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Original Research

Adult men suicide: a developmental approach

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Abstract

Background and objective: This study aims to verify the role of humiliating events and their context in provoking suicide and the contribution of childhood parental maltreatment. **Materials and methods**: A family member of consecutive adult male suicides, aged between 18 and 53, was recruited at the Montreal coroner's mortuary for a psychosocial autopsy interview (N = 63) and 7 others through the coroner-in-chief's office. Live events were assessed with the Life Events and Difficulties Schedule (LEDS) and parental maltreatment with the Child Experience of Care and Abuse (CECA) Interview. **Results**: Two thirds of the suicides presented most of the following factors: a separation from a partner, half of them involving the man's intractable behavior, financial and marital difficulties, a diagnosis of substance use and/or personality disorder, a history of parental maltreatment and impulsivity. However, other subgroups of men suicide differed significantly from this portrait. **Conclusions**: Humiliation events and parental maltreatment are key factors of men's suicide.

Keywords: Suicide; Life events; Parental maltreatment; Substance abuse; Adult men

1. Introduction

This paper proposes a developmental approach to the study of suicide in adult men of working age. The aim is to demonstrate the impact of severe humiliating life events in provoking suicide when reinforced by the presence of long-term difficulties and a history of chronic parental maltreatment during childhood [1–3]. The model is based on the work of Brown and Harris on the aetiology of episodes of depression [4].

The present study aims to complement various developmental approaches to suicide. This model has demonstrated that life events, more specifically those with a humiliating nature, provoke an episode of depression mostly when they occur in the context of long-term difficulties, weak social support and coping abilities, as well as a history of chronic parental maltreatment during childhood [5]. To achieve this goal, the design investigates the specific nature of life events and major difficulties related to men's suicide, their association to psychopathology and to parental maltreatment during childhood.

The study more similar to the present investigation has reported, with a group of mostly men's suicides, the presence of a heavy burden of negative events from the age of 10 until their death [6]. Those who died at a younger age had a higher burden than those who died later; they also had many school and behavioral problems. Joiner's interpersonal theory, focusing on the internal psychological experience leading to suicidal behavior, is also relevant to the present study [7]. This theory states that thwarted belongingness and perceived burdensomeness can lead to near lethal or lethal suicidal gestures when leading to a will to die and a decreasing fear of death. The concept of burdensomeness has some similarity with the concept of intractable behavior introduced in this study, both entailing the perception of being a burden. Joiner's interpersonal theory has received support from two reviews [8,9]. Another valuable conclusion is based on an analysis of the Longitudinal Studies on Child Abuse and Neglect. The results demonstrated that the presence of a comorbid internalizing and externalizing symptom trajectory was an intermediate factor between childhood abuse and adolescent suicide related behavior [10]. Culture also played a central part in interpreting youth suicide among First Nations of British Columbia, by associating a sense of personal discontinuity in those suicides with practices in their communities that had failed to guarantee cultural continuity by preserving and rehabilitating their traditions [11].

Regarding life events and suicide, most studies were completed more than 20 years ago using questionnaires combining events and difficulties, but not taking into account their context. Interpersonal events, mainly separation from a partner, were the main category of provoking factors [12–15]. In a research using the instruments used in this study, it was found that two-thirds of suicides with a diagnosis of schizophrenia had a severe provoking event with 57% of these involving humiliation [16].

Studies of suicide and child adversity have been rare. A psychological autopsy using the CECA among Quebec First Nations adult suicides, 90% of them men, revealed a high rate of parental negligence with an index including CECA scales [17,18]. A Canadian study found that, in a sub-group including half of the sample, at least 70% had a history of parental adversity [19]. Suicides with at least one severe indifference score from a parent (CECA) were also highly associated with high impulsivity [20]. Another psychological autopsy has also found childhood traumatic events and recent interpersonal stressors to be associated with suicide [21]. In older adults, suicide has been associated with low maternal and low paternal care [22]. In an analysis of 32 suicides with a diagnosis of schizophrenia, the rate of cases with a negative score on a six-item index of the CECA was 37%, high but unexpectedly lower than the 64% in the non-suicidal control group with schizophrenia [16].

The main goal of this paper is to confirm central elements of the vulnerability model of Brown and Harris on a group of suicides. The comparison groups came from studies including only women in the same age range, in the absence of men in this literature. The hypotheses were the following:

The frequency of provoking life-events in the humiliation categories in this sample of men's suicide will be as high as in a group of women with an episode of major depression.

The frequency of parental maltreatment in this men's suicide sample will be as high as in a group of women with an episode of major depression

The analysis will also assess the association between diagnoses and provoking life events.

2. Method

2.1 The group of suicides

This group of 70 men who have died by suicide were from French-speaking families living within 60 miles of Montreal. They were all Caucasian and, with a few exceptions, descendants of French settlers. As shown in Table 1, the mean age was 33.1 (range from 18 to 53). Half of the group was married or cohabitating, with three in a non-heterosexual partnership. The rate of marriages at 19% was similar to the general population with a marriage rate of 25% marrying before the age of 50 [23]. Two thirds (68%) were employed at the time of death, mostly in low pay manual jobs, with some on sick leave. These data are similar to the socio-economic statistics on suicide in Quebec for the same period [24]. Social life in the last year was restricted in two fifths of the group with a network of five and less. Half of the group had changed residence one or more times during the last year.

Recruitment was mostly through contacting families of 85 consecutive cases met at the mortuary of the coroner office in Montreal. The meeting took place soon after the death and psychological support was offered by a clinical psychologist. Around three quarters of these families had a member willing to be later contacted (N = 63). Seven other families were included following an invitation from the coroner-in-chief's office. There were no socio-demographic differences between families who accepted and those who did not. All suicides were confirmed by the coroner-in-chief office. The data collection took place between 1998 and 2006.

The reason to include only men was that the expected number of women, around 20% of the group, would have been too low to draw any theoretical conclusion. There was also a comparative group of road accidents drivers' death in the original design, a category for which women had a low rate. This group was later abandoned due to the low number of cases reached.

Table 1. Sociodemographic data.

Type of events		N (%)
Average age	33.1	
Marital status		
Married	13	19%
Cohabitation	22	31%
Separated/divorced	9	13%
Single	25	36%
Widow	1	1%
With children		
Yes	30	43%
No	47	56%
Sexual orientation		
Heterosexual	67	96%
Homosexual	2	3%
Bisexual	1	1%
Work status		
Professional	5	7%
Skilled worker	16	23%
Unskilled worker	26	37%
Student	3	4%
Not working (on welfare)	16	23%
Not working (disability)	4	6%
Social network size		
5 persons or less	25	38%
More than 5 persons	40	62%
Missing information	5	
Changes of residence (last year)		
1	23	33%
2	3	4%
3	6	9%
4	2	3%
5	1	1%
No change	35	50%

2.2 Procedure

Most interviews were completed within one year following the death but, to comply with ethical requirements, not in the first 6 months. With few exceptions, they took place at the home of the interviewee. Any expression of reluctance after three contacts led to withdrawal. Overall, three quarters of those participating were siblings, the rest being mothers, spouses, or partners. Interviewers were health professionals and graduate students with training in suicide crisis intervention. The research coordinator carried out a debriefing with the interviewer after each home visit. If a participant was reported to be distressed, a list of nearby free public professional resources was provided.

2.3 Instruments

The LEDS was used for the assessment of life events and difficulties for the period of 12 months before suicide [4]. Correlations between well trained raters were over 0.90, and 0.81 for the occurrence of an event between a patient and a relative. The LEDS has been used to study the aetiology of many psychiatric and somatic disorders [5,25]. The LEDS interview lasted between one and a half and three hours. Frequent and flexible probes were used to assess the context of each event and specify the date. Proxy-based ratings were made from a transcription of recorded interviews. A core purpose of the contextual rating was to reflect the likely severity of an event by checking the straightforward features of an event and the elements of a person's life that were likely to have influenced his response to an event. In order, for example, to rate in contextual terms a marital separation, we asked questions such as how long the relationship had lasted, whether the couple had financial joint responsibilities, how they were getting on and whether the man had played any part in bringing about a separation. Key ratings of events and ongoing difficulties were made in consensus meetings involving the interviewer and members of the research team. All provoking events not fitting examples of the Manual were discussed in a consensus meeting between the first author and the authors of the LEDS.

All severe events had to score positive for long-term threat. The long-term threat is the score of severity two weeks after the event, meaning that the impact has a high probability to be long-lasting. When the event occurred close to death, we evaluated whether the threat would have been present after two weeks, but the suicide confirmed the threat in most instances. A suicide provoking event was defined as the last severe event occurring in the 12 weeks before death. Since there is evidence that aetiologically relevant events occur near the time of suicide [12], a 12-week period was preferred to the 6-month period generally applied to episodes of depression [2]. Typical examples of severe events were a partner leaving home with their two children, the man's mother finding out he was a pimp, and a phone call threatening violence following failure to pay a cocaine debt.

Humiliation scale. An event is classified as severely humiliating if it is likely to have led to marked shame or lowered self-esteem following being put down [2].

In the following scheme, ratings are made hierarchically in the sense that if the first is irrelevant, the second is considered, and so on. Below is a detailed description of the two main categories of humiliation.

(1) *Humiliation: separation from someone close* deals with clear evidence of the likely presence of rejection or failure, considering the context of any associated major marital difficulty such as a partner showing displeasure by not talking to the man, or a recent decision not to share the same bedroom. Two sub-categories were used, the first of which was developed and validated by consensus meetings during the present research:

(i) *A separation related to the man's intractable behavior* such as violence, substance abuse, or stealing money from the family, including failure to respond to requests to change such behaviour or to seek treatment. Domestic violence and debts related to alcohol and drug use were often involved. This sub-category was added to the original instrument with the approval two of the original authors.

(ii) *A separation due to other reasons*, such as the partner getting involved with someone else.

Humiliation: put down involving a central aspect of the man's self-identity. Discoveries of infidelity are usually included in this category. The most common situation was the man being victim of a threatening verbal or physical attack putting his integrity in danger.

The CECA interview investigated each parent's behavior and lasted two hours on average. The convergent validity between the CECA Lack of care scale and the Parental Bonding Instrument was good [26]. The concordance between two sisters varied between 0.67 and 0.78, an important point for this study for which most informants were a sister or a brother familiar with the man's childhood. In the present study, the alpha coefficients for inter-judge agreement were 0.78 or over for all scales except one (0.65). These results were similar to those of Bifulco *et al*. [27].

The index of parental maltreatment is based on three CECA scales: (i) mother's lack of affection, (ii) mother's rejection, and (iii) father's physical abuse. Each was rated in terms of '2' severe, '1' moderate, '0' little or none, with an overall score of '2' or more defining maltreatment [28]. This index had been highly associated with risk of depressive onset and with the likelihood that the depressive episode took a chronic course of 12 months or more [3].

Psychiatric diagnoses were obtained with the SCID I [29] interview for axis I DSM-IV diagnoses, as well as the SCID II [30] for axis II personality disorder diagnoses. Information from the coroner's and medical reports were added to the interview. Diagnoses were made by a team of three psychiatrists. The estimate of interrater reliability (kappa) was 0.88 for schizophrenia and schizoaffective disorder and above 0.70 for other diagnoses [31]. In psy-

chological autopsy studies, the use of a third party has been used in 84 studies as of 2011 and the method has been validated many times [32–34].

2.4 Data analysis

Statistical analyses were conducted with the SPSS statistical package, version 11.0 (SPSS Inc., Chicago, IL, USA) Chi-square (two-way) with Yates' correction is used to compare the categorical variables.

3. Results

As many as 84% (59/70) of the suicides were associated with a severe provoking event in the 12 weeks before their death. The majority of these were in the humiliation category (48/70 or 68% of all suicides), among these 36 out of 48 or 75% in the humiliation separation category (Table 2). Two thirds of these separations (24/36) were related to the man's intractable behavior. The second type of humiliation (*put down*) accounted for 17% (12/70) of the cases, with 4 of these involving intimidation by drug dealers about debts. The average time between a provoking event and suicide was 2.5 weeks. In 21 deaths, it was less than 24 hours. Of the 11 non-humiliation events, 2 involved 'entrapment', 2 'death' and 7 other key losses such as a diagnosis of AIDS or learning of the need for heart surgery.

Table 2. Suicide provoking events (12 weeks period).

Type of events	N (%)
(1) Humiliation separation	
(a) Due to intractable behaviour	24 (34%)
(b) Due to other sources	12 (17%)
(2) Humiliation put down	12 (17%)
(3) Humiliation delinquency of other	0 (0%)
Sub-total of humiliating events	48 (69%)
(4) Other severe events	
(i) Entrapment	2 (3%)
(ii) Death	1 (1%)
(iii) Separation (subject initiated)	2 (3%)
(iv) Other key loss	6 (9%)
(v) Danger/distress	0 (0%)
Sub-total of non-humiliating events	11 (16%)
(5) No provoking event	11 (16%)
Total	70 (100%)

When comparing to a London study with a group of women with an episode of depression [2], the group of men's suicides had significantly more provoking humiliation events (48/70) than the depressed women (34/68) ($X^2 = 4.19$, df = 1, $p \leq 0.05$). The first hypothesis is thus confirmed.

Regarding context, just over half (33/59) of these provoking events were accompanied by an ongoing major difficulty. In the case of events involving a humiliating separation from a partner (36), almost all (30) were linked to such a difficulty with 9 having a chronic conflict, 9 a financial problem, and 12 both.

Three quarters or 78% (35/45) of men with substance abuse experienced a humiliating event compared to 52% (13/25) for those without ($X^2 = 4.95$, df = 1, $p \leq 0.05$). Those with substance abuse also more often had a severe event or major difficulty involving their own violence or delinquency—44% (22/45) compared with 8% for the others (2/25) ($X^2 = 11.92$, df = 1, $p \leq 0.0001$). Looked at from another angle, 30 of the 36 cases with a humiliation separation had at least one major difficulty and 22 had a substance abuse problem. It is important to note that 73% of the cases with substance abuse had a comorbidity with a personality disorder.

During their childhood, 57% (40/70) of the group experienced parental maltreatment with 43% (30/70) involving a mother's lack of affection, 43% (30/70) her rejection or abandonment, and 57% (40/70) a father's physical abuse, mostly directed toward the mother. There was no association between a provoking humiliation event and the presence of parental maltreatment. Parental maltreatment was more frequent in suicides with substance abuse and a personality disorder than in other diagnoses, but the difference was not statistically significant.

The rate of maltreatment as significantly higher in the suicide group, 70% (40/70), when compared with a group of 144 women with a diagnosis of major depression from London in the same age, with a rate of 40% or 58/144 ($X^2 = 4.74$, df = 1, $p \leq 0.05$) [36]. The second hypothesis is thus confirmed.

4. Discussion

4.1 Provoking events

Besides confirming the role of humiliation events in suicide, this study added an original sub-category to the LEDS, that is a "humiliation-separation caused by one's intractable behavior", which was found in one third of the group. In these situations, separation was often initiated by the partner, in most cases as a response to the man's antagonism such as physical abuse, death threat, stealing money or accumulating large debts. In this sub-group, the man who took his life behaved as an aggressor rather than a victim. A similar observation was made in a survey of suicidal notes and personal documents where the second most mentioned reason for dying was perceiving oneself as violent and abusing [36].

The context of life event was central to understanding its impact on suicide. In most cases where a provoking event involved a separation or a serious threat of separation, there was a major ongoing difficulty lasting for a minimum of six months, in the form of a chronic marital conflict or financial debts or both. For example, a man took his life the day after he was given a prison sentence for a death threat

toward his wife and her mother. The broader context was that he was a member of a drug gang, owed a large sum of money to the gang and had been living on social welfare benefits. In summary, ongoing difficulties preceding provoking events such as a core separation are likely to make it harder to cope with the consequences and to lead to desperation [37].

In their studies on depression among women, Brown *et al.* [2] have emphasized that humiliation led to feelings of helplessness, powerlessness and loss of control. These emotions may have been present in the men who died from suicide, but they were more likely to have experienced self-hatred rather than debasement, leading to autoaggression rather than helplessness. This manifestation of self-hatred was also observed by therapists in the immediate pre-suicide period [38]. An analysis of suicidal notes also found frequent expressions of explosive anger [36].

The results show that a dominant sub-group of suicides, despite the impulsiveness of their death, were carrying a heavy burden of negative experiences in the last year of their life and probably much before as illustrated by the study of Séguin *et al*. [4,39]. While the present results bring support to Joiner's theory [7] and his concept of burdensomeness, the LEDS's methodology does not take into consideration in the rating the subjective feelings of the person. These objective elements of the person's burden should caution to be more careful when applying the attribute of "false belief" to the feeling of burdensomeness. Not only had these men made gestures with damaging consequences for their family, but they had, in some cases, made great efforts to amend their behavior, such as entering addiction therapy, without success. Because of the accumulation of severe events and major difficulties, those suicides with a humiliation experience would probably have scored high on the Acute Suicidal Affective Disturbance proposed as a diagnostic category [40].

With respect to the concept of thwarted belongness of the interpersonal theory, the socio-demographic information confirmed a reduced social network of 5 or less persons for 40% of the group. A third of the men were violent towards members of their close network which possibly contributed to alienating them. Drug debts also became a source of isolation in the last year of life. At least six men were seriously threatened by drug gangs before their suicide, another was likely to have had a problem with a drug dealer who was nearly killed by his friends after his suicide, while an eight man was threatened with loss of access to his son by the in-laws if he didn't pay his debts to them.

The work on the role of gender in suicide brings attention to the traditional masculine role preventing men from seeking professional help in a situation of depression or mental distress [41]. Yet this role has been prevalent for centuries in North America, even in periods of low suicide rates. Cleary [42] in a qualitative analysis of the life of 52 Irish men who had made a clinically serious suicide attempt as a young adult, stressed the incapacity of these men to express pain because of the pressure of a constraining culture about their role combined with a lack of familiarity with mental health. An important point is that these men, like the ones in this study, were mostly from a broadly working-class background in which relationships with the father lacked intimacy and emotional engagement, a pattern fed by heavy drinking and a climate of violence. Clearly's book illustrated in detail the long history of substance misuse and life difficulties leading ultimately to a feeling of being trapped in their life. We would add that these problematic situations are in part explained by the collapse of traditional life among the less fortunate half of the society with the transformation of the economy and a lack of opportunity for those with lower than college education [43]. Consequently, pride in the masculine traditional role is no longer a support of identity as was found in a rural setting of Quebec [44].

To conclude this section, it is important to draw attention to the other third of suicides with a different pattern of factors. These cases were diagnosed with a chronic psychotic state, either schizophrenia or bipolar disorder, and the rest with a depressive episode associated with a loss such as a health event or miscellaneous situations. Because of the variety of trajectories leading to suicide, it is difficult to propose a universal theory as reiterated in many publications.

4.2 Childhood parental maltreatment

The rate of parental maltreatment at 57%, determined by strict criteria applied to a two-hour semi-structured interview, should be considered high. High rates were also found in other suicide studies with less robust methodology. As for comparing our group with the general population, there is no agreement for the prevalence of various measures. In a review of 224 studies using various instruments and type of samples, rates of prevalence varied between 17% and 37% for emotional abuse, and averaged 18% for emotional neglect, 23% for physical abuse and 17% for physical neglect [45]. National surveys with validated instruments, though rare, provided more reliable data. An analysis of the 2011 American child maltreatment household survey [46], indicated that 12.1% of the sample had experienced one form of maltreatment and only 2.8% had experienced 2 or more forms. Lifetime emotional neglect, measured with one question, had a rate of 11.6%, while the rate of emotional abuse was 10.3%, physical abuse 8.9% and sexual abuse in the family setting was only 0.7%. In a national Norwegian survey [47] of 9240 adolescents aged 12 to 16 years, 4% of the sample reported at least one episode of physical abuse from a caregiver and 15% less severe abuse episodes, with no gender difference.

Many factors might possibly explain the link between parental maltreatment and adult suicide. Attachment is a likely candidate and has been included in studies of depres-

sion [48,49]. School performance and behavior as well as peer socialization are also of interest [6]. One promising path is a successful transition into adulthood between the ages of 18 and 23 [50].

4.3 Comparison with other groups of men suicide

Two other studies of men's suicide have arrived at a quite different portrait than the one arising from this study. A psychological autopsy of mostly men (82%) suicides with a diagnosis of schizophrenia reported a low rate of substance abuse and of impulsive suicide, and few separations from a partner although conflicts with other members of the family were frequent [16]. Another unexpected finding was that childhood parental maltreatment, albeit somewhat high, was not associated with suicide when compared with non-suicidal patients with schizophrenia. The second study was a comparison of milk producers' suicide in Quebec and in French Switzerland [51]. It found few indicators of severe mental illness like psychosis, personality disorder and substance abuse. Professional financial difficulties were the leading motive of suicide, whereas work problems were rarely mentioned in the present study.

4.4 Limitations

This group of men's suicides was a convenience sample and may have missed cases of men without a family or estranged from it. Interviews were mostly restricted to one informant who, however, had gathered a lot of information from the network after the suicide. The absence of a control group of men is another important limit. Finally, the results cannot be generalized to other age groups, cultures, or to women.

5. Conclusions

There is a complex interaction of factors leading to suicide, among which psychopathology, childhood factors and social conditions. Treating pathology must be combined with support for coping with the consequences of behaviors that put suicidal persons at risk of being rejected. A combination of substance abuse, personality disorder, marital conflict and financial difficulties is an early warning and should be targeted in prevention. The high percentage of parental maltreatment also points to the necessity of investing in the well-being of pre-school children and in early intervention.

Author contributions

All authors contributed to the study, to the exception of two recently deceased, approved the final version for publication, and took responsibility for its accuracy and integrity. Concept and design: MT, MS, GT, AL. Acquisition of data: NC, AL, CV, RM. Interpretation of data: MT, MS, NC. Drafting of the manuscript: MT with revision from all authors.

Ethics approval and consent to participate

The Ethics Committees of the University of Quebec at Montreal and of the University Institute in Mental Health of Montreal (formerly Fernand-Séguin research center) approved the study and the consent form to participate.The participants were informed about the study procedures and a written informed consent was signed.

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Conflict of interest

The authors declare no conflict of interest.

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