

# Social Estrangement and Psychological Distress before and during the COVID-19 Pandemic: Patterns of Change in Canadian Workers

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## Abstract

This article argues that the COVID-19 pandemic and associated social distancing measures intended to slow the rate of transmission of the virus resulted in greater subjective isolation and community distrust, in turn adversely impacting psychological distress. To support this argument, we examine data from the Canadian Quality of Work and Economic Life Study, two national surveys of Canadian workers—one from late September 2019 (N = 2,477) and the second from mid-March 2020 (N = 2,446). Analyses show that subjective isolation and community distrust increased between the two surveys, which led to a substantial rise in psychological distress. Increases in subjective isolation were stronger in older respondents, resulting in a greater escalation in psychological distress. These findings support a Durkheimian perspective on the harm to social integration and mental health caused by periods of rapid social change but also illustrate how a life course context can differentiate individual vulnerability to disintegrative social forces.

## Keywords

COVID-19, life course perspective, mental health, psychological distress, social integration

The global COVID-19 pandemic presented a threat to rival the Spanish influenza pandemic, more than a hundred years before (Sly 2020). In many nations, public health measures intended to prevent the spread of the virus and “flatten the curve” in terms of the rate of transmission resulted in extreme changes to norms of social contact (Lai 2020; Morgan 2020). In Canada, public gatherings were banned and citizens were urged to stay at home as much as possible (Government of Alberta 2020; Loewen 2020; Public Health Agency of Canada 2020). The purpose of the current study is to apply a synthesis of Durkheimian and life course perspectives to examine whether the social estrangement created by these public health measures resulted in an increase in psychological distress in the Canadian public, as well as whether social estrangement and consequent psychological distress were more predominant in older respondents.

To address these questions, we compare two national probability samples of working Canadians from the Canadian Quality of Work and Economic Life Study. The first was gathered in late September 2019; the second was gathered in 2020, from March 17 to March 23, when social isolation measures were enacted in Canada. Comparison of these two samples in measures of feelings of isolation, community distrust, and symptoms of psychological distress allow us to examine not only whether the average level of psychological distress increased in the

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population but also whether population differences in subjective social isolation and distrust explain the evolution in levels of distress. We therefore contribute to the research in the sociology of mental health by examining whether public health measures intended to stop the spread of the COVID-19 virus may also have had substantial adverse consequences for public mental health in North America.

## BACKGROUND

### *Social Integration and Mental Health during the Pandemic*

The primary basis of our study is in the fundamental Durkheimian insight that social integration provides a binding influence on suicide (Durkheim [1897] 1951). Subsequent theorizing has clarified this core insight, emphasizing that assimilation into a larger whole through a web of social attachments acts a bulwark against vulnerabilities that can provoke anxiety while also assuaging hopelessness and “metaphysical exigencies” that can occur in states of individual atomization (Abrutyn and Mueller 2014:334). These arguments cohere with a social-psychological perspective in which social disconnectedness develops into perceptions of social isolation that stimulate negative cognitive processes by acting as aversive figural signals of social vulnerability (Cacioppo and Cacioppo 2014; Dahlberg, Andersson, and Lennartsson 2018). Disintegratory conditions will therefore be reflected in a subjective state of social isolation that arouses feelings of anxiety and dread. Empirical research supports this general perspective, demonstrating that social detachment can spur perceptions of social isolation that are substantially associated with psychological distress (Cacioppo et al. 2011; Swader 2019).

A Durkheimian perspective further builds on these insights to explicate the negative consequences of rapid social change for mental health (Lester 2001). From this perspective, times of social turbulence weaken the social bonds of society (Berkman et al. 2000), thereby creating conditions that deplete societal integration (Zhao and Cao 2010). Similarly, expanding from a Durkheimian perspective, Abrutyn and Mueller (2016) argue that periods of social disruption can threaten or sever meaningful social ties, in turn creating subsequent negative emotions. Rapid social change that interferes with established patterns of social interactions therefore acts as a destructive influence on social integration, in turn enhancing feelings of social isolation in the population that

give rise to psychological discomfort. From this perspective, then, even if policies of social distancing were necessary to slow the spread of the COVID-19 virus, the degree to which these measures interrupted established patterns of social interaction was likely to create a disintegratory state that heightened subjective social isolation, thereby incurring mental health damages through increased psychological distress.

Despite empirical support linking individual levels of social integration to mental health outcomes (Turner and Turner 2013), as well as research demonstrating how contextual levels of social integration can influence individual outcomes such as suicidal ideation (e.g., Maimon and Kuhl 2008; Winfree and Jiang 2010), there is much less direct evidence for the consequences of societal change for integration and subsequent effects on mental health. One of the primary areas of empirical evidence comes from periods of economic turmoil (Cockerham 2017), as increasing rates of foreclosure and unemployment were associated with spikes in suicide rates following the Great Recession (Houle and Light 2014; Phillips and Nugent 2014). Closer to individual outcomes, meso-level changes in foreclosure rates following the recession were also inversely associated with individual mental health (Houle 2014; Settels 2020). An additional line of research linking social change to integration has argued that increases in birth cohort size and births to unwed mothers are causative agents in declining levels of social integration that affect suicide rates (O’Brien and Stockard 2006; Stockard and O’Brien 2002). It is notable, however, that much of this research is conducted purely at a contextual level and does not clearly tie rapid social change to individual experiences of social isolation. The current study therefore builds on this body of evidence to demonstrate whether increases in perceptions of social isolation contributed to a rise in psychological distress following the onset of the pandemic.

### *Consequences of the Pandemic for Community Distrust*

The disintegratory conditions of the pandemic may have had additional consequences for social estrangement by resulting in decreasing social trust. A focus on social trust is directed by Abrutyn’s (2019) recent proposition that disintegratory forces that work against social solidarity can lead individuals to feel an increasing sense of threat. This argument resonates with a social-psychological perspective on trust

that positions a willingness to make one's self vulnerable in uncertain situations as fundamental to a high degree of social trust (Baumert et al. 2017). Societal atomization that enhances a sense of threat will deter individual openness to vulnerability that is elemental in building trust. These general processes are highly relevant in the context of the COVID-19 pandemic because the novel requirements to maintain social distance signaled that the threat posed by members of the community inherently could not be contained, thereby fomenting distrust of others.

Evidence from prior pandemics supports these arguments. In particular, evidence from the Spanish influenza pandemic suggests that pandemics can lower levels of social trust (Aassve et al. 2020). For example, Barry (2005:329) describes how fear eroded social trust in Philadelphia during the Spanish influenza pandemic: "Fear began to break down the community of the city. Trust broke down. Signs began to surface of not just edginess but anger, not just finger-pointing or protecting one's own interests but active selfishness in the face of general calamity." Similarly, suspicion increased following the H1N1 outbreak in the late 2000s, as individuals infected with the virus were seen as putting others at risk (Gilman 2010). Consequently, because public leaders addressing the COVID-19 pandemic began to call for social distancing, and in particular warn people to guard against interactions with others outside of their homes and in the community, we expect distrust of others in the community to have increased as well.

Decreasing trust in members of the community is in turn likely to have substantial consequences for psychological distress. Trust in members of one's own neighborhood is associated with better mental health (Murayama et al. 2015; Tomita and Burns 2013; Wu et al. 2018) even when additional aspects of social trust are taken into account (Carpiano and Fitterer 2014). Trust in members of the community can be important for mental health by increasing a sense of being accepted and facilitating social support, as well as by reinforcing informal social control that serves to prevent harmful health behaviors (Fujiwara and Kawachi 2008; Glanville and Story 2018). Conversely, feeling suspicion and needing to be on guard of the people we come into contact with outside of our homes acts as a stressor that increases psychological distress (Ross 2011). In the context of increased isolation associated with the COVID-19 pandemic, neighbors may become a focus of social acceptance and sources of support, with the result that declining trust in the member of one's community will act as a further stressor that elevates

psychological distress. Within this research, we therefore examine whether increases in psychological distress following the onset of the COVID-19 pandemic were not only attributable to increases in subjective social isolation, but a rise in community distrust as well.

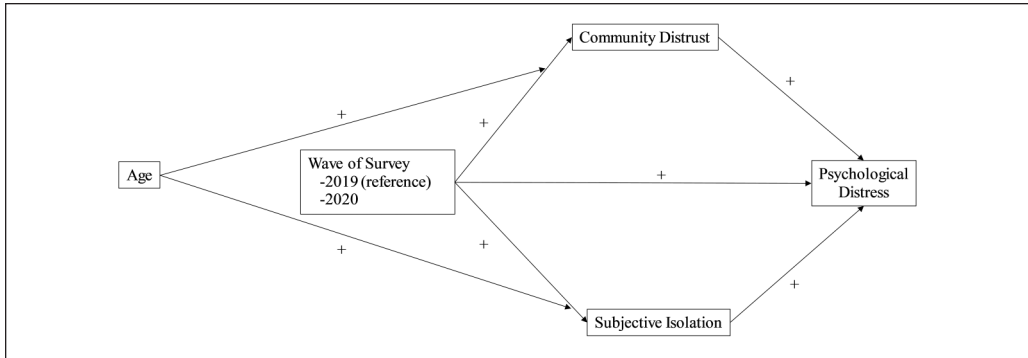
### *Integrating a Life Course Perspective*

Durkheimian perspectives on the consequences of societal change for social integration tend to frame these processes expansively, focusing on broad dimensions of social change and their summative integratory consequences. In the current research, though, we integrate insights from a life course perspective into the study of societal change and social integration. We suggest a concept of "integratory vulnerability," in which a life course context—and particularly cohort membership and the timing of societal events in the life course—critically differentiates individual vulnerability to disintegratory societal events.

We are guided to the pivotal role of integratory vulnerability by the strong emphasis of research in the life course perspective on the differentiated ramifications of large-scale economic events for individual lives (Elder 1999). A key paradigmatic principle of a life course perspective is that historical events can affect people differently depending on the timing of these events in the life course (Elder, Johnson, and Crosnoe 2003). Recent research exemplifies these patterns, demonstrating that the timing of the Great Recession as individuals entered the labor market had subsequent implications for individual earning capabilities (Atherwood and Sparks 2019).

The question of timing is especially relevant to the threat of the COVID-19 pandemic. The threat of serious adverse health consequences due to contraction of the virus are greater in older individuals (Heymann and Shindo 2020). Consequently, age may have been critical in determining integratory vulnerability: Older individuals may have isolated to a greater degree as a result of the pandemic and also may have experienced a greater distrust of members of their community due to their heightened vulnerability and subsequent fear of contracting the virus. Greater increases in feelings of isolation and distrust would in turn lead to more substantial gains in psychological distress.

Yet, differentiation in the consequences of historical events can also occur in part because the times in which individuals are born into and develop alter the resources and deficits that different birth



**Figure 1.** Model of Social Estrangement and Psychological Distress Following the Outbreak of COVID-19.

cohorts bring to bear in times of crisis (Elder 1994; Keyes et al. 2010). Birth cohorts may be differently equipped to meet the challenges of historical turbulence, in turn altering the degree to which historical events create negative repercussions across age cohorts. We suggest that we will observe differences in integratory vulnerability across cohorts due to a “digital divide” between cohorts in the comfort and use of internet and other electronic means of communications (Friemel 2016). A common characterization of the divide between cohorts is that younger cohorts, particularly those born before 1980, are “digital immigrants” and those born after the 1980s are “digital natives” (Nevin and Schieman 2020; Prensky 2001). In support of this characterization, research thoroughly documents that members of younger age cohorts have greater comfort and facility in internet use (Büchi, Just, and Latzer 2016; Hargittai and Dobransky 2017). Concomitantly, there tends to be greater reticence toward the use of social networking technology with age (Yu et al. 2016). Older users may find less social utility and fulfillment from social networking technology (Lüders and Brandtzæg 2017) and instead prefer face-to-face interactions (Yuan et al. 2016).

Evidence of cohort differences in comfort with and utility in online social interactions suggests that we will observe that patterns of change in subjective social isolation and community distrust differ across age cohorts. Members of younger cohorts may have been more able to gain social sustenance through online interactions and as a result felt less isolation in the wake of social distancing measures. Similarly, younger cohorts may have been more able to use social media and other electronic resources to gain information on

local spread of the infection and means of minimizing risk of transmission, which may in turn serve to lessen generalized suspicion of one’s neighbors.

It is critical to underscore that the sum of integratory vulnerability due to both age and cohort effects is that older individuals are likely to experience more substantial social estrangement. A lack of ability to differentiate between age and birth cohort in the current analyses is therefore not a substantial weakness because we expect moderation by both factors to be in the same direction. Within this research, we therefore examine whether increases in subjective social isolation and community distrust are observed more prominently in older individuals, leading to stronger increases in psychological distress.

### *Summary of Expectations*

Figure 1 summarizes the primary expectations of this article. First, the figure indicates that we expect to observe increased feelings of social isolation and community distrust in 2020, following the outbreak of the COVID-19 pandemic. Second, we expect that subjective social isolation and community distrust will be associated with greater psychological distress. Consequently, increases in subjective social isolation and community distrust will lead to a rise in psychological distress following the outbreak of the pandemic. However, Figure 1 also shows positive paths between age and the measures of social estrangement, which illustrates that we expect amplified increases in subjective social isolation and community distrust among older members of our study, in turn leading to greater increases in psychological distress.

## DATA AND METHODS

### Data

Data were derived from two waves of the Canadian Quality of Work and Economic Life Study (C-QWELS), national surveys intended to examine social conditions and well-being among Canadians who were currently employed. Data were gathered by the study authors in cooperation with the Angus Reid Forum, a Canadian national survey research firm that maintains an ongoing national panel of Canadian respondents. The C-QWELS I was gathered from September 19 to September 24, 2019, and was an online survey conducted among a representative sample of 2,524 working Canadians. The response rate was 42%, but results were statistically weighted according to the most current education, age, gender, and region census data to ensure a sample representative of working Canadians. The C-QWELS II was conducted from March 17 to March 23, 2020 with another nationally representative sample of 2,528 working Canadians. The response rate was 43%, and responses were similarly weighted. Of the 5,052 total respondents, 4,923 were retained in the analytic sample (2019 sample = 2,477; 2020 sample = 2,446), a retention rate of over 97%, suggesting little bias due to listwise deletion.

### Focal Measures

**Psychological distress.** Psychological distress was measured using five common symptoms of nonspecific psychological distress (Kessler et al. 2002): feel anxious or tense, feel nervous, feel restless or fidgety, feel sad or depressed, feel hopeless. Respondents indicated the frequency they experienced each symptom in the previous month, with response scales of all of the time, most of the time, some of the time, a little of the time, and none of the time. All responses were coded so that higher values indicated more frequent symptoms. Psychological distress was measured as the mean of responses to these five questions (Cronbach's  $\alpha = .877$ ).

**Community distrust.** Similar to other studies (e.g., Carpiano and Fitterer 2014; Fujiwara and Kawachi 2008), community distrust was measured using a single item that asked, "Thinking about the people in your neighbourhood—that is, the local area in which you live," how much do you agree or disagree with the statement, "My neighbours can be trusted." Response choices were strongly agree, somewhat agree, somewhat disagree, strongly disagree. Responses were

coded so that higher values indicated greater disagreement, thereby creating a measure of community distrust. However, a small proportion of respondents indicated strong disagreement, and ancillary analyses showed that standard errors were substantially inflated due to the small number of these cases. We therefore combined responses of strongly disagree and disagree into an overall "disagree" category.

**Subjective social isolation.** Subjective social isolation was measured using one item that asked respondents how often they felt "isolated from other people" in the previous month, with the same response categories as the distress items.

**Age.** Age was measured in years of age, with a top value of 74 to avoid the undue influence of sparse values of high age in tests of moderation. Age was centered over a value of 40, the approximate median age in the sample, to provide clearer interpretations of the interactions.

**Wave of survey.** Membership in the surveys was indicated by a dichotomous variable in which a value of 0 indicated the respondent participated in the September 2019 survey and a value of 1 indicated the respondent participated in the March 2020 sample. In the results, these were referred to as the 2019 and 2020 samples, respectively.

### Control Measures

**Generalized trust.** To take broader social trust into account, respondents were asked a common survey question on social trust: "Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people? Please tell me what you think, where 1 means you can't be too careful and 5 means most people can be trusted." In the analyses, an indicator of the lowest level of trust was contrasted with a set of dichotomous indicators for each of the other categories of trust. Ancillary analyses showed that community and generalized trust were not substantially correlated, suggesting that each were distinct indicators of trust.

**Employment conditions.** Because analyses were based on two samples of working Canadians, employment conditions were taken into account to address the degree to which occupational experiences contributed to psychological distress as well as the extent to which individuals may have experienced changes in work conditions and scheduling due to working at



home. Occupational class was measured using a five-category classification—professional, administrative, sales, clerical, and laborer—with professional as reference. Number of work hours in main job were controlled using a set of dichotomous indicators, in which part-time ( $\leq 29$  hours or less) was contrasted with full-time (30 – 49) and extended hours ( $\geq 50$ ). Working more than one job was controlled by a dichotomous indicator in which the higher value indicated that the respondent worked more than one job. Degree of working at home was taken into account using a measure in which individuals who never worked at home were contrasted to categories of a few times a year, about once a month, about once a week, more than once a week, and every day/mainly work at home. The degree of control over work scheduling was taken into account by asking respondents, “How much control do you have in scheduling your work hours?” with responses of none contrasted to very little, some, a lot, and complete control.

*Familial statuses.* Familial statuses that may provide support and ward off social estrangement were taken into account with a dichotomous indicator in which the higher value indicated that the respondent lived with a romantic partner and a dichotomous variable in which the higher value indicated that the respondent lived with at least one child under the age of 18.

*Social and economic statuses.* Social and economic statuses that may contribute to both social estrangement and psychological distress were also controlled, including education, income, economic hardship, gender, and minority status. Education was operationalized as a set of categories in which individuals with a university degree were compared to a category of high school, some university or college/trade school, and graduated from college or trade school; because less than 2% of the weighted sample at each wave had less than a high school degree, these respondents were grouped with those with a high school degree. Income was measured as a set of categories in which \$150,000 or more in household income was compared to less than \$25,000, \$25,000 to less than \$50,000, \$50,000 to less than \$100,000, and \$100,000 to less than \$150,000. Because individuals who do not provide income often reside in high-income categories and taking nonresponse into account would help to control for biases in self-reports, missing income was considered as an additional analytic category. Furthermore, because the measure of income did not address more proximal experiences of economic

deprivation that may have been associated with the pandemic, we also included a commonly employed measure of economic hardship that has been shown to be a valid indicator of physical and mental health (e.g., Kahn and Pearlin 2006). Respondents were asked, “How do your finances usually work out by the end of the month?,” with responses of a lot of money left over used as a comparison group to not enough to make ends meet, barely enough to get by, just enough to make ends meet, and a little money left over. Gender was coded as 0 = men, 1 = women. Racial and ethnic minority status is typically measured in Canada using the designation of “visible minority” (Little 2016), and in keeping with this convention, visible minority status was measured by asking respondents, “Would you say you are a member of a visible minority here in Canada (in terms of your ethnicity/race)?” Responses were indicated by a dichotomous variable in which the higher value indicated visible minority.

### *Plan of Analysis*

All primary analyses were conducted in Stata 16.1. Analyses were conducted in three stages. In the first stage, we examined bivariate differences between the focal study measures in the two waves of the surveys. In the second stage, we examined predictors of community distrust and subjective social isolation in multiple regression models. Each outcome was examined using two models. First, we examined between-wave differences in the outcome independent of the control variables. Second, we tested whether between-wave differences in each measure differed by respondent’s age by testing an interaction between wave of survey and age. Because both community distrust and subjective social isolation were based on an ordinal response scale, we utilized ordinal logistic regression in the multiple regression analyses (Hoffmann 2016). Ordinal logistic regression models depend on an assumption that the change in risk based on a predictor is the same between each category of the dependent variable (Williams 2006), and preliminary analyses that applied a Brant test (Brant 1990) supported this assumption for the association between wave of survey and both outcomes as well as for the interaction term.

In a third stage of analyses, we used ordinary least squares (OLS) regression to examine the association between wave of survey and psychological distress. We first examined between-wave differences in psychological distress while holding constant all background controls. In additional models, we sequentially controlled for community distrust

and subjective social isolation, which demonstrated the extent to which each explained between-wave differences in psychological distress (MacKinnon 2008). To account for the noncontinuous nature of the measures of community distrust and subjective social isolation, each measure was entered into the regression model as a set of categorical indicators, with strong trust or no sense of isolation as the reference group, respectively. We then repeated this process by removing the measures of community distrust and subjective social isolation and testing an interaction between wave of survey and age, which demonstrated the extent to which between-wave differences in psychological distress differed by age. A reintroduction of the measures of community distrust and subjective social isolation into the model examined the extent to which these factors explained age-based contingencies in between-wave changes in psychological distress.

## RESULTS

Table 1 displays the distribution of measures for each survey wave and for the combined sample. Table 1 shows a shift in both community distrust and subjective social isolation toward greater distrust and isolation. Generalized trust appeared relatively stable, however, which reflects the importance of considering trust in specific targets with whom an individual may interact rather than more diffuse perceptions of trust. Table 1 also shows that mean levels of psychological distress increased between the two waves. Although the difference in distress is not statistically significant, ancillary analyses showed that the lack of statistical significance was largely due to small compositional differences between the two surveys. For example, simply controlling for compositional differences in age and presence of children led to an estimation of significant greater distress in March compared to September. We therefore turn to the multivariate analyses that examine differences between the two waves of surveys when taking these compositional factors into account.

### *Multiple Regression Analyses*

Table 2 displays the results of the ordered logistic regression analyses of community distrust and subjective social isolation. Model 1 shows that, independent of the controls, respondents in 2020 evidenced a significantly increased risk of community distrust. Being a respondent in the 2020 survey was associated with almost 50% greater odds of reporting a higher level of distrust than being a

respondent in the 2019 sample. However, these between-wave differences did not vary by age; the interaction between wave of survey and age in Model 2 is not significant.

Turning to subjective social isolation, Model 3 shows that respondents in 2020 also had increased risk of subjective social isolation. Being a respondent in the 2020 sample was associated with 36% greater odds of reporting a higher level of isolation than being a respondent in the 2019 sample. Furthermore, between-wave differences in subjective social isolation differ by age; Model 4 shows that the interaction between wave of survey and age is statistically significant.

To explicate this interaction, Figure 2 presents the estimated odds ratios for between-wave differences in subjective social isolation across the range of ages in the survey. This figure shows that, for respondents in their 20s and 30s, the odds ratios for between-wave differences in subjective social isolation are relatively small and are not statistically significant for those in their 20s. By age 40, however, respondents in 2020 had 33% greater odds of reporting increased feelings of isolation, and this difference was significant. The between-wave odds of subjective social isolation increased further in strength in later age cohorts. Respondents at age 50 had almost 50% greater odds of increased feelings of isolation in 2020, and by age 60, the odds were 63% greater in 2020. In accordance with our expectations, then, the increased risk of subjective social isolation following the COVID-19 outbreak was greater among older respondents.

Table 3 presents the results of the OLS regression analyses of psychological distress. Model 1 shows that between-wave increases in distress are significant, independent of controls. To demonstrate the strength of this difference, we examined the semistandardized difference, in which the metric difference is divided by the standard deviation of distress (McClendon 1994), thereby expressing this difference in units of standard deviations of distress. When semistandardized, this difference was .069. It should be emphasized that this difference was observed in the population of working adults in a relatively short six-month period, and subsequent analyses will demonstrate that this increase is a combination of much stronger and much weaker age-variegated changes in distress.

Model 2 controls for categories of community distrust. When compared to respondents who reported strong agreement with trust in neighbors, respondents in the combined disagreement category reported significantly higher levels of psychological

**Table 1.** Sample Descriptives.

	2019 Survey	2020 Survey	Merged Surveys	<i>p</i>
Distress	2.357	2.404	2.380	
Community distrust				
Strongly agree with trust in neighbors	.348	.265	.307	
Somewhat agree with trust in neighbors	.502	.550	.526	
Somewhat disagree/strongly disagree with trust in neighbors	.150	.185	.167	***
Subjective isolation				
None of the time	.401	.345	.373	
A little of the time	.263	.245	.254	
Some of the time	.209	.249	.229	
Most of the time	.104	.126	.115	
All of the time	.023	.036	.029	***
Age	41.967	41.914	41.940	
Generalized trust				
You can't be too careful	.122	.101	.112	
2	.167	.178	.172	
3	.400	.390	.395	
4	.243	.265	.254	
Most people can be trusted	.068	.067	.067	
Occupational class				
Professional	.398	.404	.401	
Administrative	.156	.124	.140	
Sales	.188	.195	.192	
Clerical	.181	.170	.175	
Laborer	.077	.107	.092	***
Work hours				
Part-time	.183	.218	.200	
Full-time	.682	.657	.670	
Extended hours	.135	.125	.130	*
Working multiple jobs				
One job	.775	.776	.776	
More than one job	.225	.224	.225	
Work at home				
Never	.353	.334	.343	
A few times a year	.108	.112	.110	
About once a month	.068	.081	.074	
About once a week	.113	.113	.113	
More than once a week	.163	.171	.167	
Every day/mainly work at home	.195	.190	.193	
Control over work scheduling				
None	.158	.141	.149	
Very little	.197	.200	.198	
Some	.273	.267	.270	
A lot	.233	.245	.239	
Complete control	.140	.147	.144	
Living with romantic partner				
Partner	.648	.648	.648	
No partner	.352	.352	.352	

(continued)



**Table 1.** (continued)

	2019 Survey	2020 Survey	Merged Surveys	<i>p</i>
Any children in household				
No children	.678	.618	.648	
Children	.322	.382	.352	***
Education				
High school	.096	.121	.108	
Some university or college/trade school	.206	.217	.211	
College/trade school	.230	.231	.230	
University degree	.469	.432	.450	*
Income				
< \$25,000	.061	.068	.065	
\$25,000 to < \$50,000	.146	.136	.141	
\$50,000 to < \$100,000	.302	.304	.303	
\$100,000 to < \$150,000	.222	.229	.226	
≥ \$150,000	.172	.163	.168	
Missing income	.096	.100	.098	
Finances at end of month				
A lot of money left over	.113	.109	.111	
A little money left over	.406	.425	.415	
Just enough to make ends meet	.256	.249	.253	
Barely enough to get by	.172	.162	.167	
Not enough to make ends meet	.053	.056	.054	
Gender				
Men	.513	.514	.513	
Women	.487	.486	.487	
Visible minority				
Not a visible minority	.873	.863	.868	
Visible minority	.127	.138	.132	

Note: *N* = 4,923 (2019 sample = 2,477; 2020 sample = 2,446). Descriptives are weighted. Means are presented for continuous measures, proportions for categorical measures. Data are from the Canadian Quality of Work and Economic Life Study.

\**p* < .05, \*\*\**p* < .001, two tailed.

distress. The difference in distress for individuals in the somewhat agree category is weaker, however, and not statistically significant. These results showed that it is marked distrust in neighbors—as indicated by disagreement with a statement of trust in neighbors—that is the clear distressing aspect of community distrust. The difference in distress for individuals who distrusted neighbors was also relatively strong, with a semistandardized value of .178. Furthermore, the between-wave difference in distress declined almost 15% from the previous model, from .060 to .052, and reduced in significance from *p* < .01 to *p* < .05, indicating that increased community distrust contributed to explaining between-wave differences in psychological distress (MacKinnon, 2008). There was also a commensurate decline in the

semistandardized between-wave difference in distress, from .069 to .060.

Model 3 introduces controls for categories of responses to subjective social isolation, with no feelings of isolation as the reference group. All categories of feelings of isolation are significantly associated with greater distress. Furthermore, these differences are quite substantial. Ancillary analyses showed that the semistandardized coefficient feeling isolated some of the time was .835, whereas the semistandardized coefficient for feeling isolated most or all of the time was 1.33 and was 2.024 for all of the time. There is also a substantial decrease in the between-wave difference in psychological distress when feelings of isolation are taken into account, as the between-wave increase in distress is entirely

**Table 2.** Ordinal Logistic Regression Analyses of Community Distrust and Subjective Social Isolation.

	Community Distrust						Subjective Social Isolation										
	Model 1			Model 2			Model 3			Model 4							
	b	SE	exp(b)	p	b	SE	exp(b)	p	b	SE	exp(b)	p	b	SE	exp(b)	p	
<i>Focal predictors</i>																	
Change from 2019 to 2020	.391	.060	1.479	***	.379	.062	1.461	***	.311	.057	1.365	***	.299	.058	1.349	***	
Age	-.011	.003	.989	***	-.013	.004	.987	***	-.032	.002	.968	***	-.037	.003	.964	***	
Survey × Age					.006	.005	1.006						.009	.005	1.009	*	
<i>Control measures</i>																	
Generalized trust <sup>a</sup>																	
2	-.138	.130	.871		-.142	.130	.867		-.286	.126	.751	*	-.291	.127	.748	*	
3	-.495	.116	.609	***	-.501	.117	.606	***	-.505	.115	.603	***	-.511	.116	.600	***	
4	-1.119	.124	.326	***	-1.123	.124	.325	***	-1.616	.121	.540	***	-1.618	.121	.539	***	
Most people can be trusted	-1.612	.164	.199	***	-1.617	.164	.198	***	-.995	.158	.370	***	-.999	.158	.368	***	
Occupational class <sup>b</sup>																	
Administrative	-.080	.096	.923		-.081	.096	.922		.130	.090	1.139		.129	.090	1.137		
Sales	.073	.091	1.076		.076	.091	1.079		.136	.087	1.146		.139	.087	1.149		
Clerical	.072	.102	1.075		.072	.103	1.075		-.083	.098	.920		-.084	.098	.920		
Laborer	.162	.108	1.176		.163	.108	1.177		-.030	.100	.971		-.025	.100	.975		
Work hours <sup>c</sup>																	
Full-time	.093	.085	1.097		.090	.085	1.094		-.120	.084	.887		-.125	.084	.883		
Extended hours	-.148	.121	.862		-.154	.121	.857		-.132	.114	.876		-.139	.115	.870		
Working multiple jobs	-.100	.074	.905		-.102	.074	.903		.130	.069	1.139		.128	.069	1.137		
Work at home <sup>d</sup>																	
A few times a year	.019	.104	1.019		.021	.105	1.021		.095	.099	1.099		.097	.099	1.102		
About once a month	.064	.115	1.066		.069	.115	1.071		-.065	.117	.937		-.057	.117	.944		
About once a week	.007	.109	1.007		.007	.109	1.007		.233	.100	1.262	*	.232	.100	1.262	*	
More than once a week	-.016	.095	.984		-.013	.095	.987		.280	.090	1.323	**	.286	.090	1.331	**	
Every day/mainly work at home	-.138	.095	.871		-.133	.095	.875		.290	.092	1.336	**	.297	.092	1.346	**	
Control over work scheduling <sup>e</sup>																	
Very little	.081	.102	1.084		.079	.102	1.083		-.074	.094	.929		-.078	.094	.925		
Some	.049	.099	1.050		.049	.099	1.050		-.209	.093	.811	*	-.211	.093	.810	*	
A lot	-.069	.104	.933		-.071	.104	.932		-.337	.097	.714	**	-.342	.097	.711	**	
Complete control	-.123	.120	.885		-.127	.119	.881		-.565	.115	.568	***	-.576	.115	.562	***	
Not living with romantic partner	.114	.073	1.121		.119	.073	1.126		.335	.071	1.398	***	.343	.071	1.409	***	

(continued)

Table 2. (continued)

	Community Distrust						Subjective Social Isolation									
	Model 1			Model 2			Model 3			Model 4						
	b	SE	exp(b)	p	b	SE	exp(b)	p	b	SE	exp(b)	p	b	SE	exp(b)	p
Any children in household	-.176	.067	.839	**	-.171	.068	.843	*	-.029	.063	.971		-.020	.064	.981	
Education <sup>f</sup>																
High school	.138	.117	1.148		.146	.116	1.157		.064	.113	1.066		.079	.113	1.082	
Some university or college/trade school	-.033	.088	.968		-.033	.088	.968		-.202	.084	.817	*	-.202	.085	.817	*
College/trade school	-.012	.081	.988		-.009	.081	.991		-.210	.077	.810	**	-.206	.077	.814	**
Income <sup>g</sup>																
< \$25,000	.272	.187	1.312		.271	.187	1.311		.375	.161	1.454	*	.375	.161	1.454	*
\$25,000 to < \$50,000	.304	.127	1.355	*	.299	.127	1.348	*	.154	.120	1.167		.147	.120	1.158	
\$50,000 to < \$100,000	.281	.096	1.324	**	.276	.096	1.317	**	.104	.088	1.109		.096	.089	1.101	
\$100,000 < \$150,000	.052	.095	1.054		.050	.095	1.051		-.014	.089	.986		-.015	.089	.985	
Missing income	.207	.127	1.230		.202	.127	1.224		.091	.118	1.095		.083	.119	1.086	
Finances at end of month <sup>h</sup>																
A little money left over	.103	.111	1.109		.107	.111	1.113		.176	.104	1.193		.183	.104	1.201	
Just enough to make ends meet	.157	.120	1.171		.160	.120	1.174		.336	.112	1.399	**	.340	.112	1.406	**
Barely enough to get by	.343	.131	1.409	**	.344	.130	1.411	**	.710	.123	2.035	***	.714	.123	2.043	***
Not enough to make ends meet	.206	.167	1.229		.204	.167	1.226		.848	.155	2.336	***	.845	.156	2.328	***
Women	-.045	.064	.956		-.045	.064	.956		-.011	.061	.990		-.012	.061	.989	
Visible minority	.230	.089	1.259	*	.229	.089	1.258	*	.274	.085	1.315	**	.272	.085	1.312	**
Cut 1	-.985	.213	—		-.994	.214	—		-.648	.199	—		-.654	.199	—	
Cut 2	1.642	.214	—		1.634	.215	—		.518	.198	—		.513	.198	—	
Cut 3	—	—	—		—	—	—		1.902	.201	—		1.897	.201	—	
Cut 4	—	—	—		—	—	—		3.696	.217	—		3.689	.217	—	

Note: N = 4,923. Data are from the Canadian Quality of Work and Economic Life Study.

<sup>a</sup>You can't be too careful is reference.

<sup>b</sup>Professional is reference.

<sup>c</sup>Part-time is reference.

<sup>d</sup>Never is reference.

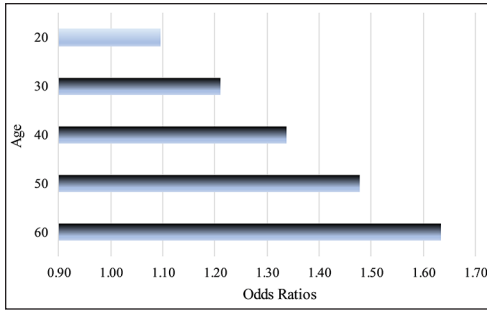
<sup>e</sup>None is reference.

<sup>f</sup>University degree is reference.

<sup>g</sup>≥\$150,000 is reference.

<sup>h</sup>A lot of money left over is reference.

\*p < .05, \*\*p < .01, \*\*\*p < .001, two-tailed.



**Figure 2.** Odds Ratios of Increased Risk in Subjective Isolation across Ages.

Note: Dark bars indicate statistically significant odds ratios, and light bars indicate nonsignificant odds ratios. Difference at age 30 is significant at  $p < .05$ ; for later ages, it is significant at  $p < .001$ .

negated and the difference is no longer statistically significant. Increasing levels of subjective social isolation from September 2019 to March 2020 therefore substantially explain increases in psychological distress

Model 4 removes the indicators of community distrust and subjective social isolation but introduces an interaction between wave of survey and age. This interaction is significant, demonstrating that between-wave differences in psychological distress varied significantly by age cohort. Figure 3 clarifies the meaning of this interaction by depicting the semistandardized coefficients for differences in psychological distress across values of age. Figure 3 shows that at younger ages, between-wave differences in psychological distress are not significant. By age 40, however, respondents in 2020 reported significantly higher mean levels of psychological distress. These differences increased in strength at older ages. For respondents at age 50, there was an increase of over a tenth of a standard between 2019 and 2020, and for respondents at age 60, this increase was almost a sixth of a standard deviation, indicating a change in population mental health that is relatively substantial, especially in the short amount of time between waves.

Model 5 introduces controls for categories of community distrust. The interaction between wave of survey and age in Model 5 was almost entirely unchanged compared to the coefficient for the same interaction in Model 4. Community distrust therefore does not explain age cohort contingencies in between-wave differences in psychological distress, but this is to be expected because age did not moderate between-wave differences in risk of community

distrust. However, the ordered logistic regression analyses did show significant age contingencies in between-wave differences in risk of subjective social isolation. Model 6 shows that controlling for categories of subjective social isolation reduces the size of the interaction by approximately a third, and this interaction is no longer significant. Moreover, ancillary analyses showed that even at age 60, between-wave differences in psychological distress were no longer significant once subjective social isolation was taken into account. That older respondents were more vulnerable to an increased risk in subjective social isolation between 2019 and 2020 therefore explains why older respondents were more at risk for an increase in psychological distress between waves of the survey.

## DISCUSSION

A central basis of Durkheimian theory is in the consequences of social integration for population health (Berkman et al. 2000). Working from this perspective, theorists have hypothesized that societal instability can lead to a loss of social integration, with subsequent emotional ill effects (Abrutyn and Mueller 2016). The outbreak of the COVID-19 pandemic presents a rare opportunity for a natural experiment that permits comparison of the population both shortly prior to and after the initiation of social distancing measures. Our study therefore permits the examination of how the wide-scale alteration of established patterns of social interactions were associated with changes in psychological distress, as well as two likely mechanisms for these effects.

Our comparisons of two surveys of the Canadian working population—one prepandemic in September 2019 and another in mid-March 2020 as the pandemic accelerated—demonstrates that when the two samples were adjusted to be compositionally equal, there was evidence of an increase in population levels of psychological distress during the pandemic. Two factors indicative of a loss of social integration contributed to explaining the rise in psychological distress. Both subjective social isolation and community distrust increased substantially in the intervening six months, with the growth in subjective social isolation especially explaining changes in the population level of psychological distress. However, subsequent analyses showed important life course contingencies in these effects, with increases in subjective social isolation and consequent psychological distress far more pervasive among middle-aged and older individuals.

**Table 3.** Ordinary Least Squares Regression Analyses of Psychological Distress.

	Model 1			Model 2			Model 3			Model 4			Model 5			Model 6		
	b	SE	p	b	SE	p	b	SE	p	b	SE	p	b	SE	p	b	SE	p
<i>Focal predictors</i>																		
Change from 2019 to 2020	.060	.023	**	.052	.023	*	-.015	.019	***	.052	.024	*	.044	.024	***	-.020	.020	***
Age	-.021	.001	***	-.020	.001	***	-.014	.001	***	-.023	.001	***	-.022	.001	***	-.015	.001	***
Survey × Age										.004	.002	*	.004	.002	*	.002	.001	
<i>Community distrust<sup>a</sup></i>																		
Somewhat agree with trust in neighbors				.047	.026	***	.011	.022	*				.046	.026	***	.011	.022	*
Somewhat disagree/strongly disagree with trust in neighbors				.153	.039	***	.069	.032	*				.152	.039	***	.068	.032	*
<i>Subjective isolation<sup>b</sup></i>																		
A little of the time							.366	.024	***							.364	.024	***
Some of the time							.721	.026	***							.720	.026	***
Most of the time							1.149	.036	***							1.147	.037	***
All of the time							1.746	.078	***							1.747	.078	***
<i>Control measures</i>																		
<i>Generalized trust<sup>c</sup></i>																		
2	-.245	.050	***	-.241	.050	***	-.156	.040	***	-.247	.050	***	-.242	.050	***	-.156	.040	***
3	-.376	.046	***	-.361	.046	***	-.232	.036	***	-.378	.046	***	-.363	.046	***	-.233	.036	***
4	-.472	.048	***	-.444	.048	***	-.299	.038	***	-.473	.048	***	-.445	.048	***	-.299	.038	***
Most people can be trusted	-.630	.059	***	-.594	.060	***	-.395	.050	***	-.630	.059	***	-.595	.059	***	-.395	.050	***
<i>Occupational class<sup>d</sup></i>																		
Administrative	.057	.038		.059	.037		.039	.031		.056	.037		.058	.037		.038	.031	
Sales	.060	.034		.057	.034		.028	.027		.061	.034		.059	.034		.029	.027	
Clerical	-.069	.040		-.071	.039		-.049	.032		-.069	.040		-.071	.040		-.049	.032	
Laborer	.035	.043		.032	.043		.050	.037		.036	.043		.033	.042		.051	.037	
<i>Work hours<sup>e</sup></i>																		
Full-time	-.025	.033		-.027	.033		.002	.027		-.027	.033		-.029	.033		.001	.027	
Extended hours	-.098	.044	*	-.097	.044	*	-.080	.037	*	-.102	.045	*	-.100	.045	*	-.083	.037	*
Working multiple jobs	.034	.029		.035	.029		.003	.023		.033	.029		.034	.029		.002	.023	
<i>Work at home<sup>f</sup></i>																		
A few times a year	.051	.039		.050	.038		.034	.031		.051	.039		.050	.038		.034	.031	
About once a month	.081	.047		.081	.047		.092	.039	*	.084	.047		.084	.047		.093	.039	*
About once a week	.102	.042	*	.102	.042	*	.065	.032	*	.102	.041	*	.102	.041	*	.065	.032	*
More than once a week	.152	.038	***	.153	.038	***	.101	.031	**	.154	.038	***	.155	.038	***	.102	.031	**
Every day/mainly work at home	.118	.037	**	.122	.037	**	.068	.030	*	.122	.037	**	.125	.037	**	.070	.030	*
<i>Control over work scheduling<sup>g</sup></i>																		
Very little	.005	.039		.004	.039		.028	.033		.003	.039		.003	.039		.027	.033	
Some	-.003	.038		-.003	.038		.046	.032		-.003	.038		-.003	.038		.046	.032	

(continued)

**Table 3.** (continued)

	Model 1			Model 2			Model 3			Model 4			Model 5			Model 6			
	b	SE	p	b	SE	p	b	SE	p	b	SE	p	b	SE	p	b	SE	p	
A lot	-.068	.039		-.066	.038		.001	.033		-.069	.038		-.068	.038		.000	.033		
Complete control	-.164	.047	***	-.162	.047	**	-.057	.039		-.168	.047	***	-.166	.047	***	-.060	.039		
Not living with romantic partner	.050	.028		.048	.028		-.031	.023		.053	.028		.050	.028		-.030	.023		
Any children in household	-.104	.026	***	-.099	.026	***	-.092	.022	***	-.100	.026	***	-.096	.026	***	-.090	.022	***	
Education <sup>h</sup>																			
High school	.098	.046	*	.093	.046	*	.063	.036		.104	.046	*	.099	.046	*	.066	.036		
Some university or college/trade school	.023	.034		.023	.034		.060	.028	*	.023	.034		.023	.034		.060	.028	*	
College/trade school	-.030	.030		-.030	.030		.007	.025		-.028	.030		-.028	.030		.008	.025		
Income <sup>i</sup>																			
< \$25,000	.074	.067		.066	.066		-.028	.055		.074	.067		.066	.066		-.028	.055		
\$25,000 to < \$50,000	.129	.046	**	.122	.046	**	.084	.038	*	.126	.046	**	.119	.046	**	.082	.038	*	
\$50,000 to < \$100,000	.022	.035		.017	.035		-.012	.030		.019	.035		.014	.035		-.013	.030		
\$100,000 to < \$150,000	.044	.034		.043	.034		.034	.029		.043	.034		.042	.034		.033	.029		
Missing income	.005	.047		.001	.047		-.025	.040		.002	.047		-.002	.047		-.027	.040		
Finances at end of month <sup>j</sup>																			
A little money left over	.113	.037	**	.113	.038	**	.093	.030	**	.116	.037	**	.116	.038	**	.095	.030	**	
Just enough to make ends meet	.289	.042	***	.287	.042	***	.233	.033	***	.291	.042	***	.289	.042	***	.234	.033	***	
Barely enough to get by	.467	.048	***	.462	.048	***	.317	.039	***	.468	.048	***	.463	.048	***	.318	.039	***	
Not enough to make ends meet	.614	.065	***	.611	.066	***	.429	.053	***	.613	.065	***	.610	.066	***	.428	.053	***	
Women	.123	.025	***	.124	.025	***	.129	.020	***	.123	.025	***	.124	.025	***	.129	.020	***	
Visible minority	.052	.036		.047	.036		-.023	.028		.052	.036		.046	.036		-.023	.028		
Constant	2.395	.075	***	2.338	.077	***	1.898	.064	***	2.400	.075	***	2.343	.077	***	1.902	.064		
R <sup>2</sup>	.249			.252			.480			.250			.253						

Note: N = 4,923. Data are from The Canadian Quality of Work and Economic Life Study.

\*Strongly agree with trust in neighbors is reference.

<sup>b</sup>None of the time is reference.

<sup>c</sup>You can't be too careful is reference.

<sup>d</sup>Professional is reference.

<sup>e</sup>Part-time is reference.

<sup>f</sup>Never is reference.

<sup>g</sup>None is reference.

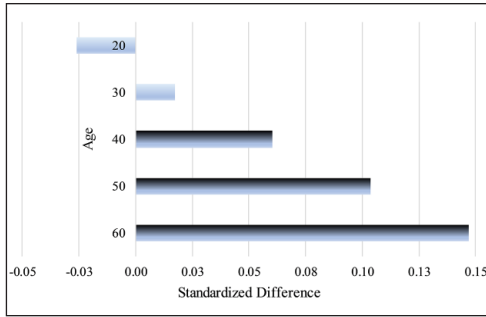
<sup>h</sup>University degree is reference.

<sup>i</sup>≥ \$150,000 is reference.

<sup>j</sup>A lot of money left over is reference.

\*p < .05, \*\*p < .01, \*\*\*p < .001, two-tailed.





**Figure 3.** Standardized Difference in Psychological Distress across Ages.

Note: Dark bars indicate statistically significant differences, and light bars indicate nonsignificant differences. Difference at age 40 is significant at  $p < .05$  and is significant at  $p < .001$  for later ages.

These findings are especially notable because they provide an important qualification to the intended public health protections intended by the COVID-19 pandemic social distancing measures. Although evidence suggests that social distancing measures are critical for helping limit the spread of infection and strains on the health care system (Delen, Eryarsoy, and Davazdahemami 2020; Lewnard et al. 2020), it has also been suggested the social consequences of stay-at-home orders may have had psychological costs (Douglas et al. 2020; Tull et al. 2020). Our analyses provide support for these concerns, suggesting that the necessity of social distancing was concomitant with a rise in psychological distress. The mental health costs of social distancing are especially important to take into account because these measures also curtailed individuals' abilities to seek out medical or therapeutic assistance for increased distress. Advocates have suggested that a critical response to social distancing policies is the fortification of programs and mechanisms that will help to address a surge in mental health problems during the pandemic (Galea, Merchant, and Lurie 2020), and the results of the current research support these proposals.

Some have also suggested that psychological vulnerability to the adverse effects of social distancing may be differentially distributed in the population, with older adults especially at risk of social isolation and subsequent adverse consequences for mental health (Armitage and Nellums 2020). The results of the current research support these concerns as well because respondents at older ages experienced greater risk of increases in a sense of isolation, with subsequent heightened increases in

psychological distress. Furthermore, the survey data analyzed in this study are intended to be representative of Canadian workers, which underrepresents the larger population of older adults, many of whom are retired. Because the working population will tend to have at least some social contact through interwork relations, it is likely that this study minimizes the consequences of social distancing measures for a sense of isolation among the larger population of older adults. The risks to the psychological well-being of older adults as a result of COVID-19 social distancing measures are therefore likely even stronger than those presented here.

These findings support a more nuanced perspective on Durkheimian expectations regarding the consequences of social change for social integration. Fundamental to a Durkheimian perspective is that "the social fabric is eroded by rapid social change" (Turner 2003:9), thereby emphasizing the dissolution of social integration in times of social change. From a life course perspective, however, birth cohorts are born with and acquire different resources and vulnerabilities as a consequence of their placement in historical time and place (Elder 1994; Keyes et al. 2010). An emphasis on cohort membership is particularly relevant to the study of disintegratory social change because some have characterized those born before 1980 as digital immigrants and those born in 1980 and after as digital natives (Nevin and Schieman 2020; Prensky 2001), with the result that older cohorts were likely to gain less social fulfillment from digital forms of social interactions that substituted for more conventional forms of interactions. In fact, our results followed this categorization. Respondents younger than 40 (and therefore born after 1980) were much less at risk for increased feelings of social isolation than those born after 1980. The current research therefore suggests that cohorts may possess different capabilities in conserving and maintaining social integration based not only on facilities with technology but also on ingrained patterns of social practices and expectations. For cohorts in which patterns of face-to-face contact and in-person meetings are less common, there may be weaker susceptibility to reductions in social integration as a result of social change.

A life course perspective invites further theoretical refinement through its emphasis on timing (Elder 1999). A key tenet of a life course perspective is that similar events and experiences can influence individuals differently depending on the timing of these events in the life course (Elder et al. 2003), but Durkheimian perspectives have less

clearly articulated the degree to which social change may vary in its influence on social integration due to timing in the life course. It is likely that the age-differentiated patterns we observed in the current research are not only due to birth cohort differences, but also to the degree to which older individuals had more established patterns and bases of social interaction that could be disrupted by large-scale social change. Timing of the pandemic in the life course as well as historical forces of cohort change also likely shaped vulnerabilities to disintegratory influences of social distancing measures.

A central theoretical contribution of the current research is therefore in the concept of integratory vulnerability—in which a life course context differentiates vulnerability to disintegratory societal events. The current research in fact underscores the importance of considering life course context as a key dimension of integratory vulnerability: Critical contingencies in changes in subjective social isolation and psychological distress would have been overlooked in the absence of the insights provided by a life course perspective. The results of this research therefore suggest that attention to the life course context of integratory vulnerability will help both theorists and empirical researchers to specify why and for whom the consequences of social change on social integration and well-being are likely to be especially pertinent. We especially wish to emphasize that both birth cohort as well as age are likely to contribute to integratory vulnerability. The sociological study of life course contexts has a poor history of overemphasizing age to the neglect of birth cohort influences, and an appropriate level of theorizing and empirical study of life course contexts should take both of these dual influences into account.

An emphasis on the contribution of birth cohort membership to integratory vulnerability also extends previous work framing cohort change as a disintegratory agent (O'Brien and Stockard 2006; Stockard and O'Brien 2002). This work essentially positions variations in intercohort characteristics as proxies for social change, but a Durkheimian perspective often views social change in broader terms, such as those of wide-scale economic collapse (Cockerham 2017). The concept of integratory vulnerability extends these ideas to propose that an understanding of the role of birth cohort as an integratory influence is better served through an intersectional emphasis: Social change occurs at both a societal and cohort level, with the result that the two intersect to influence individual outcomes. Thus, an important clarification and extension to a Durkheimian perspective in future

theorizing is to specify social change simultaneously at a societal and cohort level, with particular care to the way the two forms of change may intersect to shape consequences for social integration.

Although declining levels of social integration can lead to individual feelings of isolation, more recent theorizing has also linked loss of social integration to an increased sense threat (Abrutyn 2019). Rises in threat can in turn harm community trust because individuals become reticent to allow themselves to be vulnerable in the context of trusting relationships. Evidence from previous pandemics supports these assertions, showing how fear can undermine levels of public trust and enhance selfish motives (Barry 2005). We observed some evidence of this increase as well. Even in the short time between surveys, the odds of greater distrust in neighbors increased precipitously. Furthermore, we observed an increasing risk of community distrust even though overall trust remained relatively consistent between waves of the survey. The increase specifically in distrust of others in local surroundings suggests that individuals began to look at one another more suspiciously even if they did not perceive people more generally as less trustworthy. Essentially, the loss of bonds of integration and increasing threat inherent in social distancing measures led to less trust in people with whom individuals were likely to come into contact in the community.

There may be a hesitancy to attribute substantial meaning to the loss of community trust because community distrust only minorly explained between-wave differences in psychological distress. Yet, health is only one area of social life which is influenced by trust, as trust is a core dimension of human relations. Without trust, individuals cannot engage in fundamental processes of reciprocity that serve to build equity in human relationships (Cialdini and Goldstein 2004). An erosion of trust could therefore lead to a loss of social order, as was observed in Barry's (2005:330) chronicle of Philadelphia during Spanish influenza pandemic, in which the city "turned into itself. There was no trust, no trust, and without trust all human relations were breaking down." Thus, increasing levels of distrust during the COVID-19 pandemic could have even more substantial consequences for the disturbance of social order as the pandemic continued beyond the early stages observed in the current study, especially if a greater number of people shifted to more extreme levels of distrust. These findings therefore also underscore an important additional area for future theoretical refinement. Although a primary emphasis in Durkheimian research is on the ramifications of

social integration for health, an important additional direction of theoretical refinement is to consider how contexts of decreasing social integration could also create more widespread harms to social order through a loss of social trust.

Several limitations to this study should be noted. First, both community distrust and subjective social isolation were assessed with single-item measures. Although community distrust has previously been measured using single questions (e.g., Carpiano and Fitterer 2014; Fujiwara and Kawachi 2008), single-item measures typically have lower levels of reliability than multiple-item scales. However, that we see similar increases in both measures, as well as a reliable scale of distress, suggests that the changes observed in these analyses are not simply due to random fluctuations caused by unreliability. In addition, it should be emphasized that although the changes observed here are likely attributable to the COVID-19 pandemic and associated social distancing measures, we cannot directly link any observed changes to the COVID-19 pandemic. This does not weaken the underlying findings of this article that the Canadian working population experienced a dramatic increase in social estrangement that led to greater levels of psychological distress.

One additional theoretically motivated issue is that we do not control for changes in religious involvement. Durkheim ([1897] 1951) emphasized the importance of religious involvement as a source of social integration, and social distancing in response to COVID-19 necessitated the cessation of religious attendance, thereby contributing to a loss of social integration. At the same time, additional research suggests that a key conduit for these effects is likely to be through an increase in subjective social isolation (Rote, Hill, and Ellison 2013), with the implication that our focus on subjective social isolation absorbs the primary consequences of declines in religious attendance. Stress research has also emphasized the importance of anticipatory stressors during times of social crisis (Pearlin and Bierman 2013). During the COVID-19 pandemic, concerns in regards to contracting the virus or future economic hardship also likely exacted a toll on mental health as the pandemic continued and the economy contracted beyond the time frame in the current study. Finally, and similar to the question of retired older adults, these analyses focused on employed individuals, and it is possible that unemployed individuals may have also experienced an even greater increase in subjective social isolation in the absence of social interactions with coworkers as well as a greater burden due to economic stressors.

## CONCLUSION

The COVID-19 pandemic represents a once-in-a-lifetime shock to social life across societies. From a Durkheimian perspective, it is unsurprising that we observe consequences of such rapid and all-encompassing social change for integration and, ultimately, population health. In times of great turbulence and social disruption, it is critical to maintain meaningful social ties, but sustaining those bonds becomes increasingly more difficult, resulting in challenges to mental health. As the pandemic accelerated, we began to observe the expected fallout for social life and mental health. However, the patterns are not equivalent across age. Subjective social isolation increased more dramatically during this period among older respondents, leading to a more substantial rise in psychological distress during this period. This research therefore presents an important qualification to a Durkheimian perspective by demonstrating that a life course context plays a crucial role in differentiating individual vulnerability to disintegrative large-scale social forces and their consequences for mental health.

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## REFERENCES

- Aassve, Arnstein, Guido Alfani, Francesco Gandolfi, and Marco Le Moglie. 2020. "Epidemics and Trust: The Case of the Spanish Flu." Working Papers 661 IGIER (Innocenzo Gasparini Institute for Economic Research), Bocconi University. <http://www.igier.unibocconi.it/files/661.pdf>.

- Abrutyn, Seth. 2019. "Toward a General Theory of Anomie: The Social Psychology of Disintegration." *European Journal of Sociology* 60(1):109–36.
- Abrutyn, Seth, and Anna S. Mueller. 2014. "The Socio-emotional Foundations of Suicide: A Microsociological View of Durkheim's Suicide." *Sociological Theory* 32(4):327–51.
- Abrutyn, Seth, and Anna S. Mueller. 2016. "When Too Much Integration and Regulation Hurt: Re-envisioning Durkheim's Altruistic Suicide." *Society and Mental Health* 6(1):56–71.
- Armitage, Richard, and Laura B. Nellums. 2020. "COVID-19 and the Consequences of Isolating the Elderly." *Lancet Public Health* 5(5):e256.
- Atherwood, Serge, and Corey S. Sparks. 2019. "Early-Career Trajectories of Young Workers in the U.S. in the Context of the 2008–09 Recession: The Effect of Labor Market Entry Timing." *PLoS ONE* 14(3):e0214234.
- Barry, John M. 2005. *The Great Influenza: The Story of the Deadliest Pandemic in History*. New York: Penguin Group.
- Baumert, Anna, Anna Halmburger, Tobias Rothmund, and Christian Schemer. 2017. "Everyday Dynamics in Generalized Social and Political Trust." *Journal of Research in Personality* 69:44–54.
- Berkman, Lisa F., Thomas Glass, Ian Brissette, and Teresa E. Seeman. 2000. "From Social Integration to Health: Durkheim in the New Millennium." *Social Science & Medicine* 51(6):843–57.
- Brant, Rollin. 1990. "Assessing Proportionality in the Proportional Odds Model for Ordinal Logistic Regression." *Biometrics* 46(4):1171–78.
- Büchi, Moritz, Natascha Just, and Michael Latzer. 2016. "Modeling the Second-Level Digital Divide: A Five-Country Study of Social Differences in Internet Use." *New Media & Society* 18(11): 2703–22.
- Cacioppo, John T., and Stephanie Cacioppo. 2014. "Social Relationships and Health: The Toxic Effects of Perceived Social Isolation." *Social and Personality Psychology Compass* 8(2):58–72.
- Cacioppo, John T., Louise C. Hawkey, Greg J. Norman, and Gary G. Berntson. 2011. "Social Isolation." *Annals of the New York Academy of Sciences* 1231(1):17–22.
- Carpiano, Richard M., and Lisa M. Fitterer. 2014. "Questions of Trust in Health Research on Social Capital: What Aspects of Personal Network Social Capital Do They Measure?" *Social Science & Medicine* 116:225–34.
- Cialdini, Robert B., and Noah J. Goldstein. 2004. "Social Influence: Compliance and Conformity." *Annual Review of Psychology* 55:591–621.
- Cockerham, William C. 2017. *Sociology of Mental Disorder*. 10th ed. New York: Routledge.
- Dahlberg, Lena, Lars Andersson, and Carin Lennartsson. 2018. "Long-Term Predictors of Loneliness in Old Age: Results of a 20-Year National Study." *Aging & Mental Health* 22(2):190–96.
- Delen, Dursun, Enes Eryarsoy, and Behrooz Davazdahemami. 2020. "No Place Like Home: Cross-National Data Analysis of the Efficacy of Social Distancing during the COVID-19 Pandemic." *JMIR Public Health and Surveillance* 6(2):1–10.
- Douglas, Margaret, Srinivasa Vittal Katikireddi, Martin Taulbut, Martin McKee, and Gerry McCartney. 2020. "Mitigating the Wider Health Effects of COVID-19 Pandemic Response." *BMJ* 369:m1557.
- Durkheim, Émile. [1897] 1951. *Suicide: A Study in Sociology*. Glencoe, IL: Free Press.
- Elder, Glen H., Jr. 1994. "Time, Human Agency, and Social Change: Perspectives on the Life Course." *Social Psychology Quarterly* 57(1):4–14.
- Elder, Glen H., Jr. 1999. *Children of the Great Depression: Social Change in Life Experience*. Boulder, CO: Westview Press.
- Elder, Glen H., Monica K. Johnson, and Robert Crosnoe. 2003. "The Emergence and Development of Life Course Theory." Pp. 3–19 in *Handbook of the Life Course*, edited by J. T. Mortimer and M. J. Shanahan. Boston, MA: Springer.
- Friemel, Thomas N. 2016. "The Digital Divide Has Grown Old: Determinants of a Digital Divide among Seniors." *New Media & Society* 18(2):313–31.
- Fujirawa, T., and I. Kawachi. 2008. "A Prospective Study of Individual-Level Social Capital and Major Depression in the United States." *Journal of Epidemiology and Community Health* 62(7):627–33.
- Galea, Sandro, Raina M. Merchant, and Nicole Lurie. 2020. "The Mental Health Consequences of COVID-19 and Physical Distancing: The Need for Prevention and Early Intervention." *JAMA Internal Medicine* 180(6):817–18.
- Gilman, Sander L. 2010. "Moral Panic and Pandemics." *The Lancet* 375(9729):1866–67.
- Glanville, Jennifer L., and William T. Story. 2018. "Social Capital and Self-Rated Health: Clarifying the Role of Trust." *Social Science Research* 71:98–108.
- Government of Alberta. 2020. "Restrictions on Gatherings and Businesses." <https://www.alberta.ca/restrictions-on-gatherings-and-businesses.aspx>.
- Hargittai, Eszter, and Kerry Dobransky. 2017. "Old Dogs, New Clicks: Digital Inequality in Skills and Uses among Older Adults." *Canadian Journal of Communication* 42(2):195–212.
- Heymann, David L., and Nahoko Shindo. 2020. "COVID-19: What Is Next for Public Health?" *The Lancet* 395(10224):542–45.
- Hoffmann, John P. 2016. *Regression Models for Categorical, Count, and Related Variables: An Applied Approach*. Oakland, CA: University of California Press.
- Houle, Jason N. 2014. "Mental Health in the Foreclosure Crisis." *Social Science & Medicine* 118:1–8.
- Houle, Jason N., and Michael T. Light. 2014. "The Home Foreclosure Crisis and Rising Suicide Rates, 2005–2010." *American Journal of Public Health* 104(6):1073–79.



- Kahn, Joan R., and Leonard I. Pearlin. 2006. "Financial Strain over the Life Course and Health among Older Adults." *Journal of Health and Social Behavior* 47(1):17–31.
- Kessler, Ronald C., Gavin Andrews, Lisa J. Colpe, Eva Hiripi, Dan K. Mroczek, Sharon-Lise T. Normand, Ellen E. Walters, and Alan M. Zaslavsky. 2002. "Short Screening Scales to Monitor Population Prevalences and Trends in Non-specific Psychological Distress." *Psychological Medicine* 32(6):959–76.
- Keyes, Katherine M., Rebecca Utz, Whitney R. Robinson, and Guohua Li. 2010. "What Is a Cohort Effect? Comparison of Three Statistical Methods for Modeling Cohort Effects in Obesity Prevalence in the United States, 1971–2006." *Social Science & Medicine* 70(7):1100–1108.
- Lai, K. K. Rebecca. 2020. "Are Countries Flattening the Curve for Coronavirus." *The New York Times*, April 3. <https://nyti.ms/2UFD38P>.
- Lester, Bijou Yang. 2001. "Learnings from Durkheim and Beyond: The Economy and Suicide." *Suicide and Life-Threatening Behavior* 31(1):15–31.
- Lewnard, Joseph, Vincent X. Liu, Michael L. Jackson, Mark A. Schmidt, Britta L. Jewell, Jean P. Flores, Chris Jentz, Graham R. Northrup, Ayesha Mahmud, Arthur L. Reingold, Maya Petersen, Nicholas P. Jewell, Scott Young, and Jim Bellows. 2020. "Incidence, Clinical Outcomes, and Transmission Dynamics of Severe Coronavirus Disease 2019 in California and Washington: Prospective Cohort Study." *BMJ* 369:m1923.
- Little, William. 2016. *Introduction to Sociology*. 2nd Canadian ed. <https://opentextbc.ca/introductionto sociology2ndedition/>.
- Loewen, Claire. 2020. "As Quebec Bans Gatherings of 2 or More, Police Forces Given More Power to Disperse Groups." *CBC News*, March 23. <https://www.cbc.ca/news/canada/montreal/as-quebec-bans-gatherings-of-2-or-more-police-forces-given-more-power-to-disperse-groups-1.5506327>.
- Lüders, Marika, and Petter Bae Brandtzæg. 2017. "'My Children Tell Me It's So Simple': A Mixed-Methods Approach to Understand Older Non-users' Perceptions of Social Networking Sites." *New Media & Society* 19(2):181–98.
- MacKinnon, David P. 2008. *Introduction to Statistical Mediation Analysis*. New York, NY: Taylor & Francis Group.
- Maimon, David, and Danielle C. Kuhl. 2008. "Social Control and Youth Suicidality: Situating Durkheim's Ideas in a Multilevel Framework." *American Sociological Review* 73(6):921–43.
- McClendon, McKee J. 1994. *Multiple Regression and Causal Analysis*. Itasca, IL: F. E. Peacock.
- Morgan, Clancy. 2020. "How Long Will Social Distance Last? It's Complicated." *Business Insider*, March 30. <https://www.businessinsider.com/why-social-distancing-might-last-several-months-2020-3>.
- Murayama, Hiroshi, Yu Nofuji, Eri Matsuo, Mariko Nishi, Yu Taniguchi, Yoshinori Fujiwara, and Shoji Shinkai. 2015. "Are Neighborhood Bonding and Bridging Social Capital Protective against Depressive Mood in Old Age? A Multilevel Analysis in Japan." *Social Science & Medicine* 124:171–79.
- Nevin, Andrew D., and Scott Schieman. 2020. "Technological Tethering, Digital Natives, and Challenges in the Work–Family Interface." *The Sociological Quarterly*, first published on January 23, 2020. doi:10.1080/00380253.2019.1711264
- O'Brien, Robert, and Jean Stockard. 2006. "A Common Explanation for the Changing Age Distributions of Suicide and Homicide in the United States, 1930–2000." *Social Forces* 84(3):1541–57.
- Pearlin, Leonard I., and Alex Bierman. 2013. "Current Issues and Future Directions in Research into the Stress Process." Pp. 325–40 in *Handbook of the Sociology of Mental Health*. 2nd ed, edited by C. S. Aneshensel, J. C. Phelan, and A. Bierman. Dordrecht, the Netherlands: Springer.
- Phillips, Julie A., and Colleen N. Nugent. 2014. "Suicide and the Great Recession of 2007–2009: The Role of Economic Factors in the 50 US States." *Social Science & Medicine* 116:22–31.
- Prensky, Marc. 2001. "Digital Natives, Digital Immigrants, Part I." *On the Horizon* 9(5):1–6.
- Public Health Agency of Canada. 2020. "Physical distancing (Fact Sheet)." <https://www.canada.ca/en/public-health/services/publications/diseases-conditions/social-distancing.html>.
- Ross, Catherine E. 2011. "Collective Threat, Trust, and the Sense of Personal Control." *Journal of Health and Social Behavior* 52(3):287–96.
- Rote, Sunshine, Terrence Hill, and Christopher Ellison. 2013. "Religious Attendance and Loneliness in Later Life." *The Gerontologist* 53(1):39–50.
- Settels, Jason. 2020. "Changes in City-Level Foreclosure Rates and Home Prices through the Great Recession and Depressive Symptoms among Older Americans." *Society and Mental Health*, first published January 2, 2020. doi:10.1177/2156869319895568.
- Sly, Timothy. 2020. "COVID-19 Has the Potential to Become as Severe as the Spanish Flu." *MacLean's*, March 5. <https://www.macleans.ca/opinion/covid-19-has-the-potential-to-become-as-severe-as-the-spanish-flu/>.
- Stockard, Jean, and Robert O'Brien. 2002. "Cohort Effects on Suicide Rates: International Variations." *American Sociological Review* 67(6):854–72.
- Swader, Christopher S. 2019. "Loneliness in Europe: Personal and Societal Individualism-Collectivism and Their Connection to Social Isolation." *Social Forces* 97(3):1307–36.
- Tomita, Andrew, and Jonathan K. Burns. 2013. "A Multilevel Analysis of Association between Neighborhood Social Capital and Depression: Evidence from the First South African National Income Dynamics Study." *Journal of Affective Disorders* 144(1–2):101–105.

- Tull, Matthew T., Keith A. Edmonds, Kayla M. Scamaldo, Julia R. Richmond, Jason P. Rose, and Kim L. Gratz. 2020. "Psychological Outcomes Associated with Stay-at-Home Orders and the Perceived Impact of COVID-19 on Daily Life." *Psychiatry Research* 289:113098.
- Turner, Bryan S. 2003. "Social Capital, Inequality and Health: The Durkheimian Revival." *Social Theory and Health* 1(1):4–20.
- Turner, J. Blake, and R. Jay Turner. 2013. "Social Relations, Social Integration, and Social Support." Pp. 341–56 in *Handbook of the Sociology of Mental Health*. 2nd ed., edited by C. S. Aneshensel, J. C. Phelan, and A. Bierman. New York, NY: Springer.
- Williams, Richard. 2006. "Generalized Ordered Logit/Partial Proportional Odds Models for Ordinal Dependent Variables." *The Stata Journal* 6(1):58–82.
- Winfrey, L. Thomas, Jr., and Shanhe Jiang. 2010. "Youthful Suicide and Social Support: Exploring the Social Dynamics of Suicide-Related Behavior and Attitudes within a National Sample of US Adolescents." *Youth Violence and Juvenile Justice* 8(1):19–37.
- Wu, Yun-Hsuan, Kellee White, Nancy L. Fleischer, Bo Cai, Shing-Chia Chen, and Spencer Moore. 2018. "Network-Based and Cohesion-Based Social Capital and Variations in Depressive Symptoms among Taiwanese Adults." *International Journal of Social Psychiatry* 64(8):726–36.
- Yu, Rebecca P., Nicole B. Ellison, Ryan J. McCammon, and Kenneth M. Langa. 2016. "Mapping the Two Levels of Digital Divide: Internet Access and Social Network Site Adoption among Older Adults in the USA." *Information, Communication & Society* 19(10):1445–64.
- Yuan, Shupe, Syed A. Hussain, Kayla D. Hales, and Shelia R. Cotten. 2016. "What Do They Like? Communication Preferences and Patterns of Older Adults in the United States: The Role of Technology." *Educational Gerontology* 42(3):163–74.
- Zhao, Ruohui, and Liqun Cao. 2010. "Social Change and Anomie: A Cross-National Study." *Social Forces* 88(3):1209–29.

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