# "Who's Got My Back?": A Neo-Durk-HEIMIAN ANALYSIS OF SUICIDALITY AND PERCEPTIONS OF SOCIAL SUPPORT IN BRIT-ISH COLUMBIA AND SASKATCHEWAN

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Abstract. Critically reconsidering Durkheim's sociology of suicide, we develop a quantitative analysis of individual level data contained in the Canadian Community Health Survey (2009-2012) to investigate the relationship between perceptions of social support and suicidality in the Canadian provinces of British Columbia and Saskatchewan. We operationalize Durkheim's general sociology to investigate relationships between people's perceptions of the more objective aspects of social life (structural-institutional) and the more subjective dimensions of social life, on suicidal ideation. We find that people's perceptions of the quality of social support available to them significantly affect susceptibility to suicidality, lending credence to key aspects of Durkheim's general sociology of social pathology.

Keywords: Suicidality; Durkheim; Social Support; Social Pathology.

Résumé. À partir d'une reconsidération critique de la sociologie du suicide de Durkheim, nous développons une analyse quantitative des données individuelles de l'Enquête canadienne sur les mesures de la santé/Canadian Community Health Survey (2009-2012) pour étudier la relation entre les perceptions de support social et le taux de suicidalité dans les province canadienne de la Saskatchewan et de la Colombie-Britannique. En posant comme objet les idées suicidaires nous opérationnalisons la sociologie générale de Durkheim pour étudier la relation entre les perceptions qu'ont les gens des aspects objectifs de leur vie sociale (structurels et institutionnels) et les aspects les plus subjectifs de leur vie sociale. Nous en venons à valider la sociologie générale durkheimienne des pathologies sociales en montrant que les perceptions qu'ont les gens quant à la qualité de support social dont ils peuvent bénéficier affecte de manière significative leur susceptibilité à succomber aux idées suicidaires (suicidalité).

Mots-clés: suicidalité, Durkheim, soutien social, pathologie sociale

"...when [individuals] are in solidarity with a group that they love, they are more obstinate about living..." (Durkheim [1897] 2006: 225).

#### Introduction

Suicide is one of the 10 leading causes of death in Canada; among those who are under 24 years of age it is the second, and for those in the 25-44 age group it is the third leading cause of death. Suicide accounts for 20 percent of deaths for those under 24, and 16 percent for those 25-44; it ranked second among the five leading causes of death in 2012 (Statistics Canada 2015; Navaneelan 2012). The survey data analysed here revels a population in which 22.9% of persons report having thought seriously about suicide in the past twelve months. So, while suicide is widely regarded an indicator of social pathology, the prevalence of suicidal ideation (suicidality) should be too.

Over one hundred years after his death, Durkheim's book *On Suicide* ([1897] 2006, orig. *Le Suicide*) remains a significant resource for explaining suicide and societal pathology. However, Durkheim's own project, and much of the research that followed, focused on aggregated data of the relatively rare reports of accomplished suicides and did not systematically attend to what is now called "suicidality" at the individual level. Moreover, generations of scholars who followed Durkheim's methodology focus on objective social-structural explanations of suicide, neglecting subjective elements inherent in suicidality.

We revisit key components of Durkheim's sociology to incorporate the consideration of individuals' perceptions of the quality of their social life. Doing so is sociologically pertinent for understanding social pathology because it serves as an available indicator of the quality of social institutions that affect people's vulnerabilities to suffering, thus contributing to the analysis of the causes and consequences of such suffering (cf. Pearce 2001: 119-120). We focus on the subjective dimensions of social life to help explain suicidal ideation at the individual level, specifically, given a milieu of objective integrative social forces in social institutions (the practical domain perceived by individuals). In doing so we thus incorporate macro-micro explanations of suicide to analyse relationships between individual reports of suicidality and potentially pathological states of the social milieux in which individuals are imbricated. Our data source is the Canadian Community Health Survey (2009-10 and 2011-2012, hereafter "CCHS"), and the focus is on the provinces of British Columbia and Saskatchewan for which the most pertinent data has been collected. Results confirm that individuals' perceptions of accessible social support protect against suicidal ideation.

## **DURKHEIM AND SUICIDE**

The central thesis of *On Suicide* (Durkheim [1897] 2006) is that changes in the "social suicide rate" are caused by modal variations in "integration" and "regulation" in the main institutions in which people live (e.g., familial, political, religious, and occupational). Given the valorization of personhood, individualism, and humanity in modern Europe, the marked increase in the social suicide rate in Durkheim's view was symptomatic of societal pathologies emerging from the changes to social institutions (e.g., the waning impact of the family and religion), themselves being articulated by anomic developments conferred in industrial societal structures of the late nineteenth century Europe. Typically for Durkheim, integration broadly refers to collective activities tied to people's sense of group belonging, plus the power of reciprocal obligations (Durkheim [1897] 2006: 284). In contrast, regulation refers to how social/moral forces shape people's expectations about just and appropriate ways of living (Durkheim [1897] 2006: 269-270), placing limits on the satisfaction of desires that by definition have no natural limit and hence are infinite, such as those for money, influence, and power (Durkheim [1897] 2006: 281-2; Hodwitz and Frey 2016). Unchecked infinite desires condemn individuals to a "perpetual state of unhappiness" and disappointment (Riley 2015: 117). Integration acts predominantly from within the individual (e.g., at the level of emotion), and regulation predominantly from without as found in the case of sanctions, penalties and rewards conferred by a group. Together, variations in integration and regulation mitigate against, or foster susceptibility to, suicidogenic social currents. Integration and regulation generate the causes of four different social types of suicide: egotistical suicide, stemming from weak integration; altruistic suicide, stemming from excessive integration; anomic suicide stemming from weak regulation (Durkheim [1897] 2006: 325); and finally, the undertheorized fatalistic suicide, stemming from excessive regulation, "committed by those whose future is pitilessly confined," blocking personally fulfilling and socially beneficial life paths (Durkheim [1897] 2006: 305; Pearce 2001: 121-123). Durkheim argued that while there are four causal sources, they are generally complexly articulated in individuals' lives ([1897] 2006: 318-319).

The dominant pattern in advanced industrial societies was that "suicide rates vary inversely with the degree of integration of the so-

cial groups to which individuals belong" (Durkheim [1897] 2006: 224). However, Durkheim never systematically defined his concept of "integration" (Wray et al 2011: 597; Abrutyn and Mueller 2014: 346). Critically reconsidering "integration" in light of Durkheim's broader sociology, we take "integration" to mean the feature of social life that binds individuals together objectively-structurally to society as a whole through institutionalized and symbolized obligations, and subjectivelyrelationally to other persons in quotidian interaction, grounded especially in reciprocal obligations of care. Accordingly, integration can helpfully be viewed as existing on a continuum of "poles" in social reality: the "structural-institutional" pole is more "objective" since less rooted in any particular individual person's actions, experiences and circumstances. Alternatively, the "subjective" pole is shaped by the perceptions and activities of individuals and is more affected by them. The more subjective pole includes people's perceived and felt dependence on collective resources and supports, rather than simple self-reliance. Such subjective effects emerge from the "density" of institutional life. Family density for instance, refers to the intensity and quantity of relationships between family members as manifested in the regularity with which the family comes together and engages in shared activities, the result being common feelings, memories, and nomic goals (Durkheim [1897] 2006: 216-217; [1893] 1984: 135-142).

## CANADIAN RESEARCH ON SUICIDE

Most suicide research, consistent with Durkheim's own project, focuses on completed acts and the objective structural-institutional pole of integration, using aggregated data. These studies tend to confirm Durkheim's argument that social forces external to individuals are responsible for suicide and that pathological societal dynamics can exacerbate them (Durkheim [1897] 2006: 20-21; [1895] 1982: 115, 309-301). Canadian studies analyzing aggregate data confirm that family dissolution, household density, and immigrant status affect the suicide rate. Trovato's (1986b) study of suicide in Canada, based on mortality data and censuses in 1971 and 1981, showed that the married population had lower odds of suicide than those who were never married, widowed, divorced, and separated (cf. Leenaars and Lester 1999; Lester 2003; Desaulniers

A massive literature on Durkheim's approach to suicide has emerged since 1897. For accessible discussions of Durkheim's On Suicide ([1897] 2006) in light of key sociological debates, see Riley (2015), Pearce (2001), and Taylor (1982). Wray et al (2011) provide a comprehensive map of empirically oriented debates in the sociology of suicide.

and Daigle 2008; Burrows et al. 2011). In another study, he showed that Canadian provinces with below average divorce levels also had below average suicide rates in both 1971 and 1978 (Trovato 1986a). Further, after accounting for unemployment and female labour force participation, Trovato (1987) confirmed that family dissolution, measured by the divorce rate, was positively related to the Canadian suicide rate between 1950 and 1982, particularly for males (see also Trovato 1988). The effect of marital dissolution on the suicide rate was shown to be stronger for males than females for each of the 1951, 1961, 1971, and 1981 censuses. However, among the younger age cohort (15-34), the divorce rate was negatively related to suicide, particularly among females.

"Family density" has also been related to suicide (Durkheim [1897] 2006: 212-217). Family density, as the basis of a uniting bond, increases immunity against suicide more so than marriage (Durkheim [1897] 2006: 217). However, contrary to the expectation, Trovato (1992) shows that household size, as the most important predictor of the male suicide rate among 24 Census Metropolitan Areas (CMAS) in Canada, actually *increased* the suicide rate. This suggests that large households tend to produce chronic pressures. Nevertheless, Trovato argues that that this finding should be interpreted with caution because generalizing from CMAS aggregate data is unpersuasive.

Canadian research also shows that immigrant status tends to increase suicide (Trovato 1986a, 1986b; Trovato and Jarvis 1986). This finding is consistent with Durkheim's thesis about integration. Immigration is a disruptive process where social ties with family, friends, and institutions are severed (Trovato 1986c, 1986d). Moreover, immigrants tend to experience culture shock and changes to socially meaningful ways of life related to customs, food, clothing and values (Trovato and Jarvis 1986). Finally, immigration can be a stressful event because of challenges experienced in the integration and assimilation process in the host society (Nakhaie and Wijesingha 2015).

Although a focus on aggregate data dominates Canadian research on suicide, such analyses frequently lead to the ecological fallacy in which individual cases are explained by deduction from group characteristics (Hodwitz and Frey 2016: 239). Conversely, a focus on individual level data on *suicidality*, rather than suicide, helps one understand social pathology as something that happens to *individuals* who inhabit groups, institutions, and communities and is also as an activity actualizing social potentialities that are the conditions of existence of the act (Durkheim [1897] 2006: 306-307; Porpora 2015: 21-23). In addition, individual level data allows researchers to focus on the subjective component of integration concerning people's feelings about their life with others, es-

pecially as concerns reciprocal obligations of care and feeling supported and empowered by others.

## RECONCEPTUALIZING PERCEPTION IN NEO-DURKHEIMIAN TERMS

Stedman Jones (1996; 2001) and Riley (2015) note that Durkheim's sociology attends to the structures of social consciousness that inevitably shape, while not determining, how particular individuals in a society actively give meaning to, and subjectively evaluate, their experiences (Durkheim [1897] 2006: 344-345). Subjectivity is affected in an on-going way by supportive social forces such as common reference points, symbols, and feeling a sense of duty to others while simultaneously feeling confident in the duty of care owed by others (Abrutyn and Mueller 2014). While individuals are imbricated in their particular nexus of social forces, they inevitably place their own "personal stamp [imprint]" on them with their perceptions (Durkheim [1897] 2006: 306; [1895] 1982: 47), thus interacting with more objective social forces in a synthetic way. Perceptions then are not solipsistically produced ideas, but are perceptions of something, including the "thing-like" quality of symbols and language that allow individuals to interpret, evaluate, and navigate their social circumstances.

The quality of group life has a profound effect on the individual's perception and evaluation of life. For instance, "When [one] feels depressed the world *is* a depressing place. The boundary between internal experience and external, independent reality has been erased" (Pearce 2001: 148), the individual generalizing from their feeling to the state of their world, thus producing an egotistical perceptual and evaluative framework (Durkheim [1897] 2006: 225-226, 284; Riley 2015: 120). However, Durkheim did not have access to methodologically reliable individual-level data and his remarks about individuals' perceptions of their own malaise and societal malaise, while often insightful, could not be methodologically rigorous (see Durkheim [1897] 2006: 230-231, 346).

In reviewing previous work, we note that there are excellent Canadian studies supporting Durkheim's analyses that use individual level data focusing on suicidal ideation (see Clarke et al. 2008; Ramey et al. 2010; Oliffe et al. 2012; Frederic et al. 2012; Rasic et al. 2013; Fraser et al. 2015; McConnell et al. 2016). However, with few exceptions, previous studies are inattentive to the role of subjective forces in general and those pertinent to social support in particular. Clarke et al.'s (2008) study based on the *Community Health Survey*, 2000-2001, and McConnell et al.'s (2016) study based on the same data (2009-10) show that a sense of belonging to the community is negatively related to suicidal ideation. They did not however, evaluate the subject's perception of social support. The "sense

of belonging to the community" question measures socio-cultural integration, indicating identification with, and emotional attachment to the community (Banting and Soroka 2012). Alternatively, measures of the perception of social support point to a sense of obligation and reciprocity linking individuals to the community. The former measures how the individual belongs to the community while the latter points to perceptions of what community members do for the individual. Perceived social support has greater subjective intensity and may produce psychological and protective social benefits absent in perceptions about the more abstract sense of belonging to the community. Thus, the perception that there are people in whom one can truly confide and who love, likely induces enduring feelings of connectedness, protection, and trust, acting as the best therapies for eliminating loneliness, and destructive feelings and behaviours. Our argument also stresses that subjective measures of integration should mediate or moderate the effect of objective measures, and subjective and objective measures should also interact where the effect of subjective forces would be stronger for those groups who are least integrated such as the divorced, separated, and widowed, for example.

To our knowledge, of Canadian studies, only Armstrong and Manion (2013), has evaluated the importance of social support for suicidal ideation. They note that low perceived social support increases suicidal ideation among secondary school students in Eastern Ontario (but see de Man 1988). However, they did not include objective measures of integration, making it unclear if social support has an independent effect on suicidal ideation and/or the extent to which it may mediate the relationship between objective/macro measures of integration and suicidal ideation. Other Canadian studies have shown that the perception of social support protects against poor mental health independent of objective, structural-institutional predictors (Nakhaie et al. 2007; Nakhaie and Arnold 2010).

In sum, Canadian research on suicide has typically focused on aggregate measures, paying less attention to individual level data indicative of subjective perceptions of the quality of social life (e.g., integration and social support). Research has also generally neglected a more holistic Durkheimian model of social pathology that includes both structural-institutional and subjective indicators of well-being, including suicidality. Crucially, since people typically misconstrue the complex causes of their distress or depression because missing conscious, systematic reflection on their *social* world, answers to questions about perceptions of social support can help redress that limitation. Thus, an analysis of individuals' perceptions and assessment of their social life provides a new point of departure for assessing social dynamics and pathology by investigating responses to questions about various bases of social support such as family life. Accordingly, we aim to navigate between structural (objective) and

subjective dimensions of social life by attending to the available data about people's perceptions of the quality of their social milieux. The guiding research questions in this paper are: 1). Do subjective positive perceptions and evaluations of the quality of social life protect against suicidal ideation?; and, if so, 2). Do they have an independent effect on suicidal ideation when taking into account objective, structural-institutional and other predictors?

## **METHODOLOGY**

We use the most recent publicly available cycles of the CCHS (2009-10 and 2011-2012) administered by Statistics Canada since 2001. A more recent Canadian Community Health Survey (2013-14) does not include measures of subjective integration in combination with a measure of suicidality. This survey is a stratified multi-stage sampling of Canadian health regions and households. The combined household and person response rate for the 2009-10 survey was 74.4% and for 2011-12, 68.9%. The original data included 2111 respondents in British Columbia (hereafter, "BC") and Saskatchewan who answered a question about whether they had thought about suicide during the last twelve months (the measure for suicidality). However, 135 respondents did not answer questions about social support, 38 about food security, 15 about the sense of belonging to community, and smaller numbers for other variables in our model. The missing value imputation technique is used to estimate missing responses bringing our working sample to 2111. Results for samples with or without missing cases are almost exactly the same. Analyses are based on imputed missing cases and weighted sampling. Unfortunately, questions on perceptions of social support or suicidal ideation are not asked in each survey and/or in all provinces. Only the 2011-2012 survey included questions on perceptions of social support and suicidal ideation for Saskatchewan, and the 2009-2010 data includes these measures for BC. Therefore, our analyses are limited to individuals who are 15 years of age and over who participated in the suicidality and social support component of the survey in these provinces.

The dependent variable is suicidal ideation. Suicidal ideation, as a form of suicidality, is a phenomenon dealing with subjective perceptions, thoughts about, and evaluations of suicide (Abrutyn and Mueller 2014: 343-344; Klonsky et al. 2016). Attending to suicidality addresses the Durkheimian (and characteristically sociological point) that an individual's sense of the causes of their mental distress or depressed mood may or may not reflect the real causes of their distressing circumstances (Durkheim [1897] 2006: 148; Pearce 2001: 144). We limit any generalization to suicidal behaviours because few individuals who think about suicide ac-

tually commit it (Klonsky et al. 2016). Nevertheless, all those who commit suicide have had thoughts about it. Accordingly, our dependent variable, suicidal ideation, is measured based on one item from the General Mental Health Distress Scale (see Dennis et al. 2007). Respondents were asked if they have "ever seriously considered committing suicide or taking [their] own life?" and a subsequent question asked if "this happened in the past 12 months." We focus on suicidal ideation in the past 12 months. This measure is coded into: no thoughts about suicide = 0 and; serious thoughts about suicide = 1.

The subjective pole of integration is measured by the reported sense of belonging, and reported perceptions of social support. "Sense of belonging" is measured by a question asking respondents to rate their sense of belonging to the community on a four-point Lickert scale ranging from "very weak" to "very strong." Social support is measured by fifteen questions. Confirmatory factor analysis of these 15 indicators reveals that they all load on one factor with the first accounting for 67.2 percent of variance. The Chronbach's reliability score for these 15 measures of social support was .964 (see Table 1). These 15 measures were summed and divided by 15 thus keeping the original range.

Table 1. Factor Loading and Cronbach's Alpha for Measures of Social Support

Measures	Factor Loading
Has someone to listen	.778
Has someone to get advice about crisis	.775
Has someone who shows love and affection	.770
Has someone to have a good time with	.829
Has someone to give info about situation	.812
Has someone to confide in	.859
Has someone who gives hugs	.768
Has someone to get together w/to relax	.823
Has someone to give advice	.804
Has someone to do things to get mind off	.840
Has someone to share worries & fears	.842
Has someone to turn to for suggestions	.870
Has someone to do something enjoyable	.855
Has someone who understands problems	.840
Has someone who loves/makes feel wanted	.820
Percent variance	67.189
Reliability	0.964

The objective structural-institutional pole of integration is measured by marital status, household density, and immigrant status. Marital status is coded into divorced, separated and widowed = 1, single = 1 and married = 0 (reference). Household size is measured in five categories of "1"

to "5 or more" persons in the household providing a proxy for "family density." Immigrants are coded 1 and those born in Canada 0 (reference).

In order to test the importance of both objective and subjective dimensions of integration for suicidal ideation, we controlled for the effect of other variables shown to affect suicide directly and indirectly. These variables include: material deprivation such as food insecurity (McConnell et al. 2016; also see Trovato 1987, 1992; Trovato and Vos 1992; Clarke et al. 2007), education (Burrows et al. 2011; Denny et al. 2015), age (Trovato 1988; Trovato and Vos; Trovato and Jarvis 1986; Burrows et al. 2011); gender (Sakinofsky and Leenaars 1997; but see Elias et al. 2012); ethno-racial origins (Clarke et al. 2007; Denny et al. 2015); region (Gartrell et al. 1993), and stress (Clarke et al. 2008; Maimon and Kuhl 2008; Jalles and Andresen 2015). The public file of *CCHS* does not distinguish between various groups of ethno-racial origins, nor does it provide measures of religiosity or religious denomination.

Statistics Canada measures food (in)security with 18 questions that describe the food security situation of the household in the previous 12 months. Combined, these 18 questions capture three situations: 1). food secure: no, or one, indication of difficulty with income-related food access; 2). moderately food insecure: indication of compromise in the quality and/or quantity of food consumed; and 3). severely food insecure: indication of reduced food intake and disrupted eating patterns (Statistics Canada 2017). We distinguished those with severe food insecurity and moderate food insecurity, each coded 1, from those with food security coded 0 (reference group).

Those with a university degree, some university and college, and those with a diploma are each coded 1 and those with less than a high school degree are coded 0 (reference). Age is measured in fifteen categories starting at 15-18 to 80 years of age and over. Due to the curvilinear nature of the age-suicide relationship (Trovato 1986b), age is also squared and included in the multivariate models. Males are coded 1 and females 0 (reference). White ethno-racial origin is coded 1 and visible minority status is coded 0 (reference).

Evidence points to a significantly high suicide rate among the Aboriginal population on reserves in Alberta (Gartrell et al. 1993), First Nation adults in Manitoba (Elias et al. 2012), the Inuit population (Fraser et al 2015), and in the U.S. (Strickland 1997; Leenaars et al. 1993). Unfortunately, the public file of the survey excludes Aboriginal populations.

Finally, to consider psychological causes of suicidal ideation, we use two measures based on answers to questions ranking the stress level at work and life in general from 1 ("not at all") to 5 ("quite a bit"). Factor analysis confirmed that the reported data is loaded on one factor with the first accounting for 73.1 percent of variance and a Cronbach's Alpha of .632. These two measures were summed and divided by 5, thus keeping the original scale.

Table 2. Descriptives

Variables	Minimum	Maximum	Percent
Suicide ideation in past 12 months	0	1	22.89%
British Columbia	0	1	82.18%
Saskatchewan	0	1	17.82%
Males	0	1	42.21%
Females	0	1	57.79%
White	0	1	80.89%
Non-White	0	1	18.11%
Immigrant	0	1	15.86%
Canadian Born	0	1	84.14%
Widowed, Separated, Divorced	0	1	20.67%
Single	0	1	32.74%
Married	0	1	46.59%
Less than High School Diploma	0	1	15.22%
Diploma	0	1	15.20%
Post-Secondary	0	1	13.97%
University Graduate	0	1	55.61%
Food Secure	0	1	78.42%
Moderate Food Insecurity	0	1	10.32%
Severe Food Insecurity	0	1	11.26%

	Me	an	andard eviation
2	16	8.05	3.21
1	5	2.49	1.24
1	4	2.56	0.91
0.03	5	4.15	0.9
0.5	5	2.72	1.04
	1 1 0.03	2 16 1 5 1 4 0.03 5	Mean De

Table 2 shows that on average 22.9 percent of respondents have seriously thought about suicide in the past 12 months. It also shows that the sample includes more respondents from BC, those born in Canada, Whites, females, university graduates, and those with enough food to be considered secure. The average age of the sample is somewhere between 40 to 44 years. Approximately 46 percent of respondents are married, 33 percent single, and 21 percent are widowed, separated or divorced (hereafter "WSD"). The average household size, sense of belonging to community, social support, and stress are 2.5, 2.5, 4.2 and 2.7, respectively.

**Table 3. Means for Suicidal Ideation by Predictors** 

	Mean	Std. Deviation	N	Sig.
Provinces				
Saskatchewan	0.2247	0.4293	376	
British Columbia	0.2269	0.41828	1735	
Gender				
Females	0.2108	0.40806	1220	***
Males	0.2536	0.43531	891	
Age Groups				
under 30	0.2734	0.44612	560	Ref.
31 to 64	0.2194	0.41402	1376	*
65 plus	0.1606	0.36821	175	**
Racial Origin				
Non-White	0.2187	0.44446	403	***
White	0.2122	0.41068	1708	
Place of Birth				
Canadian Born	0.222	0.41574	1776	*
Immigrant	0.2654	0.44206	335	
Household Size				
1 person Household	0.2308	0.42174	506	**
2 person Household	0.1729	0.37844	733	***
3 person Household	0.2565	0.43727	398	
4 person Household	0.2388	0.4271	278	*
5 person Household	0.3629	0.48208	196	Ref.
Marital Status				***
Widowed, Separated, Divorced	0.3044	0.46107	436	
Single	0.2617	0.43983	691	***
Married and Cohabiting	0.1723	0.37763	984	Ref.
Education				
Less than Diploma	0.2746	0.44611	322	*
Diploma	0.3008	0.4592	321	**
Post-Diploma	0.2482	0.43632	297	
University Graduate	0.1918	0.39299	1174	Ref.
Food Security Status				***
Food Secure	0.1923	0.3912	1655	***
Moderate Food Insecurity	0.2107	0.41935	218	
Severe Food Insecurity	0.5	0.50097	238	Ref.
Sense of Belonging to Community	0.2500	0.4015	224	D. C
Weak Sense of Belonging	0.3598	0.4815	324	Ref. ***
Somewhat Weak Sense of Belonging	0.2305	0.42261	586	***
Somewhat Strong Sense of Belonging	0.1945	0.39501	901	***
Strong Sense of Belonging	0.1875	0.38991	300	***
Social Support				
Low Social Support	0.554	0.4991	80	Ref.
Medium Social Support	0.3664	0.48216	364	***
High Social Support	0.1833	0.38679	1667	***
Life and Work Stress Level				
Low Stress	0.1947	0.39616	726	Ref.
Medium Stress	0.2345	0.42391	1022	
High Stress	0.2813	0.45035	363	**
Total	0.2289	0.42021	2110	
Note: * P<.05; ** P<.01; *** P<.001,				

Table 3 shows average suicide ideation by predictors. P-values are based on One-Way ANOVA Scheffe tests. Results are generally consistent with the expectation that married respondents, those born in Canada, those with a greater sense of belonging, and social support, are less likely to have had a suicidal thought during the past twelve months than their counterparts. 17 percent of married respondents compared to 26 percent of single, and 30 percent of widowed, separated or divorced respondents, stated that they have had suicidal thoughts, resulting in significantly lower suicidal ideation among married respondents. Over 55 percent of those perceiving low social support, compared to 18 percent of those perceiving high social support, reported suicidal thought. The group reporting high social support is significantly different from those with average and low social support. About 36 percent of those with a weak sense of belonging to the community reported suicidal thought, a result significantly higher than that of the other groups of respondents with a higher sense of belonging. However, contrary to conventional Durkheimian expectations, there was little difference in suicidal thought among individuals living in households with a 1 to 4 person density, and individuals in all of these types of households were significantly *less* likely to report suicidal thought than those in households with 5 or more density.

Economic deprivation measured by food insecurity shows an expected effect: 50 percent of those living in households with severe food insecurity reported suicidal thought significantly higher than the approximately 20 percent for each of the other two types of economic households. Our findings thus diverge from Durkheim's original conclusion about habitual poverty being a practical limitation on desires thus holding subjective anomie in check (Riley 2015: 115-116). There was little noticeable effect of education on suicidal thought. Consistent with the patterns reported in the literature, males, immigrants, visible minorities, and younger age groups were significantly more likely to report suicidal thought than females, those born in Canada, Whites, and older age groups respectively. Finally, stress is also related to suicidal thought. The group reporting above average life and work stress reported substantially more suicidal thoughts than those with below average stress.

# Analysis With Controls

Table 4 shows logged coefficients and odds ratios of suicidal thought by predictors. Logistic coefficients are used to model outcomes that are nominal where the log odds of the dependent variable are modeled as a linear combination of predictor variables. When analyzing logistic coefficients, the effects of predictor variables should be interpreted in terms of their relative impact on the probability of one alternative over another. Positive coefficients indicate that an increase in the predictor variable increases the probability of choosing a given alternative over the baseline or reference category and vice versa. Odds are exponentiated yielding regression coefficients that are odds ratios for a unit change in the predictor variable. Odds ratios are identified under the column EXP(B). Odds ratios over 1 indicate a positive relationship and odds ratios below 1 denote negative relationships. Pseudo R-squared is also displayed to indicate the change in terms of loglikelihood from the intercept-only model to a model with predictors included. Although it does not convey the same information as R-Squared, similar interpretive reasoning applies: the higher the pseudo R-square, the better the model fits the data.<sup>2</sup>

Diagnostics did not reveal a violation of assumptions (multicollinearity was not a problem), and the variance inflation factor (VIF) was never above 2.

Table 4. Logged Coefficients and Proportion of Subjects Reporting Suicide Ideation by Predictors

		Model 1			Model 2			Model 3			Model 4			Model 5	
	В	Exp(B)	Sig	В	Exp(B)	Sig.	В	Exp(B)	Sig.	В	Exp(B)	Sig.	В	Exp(B)	Sig.
British Columbia	050	.951		162	.850		152	.859		157	.855		163	.849	
Age	156	.856		102	.903		680'-	.915		177	.838	*	250	622.	*
Age Squared	.007	1.007		.003	1.003		.003	1.003		900	1.006		.012	1.012	*
Male	.311	1.365	*	.378	1.459	* * *	.358	1.430	*	.294	1.342	×	.298	1.347	*
White	293	.746	*	194	.824		240	787.		206	.814		213	808	
Diploma	0.309	1.363		.378	1.460		.363	1.437		.444	1.558	*	.382	1.466	
Post-Secondary	-0.247	0.781		264	.768		312	.732		236	.790		240	787.	
University Graduate	-0.238	0.788		185	.831		184	.832		070	.933		146	.864	
Moderate Food Insecurity	0.064	1.066		023	716.		055	0.947		285	.752		315	.730	
Severe Food Insecurity	1.495	4.457	* *	1.399	4.050	*	1.320	3.742	*	.982	2.670	*	928	2.606	* *
Immigrant				.383	1.464	×	.356	1.427	*	.311	1.365		.310	1.363	
House Hold Size				0.204	1.226	* *	.207	1.230	* *	.267	1.306	* * *	.267	1.306	* *
Widow, Separated, Divorced				0.834	2.303	* *	.815	2.259	* * *	909.	1.831	* * *	.622	1.862	* * *
Single				.317	1.373	×	.318	1.375	*	.081	1.084		.113	1.120	
Sense of Belonging to Community							186	.830	*	680'-	.915		091	.913	
Social Support										562	.570	* *	554	.574	* *
Life and Work Stress													.233	1.263	* *
Constant	444	.165		-1.554	.211	* *	-1.115	.328	*	1.356	3.879	*	.926	2.525	
Nagelkerke R Square	0.104			0.134			0.141			0.188			0.197		
References: gender = female; white = non-white; education = less than high school; food insecurity = food secure; Immigrant = born in Canada; marital status = married	on-white;	education =	less thar	high sch	ool; food ir	security	= food se	cure; Immig	rant = bc	rn in Car	ada; marita	l status =	= married.		
* P<.05; ** P<.01; *** P<.001.															

In Table 4, we introduce five models, introduced hierarchically to evaluate the change in the predictor coefficients once new predictor(s) are included. First, we introduce control variables followed by structural-institutional measures of integration, and then subjective measures of integration including the "sense of belonging" in Model 3, and "perception of social support" in Model 4. Finally, we include a "psychological" variable in Model 5 in order to separate its effect from the "social" predictors.

Among control variables in Model 1, males report significantly higher, and the White group lower, suicidal thought than their counterparts. Province, age and education are not statistically related to suicidal thought. However, Model 1 points to the importance of poverty for increasing suicidal ideation. Food insecurity increases suicidal thought by 4.46 times, some of it being due to the moderating effect of marital status, the sense of belonging to the community, and social support (compare Models 1, 2, 3 and 4). Some of the changes stem from the interaction between food insecurity and other variables. For example, food insecurity interacted with both WSD (b=2.021, P < .001) and single persons (b=1.364, P <.01), increasing suicidal thought for these groups compared to married persons; a higher sense of belonging to the community decreased it among WSD (b= -.582, P <.001). However, food insecurity did not interact with social support, though results were in the expected direction (b = -.271, P <.108).

Although age is not statistically related to suicidal thought in Model 1, the following observations are relevant. As individuals become older, suicidal thought decreases. However, since age squared has a positive coefficient, there appears to be a bend in the age-suicidal thought relationship reversing the trend, indicating increasing suicidality. Bivariate analysis shows that the age-suicidal thought pattern reversed around the 45-50 age group and is consistent with recent reports (Navaneelan 2015). This pattern becomes more apparent in the final two models, Model 5 in particular, where the net effects of both age and age squared are statistically significant.

Model 2 includes objective, structural-institutional measures of integration. Immigrants and WSD are 1.46 and 2.3 times more likely to have suicidal thoughts than those born in Canada, and married respondents respectively (see Trovato 1986a, 1986b, 1991; but see McConnell et al. 2016). Single individuals also show a higher propensity for suicidal thoughts. Moreover, WSD interacted with the sense of belonging, decreasing suicidal ideation (b = -.786, P < .001), but not with singles, though results were in the expected direction (b = -.182, P < .202). While immigrants are more likely to have suicidal ideation, once a sense of

belonging is included in the model the immigrant effect becomes insignificant, suggesting as expected that some of the effect of immigrant status stems from their low sense of social attachment. However, when we tested the interaction between immigrant status and the sense of belonging, the results were opposite of the expectation (b = .575, P < .001): suicidal thoughts were higher among immigrants with a greater sense of belonging to community than those born in Canada (but see Trovato and Jarvis 1996).

Finally, Model 2 shows that, contrary to the conventional Durkheimian expectation, the higher the household density, the *higher* the suicidal thought (for a similar finding see Trovato and Jarvis 1992a). However, interaction analysis showed that this relationship was gender specific being negative for males (b = -. 265, P < .01). None of the objective measures of integration significantly interacted with the perception of social support, though coefficients were in the expected direction. Our analysis did not show an interaction between marital dissolution and gender (but see Trovato 1986b, 1987).

Model 3 shows that each level of "sense of belonging to the community" decreases suicidal ideation by 17 percent (1 - .830 = .17). However, the effect of the "sense of belonging" becomes insignificant when social support is included in Model 4. We surmise that perceptions about having others in which to confide, and who generally listen, love, and care for the individual, is a reminder of more proximate supports than a sense of belonging to an abstract notion of the community, too remote an idea to be perceived as an effective bulwark in difficult times. The disappearing effect of the sense of belonging, after accounting for perceived social support, also suggests that the findings by Clarke et al. (2008) and McConnell et al. (2016) on the importance of a sense of belonging for suicidal ideation were spurious.

Model 4 shows that perceived social support independently and negatively effects suicidal thought; one unit change in social support decreases suicidal thoughts by 43 percent (1 - .570 = .43). Given that this variable has five categories, its effect is substantial, reaching 2.72 times (1 + .43 \* 4 = 2.72) at the highest end after controlling for other variables. The inclusion of social support also alters the effect of age, being male, severely food insecure, immigrant status, and being an unattached individual (WSD and single). Although the findings suggest that these groups are protected against suicidal thought if they perceive accessible social support, the interactions between social support and these variables are not statistically significant. In other words, perceptions of social support mediate but do not interact with these variables.

Finally, as expected, Model 5 indicates that stress significantly increases suicidal thought by 26 percent per unit. Moreover, the effect of social support does not decrease further when stress in life or work is included. Model 5 also shows that the effect of stress is less than half that of social support, and that stress does not significantly alter the effect of other variables. Overall then, among various objective and subjective measures of integration, perceptions of social support and WSD are the most important predictors in accounting for reported suicidality variance. Severe food insecurity is also a strong predictor of suicidal ideation, increasing it by 2.6 times.

### DISCUSSION AND CONCLUSIONS

Above, we show that subjective and objective measures of integration are important to understanding suicidality as a social pathology, and that subjective factors have independent effects on suicidal ideation. First, our analysis confirms much of the previous analysis on the importance of objective measures of integration. Model 5 of Table 4 shows that WSD have 1.86 times, single individuals 1.12 times, and immigrants 1.36 times more suicidal thought than their counterparts. Family members control, monitor, encourage and oblige individuals to adopt healthy behaviours, discouraging them from unhealthy, risky or suicidal ones (see Thoits 2011a; Maimon and Kuhl 2008; Leenaars et al. 1993; Trovato 1986a; Trovato and Vos 1992; Denney et al. 2015; Armstrong and Manion 2013). Additionally, single and WSD individuals benefit from a strong sense of belonging to the community more than married groups. Individuals who experience the loss of social relations from divorce, separation, and widowhood, or who are single, can find strength in community attachment.

Immigrant status positively effects suicidal thought and its effect decreased and becomes insignificant when the perception of social support was included in the model: social support mediates the relationship between immigrant status and suicidality. However, we also showed that the interaction of immigrant status and "sense of belonging" was positive, suggesting that immigrants with higher community attachment have higher suicidal ideation than those born in Canada. While this may seem counter-intuitive, Durkheim also warned that excessive integration can minimize the necessary valuation of the self. As we have shown, it is not integration variance *per se* that produces suicidal ideation (see Abrutym and Mueller 2016). Rather, in this case, the effect of integration is more positive for those born in Canada than

for immigrants. Arguably, this can be explained by the change in immigrants' modes of attachment when they must minimize their sense of belonging to the home society to foster a new habitus and sense of belonging to the host society, something that those born in Canada need not do.

Contrary to the standard Durkheimian hypothesis we found that household size increases suicidal thoughts by 31 percent per unit. Trovato (1992) suggests that high household size results in overcrowding and psychological distress that may explain higher suicide rates. However, the effect of household size on suicidal ideation was significantly negative for males and positive for females. This finding suggested that patriarchal power relations in large households emotionally and instrumentally benefit men by placing greater obligations on women. These households tend to produce a "forced" and gendered division of social labour resulting in an unjust and stressful environment (see Durkheim [1893] 1984: 312-313; Pearce 2001: 128-129), negatively affecting women's well-being.

Crucially, we show that the measured subjective side of integration strongly effects suicidality. Each level of perceived social support decreases suicidal thought by 43 percent and each level of the "sense of belonging" by 9 percent (see Model 5 of Table 4). The latter is significant only when social support is excluded from the model. The effect of percieved social support is substantially larger than any other variable in the model—at its highest end it reaches 2.72 times. Findings on the importance of subjective measures of integration, particularly of perceived social support, are consistent with our reconceptualization of Durkheim and the literature on mental health (see Umberson, D. et al. 2010; Umberson and Montez 2010; Uchino 2009). Previous studies have shown that the relationship between actual support and well-being is weak or even contrary to the expectation, while the effect of perceived social support is strong and consistent (see Uchino 2009; Thoits 2011a, 2011b). This is perhaps understandable because actual social support is typically assessed in relation to a particular stressful event. On the other hand, perceived social support is rooted in individuals' generalizations based on multiple occasions of social support, thus indicating more crystallized bases of care. Moreover, recipients of actual social support may have a negative reaction to help offered if lacking opportunities to reciprocate, such assistance instead contributing to feelings of helplessness or indebtedness. In contrast, "unsolicited, subtly supplied, effectively invisible aid" may reduce psychological distress (Thoits 2011a: 150-151).

Finally, we found that severe food insecurity significantly increases suicidal ideation. This seemingly contradicts Durkheim's explanation that poverty is protective ([1897] 2006: 267). However, this finding can also be interpreted as consistent with Durkheim's diagnosis of modern society. First, food insecurity is anomic since it is socially irrational to have a wealthy OECD country subject people to precarity with a basic necessity of life, contributing to very significant vulnerabilities. Second, food insecurity, given the importance of regularly socializing over food, may result in less durable interpersonal relationships, depriving vulnerable people of opportunities for integration and for being seen as moral agents valued by the community (cf. Datta 2012). Furthermore, if individuals with food insecurity perceive that they deserve more because of their education and/or experience, then they also experience status incompatibility, role conflict, and identity confusion which may then increase their potential for suicidal ideation, attempts, and success (see Gibbs and Martin 1964; Martin 1968). We also found that the effect of severe food insecurity decreases when more subjective measures of integration are included in our regression model. Moreover, food insecurity interacted with a sense of belonging in the community, suggesting that those who experience food insecurity may have benefited from community food drives, hence fostering a sense of integration mitigating against suicidality.

In sum, by retheorizing a more comprehensive Durkheimian approach to suicidality we are able to account for institutional bases of integration as well as individuals' perceptions of the quality of institutional life, the community, and social support, the latter being an indicator of reciprocal obligations of care and regulative/moral forces. We confirm that both objective and subjective social forces are important in explaining suicidality, highlighting that the latter is somewhat more important than the former. Furthermore, we found that subjective and objective measures of integration interact (i.e., single, WSD, and immigrant status interacting with sense of belonging), and that the subjective measures mediate (i.e., social support for immigrant status) the effect of the latter on suicidal ideation. Finally, we showed that suicidality is strongly related to poverty and material deprivation as measured by food insecurity.

## LIMITATIONS

This study has three limitations. First, data are limited to Saskatchewan and BC because individual-level data at the national scale is unavailable

(provinces can opt in or out certain questions in the survey). Nevertheless, given that our findings are generally consistent with other national and international studies, we suggest that they might be generalized to Canada-at-large. Second, as noted above, the absence of data about Aboriginals in the public file of the Community Health Survey meant that they could not be included in our study. Third addressing issues of causal relationships between suicidality and completed suicides, while crucial to suicide prevention, is beyond the scope of this paper given our focus on suicidality itself as an indicator of social pathology. Moreover, there remains considerable debate about links between suicidality and suicide not least because of the substantially higher numbers for reports of suicidality relative to the small numbers of completed suicides (Klonsky et al. 2016). This raises important issues about how thoughts and emotions variously affect actions while also serving as a reminder of Durkheim's distinction between the social causes of "vulnerability" and "occasions" that spur suicide attempts (Pearce 2001: 142ff.) and the need to broaden the indicators of societal pathology.

Methodologically, Durkheimian-based studies of social pathology need to more systematically consider the limitations of Durkheim's model of advanced industrial societies. His problematization of increased suicide rates optimistically assumed that the displacements caused by rapid industrialization and urbanization in conditions of increasing organic solidarity would wane—the severity of the disruptions would be mitigated by the rational recognition of emerging humanistic and democratic social forces to be fostered. This optimism reveals Durkheim's inadequate understanding of the dynamics of capitalism (Pearce 2001). Indeed, capitalist development inherently destabilizes societies and social reproduction, generating precarity (Lazzarato 2015) and anomic development (Pearce 2001) adversely affecting vulnerable populations in particular.

## POLICY RECOMMENDATIONS

Our first set of policy recommendation concerns the need for more data and questions related to suicidality, integration, and regulation—this data is needed from all provinces and from Aboriginal populations on and off reserves. Social surveys of this kind will allow sociologists to have a more adequate, generalizable sense of the country's suicidal health, societal pathogenesis, and potentially, the structural contexts of people's vulnerability. For instance, questions about whether respondents have been regularly monitored and/or mentored by co-

workers, social workers or others, will help sociologists understand the impact of nomic practices.

The second set of policy recommendations is more political: the quality of social health needs to be part of our democratic conversation. Limiting the discussion of human well-being to matters of physical, mental, and economic health has obscured the extent to which quality social institutions affect human well-being. For instance, reminding the public that participation in community groups, whether these be oriented to religious activities, the arts, sports, or volunteering, are beneficial to well-being and empowering and protective for individuals, is not to be trivialized; their absence leads to vulnerability. The hegemony of a medical model of individual suffering itself then, can lead to the entrenchment of social pathology. Civic organizations and government agencies should ensure that there are group activities programmes, without cost and accessibility barriers, available to all, particularly to immigrants, and WSDs. In this respect, Canada Revenue Agency policy needs stronger language concerning "public benefit" for charitable organizations to better reflect the value of providing services free of financial and physical barriers. We also recommend that policy makers include food security as a social right in that individuals should never experience food shortage in a country that belongs to the Group of Eight. Last but not least, we recommend that the public file of the CCHS include the option of analyzing the Aboriginal population.

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# ACKNOWLEDGEMENTS

We wish to thank the peer reviewers and journal editor Kevin Haggerty for exceptional feedback—our analysis is stronger for it. The paper has also benefited from discussions between Dr. Datta and Frank Pearce. François Pizarro Noël and Katy Maloney were most helpful in the closing stages of writing. Finally, we wish to thank each other for countless Friday afternoon conversations about sociological methodology, Durkheimian theory, and the sociology of social pathology in contemporary capitalist societies. The usual disclaimer applies.

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