan* package; Rosseel 2012) was applied to examine whether depressive symptoms, suicidality, and civic engagement at 20 and 23 years predicted changes in one another over time, while controlling for sex and parental SES. To ensure the robustness of our findings, we conducted a sensitivity analysis by trimming nonsignificant paths from the model (MacCallum 2003) to assess whether these changes affected the consistency of associations.

2.3.3 | Missing Data and Multiple Imputation

Of the original 2120 participants, 669 were excluded due to missing data on both civic engagement and mental health at ages 20 and 23, leaving 1451 participants for analysis. Compared to those included, excluded participants were more likely to be male, non-Canadian, have younger mothers, mothers with higher depressive symptoms at 5 months postpartum, come from nonintact families, and have low SES at 5 months (see Appendix S4).

Among the 1451 included participants, 1094 (75%) had complete data on civic engagement and mental health at both ages 20 and 23, while 357 (25%) had incomplete data (i.e., at least one measure of civic engagement or mental health with missing data at either 20 or 23 years). Participants with incomplete data were less likely to engage in charitable actions at age 20, and in volunteering, activism, charitable actions, and community involvement at age 23, compared to those with complete data. No significant differences were observed in depressive symptoms; however, participants with incomplete information reported higher levels of suicidality at age 23 (see Appendix S5). To address missingness within the analytic sample, nonparametric imputation using Random Forest was applied (see Appendix S6).

3 | Results

3.1 | Descriptive Statistics

A bivariate correlational power sensitivity analysis using G*Power 3.1.9.7 (Faul et al. 2009) was conducted to determine the smallest effect size detectable with 80% power ($\alpha = 0.05$) using a sample size of 1451; results indicate that r values ≥ 0.07 are reliably detectable. Table 1 presents frequencies and means for civic engagement, depressive symptoms, and suicidality at 20 and 23 years. Age comparisons indicate that at 20 years, participants were more likely to engage in activism ($\chi^2 = 8.81$, $\varphi = 0.31$), volunteering ($\chi^2 = 125.80$, $\varphi = 0.27$), charitable actions ($\chi^2 = 116.85$, $\varphi = 0.26$), and community involvement ($\chi^2 = 21.30$, $\varphi = 0.30$) compared to 23 years. Conversely, participants exhibited higher depressive symptoms ($t = -4.87$, $d = 0.15$) at 23 years than at age 20. There were no significant age differences between political engagement ($\chi^2 = 3.67$, $p = 0.07$) or suicidality ($t = 1.36$, $p = 0.18$). In bivariate correlations, activism and political engagement were consistently associated with higher depressive symptoms and suicidality concurrently and longitudinally (see Figure 1). Moreover, volunteering at 20 years was associated with lower depressive symptoms at 23 years. Correlations among civic engagement variables at 20 and 23 years ranged from 0.08–0.20 and 0.09–0.28, respectively, suggesting a low risk of multicollinearity. Furthermore, depressive symptoms and suicidality were weakly to moderately correlated concurrently and longitudinally (rs = 0.27–0.42). The robustness of these associations were then investigated simultaneously in a cross-lagged path model.

3.2 | Cross-Lagged Path Model

3.2.1 | Auto-Regressive and Covariate Associations

Autoregressive associations revealed moderate stability in all civic engagement and mental health variables between 20 and 23 years: political engagement ($\beta = 0.39$; $b = 0.44$; 95%CI[0.29, 0.59]), volunteering ($\beta = 0.33$; $b = 0.36$; 95%CI[0.19, 0.53]), activism ($\beta = 0.30$; $b = 0.32$; 95%CI[0.16, 0.49]), charitable actions ($\beta = 0.31$; $b = 0.33$; 95%CI[0.17, 0.51]), community involvement ($\beta = 0.42$; $b = 0.47$; 95%CI[0.33, 0.61]), depressive symptoms ($\beta = 0.38$; $b = 0.43$; 95%CI[0.35, 0.50]), and suicidality ($\beta = 0.35$; $b = 0.38$; 95%CI[0.24, 0.52]).

Females were more likely to experience increases in depressive symptoms over time (20, 23 years: $\beta = 0.25$, 0.12; $b = 0.25$, 0.13; 95%CI[0.19, 0.30], [0.05, 0.21]), as well as greater involvement in activism (20, 23 years: $\beta = 0.14$, 0.17; $b = 0.14$, 0.18; 95%CI [0.06, 0.22], [0.08, 0.29]) and charitable actions (20, 23 years: $\beta = 0.20$, 0.22; $b = 0.20$, 0.24; 95%CI[0.12, 0.28], [0.14, 0.35]). At 20 years, females were more likely to experience increased

TABLE 1 | Descriptive statistics of civic engagement and mental health between 20 and 23 years.

	20-years old n of yes (%) or M (SD)	23-years old n of yes (%) or M (SD)	McNemar's test or paired sample t-test χ^2 or t $(p)^b$
Political engagement	178 (14.7%)	166 (12.3%)	3.67 (0.07)
"Be a member of a political party"	29 (2.4%)	34 (2.5%)	—
"Share your political views on a website"	211 (17.2%)	144 (10.7%)	—
Activism	698 (57.8%)	687 (50.9%)	8.81 (0.003)
"Be a member of an advocacy group (of any type) (e.g., Equiterre, Greenpeace, Amnesty International)"	42 (3.5%)	50 (3.7%)	—
"Take part in a legal demonstration or rally"	68 (5.6%)	—	—
"Take part in an illegal demonstration or rally"	18 (1.5%)	—	—
"Take part in a legal or illegal demonstration or rally"	—	111 (8.2%)	—
"Avoid buying a product to show that you disagree with how it is manufactured or with the policies of the company that sells it"	479 (39.4%)	457 (33.8%)	—
"Sign a petition"	478 (39.4%)	465 (34.4%)	—
Volunteering	396 (25.9%)	131 (9.7%)	125.80 (< 0.001)
Charitable actions	739 (60.8%)	538 (39.8%)	116.85 (< 0.001)
"Raise funds for a cause, a charity, or a non-profit organization"	235 (19.2%)	104 (7.7%)	—
"Make a donation to a charity or non-profit organization (money, clothing, food, etc.)"	711 (58.4%)	512 (37.9%)	—
Community involvement	271 (22.3%)	205 (15.2%)	21.23 (< 0.001)
Depressive symptoms	9.31 (6.53)	10.27 (6.91)	− 4.87 (< 0.001)
Suicidality	0.07 (0.20)	0.06 (0.18)	1.36 (0.18)

Note: Data were compiled from the final master file of the Québec Longitudinal Study of Child Development (2018–2021), © Gouvernement du Québec, Institut de la statistique du Québec. Descriptive statistics based on imputed study sample ($N = 1451$). n = number of observations; M = mean; SD = standard deviation. Volunteering and community involvement were assessed with a single item. p-values are based on paired sample t-test for continuous variables (mental health) and McNemar's test for dichotomized variables (civic engagement).
— = Not reported/Not applicable.

levels of suicidality ($\beta = 0.12$; $b = 0.12$; 95%CI[0.02, 0.22]), as well as greater involvement in volunteering ($\beta = 0.14$; $b = 0.14$; 95%CI[0.06, 0.22]) and community involvement ($\beta = 0.12$; $b = 0.12$; 95%CI[0.03, 0.21]). Sex was not associated with political engagement at 20 or 23 years, nor with suicidality, volunteering, or community involvement at 23 years.

Individuals from higher SES backgrounds at 15/17 years were more likely to participate in activism (20, 23 years: $\beta = 0.19$, 0.13; $b = 0.19$, 0.15; 95%CI[0.13, 0.25], [0.07, 0.23]), charitable actions (20, 23 years: $\beta = 0.13$, 0.10; $b = 0.12$, 0.11; 95%CI[0.06, 0.19], [0.02, 0.20]), community involvement (20, 23 years: $\beta = 0.10$, 0.22; $b = 0.11$, 0.24; 95%CI[0.01, 0.22], [0.15, 0.30], as well as with greater participation in political engagement ($\beta = 0.10$; $b = 0.10$; 95%CI[0.02, 0.18]) and volunteering ($\beta = 0.18$; $b = 0.17$; 95%CI[0.11, 0.24]) at 20 years. Moreover, individuals from lower SES backgrounds were more likely to experience increases in depressive symptoms at 20 years ($\beta = -0.07$; $b = -0.06$; 95%CI[−0.11, −0.02]). Parental SES at 15/17 years was not associated with suicidality at 20 or 23 years, nor with depressive symptoms, political engagement, or volunteering at 23 years.

3.2.2 | Concurrent and Longitudinal Associations

Table 2 shows results from the fully saturated cross-lagged path model (see Figure 2 for only significant associations). At 20 years, individuals involved in political engagement and activism were more likely to experience increased depressive symptoms and suicidality, while those engaged in volunteering tended to report fewer depressive symptoms. At 23 years, political engagement remained associated with subsequent increases in depressive symptoms. Longitudinally, those who engaged in greater activism at 20 years were more likely to experience increases in depressive symptoms ($\beta = 0.17$). Sensitivity analyses also revealed that individuals who participated in volunteering and charitable actions at 20 years, when examined separately, were more likely to experience fewer depressive symptoms at 23 years (see *Sensitivity Analyses* section below for details).

Community involvement showed no significant concurrent or longitudinal associations with depressive symptoms or suicidality. Civic engagement was not significantly associated with later suicidality. Furthermore, political engagement was not

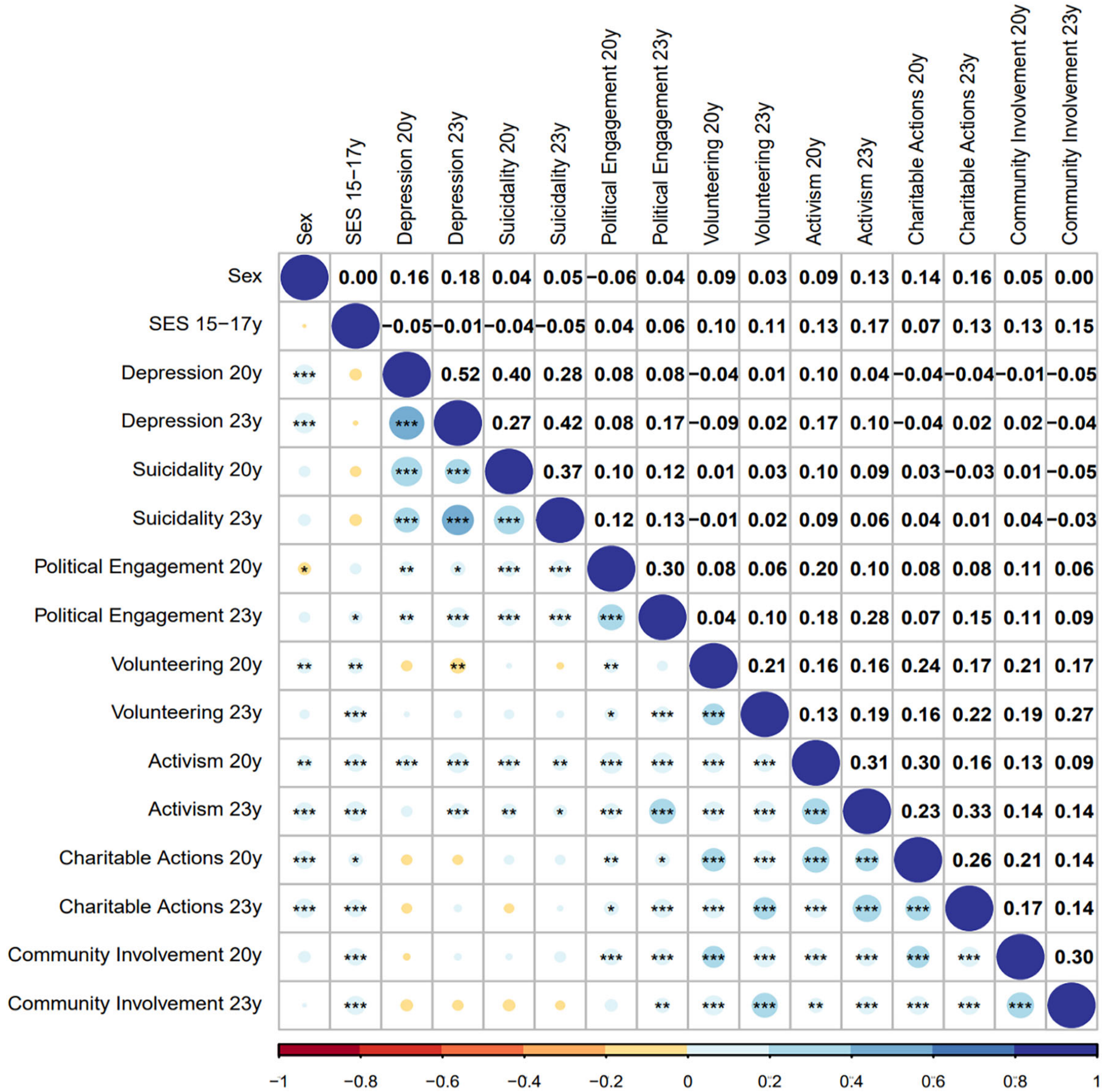

FIGURE 1 | Zero-order Spearman correlations for all study variables. Note. Data were compiled from the final master file of the Québec Longitudinal Study of Child Development (1998–2021), © Gouvernement du Québec, Institut de la statistique du Québec. Bivariate correlations were performed with the full imputed study sample ($N = 1451$). For sex, male was coded as 0 and female was coded as 1. SES = socioeconomic status; y = years. Blue circles indicate positive correlation coefficients. Yellow circles indicate negative correlation coefficients. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$. [Color figure can be viewed at wileyonlinelibrary.com]

significantly associated with later depressive symptoms. Depressive symptoms and suicidality were not significantly associated with any types of civic engagement later on.

3.2.3 | Sensitivity Analyses

To assess the sensitivity of our findings to our model's specifications, a sensitivity analyses was conducted. Nonsignificant longitudinal associations between study variables were removed sequentially. Notably, when volunteering at 20 years was removed as a predictor of depressive symptoms at 23 years, charitable actions became significantly associated with lower depressive symptoms at 23 years ($b = -0.16$, 95%CI[-0.28, -0.03]). Conversely, when charitable actions at 20 years was removed, volunteering became significantly associated with lower depressive symptoms ($b = -0.12$, 95%CI[-0.22, -0.01]). These analyses suggest that reported findings are robust to changes in model specifications, and both volunteering and charitable actions significantly predict relative decreases in depressive symptoms over time, but not fully independently of one another.

4 | Discussion

This Canadian study is the first, to our knowledge, to examine reciprocal associations between different types of civic engagement, depressive symptoms, and suicidality among youth over 3 years. Longitudinally, we found that individuals who engaged in charitable actions and volunteering were more likely to experience fewer depressive symptoms, while those who engaged

TABLE 2 | Cross-lagged path model.

Concurrent paths[1]

	Depressive symptoms (20 y)			Depressive symptoms (23 y)			Suicidality (20 y)			Suicidality (23 y)		
	r	**SE**	**CI**	***r***	**SE**	**CI**	***r***	**SE**	**CI**	***r***	**SE**	**CI**
Political Engagement (20 y/23 y)	0.12	0.04	**[0.04, 0.20]**	0.11	0.05	**[0.01, 0.21]**	0.21	0.05	**[0.10, 0.33]**	0.10	0.07	[−0.04, 0.24]
Volunteering (20 y/23 y)	−0.08	0.03	**[−0.14, −0.01]**	0.04	0.05	[−0.07, 0.14]	0.01	0.05	[−0.10, 0.11]	0.02	0.08	[−0.14, 0.17]
Activism (20 y/23 y)	0.13	0.03	**[0.07, 0.20]**	0.02	0.04	[−0.06, 0.10]	0.23	0.04	**[0.13, 0.33]**	0.02	0.06	[−0.10, 0.13]
Charitable Actions (20 y/23 y)	−0.05	0.03	[−0.11, 0.01]	0.03	0.04	[−0.05, 0.11]	0.07	0.04	[−0.03, 0.18]	0.05	0.06	[−0.07, 0.17]
Community Involvement (20 y/23 y)	−0.03	0.04	[−0.10, 0.04]	0.02	0.05	[−0.09, 0.12]	0.08	0.05	[−0.03, 0.20]	−0.02	0.08	[−0.17, 0.13]

Longitudinal paths

	Depressive symptoms (23 y)				Suicidality (23 y)			
	β	***b***	**SE**	**CI**	***β***	***b***	**SE**	**CI**
Political Engagement (20 y)	−0.01	−0.01	0.07	[−0.14, 0.12]	0.05	0.06	0.10	[−0.13, 0.24]
Volunteering (20 y)	−0.09	−0.10	0.06	[−0.21, 0.01]	−0.04	−0.05	0.09	[−0.21, 0.12]
Activism (20 y)	0.17	0.19	0.08	**[0.04, 0.35]**	0.10	0.11	0.12	[−0.13, 0.35]
Charitable Actions (20 y)	−0.08	−0.10	0.08	[−0.25, 0.06]	0.00	0.00	0.12	[−0.23, 0.24]
Community Involvement (20 y)	0.01	0.01	0.07	[−0.12, 0.14]	0.02	0.02	0.10	[−0.17, 0.21]

	Depressive symptoms (20 y)				Suicidality (20 y)			
	β	***b***	**SE**	**CI**	***β***	***b***	**SE**	**CI**
Political Engagement (23 y)	−0.04	−0.04	0.09	[−0.22, 0.13]	0.05	0.06	0.11	[−0.15, 0.27]
Volunteering (23 y)	−0.05	−0.05	0.09	[−0.22, 0.13]	0.10	0.11	0.12	[−0.12, 0.34]
Activism (23 y)	−0.06	−0.06	0.07	[−0.20, 0.07]	0.10	0.11	0.08	[−0.05, 0.28]
Charitable Actions (23 y)	−0.08	−0.09	0.07	[−0.23. 0.05]	−0.03	−0.03	0.10	[−0.21, 0.14]
Community Involvement (23 y)	0.03	0.03	0.09	[−0.15, 0.21]	−0.14	−0.15	0.11	[−0.38, 0.07]

Note: Data were compiled from the final master file of the Québec Longitudinal Study of Child Development (2018–2021), © Gouvernement du Québec, Institut de la statistique du Québec. Bolded CI indicates significant at the 0.05 level. The model was fully saturated and adjusted for sex and parental socioeconomic status. y = years; r = correlation coefficient; SE = standard error; CI = confidence interval; β = standardized coefficient; b = unstandardized coefficient. Coefficient of determination (R^2) for age 23 variables: political engagement (0.29), volunteering (0.27), activism (0.30), charitable actions (0.25), community involvement (0.28), depressive symptoms (0.30), and suicidality (0.26).

[1]The concurrent section displays cross-sectional associations between variables measured at the same age (e.g., the correlation statistics between activism (20 y/23 y) and suicidality (20 y) denotes concurrent associations at 20 years. Whereas, the statistics for activism (20 y/23 y) and suicidality (23 y) denotes concurrent associations at 23 years).

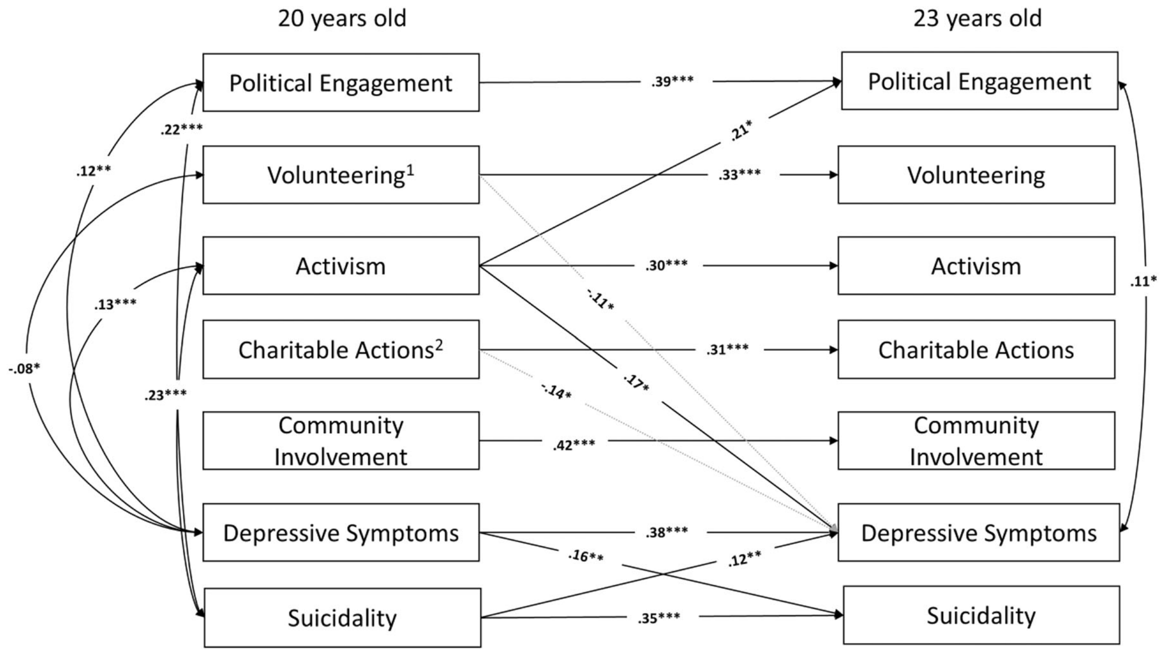

FIGURE 2 | Cross-lagged path model. *Note:* Data were compiled from the final master file of the Québec Longitudinal Study of Child Development (2018–2021), © Gouvernement du Québec, Institut de la statistique du Québec. The model was fully saturated and adjusted for sex and parental socioeconomic status. For longitudinal associations, only significant associations are presented. For concurrent associations, only significant associations between civic engagement and mental health variables are presented. All civic engagement activities significantly correlated with each other at both timepoints, except for the associations between political engagement and both volunteering and community involvement at age 23, as well as between community involvement and charitable actions at age 23. Significant findings from the fully saturated model are shown with solid black lines, while those identified in the sensitivity analysis are displayed with dotted gray lines. Results are standardized coefficients (β) for longitudinal findings and correlation coefficients (r) for concurrent findings. [1]When charitable actions at 20 years was removed as a predictor of depressive symptoms at age 23, volunteering became significant. [2]When volunteering at age 20 was removed as a predictor of depressive symptoms at 23 years, charitable actions became significant. $*p < 0.05$, $**p < 0.01$, $***p < 0.001$.

in activism tended to report increases in depressive symptoms. Neither depressive symptoms, nor suicidality were associated with later civic engagement. These findings support the idea that civic engagement precedes relative changes in mental health, rather than the reverse.

4.1 | Youth Civic Engagement

Previous studies conducted in Canada and Europe report variable youth civic engagement rates, ranging from 14%–80% in Canada and 10%–45% across 27 European countries (Arriagada et al. 2022; Ipsos European Public Affairs 2021). In our sample, 15%–61% and 10%–51% engaged in at least one type of civic activity at 20 and 23 years, respectively. Furthermore, youth civic engagement declined by 2%–21% over time, with significant declines in activism, volunteering, charitable actions, and community involvement. This decline coincided with the COVID-19 pandemic, when participants were assessed pre-pandemic in 2018 and during the pandemic in 2021. The timing suggests that pandemic-related restrictions—such as lockdowns and social distancing measures—may have contributed to reduced opportunities for in-person civic activities (Lachance 2020).

At both ages, more females than males participated in civic activities, particularly in charitable actions, aligning with previous research (Cicognani et al. 2011; Arriagada et al. 2022). This may reflect societal expectations for females to adopt communal and supportive roles (Cicognani et al. 2011). Notably, females demonstrated higher levels of activism at both ages, contrasting prior findings of greater male participation (Fortin-Rittberger 2016; Stefani et al. 2021). This shift could be influenced by contemporary social movements, particularly the #MeToo movement, which has empowered women to assert their voices and take action within their communities, reflecting evolving societal attitudes that recognize and encourage women's contributions to activism (Levy and Mattsson 2023; Castle et al. 2020).

Higher parental SES was consistently associated to greater civic engagement, aligning with previous research suggesting that youth from higher SES families are more likely to participate in civic activities (Levinson 2010; Ballard et al. 2019). This may be due to greater access to resources and supportive environments that higher SES families provide, which promote involvement in community initiatives (Nutakor et al. 2023; McMaughan et al. 2020). In contrast, those from lower SES backgrounds may hold similar values but lack resources to engage due to higher work, family, and school demands (Karakoc 2013; Reich 2018).

4.2 | Volunteering and Charitable Actions Associated With Lower Depressive Symptoms

Similar to other longitudinal studies (Kim and Morgül 2017; Ballard et al. 2019; Pai and Kim 2021; Thompson et al. 2024), we found that individuals who participated in volunteering and charitable actions were more likely to experience fewer depressive symptoms 3 years later. Charitable actions and volunteering explained, in part, the same variance in later depressive symptoms, suggesting they are associated in similar ways to depressive symptoms. Concurrently, individuals who volunteered at 20 years were more likely to report fewer depressive symptoms, suggesting it may be closely temporally associated as well. Together, these findings are consistent with general practitioners' recommendations and experimental evidence supporting the idea that such activities can improve mental health (Jenkinson et al. 2013; Bickerdike et al. 2017; Aughterson et al. 2020). The beneficial effects of these activities may arise from the satisfaction and emotional lift they provide, as helping and giving back to others is rewarding for most people (Poulin et al. 2013; Inagaki and Orehek 2017). Additionally, volunteering and charitable actions provide a meaningful avenue to potentially foster a sense of purpose and feeling that one matters (Elliott et al. 2005; Piliavin and Siegl 2007). Overall, these findings strengthen past literature supporting that acts of volunteering and charity may simultaneously benefit the individual and community.

4.3 | Activism and Political Engagement Associated With Higher Depressive Symptoms and Suicidality

Concurrently, but not longitudinally, those who engaged politically tended to report increases in depressive symptoms and suicidality at both 20 and 23 years, likely due to its more immediate relation with mental health, which might not be detectable 3 years later. Individuals who engaged in activism at 20 years were more likely to report higher levels of depressive symptoms and suicidality at that time, as well as increases in depressive symptoms 3 years later. Existing research presents mixed findings regarding concurrent associations between activism and depressive symptoms in youth (Ballard et al. 2020; Schwartz et al. 2023; Tao and Fisher 2023). To our knowledge, only one longitudinal study has investigated this relationship, finding no significant association (Ballard et al. 2019). However, its reliance on a single item to measure activism (i.e., attended a political rally or march in the past 12 months) limits its scope. Our study assessed activism at age 20 using five distinct items, providing a more comprehensive measure of activism-related behaviors. Participating in activism could lead to distress, as individuals may face violence and harassment through counter-protests or police interactions (Fenn et al. 2022; Conner et al. 2023). Additionally, taking actions that feel insignificant in face of larger societal issues (e.g., signing a petition) may lead to feelings of futility, resulting in frustration and disappointment as youth grapple with the disconnect between their efforts and lack of change (Conner et al. 2023). Thus, perhaps civic activities focused on systemic change results in modest acute and long-term increases in distress, which may be especially concerning in the short-term due to increased suicidality. Future research exploring whether exposure to violence during activism and engaging in seemingly minor actions contribute to these identified associations is needed. Additionally, it may be important to explore whether, in some cases, suicidality reflects not only emotional distress but also a form of radical political expression—where self-destructive behavior is used symbolically to protest perceived social/political injustice (Nooraeen and Croarkin 2023). Investigating this intersection between activism, distress, and meaning-making could provide valuable insight into the psychological experiences of youth engaged in sociopolitical movements.

4.4 | Strengths and Limitations

This study offers several strengths. First, the large, representative cohort enhances the generalizability of our findings to youth from Québec. Second, it advances prior research by examining the independent associations of different types of civic engagement with mental health, and vice-versa, a gap in earlier studies. Lastly, the inclusion of suicidality addresses an underexplored area in the literature.

This study also has several limitations. First, consistent with prior work in this cohort (Geoffroy et al. 2018; Bolanis et al. 2020), depressive symptoms and suicidality measures relied on self-report questionnaires. Second, our suicidality measure did not differentiate between suicidal ideation and attempts, potentially reducing the specificity of our results. Third, asking participants about their civic activities over the past year may weaken the association with mental health, especially one-time actions like signing a petition; however, research shows that even single civic acts, such as voting, can have lasting association, possibly because of the act itself or because it signals ongoing engagement (Ballard et al. 2019). Fourth, because our analysis used a two-wave cross-lagged panel model—and random intercepts cannot be modeled with only two time points—we could not distinguish within-person from between-person effects. As noted in recent methodological critiques (e.g., Hamaker et al. 2015; Lucas 2023), cross-lagged panel models are one of the few options available for assessing the temporality of associations, however—similar to other models testing directionality in two waves—they can yield spurious cross-lagged associations. Therefore, our findings should be treated as preliminary and should be replicated in samples with more timepoints. Fifth, data collection for participants at 23 years occurred during the COVID-19 pandemic (winter/spring 2021). Since civic engagement was first measured at 20 years, it's possible that youth who participated pre-pandemic experienced poorer mental health when forced to stop due to COVID-19. Interestingly, individuals engaging in volunteering and charitable actions were more likely to report fewer depressive symptoms over time, which would be unexpected if reduced civic engagement led to poorer mental health, though these associations may have been even stronger under typical (non-pandemic) conditions. The pandemic also likely disrupted the ability to identify associations between mental health and subsequent changes in civic engagement, as lockdowns and social distancing measures restricted in-person activities (Lachance 2020). Nonetheless, moderate correlations between political engagement (0.30), volunteering (0.21), activism (0.31), charitable actions (0.26), and community involvement (0.30) at 20 and 23 years indicate continuity in participation across time. Of note, using dichotomous items likely underestimates the stability of civic engagement over time, as 0 vs 1 items reduce retest reliability (Weng 2004). Also, since we did not measure activity frequency, it's possible that level of involvement decreased even if overall participation appeared to stay the same.

Sixth, while significant associations were identified, causality cannot be assumed, and unmeasured factors may also influence or account for the observed associations. Prior studies have shown that certain personality traits, such as extraversion and conscientiousness, are associated with increased civic engagement and lower levels of depressive symptoms (Rico-Bordera et al. 2023; Cai et al. 2024; Naragon-Gainey and Simms 2017). Extraverts, who are naturally drawn to social interactions and group activities, are more likely to engage in civic participation (Mondak et al. 2010), and the socialization and support that come with such involvement may contribute to better mental health (Naragon-Gainey and Simms 2017; Rico-Bordera et al. 2023). Thus, it may not be participation in the civic activity itself that benefits mental health, instead it is the disposition toward socializing that matters for mental health. Similarly, conscientious individuals are predisposed to structured and goal-oriented behaviors, which make them more likely to engage in civic activities that require commitment and organization (Rico-Bordera et al. 2023). Their conscientiousness also promotes self-discipline and resilience, factors that protect against depression (Naragon-Gainey and Simms 2017; Rico-Bordera et al. 2023). Further, concern about societal issues may lead to both activism and depressive symptoms, suggesting that activism itself may not cause changes in mental health; in fact, it's possible that activism improves mental health for individuals who are already distressed (Ballard et al. 2021; Klar and Kasser 2009; Conner et al. 2023).

Seventh, as is common in longitudinal studies, attrition occurred, with the most vulnerable participants more likely to be lost to follow-up (Orri et al. 2020); notably, those with incomplete data showed higher levels of suicidality and lower engagement in certain civic activities. To address this, we used full information maximum likelihood estimation, a best-practice approach for handling missing data when it is related to observed variables. Lastly, there may be meaningful differences in how different activities within each civic category relates to outcomes. For example, online political engagement may negatively impact mental health more than traditional activities like party membership. Further research is needed to clarify these nuances.

5 | Conclusion and Implications

Civic engagement is concurrently associated with depressive symptoms and suicidality in youth, as well as with depressive symptoms 3 years later. However, the valence of association depends on the type of activity. Neither depressive symptoms nor suicidality were associated with later civic engagement. Helping others through charitable actions and volunteering may represent promising targets for enhancing mental health. Activism and political engagement can yield positive societal outcomes, however, individuals performing these acts were modestly more likely to have relatively poorer mental health. Further studies are needed to clarify the pathways linking civic engagement to mental health outcomes, in addition to the potential influence of engagement frequency, underlying motivations, and contextual factors. Such evidence would deepen our understanding and help inform interventions that support both societal contribution and youth mental health.

Author Contributions

Supervised the study: Dr. Acland, Dr. Geoffroy. Conceptualized and designed the study: Mr. Sciola, Dr. Acland, Dr. Geoffroy. Conducted analyses and interpreted data: Mr. Sciola, Dr. Acland, Dr. Geoffroy, Dr. Philippe, Dr. Loose, Mr. Girard. Drafted initial manuscript: Mr. Sciola, Dr. Acland, Dr. Geoffroy. Reviewed and revised manuscript for important intellectual content: All authors. Mr. Sciola, Dr. Acland, and Dr. Geoffroy had full access to the data and take responsibility for the integrity and accuracy of the data analysis. All authors approved the final manuscript as submitted and agree to be accountable for all aspects of the work.

Acknowledgments

The QLSCD was supported by funding from the Ministère de la Santé et des Services sociaux, Ministère de la Famille, Ministère de l'Éducation and Ministère de l'Enseignement supérieur (Québec ministries), Lucie and André Chagnon Foundation, Institut de recherche Robert-Sauvé en santé et en sécurité du travail, Research Center of the Sainte-Justine University Hospital, Ministère de l'Emploi et de la Solidarité sociale, and ISQ. Additional funding was received by the Fonds de Recherche du Québec - Santé, Fonds de Recherche du Québec - Société et Culture (FRQSC), Social Science and Humanities Research Council of Canada, and Canadian Institutes of Health Research. Mr. Sciola received funding from the FRQSC (B2Z – 326296; https://doi.org/10.69777/326296) and Papageno research team on suicide prevention (https://doi.org/10.69777/311140). Dr. Loose is funded by the Canadian Institutes of Health Research. Drs. Ouellet-Morin, Orri, Côté, Talwar and Geoffroy hold a Canada Research Chair.

Ethics Statement

Statements regarding informed consent and ethics approval are found on pages 6–7 of the manuscript.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

Data analyzed in this study was obtained from the Institut de la Statistique du Québec, and, as stipulated in clauses 10 and 11 of the Institut de la statistique's Québec Act (Canada), access to the data is restricted to parties identified in the partnership agreement signed to ensure the conduct of the study and which describes the author's right. In the Québec Longitudinal Study of Child Development cohort, participants only consented to share their data with the study's financial partners and affiliated researchers and collaborators. Those partners and researchers only have access to the data after signing a data sharing agreement. Requests to access data can be directed to the Institut de la Statistique du Québec's Research Data Access Services - Home (www.quebec.ca).

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Supporting Information

Additional supporting information can be found online in the Supporting Information section.
Appendix S1: Civic engagement items and derived categories. **Appendix S2:** Depression symptoms experienced during the past week. **Appendix S3:** Suicidality scale. **Appendix S4:** Early life characteristics of included and excluded participants. **Appendix S5:** Comparison of participants with complete and incomplete data across study variables. **Appendix S6:** Missing data and multiple imputation.