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Article

Burnout amongst Crisis Hotline Responders: A National Cross-Sectional Survey in Canada during COVID-19

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Abstract: Introduction: There is a significant gap in accessibility to mental health care in Canada, worsened by various factors including rurality. Therefore, an important resource is crisis hotlines. Responders are hypothesized to be affected by the occupational phenomenon of burnout, partly due to the inherent nature of the job and partly due to the widespread negative mental health effects of the COVID-19 pandemic. Difficulties for crisis hotlines is expected to continue due to the ongoing fallout from the pandemic and from increased awareness of the Canada Suicide Prevention Line after introduction of a new 3-digit (9-8-8) number. This manuscript aims to characterize the population of Canadian crisis hotline responders and investigate the variables that contributed to burnout during COVID-19.; **Methods**: An online questionnaire assessed sociodemographic information, shift related variables, burnout, and current support methods utilized by crisis hotline responders across Canada. A qualitative component was also included to reflect participants' experiences.; **Results**: The cross-sectional assessment was completed by 136 participants. During COVID-19 Canadian crisis hotline responders reported relatively high levels of burnout/stress on both the Copenhagen Burnout Inventory and Professional Quality of Life Survey. Younger age emerged as the sole predictor of greater burnout amongst the variables we studied. The normal limitations of a cross-sectional survey apply. The COVID-19 pandemic may have affected the generalizability through several factors.; **Conclusions**: Findings suggest that Canadian crisis hotline responders, especially younger ones, require greater support to manage workplace burnout. Nevertheless, conducting comprehensive studies during times when there are no public health emergencies are warranted to understand the full scope of burnout in this population.; **Recommendations**: Based on our data, we offer 5 recommendations to mitigate the risk of burnout for responders and improve access to this important public health resource.

Keywords: crisis; suicide; hotline; burnout; quality of life; CBI; ProQOL; Copenhagen

1. Introduction

There is a significant gap in accessibility to mental health care in Canada [1,2]. In 2018, 5.3 million Canadians reported that they needed some form of mental health support in the past year; however, 1.2 million stated that their needs were only partially met and a further 1.1 million stated that their needs were fully unmet with the need for counselling being the least met need. Lack of available resources, limited number of mental health care providers, financial barriers, and stigma have been reported as potential reasons for this crisis [2,3]. A case in point is that therapy is often not covered by government run health insurance and private insurance typically will only cover 2-8 therapy sessions annually [3]. Certain populations have been found to be more vulnerable to suicide

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including those living in rural communities and ethnic minorities as found by two separate systematic reviews and meta-analyses [4,5]. Lack of access to care is hypothesized to drive the rural-urban difference in suicides, which may also result in a reduced chance of a mental health diagnosis being made [4]. Ethnic minorities are more likely to deal with language barriers, acculturative stress, and discrimination which affect their suicide risk and ability to access care [5].

As a result of these unmet needs an important accessible resource is crisis hotlines, which often act as a vital first point of contact for individuals experiencing various biopsychosocial crises. Crisis hotlines are designed to be free and often available 24/7 for anyone requiring immediate support and guidance [6–9]. The Canada Suicide Prevention Service is a national crisis hotline dedicated to suicide prevention [7]. Recently the government of Canada replaced the old 10-digit suicide hotline number with a new 3-digit (9-8-8) number showing that the government recognizes the importance of crisis hotlines as an accessible means for mental health support [10,11]. It is anticipated that there will be an increased awareness of crisis hotlines after the change, which will subsequently lead to an increase in call volume and necessitate measures to ensure the wellness of crisis hotline responders.

Burnout is an occupational phenomenon, recognized by the International Classification of Diseases-11, due to unmanaged chronic workplace stress [12]. It has also been defined as a psychological syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment among people who do 'people work' [13]. Maslach measures emotional exhaustion by primarily depletion of physical energy and fatigue, depersonalization is measured by indifference or a distant attitude toward one's work in general, and personal accomplishment is measured by one's feelings of competence and successful achievement in one's work [14]. Stress itself is defined as the physiological or psychological response to internal or external stressors that influences how people feel and behave [15].

Crisis hotline responders report a significant amount of stress and burnout due to continually dealing with a variety of highly emotional and intense calls, including suicidal ideation, sexual assault, and spousal abuse [8,16–20]. Due to fielding anonymous calls, responders often never know the eventual outcome of a caller's situation, which again can contribute to burnout through resulting frustration and disillusionment [16,20]. The negative impacts of burnout can result in high rates of responder absenteeism and turnover [16,17]. This results in longer wait times for callers, on average less experienced responders answering calls, and an overall decrease in the quality of support provided to callers [21]. The majority of crisis hotline responders are volunteers rather than trained mental health professionals. The lack of extensive training and experience combined with the stressors of balancing priorities related to work or school puts volunteer responders at an increased risk for burnout [8,16–19].

New challenges were brought to crisis hotline responders during the COVID-19 pandemic, such as an increase in the volume of calls and a change in the type of calls received, which likely contributed to a heightened burnout level in our study participants [22]. Pre-COVID, calls to crisis hotlines were predominantly reported to be regarding relationship issues (37%), loneliness (20%), or various fears and anxieties (13%) [22]. However, during the first wave of the pandemic there was a reported increase in calls regarding fear of infection from COVID-19 and loneliness, to which there was a lot of uncertainty, and those concerns were likely shared by responders themselves [22]. Suicide rates are highly sensitive to macroeconomic changes, particularly unemployment, which did increase during COVID [23]. In Canada, suicidal ideation was increased in those experiencing unemployment or worsening socioeconomic status and monetary inflation post COVID has continued to cause economic difficulties that may perpetuate this problem [23]. The pandemic also forced many responders to work from home, thereby reducing their access to support and increasing their risk of burnout [10].

Previous national studies on burnout in crisis hotline responders have produced mixed results as 2017 research from the UK found that compared to population norms, UK responders had lower levels of emotional exhaustion and depersonalisation and moderate to high personal accomplishment, while a 2016 Australian study found that 1 in 4 participants reported moderate to very high symptoms of general psychological distress [21,24]. To date, no study has investigated the

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national rates of burnout amongst crisis hotline responders in Canada, which we hypothesized would be high. This manuscript aims to characterise the population of Canadian crisis hotline responders and investigate the variables that contributed to burnout during the COVID-19 pandemic. Based on our data, we also offer recommendations to mitigate the risk of burnout for responders and improve access to this important public health resource.

2. Materials and Methods

2.1. Study Enrolment and Design

A cross-sectional assessment by questionnaire consisting of sociodemographic information, shift-related variables, burnout measures, organization of crisis hotlines, and responder training was administered online through SurveyMonkey from November 2021 to May 2022. A mixed methods design was implemented, which allowed for comparison of measure scores and the opportunity to capture unique experiences/responses in the qualitative component. The methodology of this study was informed by the STROBE guidelines for cross-sectional studies [25].

To reduce bias and obtain the largest sample possible, the authors invited all crisis hotline centres from every province and territory of Canada. Both English and French versions of the questionnaire were disseminated. Originally, only volunteers were invited but due to a low response rate, the invitation was also extended to paid staff.

Inclusion criteria were the following: current responder at a crisis hotline in Canada, >18 years old, proficient in English or French, and has been taking unsupervised calls for >30 days.

Crisis hotline centre managers were contacted through email/telephone. The managers informed their responders of this study opportunity and provided an information sheet that included a link to sign up if interested. A questionnaire was then sent that included the information sheet and a consent form. Informed consent was obtained from all participants involved in the study including permission to publish their anonymized data. A reminder email was sent out 14 days later for non-responders and partial responders. Withdrawal was possible at any time during the questionnaire and up to seven days after it closed. Four participants withdrew during survey administration and zero withdrew after they had finished responding.

2.2. Data Collection

Sociodemographic data was collected based on previously reported associations for burnout in crisis hotline responders [17,18]. Several custom-made questions were designed based on the existing literature to determine how the organization of crisis hotlines and specifically their training methods were supporting responders (e.g., Does the rigidity of your crisis hotline schedule regularly cause you stress?, Do you have access to ongoing training on how to manage calls?. Are you able to debrief with workplace peers after a difficult call?.) [8,9,16–18]. To avoid stereotyped response patterns, the question order for the Copenhagen Burnout Inventory (CBI) was mixed considering the CBI instructions [21].

Data were collected on average shift start time as it might be a possible contributing variable to burnout. We considered time of day to be categorical data as a higher number on a 24-hour clock does not necessarily infer a 'better' time. The shift times were therefore grouped by 4-hour windows (8-11am, noon-3pm, 4-7pm, 8-11pm, midnight-3am, 4-7am) in order to perform the analyses.

The Copenhagen Burnout Inventory (CBI) is a 19-item survey [21]. Thirteen items (6 personal and 7 work related) relate to physical and psychological fatigue/exhaustion and 6 client-related items relate to burnout. The three subscales, "Personal Burnout", "Work-related Burnout", and "Client-related Burnout", are scored from 0-100. Score >50 are considered a 'high degree of burnout' [26]. CBI scales have high internal reliability and are validated for use in any adult occupational group in any setting [27–30]. Burnout has previously been studied amongst employees in the human service sector by the 2005 PUMA study (Project on Burnout, Motivation and Job Satisfaction) [26]. CBI results from the current study were compared to the PUMA study.

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The ProQOL is a 30-item survey that measures a participant's compassion satisfaction and compassion fatigue, as a result of their work situation and life in general in the last 30 days [31]. The three, 10-item subscales, "Compassion Satisfaction Scale", "Burnout Scale", and "Secondary Traumatic Stress Scale", are initially scored from 10-50, then are converted to t-scores for analysis, and further categorized as "low" (<43), "average" (around 50), and "high" (>57) [19]. Compassion fatigue is measured by the burnout and secondary traumatic stress scales. The ProQOL has good construct validity [31,32]. ProQOL results were compared to average scores provided by the ProQOL manual [31].

To further understand participants' experiences with burnout, they were asked qualitative (i.e., open end) questions to describe (1) what contributes to their stress, (2) to what extent and how burnout affects their ability to work as crisis hotline responders, (3) their current use of available support methods, and (4) how they could be better supported as responders.

The questionnaire survey was piloted for feedback with one volunteer crisis hotline responder in a think aloud interview with appropriate suggestions implemented, such as inclusion of different employment categories, rewording of questions, and exclusion of certain questions.

2.3. Statistical Methods

A minimum sample size (n=116) was determined for multiple linear regression, with a medium effect size 0.15, alpha error probability 0.05, power 0.90, and five predictors. Calculations were performed using G*Power software. In cases where a participant had partially or completely missing data for a subscale of the CBI and/or ProQOL, those participants were omitted from the analysis for that particular subscale. A multiple linear regression was performed for variables (age, work experience in months, average hours worked per month, average length of day shift in hours, average length of overnight shift in hours) against the CBI and ProQOL subscale scores. ANOVA analyses were performed for work environment and average shift start time against the CBI and ProQOL subscale scores. A Tukey-Kramer test for post-hoc analysis was done when the initial result was statistically significant as group sizes were different. SPSS Version 28.0.1.0 was used to perform the quantitative analyses. NVivo 12 was used to perform the thematic analysis of the qualitative questions.

3. Results

3.1. Demographics

Twenty-two of 72 invited crisis hotline centres participated, which yielded 136 responders who completed the cross-sectional assessment. Eight out of 10 provinces participated and none of the territories participated. Sixteen responses were in French. The majority of participants were female (78.7%) and the ethnicity participants identified as the most was Caucasian (75.89%) followed by East Asian (5.67%) and South Asian (5.67%). Ontario had the most participants (40%) followed by Alberta (20.7%). The majority of participants worked on their crisis hotline in English (86.7%), 11.1% worked in French, and 2.2% alternated between English and French. The majority of participants had an education level above high school (97.8%) and 31.6% had completed some or all of a graduate degree. Participants mostly had a healthcare and social sciences education (55%), and while a variety of current professions were reported, many were again from healthcare and social sciences (including professional crisis hotline responders) (24%). A significant proportion of participants reported that they were students or retired (41%), which likely accounts for the discrepancy between those with an education in healthcare and social sciences versus those currently working in those fields. A minority of participants (8%) reported that working as a crisis hotline responder was their primary profession.

3.2. Burnout Level and Prevalence

Copenhagen Burnout Inventory (CBI): CBI personal, work-related, and client-related burnout mean scores were found to be below what is considered a 'high degree of burnout' (>50 points) (Table

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1). However, a significant number of participants did report a 'high degree of burnout' on the various CBI scales (Table 2).

Professional Quality of Life (ProQOL): Compassion satisfaction and burnout mean scores for the ProQOL were within the 'average' level of scoring, while the secondary traumatic stress mean score was within the 'high' level of scoring (Table 1). Burnout mean scores were average, with most participants scoring in the average level and an almost equal amount scoring in the low and high levels (Table 3). Secondary traumatic stress scores were high, with no participants scoring in the low level. Compassion satisfaction mean scores were on the high end of average and the majority of participants scored in the average or high levels.

Table 1. Copenhagen Burnout Inventory (CBI) and Professional Quality of Life (ProQOL) subscale scores for the current study compared to the PUMA study and ProQOL Manual.

	Current Study	**PUMA Study**
CBI	**Mean (SD)**	**Mean (SD)**
Personal Burnout	43.78 (19.61), n = 136	35.9 (16.5), n= 1898
Work-Related Burnout	41.57 (18.04), n = 136	33.0 (17.7), n = 1910
Client-Related Burnout	36.40 (16.13), n = 124	30.9 (17.6), n = 1752
	Current Study	**ProQOL Manual**
ProQOL	**Mean (SD)**	**Mean (SD)**
Compassion Satisfaction Scale	55.14 (7.97), n = 132	50 (10), n = 1187
Burnout Scale	49.59 (7.80), n = 131	50 (10), n = 1187
Secondary Traumatic Stress Scale	59.92 (7.00), n = 131	50 (10), n = 1187

Table 2. Proportion of participants with a high degree of burnout (>50 points) on Copenhagen Burnout Inventory (CBI) in the current study vs. PUMA study.

CBI Subscale	**≥50 points**	**n**	**% of current study participants with ≥50 points**	**% of PUMA participants with ≥50 points**
Personal Burnout	52	136	38.24%	22.2%
Work-Related Burnout	49	136	36.03%	19.8%
Client-Related Burnout	30	124	24.19%	15.9%

Table 3. Proportions of participants within each level of scoring of Professional Quality of Life (ProQOL) subscales vs. the ProQOL Manual listed norms.

ProQOL Subscale (n=131)	**Low (≤43)**	**Average (44-56)**	**High (≥57)**
Compassion Satisfaction Scale	10% vs. 25%	41.2% vs. 50%	48.9% vs. 25%
Burnout Scale	16.8% vs. 25%	65.6% vs. 50%	17.6% vs. 25%
Secondary Traumatic Stress Scale	0% vs. 25%	38.2% vs. 50%	61.8% vs. 25%

3.3. Variables Affecting Burnout

Age was the only demographic variable found to have a statistically significant effect on both CBI and ProQOL subscale scores (Table 4). Younger individuals were found to suffer more from burnout and lower compassion satisfaction; however, age had no effect on the ProQOL secondary traumatic stress scale ($p > 0.05$) (Table 4).

Table 4. Multiple linear regression for variables to predict CBI and ProQOL sub scores.

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	Coefficient R	SE	95% CI	p	Adjusted R^2
Age					
CBI Personal Burnout	-0.42	0.11	-0.64 – -0.20	0.001	0.17
CBI Work-Related Burnout	-0.53	0.11	-0.75 – -0.32	0.001	0.18
CBI Client-Related Burnout	-0.42	0.10	-0.63 – -0.22	0.001	0.13
ProQOL Compassion Satisfaction Scale	0.14	0.05	0.04 – 0.25	0.01	0.07
ProQOL Burnout Scale	-0.19	0.05	-0.29 – -0.09	0.001	0.11
ProQOL Secondary Traumatic Stress Scale	-0.08	0.04	-0.16 – 0.008	0.08	0.02
Work Experience (Months)					
CBI Personal Burnout	-0.03	0.07	-0.16 – 0.11	0.70	0.17
CBI Work-Related Burnout	0.07	0.06	-0.05 – 0.20	0.26	0.18
CBI Client-Related Burnout	0.02	0.06	-0.11 – 0.15	0.75	0.13
ProQOL Compassion Satisfaction Scale	0.004	0.03	-0.06 – 0.07	0.91	0.07
ProQOL Burnout Scale	0.02	0.03	-0.04 – 0.09	0.44	0.16
ProQOL Secondary Traumatic Stress Scale	0.002	0.03	-0.05 – 0.06	0.93	0.02
Average Hours Worked per Month					
CBI Personal Burnout	0.10	0.10	-0.11 – 0.30	0.36	0.17
CBI Work-Related Burnout	0.005	0.10	-0.19 – 0.20	0.96	0.18
CBI Client-Related Burnout	-0.01	0.10	-0.21 – 0.19	0.94	0.13
ProQOL Compassion Satisfaction Scale	0.04	0.05	-0.05 – 0.13	0.34	0.07
ProQOL Burnout Scale	0.005	0.05	-0.09 – 0.10	0.91	0.11
ProQOL Secondary Traumatic Stress Scale	-0.03	0.04	-0.11 – 0.05	0.45	0.02
Average Length of Day Shift (Hours)					
CBI Personal Burnout	-0.24	1.15	-2.53 – 2.04	0.83	0.17
CBI Work-Related Burnout	-0.85	1.08	-3.01 – 1.30	0.43	0.18
CBI Client-Related Burnout	0.72	1.05	-1.35 – 2.80	0.49	0.13
ProQOL Compassion Satisfaction Scale	-0.80	0.48	-1.76 – 0.16	0.10	0.07
ProQOL Burnout Scale	0.16	0.50	-0.83 – 1.16	0.75	0.11
ProQOL Secondary Traumatic Stress Scale	0.48	0.44	-0.39 – 1.36	0.27	0.02
Average Length of Overnight Shift (Hours)					
CBI Personal Burnout	0.95	0.84	-0.72 – 2.63	0.26	0.17
CBI Work-Related Burnout	0.65	0.79	-0.92 – 2.23	0.41	0.18
CBI Client-Related Burnout	-0.17	0.75	-1.66 – 1.32	0.82	0.13
ProQOL Compassion Satisfaction Scale	0.36	0.33	-0.29 – 1.00	0.27	0.07
ProQOL Burnout Scale	-0.07	0.37	-0.80 – 0.67	0.86	0.11
ProQOL Secondary Traumatic Stress Scale	-0.17	0.32	-0.81 – 0.46	0.59	0.02

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Average Number of Overnight Shifts/Month					
CBI Personal Burnout	0.24	1.85	-3.44 – 3.92	0.90	0.17
CBI Work-Related Burnout	0.15	1.75	-3.32 – 3.62	0.93	0.18
CBI Client-Related Burnout	0.61	1.67	-2.7 – 3.9	0.72	0.13
ProQOL Compassion Satisfaction Scale	-0.22	0.63	-1.47 – 1.02	0.72	0.07
ProQOL Burnout Scale	0.84	0.89	-0.92 – 2.6	0.35	0.11
ProQOL Secondary Traumatic Stress Scale	0.78	0.71	-0.63 – 2.19	0.27	0.02

During the COVID-19 pandemic 66 crisis hotline responders worked from home, 51 worked from an office, and 19 alternated. Prior to the pandemic 2 crisis hotline responders worked from home, 55 worked from an office, and 1 alternated, while 78 were not employed as a crisis hotline responder.

Work location (office, home, alternating between home and office) did not affect CBI and ProQOL scores (Table 5). Alternatively, shift start time predicted Secondary Traumatic Stress scale scores on the ProQOL (Table 6), however a follow-up Tukey-Kramer test did not yield any statistically significant differences across shift start times.

Table 5. The effect of work location on burnout scores.

Subscales	**ANOVA Result**
CBI Personal Burnout	(F(2, 133) = [1.57], p = 0.21)
CBI Work-Related Burnout	(F(2, 133) = [1.61], p = 0.20)
CBI Client-Related Burnout	(F(2, 121) = [1.30], p = 0.28)
ProQOL Compassion Satisfaction Scale	(F(2, 128) = [0.36], p = 0.70)
ProQOL Burnout Scale	(F(2, 128) = [0.05], p = 0.94)
ProQOL Secondary Traumatic Stress Scale	(F(2, 128) = [0.10], p = 0.91)

Table 6. The effect of work shift start time on Copenhagen Burnout Inventory (CBI) and Professional Quality of Life (ProQOL) scores.

Subscale	**ANOVA Result**
CBI Personal Burnout	(F(5, 127) = [1.57], p = 0.17)
CBI Work-Related Burnout	(F(5, 127) = [0.63], p = 0.68)
CBI Client-Related Burnout	(F(5, 116) = [0.81], p = 0.54)
ProQOL Compassion Satisfaction Scale	(F(5, 124) = [2.17], p = 0.06)
ProQOL Burnout Scale	(F(5, 122) = [1.77], p = 0.12)
ProQOL Secondary Traumatic Stress Scale	(F(5, 124) = [2.53], p = 0.03)

3.4. Professional Support and Training Modalities

Awareness of various support and training methods for crisis hotline responders and their utilisation is summarized in Table 7. The majority of study participants acknowledged available assistance and supportive resources, especially training opportunities on setting limits/boundaries with callers and possibilities to debrief with supervisors after a difficult call. Although clear guidelines and procedures to ensure consistency and efficiency in handling calls was recognized by study participants as important, they viewed flexible policies regarding shift scheduling as being one of the most important strategies for their well-being, as well as training, promoting, and supporting self-care as being the most important to mitigating burnout/stress.

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Table 7. Participants' knowledge and views on available support and training methods to mitigate work-related burnout/stress.

Questions on supports available and current responder training methods to mitigate burnout/stress				**Support methods viewed as being most helpful to mitigate burnout/stress** [a]	
	Yes	**No**	**I Don't Know**		**Tallied results**
Does the rigidity of your crisis hotline schedule regularly cause you stress? [b]	88 (65.7%)	39 (29.1%)	7 (5.2%)	Having a flexible schedule	83
Did your training involve a component on recognizing and managing burnout?	79 (58.1%)	41 (30.1%)	16 (11.8%)	Training on recognizing & managing burnout	62
Do you have access to ongoing training on how to manage calls?	103 (75.7%)	23 (16.9%)	10 (7.4%)	Access to ongoing training	61
Does your centre have a buddy system pairing up experienced and new responders for ongoing support?	64 (47.1%)	62 (45.6%)	10 (7.4%)	A buddy system pairing up experienced and new responders for ongoing support	59
Are you able to debrief with supervisors after a difficult call?	128 (94.1%)	4 (2.9%)	4 (2.9%)	Debriefing with supervisors after calls	54
Are responders at your centre asked to provide feedback on support desires?	75 (55.1%)	34 (25.0%)	27 (19.9%)	Having an avenue to provide feedback on support desires	51
Did you training involve a component on setting limits/boundaries with callers?	130 (95.6%)	5 (3.7%)	1 (0.7%)	Training on setting limits/boundaries with callers	50
Do you feel comfortable sharing any experiences of burnout with supervisors? [c]	96 (71.1%)	30 (22.2%)	9 (6.7%)	A comfortable environment to share experiences of burnout with supervisors	49
Are you able to debrief with peer responders after a difficult call?	99 (72.8%)	32 (23.5%)	5 (3.7%)	Debriefing with colleagues after calls	48
Do you have periodical check ins with supervisors to assess performance?	57 (41.9%)	74 (54.4%)	5 (3.7%)	Periodical check ins with supervisors to assess performance	47
Do you feel comfortable sharing any experiences of burnout with colleagues?	101 (74.3%)	22 (16.2%)	13 (9.6%)	A comfortable environment to share experiences of burnout with colleagues	44
Does your crisis hotline centre currently hold social activities for responders and supervisors?	61 (44.9%)	62 (45.6%)	13 (9.6%)	Organized social activity	36
Are you able to discuss any feedback with supervisors?	107 (78.7%)	15 (11.0%)	14 (10.3%)	Feedback and related discussion on your performance with a supervisor	34

3.5. Crisis Hotline Responders' Insight on Burnout and Related Support

Team collaboration and leadership were valued by a third of participants, acknowledging the importance of peer support and support from senior staff. The unpredictable nature of the job was the top reason cited for stress, despite the available training and supportive environment. Two thirds of participants reported burnout that led to an inability to offer best care to callers, and their own personal emotional distress, including fatigue.

4. Discussion

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4.1. Discussion of Results

This is the first study documenting higher rates of burnout amongst crisis hotline responders in Canada during the COVID-19 pandemic. A combination of the effects of the pandemic and the inherent nature of the job as a crisis hotline responder likely contributed to the observed higher emotional distress in this population compared to the general population. Higher rates of burnout were found on all CBI subscales (Table 1) compared to the 2005 PUMA study (Project on Burnout, Motivation and Job Satisfaction) which measured burnout in employees in the human service sector [26,28]. Moreover, a higher proportion of study participants in the current study reported a high degree of burnout (scored >50 points) compared to the PUMA study population (Table 2). Individuals in the human service sector may not face the same acute or chronic challenges as crisis hotline workers and these data help put into perspective the experiences confronted by crisis hotline responders.

Crisis hotline managers consistently indicated that they were short-staffed during the data collection period as responders had quit or gone on a leave of absence due to the increasing levels of stress both at the crisis hotline and in their personal lives. This was unsurprising, as other healthcare providers also experienced a high incidence of burnout during the pandemic [33–35]. The degree of secondary traumatic stress, which is work-related secondary exposure to extremely stressful events, also approached a high threshold in our study participants (Table 1) [36]. The above-mentioned profession-related challenges due to more complex and demanding phone calls might be one of the reasons for this, while another might be COVID-associated stress. There was a five times higher PTSD rate, related to COVID, seen in physicians during the pandemic, which was explained by the sharp increase in exposure to more severe cases of COVID-19 and related traumatizing experiences [33]. A high percentage of participants from our study suffered from high degrees of secondary traumatic stress and a low percentage had a low level of burnout (Table 3). All of this highlights the intensive use of crisis hotlines during the COVID-19 pandemic and implies the need for the implementation of additional or continuous training beyond the standard practices and/or more frequent check-ups/debriefs in times of public health emergencies for crisis hotline responders. Further robust training on suicide risk assessment, difficult topics (violent/sexual abuse, aggression, manipulation), available community resources, and how to recognize and manage burnout, may be of benefit as these were topics often cited in both the qualitative and quantitative components as leading to burnout (Table 7) (Table 8).

Table 8. Commonly identified themes of qualitative component.

Qualitative Question	Themes Identified	Number of times theme identified
Which of the support methods available to you do you feel help the most and why? (n=121)	Peer support	37
	Support from senior staff	33
	Supervisor feedback	15
	Further training	11
	Boundaries and personal limitations	4
	Breaks	3
What do you think contributes the most to your stress as a volunteer? (n=123)	Unpredictability and lack of self-confidence	38
	Frequent callers	17
	Lack of training	13
	Unknown outcomes	12
	Technology issues	10
	Time constraints	10
	Harassment from callers	9
	Overtime	8
How do you feel you could be better supported as a volunteer? If you feel that	Level of support is good	43
	Supervisor check ins	22
	Further training	19
	Improved staff relationships or bonding	11

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your support level is good, please state why. (n=124)	In-person support	7
	Shorter shifts	5
	Time off for mental health	4
How has burnout from volunteering affected your ability to be a crisis hotline responder? (n=121)	No burnout	43
	Unable to provide best care	22
	Fatigue	21
	Negative emotional response	10
Do you have any other comments you would like to add which have not been discussed? (n=61)	Further training	4
	Staff relationships or bonding	3
	More staff	3

Our findings indicate that participants had high levels of compassion satisfaction (the pleasure one derives from doing their work well (Table 3) [36]. They reported their satisfaction and fulfilment was derived from being able to help and make positive changes in others' lives during difficult times, despite the burnout and secondary traumatic stress they suffered from themselves, which is a finding consistent with previous literature [20]. Those that responded to the study during such a stressful period may have represented a uniquely resilient cohort, which would increase the levels of compassion satisfaction captured and reduce the levels of burnout captured. In kind, severely affected participants may have already quit/gone on a leave of absence or not responded to the survey due to burnout, which would have underestimated our results in terms of burnout and secondary traumatic stress.

We report high rates of burnout during the COVID-19 pandemic in younger crisis hotline responders (Table 4). This is in line with previous reports of increased burnout rates within younger employees including nurses and physicians and might be related to the fact that younger people are less experienced in handling extreme events [33,37]. There are several factors unrelated to being a crisis hotline responder that may contribute to this trend as well. In their professional lives, younger workers are more likely to deal with more psychologically and physically demanding jobs, lack of authority at work, job insecurity, and irregular work schedules [38]. In their personal lives, they may be dealing with challenging life events such as living on their own for the first time, getting their first jobs, being in their first serious romantic relationships, and having young children. Many of our participants were students, which may increase the significance of the effect of age on burnout in this population as the youngest crisis hotline responder will be younger than the youngest employee in other populations such as nurses or physicians. Crisis hotlines should, therefore, anticipate that younger age is a significant risk factor for burnout in this line of work, that younger workers may benefit from tailored support and training resources, and that supervisors may benefit from additional education and training to support the younger workers.

Within our qualitative component, our participants did voice their own concerns over isolation, while working from home, which reduced their ability to connect and support one another. As the pandemic is now over and people have returned to work in person, this issue seems to have resolved. Although our results did not yield any statistically significant difference in CBI or ProQOL scores related to working at home or in an office, in future times where working from home and isolation is required the increased risk for burnout should be considered and monitored (Table 5).

Shift start time was hypothesized to have potentially had an effect on burnout, due to various factors such as: the volume, type, and intensity of calls; the levels of support available; and the fatigue levels of the responders. However, no statistically significant effect was found between shift start time and CBI or ProQOL scores (Table 6).

The qualitative component also indicates that peer support (including specifically from senior staff) is highly valued, while the unpredictability of the job and lack of self-confidence is the most cited cause of burnout (Table 8). As initially suggested by the literature and corroborated by our data, the implementation of a 'buddy system' that pairs experienced responders with less experienced ones seems beneficial, as it was one of the support methods most often selected by participants as being

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desired while simultaneously being one of the least available (Table 7) [16,39]. This would allow for shadowing of live calls, ongoing training, and an avenue for peer support and peer bonding. As the challenges faced by responders have proven to be dynamic based on global factors this 'buddy system' may provide an avenue for more up to date feedback on what responders require for support.

Despite the overall heightened rates of stress and burnout amongst crisis hotline responders in our study, many participants did not score high on either the CBI or ProQOL. The qualitative component indicated this as well, as a significant proportion of participants cited that they felt their level of support received was adequate and that they didn't suffer from burnout (Table 8). This may be attributed to good organizational infrastructure, including effective training and supportive work environments. Awareness of available resources and participation in training opportunities seems to strengthen crisis hotline responders' resilience. Nevertheless, some discrepancies between researcher-posed questions (i.e., surveys) vs responders'-initiated themes (i.e., qualitative arm of this study) indicate the need to further refine the organizational infrastructure of crisis hotlines, especially during a public health crisis. Flexible shift arrangements for crisis hotline responders seems to be a crucial aspect to protect them from excessive job-related burnout and may help to retain them for longer and prevent future staffing shortages [20,39]. Furthermore, in addition to improving the training and support provided, increased promotion of supports that are already available seems necessary. Many participants reported they were unaware of their availability yet voiced their desire for same.

4.2. Limitations

The normal limitations of a cross-sectional survey apply, including risk of participant recall bias, and the fact that the data can only imply association but not causation. The majority of the study took place during the height of the COVID-19 pandemic, which may have affected the sample size, which was not as large as in other pre-pandemic national studies from the UK and Australia, and limits the generalizability of findings to times of public health crises [21,24]. The generalizability of our findings is also potentially limited to urban centres where a greater number of calls, but also greater number of resources are present. Overall, 58/72 centres agreed to participate, but only 22 centres (10 urban) had responders participate. None of the territories participated, and 109/136 participants worked for crisis hotlines in major urban centres. The most common reason for centres not agreeing to participate was their workload and a desire for the responders to focus on responding to calls given the COVID-19 related increase in call volume and decrease in active responders. Follow up emails and calls were sent to centres that did not reply at all, but this did not result in successful recruitment.

5. Conclusions

This is the first study to capture the rates of burnout amongst crisis hotline responders in Canada on a national scale. The COVID-19 pandemic led to relatively high rates of burnout amongst crisis hotline responders in Canada. Younger responders seem to be more affected than older counterparts. The support and training methods offered by crisis hotline centres were acknowledged, appreciated, and used by crisis hotline responders; however, their availability was not always known and further support was still desired. More flexibility regarding work arrangements was also highlighted by responders as a desire. Considering the increasing rates of burnout and staff turnover during this public health emergency, we feel that implementation of more tailored and robust training regarding burnout and associated supportive measures is warranted. Despite the limitations, the current study provides unique Canadian evidence on crisis hotline responders' functionality and well-being during this public health emergency. Recommendations are provided below that may help to retain responders for longer and prevent future staffing shortages, whether during times of public health emergencies or not.

6. Recommendations

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1. Increase promotion of already available support methods and emphasize components during training that pertain to mitigating burnout. Many participants reported they were unaware of their availability yet voiced their desire for them.
2. Provide more robust training on suicide risk assessment, difficult topics (violent/sexual abuse, aggression, manipulation), available community resources, and how to recognize and manage burnout. These were topics often cited as leading to burnout.
3. Provide additional supportive supervision through a 'buddy system' that pairs experienced responders with less experienced ones. This can allow for shadowing of live calls, ongoing training, and an avenue for peer support and peer bonding.
4. Recognition that younger age is a significant risk factor for burnout warrants tailored additional support for younger responders and their supervisors.
5. Improve flexibility of schedule, such as by providing more breaks, more time off, and options for shorter shifts. This may be difficult to implement if crisis hotlines are short staffed and as a result may be the last recommendation that could be potentially implemented.

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Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Individualized data is unavailable due to privacy and ethical standards held by KCL.

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