

Completed Suicides in a Youth Centres Population

Johanne Renaud, MD, MSc, FRCPC¹, François Chagnon, PhD², Gustavo Turecki, MD, PhD³, Claude Marquette, MD, CSPQ⁴

Objective: From 1995 to 2000, 422 youths, aged 18 years and under, died as a result of suicide in Quebec. More than one-third had received services from youth centres (YCs) at some point. This study sought to characterize a sample of those youths to improve services for this at-risk population.

Method: From a retrospective study of YCs and coroner's office files, we investigated the clinical features of youths who had received YC services and died by suicide. We compared them with YC patients matched for age, sex, and geographic area who had reported suicidal behaviour or who had no such symptoms.

Results: Among those who committed suicide, we found a ratio of 3.8 boys for 1 girl, with a mean age of 16.8 years. Hanging, used by 73.6%, was the most frequent means; 53.6% had a previous suicide attempt. The group that committed suicide had more indicators of major depression, substance abuse, and disruptive behaviours, as well as more adverse events.

Conclusions: Interventions should focus on screening for mental disorders and suicidal behaviours on the initial contact with YC services. This screening should be implemented through a medical multidisciplinary team that includes psychoeducational services.

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Clinical Implications

- The YC population has a high risk for psychopathology and suicide.
- This study highlights the need for YC services to screen for psychopathology.
- This study supports implementation of a comprehensive approach to evaluating psychopathology and to intervention in the YC population.

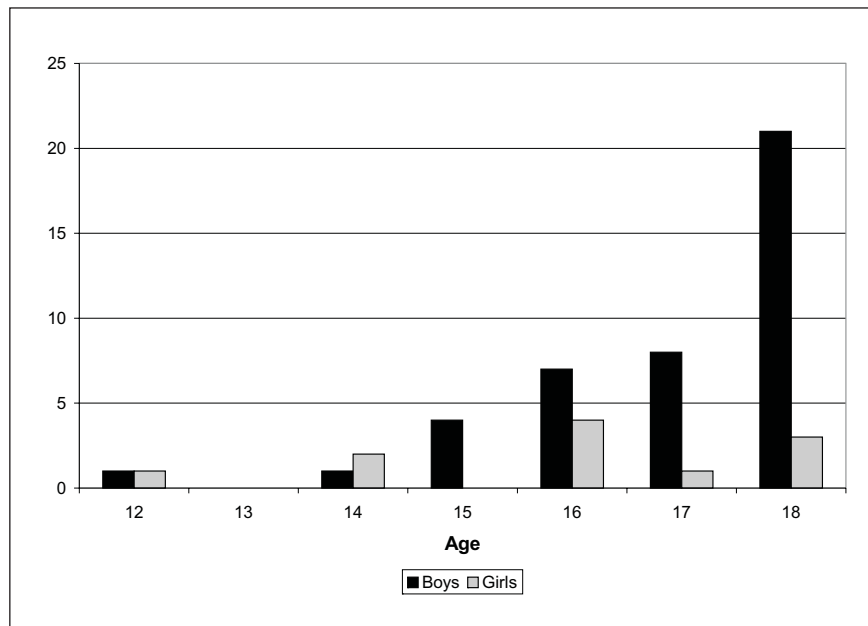
Limitations

- The data presented are based on archival sources.
- The method of chart review used to determine psychopathology is not specified and does not yield diagnoses.
- There is no systematic database on Quebec YC services.

Key Words: *suicide, youth centres services, psychopathology, intervention*

In Quebec, suicide is currently the second cause of death among youths aged 10 to 19 years, exceeded only by motor vehicle accidents (1). Some groups demonstrate a higher risk of suicide: young people receiving services at YCs (in Quebec, a single type of government agency with 16 regional branches is mandated by law to provide social services, foster

care, rehabilitation programs, and juvenile detention to troubled youths) (2), youths with a family history of suicide (3), and young Aboriginals (4–6). A committee that included the Quebec College of Physicians, the Association of Quebec Youth Centres, and the Quebec government ombudsman reported that at least one-third of the adolescents who commit-

Figure 1 Breakdown of suicides by sex and age

ted suicide had previously received YC services. Those who were still receiving or had received YC services had a 5.5 times greater risk of suicide than youths in the general population (2).

In 2000–2001, the population aged 18 years and under in Quebec was estimated to number around 1 700 000; approximately 5.3% had received some type of social services (7). Services are given under 3 laws: the Youth Protection Act (www.canlii.org/qc/laws/sta/p-34.1/20050616/whole.html), which addresses youths referred to YC services as a result of parental neglect, behavioural problems, or similar issues; the Act Respecting Health Services and Social Services (www2.publicationsduquebec.gouv.qc.ca/dynamicSearch/telecharge.php?type=2&file=/S_4_2/S4_2_A.html); and the Young Offenders Act (<http://laws.justice.gc.ca/en/Y-1/>), related to delinquent behaviours. Youth receiving YC services are mainly followed up in their families by their social workers but may be placed in foster care, residential settings, or rehabilitation resource centres, depending on their status. Between 40% and 52% of the teenagers receiving YC services showed at least one psychiatric disorder, including alcohol consumption (87.7%) and drug consumption (78.4%) (8). Three studies found a high proportion (27.8% to 64.4%) of youths in YCs showing serious suicidal behaviours (9–11). It is also indicated that suicide attempt rates were 4 to 10 times

higher in YC services than in the general population (9–12). Five US studies of juvenile delinquents reported lifetime suicidal ideation or attempt rates ranging from 12.4% to 61.0% (13–17). While these findings support the hypothesis of high levels of suicide attempts and suicidal ideation in YC users, nothing has, to our knowledge, been published on completed suicide in that population. However, it is known that about 90% of youths in the general population who died by suicide suffered from one or more psychiatric disorders (18–21). Further, adolescents with disruptive disorders (who constitute the major proportion of youths in YC services) were found to be at risk for completed suicide when comorbid substance abuse and past history of suicide attempt were present (22). This paper outlines characteristics of a sample of adolescent suicides in YC services.

Method

Using a case–control design, we studied demographic and clinical data from individuals aged 12 to 18 years who died by suicide in Quebec between January 1, 1995, and April 23, 2000. Systematic examination of coroner's office and YC services electronic databases revealed 422 suicides; of these, 143 youths had received YC services. From that subsample, 53 YC files were available, other files having been cleared according to the YC archival regulations. Subjects were matched for sex, age, and geographic area with living control subjects who had also received YC services. We use a randomized procedure to identify the file of the corresponding subject receiving services at the time of death of the index case. Five categories were defined: interval between YC service and suicide; clinical features of the suicide; information

Abbreviations used in this article

IRB	institutional review board
YC	youth centre

Table 1 Last place at which services received from YC were dispensed

Places	Subjects who received services at some point		Subjects who received services on the date of the suicide	
	(n = 48) (missing data for 5 cases)	%	(n = 28)	%
At home	29	60.4	14	50.0
Placement in residence	10	20.8	7	25.0
Supervised group home or apartment	5	10.4	3	10.7
Family type resource	4	8.3	4	14.3

Table 2 Suicide locations (n = 53)

Location	n	%
Home	29	54.9
Neutral environment (not related to family)	8	15.1
Near home	3	5.7
YC resources (residential, supervised group home, or apartments)	7	13.3
Other places (such as parents' work place or friends' home)	6	11.2

relative to past history of suicidal ideation or attempts; indicators of psychopathology; and adverse events. The first author used a coding grid to collect data obtained from a thorough search of coroner's office and YC files. We considered significant comparisons and set a probability of type I error lower than 5%. Ethics approval for this study was provided by the local IRB.

Results

The 53 suicide cases who had active YC files comprised 42 boys and 11 girls (ratio of 3.8:1), which is similar to the general population ratio of youth aged 10 to 19 years (3.6:1) (1). The mean age was 16.8 years (girls 16.98 years, SD 1.4; boys 15.96 years, SD 1.9). This sample was representative of the 143 YC subjects who died by suicide, in terms of age (mean 16.6 years, SD 1.53; $F_{1,95} = 0.21$, $P = 0.65$) and sex distribution (Fisher's $P = 0.71$) (Figure 1). Of the group, 52.8% (28/53) were receiving services at the time of their death; 20% had received services in the past 6 months, while 91.1% had received those services in the past 12 months (Table 1). Most suicides took place at home (Table 2). The main methods were

by hanging (73.6%) and by firearms (18.9%). Of the cases, 88.7% (47/53) had been screened for alcohol and drugs by the coroner's office: 46.8% (22/47) had used alcohol and drugs immediately prior to death, with alcohol and drugs achieving toxic levels in 31.9% (15/47). In the group who died by suicide in YC resources rather than at home, 3 were intoxicated.

Our analyses revealed 2 control subgroups: we found files containing references to a history of suicidal ideation or attempts, and we found other files that contained no such references. The suicide group, compared with the control group having no indication of suicidal ideation or attempts, showed more characteristics of mental disorders: indicators of major depression were present in 44.0% and 1.2%, respectively (Fisher's $P = 0.001$), and use of hard drugs was mentioned in 41.4% and 14.3%, respectively (Fisher's $P = 0.02$). Evidence of conduct disorder was high in all groups, but in the suicide group, there were more indicators of aggression toward people or animals (48.8%, compared with 22.3%; $\chi^2 = 9.74$, df 1; $P < 0.01$), threats and intimidation (50.0%, compared with 27.7%; $\chi^2 = 10.84$, df 1; $P < 0.01$), and running away at least twice (35.0%, compared with 12.8%; $\chi^2 = 11.30$, df 1; $P < 0.01$). A previous suicide attempt was found in 53.6% of the suicide group but only in 4.0% of the control group. Among suicides, compared with the control group, we found more placements (3.10, compared with 1.53; $F = 13.10$, df 1; $P < 0.001$), more relational conflict and affective loss (76.5.0%, compared with 53.5%; $\chi^2 = 5.80$, df 1; $P < 0.05$), and more disciplinary measures applied by the YC (41.1%, compared with 16.5%; $\chi^2 = 9.05$, df 1; $P < 0.01$).

Conclusion

We found that 33.9% of youths who completed suicide in Quebec had received YC services. Those suicides had been almost entirely committed at the time of or in the year following the services. About one-half of the youths had used alcohol or drugs prior to death, and almost one-third were

considered to be intoxicated at the time of suicide. Indicators of depression and conduct disorders, as well as adverse events, were more frequent, compared with the control group; more than one-half had already shown a previous suicide attempt. These findings are consistent with a US sample of youths in foster care that showed 37% to have a current psychiatric disorder and 61% to have a lifetime psychiatric disorder (23). In that study, substance use was linked with suicidal behaviour by its effect of increasing stress and exacerbating cooccurring psychopathology, especially among impulsive adolescents, a finding which is also congruent with our results (24).

This study is based on retrospective assessments of files, a method that has methodological limitations. A psychological autopsy study would have been a more accurate method. However, our results suggest that suicide and psychopathology are rather high in the YC population. Some might argue that suicide is not always preventable, others that some situations might have not been managed optimally. We think that interventions to be promoted should focus on screening at the initial contact with YC services; such screening should include a specific assessment for prior suicide attempts and psychiatric disorders. Implementation of a medical multidisciplinary team should be coordinated with psychiatry and psychoeducational services. Increased attention should be given to the period surrounding discharge from the YC: transition to independence is a difficult time for youth, especially for those leaving the out-of-home care system (25,26). Moreover, detailed case studies (for example, in collaboration with the coroner's office) might also help guide us to better interventions for suicidal youths.

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¹Assistant Professor, Université de Montréal, Montreal, Quebec; CIHR Young Investigator, Montreal, Quebec.

²Assistant Professor, Université du Québec à Montréal, Montreal, Quebec.

³Assistant Professor, McGill University, Montreal, Quebec; CIHR Investigator, Montreal, Quebec.

⁴Assistant Professor, Université de Montréal, Montreal, Quebec.

Address for correspondence: Dr J Renaud, CHU mère-enfant Sainte-Justine, 3175 Côte Sainte-Catherine, Montréal, QC H3T 1C5 e-mail: johanne_renaud@SSSS.gouv.qc.ca

Résumé : Suicides complétés dans la population des centres de jeunesse

Objectif : De 1995 à 2000, 422 jeunes gens, âgés de 18 ans et moins, sont décédés par suicide au Québec. Plus d'un tiers avaient reçu les services d'un centre de jeunesse (CJ) à un certain moment. Cette étude cherchait à caractériser un échantillon de ces jeunes afin d'améliorer les services pour cette population à risque.

Méthode : À partir d'une étude rétrospective des CJ et des dossiers du bureau du coroner, nous avons recherché les traits cliniques des jeunes qui avaient reçu des services des CJ et s'étaient suicidés. Nous les avons comparés avec des patients des CJ jumelés selon l'âge, le sexe et la région géographique, qui n'avaient pas déclaré de comportements ou de symptômes suicidaires.

Résultats : Parmi ceux qui se sont suicidés, nous avons trouvé un ratio de 3,8 garçons pour 1 fille, dont la moyenne d'âge est de 16,8 ans. La pendaison était le moyen le plus fréquemment utilisé par 73,6 %, et 53,6 % avaient déjà fait une tentative de suicide. Le groupe s'étant suicidé avait plus d'indicateurs de dépression majeure, d'abus de substances et de comportements perturbateurs, et plus de réactions adverses.

Conclusions : Les interventions devraient porter sur le dépistage des troubles mentaux et des comportements suicidaires, lors du premier contact avec les services des CJ. Ce dépistage devrait être effectué par une équipe médicale multidisciplinaire qui comprend des services psychoéducatifs.