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Compliance with preventative measures during the COVID-19 pandemic in the USA and Canada: Results from an online survey

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ABSTRACT

This study explored people's compliance with recommended preventative measures during early stages of the COVID-19 pandemic. An online survey was administered in June 2020 in the USA and Canada (N = 1,405). Regression analysis found that when controlling for other factors, age and political ideology were significant predictors of compliance with preventative measures. A content analysis of narrative answers of compliance/noncompliance found that the majority of individuals intended to comply with preventative measures, with primary reasons as social responsibility, self-protection, and protection of family members. Reasons identified for not complying were viewing preventative practices as unnecessary, getting mixed messages from various sources about effectiveness, distrust in government and inability to comply. This study informs social workers on intervention strategies on micro, mezzo and macro levels of practice.

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The outbreak of the COVID-19 virus quickly and unexpectedly impacted the entire world. With little time to prepare, people adapted their lives in many areas, such as work, childcare, health and preventative measures. Communities around the world were advised to stay in their homes as much as possible, avoid gatherings, frequently wash their hands, and to “social distance” (Sheppard & Thomas, 2020). Preventative measures prescribed by government leaders ranged from simple recommendations to enforceable orders.

Given that the severity of these preventative measures greatly compromised day-to-day life, voluntary compliance with guidelines seemed unlikely in earliest stages of this episode (Sheppard & Thomas, 2020). Previous epidemiological research has shown that successful disease control efforts need to focus on comprehension, distribution and frequency of health behaviors, and the relationship to socio-demographics (Janahi et al., 2011). Research has identified factors that relate to the personal level

of adherence to preventative health behaviors. Most studies have shown that women, individuals with a college education, and the 18–24 and 65 + age groups were more likely to practice preventive behaviors than men, individuals with less or no education, and the 25–44 age group (Janahi et al., 2011; Vaidya et al., 2012). Women are more likely to engage in handwashing and other non-pharmaceutical prevention behaviors, and to believe the seriousness of contagious viruses (Moran & Del Valle, 2016; Simonsen et al., 2012).

The theory of reasoned action (TRA) posits that an individual's behavioral intentions are determined by their attitudes, and the subjective norm associated with the behavior (Montaño & Kasprzyk, 2015). The TRA is an extension of the Health Belief Model (Gehlert & Ward, 2019), which attempts to describe how individual beliefs relate to preventive health measures but does not necessarily offer insight into motivational behavior for engagement in preventive health behaviors. TRA has been applied to a wide range of behaviors, such as substance abuse (Gehlert & Ward, 2019), weight loss (Gehlert & Ward, 2019), and HIV prevention (Montaño & Kasprzyk, 2015). TRA addresses many of the factors associated with potential covariates with compliance of COVID-19 preventative measures, such as attitude. The current study uses the TRA to understand what motivates people to comply with measures to prevent the spread of COVID-19.

Method

Approval of this study was received from the researchers' home institutional review boards prior to the initiation of this project. A cross-sectional design was employed using an anonymous online survey administered through Qualtrics Survey Software. Data were collected over two weeks in June 2020. Informed consent was outlined through the introduction to the survey tool. Completion of the survey was considered consent for participation. Survey completion took around ten minutes.

Researchers recruited study respondents through convenience and snowball sampling, using personal contacts, social media, and personal and professional networks. Additional efforts were made to reach underrepresented populations and geographic areas by targeting known contacts from those communities via e-mail, Facebook or instant messaging.

Respondents were asked a series of demographic questions including age (in total years), gender identity, race and ethnicity, political ideology identification, and educational attainment. Thirty items were constructed by the researchers using a six-point Likert-type scale that asked respondents to indicate their level of agreement to statements concerning the COVID-19 outbreak (1 = *strongly disagree*, 6 = *strongly agree*). The present research focuses on responses to the item: "I strictly followed my state's preventative measures (e.g., social distancing,

wearing a mask) during the COVID-19 outbreak.” An open-ended question following this item invited respondents to, “Please describe your reasons for following or not following your state’s preventative measures.” Of the total sample, 954 respondents provided an answer to the open-ended question. However, many respondents did not provide a relevant answer. Instead, they wrote various unrelated statements, including opinions on other issues, or clarifications of their actual practices. Examples of these include “I live in Canada,” and “I followed.” These responses were not included in the analysis reported in this paper. Culling of the data for relevant responses resulted in the identification of 912 useable responses.

The usable responses were downloaded into a Word document. Two of the researchers independently read through the responses to develop a preliminary codebook using open-coding (Strauss & Corbin, 1990). The Word document was then uploaded into Atlas.ti Version 8.4 for data management, and codes were assigned to each response. It should be noted that some respondents provided several reasons within a single response narrative; each reason was counted separately for the purposes of analysis. Several reasons contained more than one concept; thus, some reasons were assigned more than one code. Throughout this stage, codes were refined and were added. Once this process was completed, inter-rater reliability was assessed by comparing 15% of the codes. The level of agreement was 86%. Responses that were conflicted between evaluators were reconciled through discussion. The final inter-rater reliability was calculated at 97%. A standardized codebook and intercoder agreement checks were used in order to reduce potential researcher bias and subjectivity (Onwuegbuzie & Leech, 2007). An audit trail was kept tracking the data analysis procedures for accountability (Bloomberg & Volpe, 2008).

Results

Representation from all 50 states, District of Columbia, and English-speaking Canada (all 10 provinces except Quebec) was obtained. The average age of the sample was 43.04 ($sd = 24.09$). The sample disproportionately identified as female (82.6%). [Table 1](#) displays the demographics of the sample.

Almost all respondents agreed with the statement: “I strictly followed my state’s preventative measures (e.g., social distancing, wearing a mask) during the COVID-19 outbreak ($\bar{x}=5.49$, $sd = 1.05$).” [Table 2](#) shows the frequency distribution for this item.

As age, education, liberal position, and reliance on the newspaper as a source of information increased, so did agreement with the statement about following prescribed preventative measures. Pearson correlation analysis found significant positive, relatively low correlations between agreement with following prescribed preventative measures and respondent age, $r(1370) = .116$, $p = .006$, education, $r(1390) = .269$, $p < .001$, political views, r

Table 1. Demographics of the sample.

Demographic	n	\bar{x} (sd)/ %
Age		43.04 (24.09)
Number of children		1.68 (.97)
Gender identity		
Female	1154	82.6
Male	227	16.2
Other	17	1.21
Race/ethnicity		
American Indian/First Nations	11	.75
Asian	41	2.8
Black or African-American	128	8.7
Hispanic, Latino or Spanish origin	97	6.6
Middle Eastern or North African	17	1.7
Native Hawaiian of other Pacific Islander	6	.41
White	1138	77.9
Other	27	1.8
Education		
Less than HS diploma	1	.07
HS diploma or GED	316	22.6
Associate's degree	100	7.2
Bachelor's degree	320	22.9
Master's degree	466	33.3
Doctoral degree or PhD	195	14.0
Political views		
Extremely conservative	27	2.0
Moderately conservative	159	11.6
Neither conservative or liberal	323	23.4
Moderately liberal	555	40.2
Extremely liberal	317	23.0

more than one option could be selected.

Table 2. Level of agreement of following preventative measures.

Level of agreement	n	%
Completely disagree	32	2.3
Moderately disagree	19	1.7
Slightly disagree	33	2.7
Slightly agree	65	4.6
Moderately agree	243	17.3
Completely agree	1003	71.6

(1373) = .211, $p < .001$, use of the newspaper as a source of information, r (1293) = .116, $p < .001$, and satisfaction with state leadership in response to the COVID-19 outbreak, r (1370) = .256, $p < .001$.

As satisfaction with federal leadership in response to the COVID-19 outbreak decreased, agreement with the statement about following prescribed preventative measures increased, r (1307) = $-.161$, $p < .001$. There were no significant relationships found in bivariate analyses of agreement with the statement about following prescribed preventative measures and either gender, or racial identity.

A five-stage, hierarchical multiple regression analysis was conducted to determine the building, and collective, predictive nature of various factors

explored at the bivariate level on the level of agreement with the statement about following prescribed preventative measures (See Table 3. Block-wise regression analysis). The predictors in the final model explain 12% of the variation in the level of agreement with the statement about following prescribed preventative measures. In this multivariate analysis, only age, political ideology and satisfaction with government responses remained significant predictors, after gender, education, information source, and adaptation were controlled for in the model.

$n = 1013$, $*p < .05$, $**p = <0.005$

Content analysis was conducted for the open-ended question, “I strictly followed my state’s preventative measures (e.g., social distancing, wearing a mask) during the COVID-19 outbreak.” Identified themes were categorized into two content areas: agreement and disagreement. This duality permitted the authors to compare, and contrast, the reasons why people chose to follow, or not follow, the recommended preventative measures. Within these two content areas, the open coding process yielded additional themes that were further classified as either attitudes or subjective norms for further understanding of the complex decision-making process. Figure 1 conceptualizes these themes utilizing a TRA framework. Examples of quotes that highlight identified themes are presented in Table 4 (Agreement) and Table 5 (Disagreement). Themes are presented in descending order of frequency in the sample.

Agreement with following preventive measures

Content analysis found that 87% ($n = 967$) of respondents’ narrative answers reported agreement with preventative measure recommendations. Reasons for

Table 3. Hierarchical regression analysis of predictors of following prescribed preventative measures.

Predictors	Model 1 β	Model 2 β	Model 3 β	Model 4 β	Model 5 β
Age	.175**	.140**	.128**	.127**	.112**
Gender					
Male	-.026	-.017	-.021	-.021	-.031
Transmale	-.023	-.030	-.026	-.026	-.022
Transfemale	.010	.003	.004	.005	.012
Gender Queer	.017	.001	.000	.000	-.003
Other	.014	.013	.017	.017	.011
Information source					
Education		-.013	-.011	-.278	-.013
Ideology		.190**	.188**	.188**	.083*
Newspaper			.030	.030	.015
Social Media			-.024	-.024	-.019
TV News			.025	.025	-.005
Family/Friends			.032	.032	.022
Radio			.017	.017	.027
Adapted well				.003	.010
Satisfaction with:					
State/province					.220**
Federal					-.122**
R ²	.032	.065	.068	.068	.122
R ² change		+.033	+.003	0	+.064

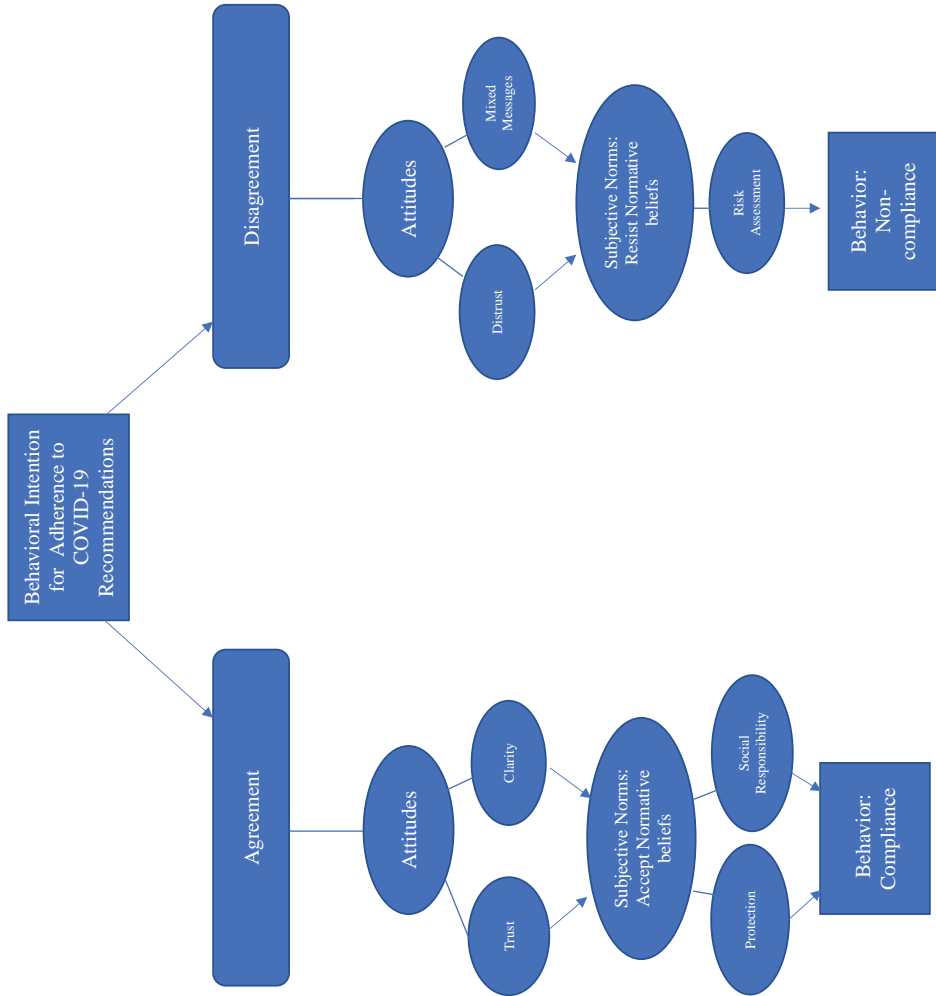


Figure 1. Conceptual framework of themes based on Theory of Reasoned Action

Table 4. Qualitative results for agreement with recommendations.

Theme by level of influence	n	Quotes
<i>Protection</i>	390	
Protection of self	238	<ul style="list-style-type: none"> ● <i>To protect myself</i> ● <i>I wasn't willing to put myself in jeopardy so I followed the guidelines and abided by the restrictions.</i> ● <i>I want to remain healthy, I'm vulnerable</i>
Protection of family	152	<p><i>To protect my family. I followed the rules even when the state lifted restrictions</i></p> <p><i>Though I disliked wearing the mask I wore it to protect my family members who were at higher risk.</i></p> <p><i>I live in NY where we were having hundreds of people die a day. My father is 68 years old and I knew if I didn't follow precautions, I could have possibly contracted the virus and given it to him.</i></p>
<i>Social Responsibility</i>	338	
Societal obligation	256	<p><i>It is the right thing for everyone to protect each other from harm wear a mask and social distance</i></p> <p><i>I followed as a citizen who cares about the health & well-being of my community.</i></p> <p><i>The pandemic is serious and unprecedented. Want to protect myself and others.</i></p>
Stopping the spread	70	<p><i>I didn't want to risk spreading the disease.</i></p> <p><i>It was my only available action to be sure I was helping not to spread it and hopefully not to get it</i></p>
Help health care systems	12	<p><i>I wanted to do my part to help keep the hospitals and health providers from being overwhelmed.</i></p> <p><i>I tried my best to adhere to guidelines as not to burden the healthcare system and contribute to an already rapidly spreading virus.</i></p>
<i>Trust</i>	125	
Trust in science	85	<p><i>I try to follow best practices based on scientific thought and the most recent information available.</i></p> <p><i>I believe in the science and want to keep the people around me safe.</i></p>
Government & authority	40	<p><i>Followed the instructions from the Governor. He is competent and informed.</i></p> <p><i>I followed because I understand the risks and consequences of a pandemic, and I trust my state leadership.</i></p> <p><i>Very confident in province's leadership, both government and health officials, and actions taken to date.</i></p>
<i>Clarity</i>	114	
Common sense	68	<p><i>It made sense to keep myself and those I care about healthy and safe and it was fairly easy.</i></p> <p><i>Following preventative measures is logical.</i></p>
Acquired knowledge	46	<p><i>I work in healthcare so was more attuned to the risk given the early understanding of the disease in the context of communicable disease pandemics.</i></p> <p><i>I educated myself about the virus from legitimate sources, whether news or friends working in medical settings in high virus areas.</i></p> <p><i>Maybe because I am a biology major I'm more educated about the topic than other people, but everything the state implemented should have been followed so much more strictly</i></p>

agreement were classified into major themes of protection, social responsibility, trust, and clarity. Protection and social responsibility seemed to reflect subjective norms of engaging in socially acceptable behaviors of compliance, while trust and clarity seemed to reflect positive attitudes toward recommendations. According to the TRA, attitudes reveal personal feelings related to engaging in behaviors while subjective norms reveal a motivation to engage in compliance behaviors due to a perception of socially approved behaviors.

Table 5. Qualitative results for disagreement with recommendations.

Theme by level of influence	Quotes
Risk Assessment	128
Priorities	71 <i>A balance of safety and life's needs. I wanted to spend time with friends and family still I don't agree that we should have shut down our economy over a virus</i>
Recommendations too excessive	31 <i>They were overly restrictive, unrealistic, and inappropriate They were over exaggerated and silly</i>
Different behaviors different settings	26 <i>It depends on where I am and who I am with I followed it entirely except for a couple times to see the same friend, because I struggled in my own home. When I am with very close friends or family I will not wear a mask, probably because I assume we have already "cross-contaminated" even though I know that is not a fair judgment.</i>
Distrust	40
Distrust in science	22 <i>I believe if we have a healthy diet we are fine. And being disinfected and masked kills germs that are good for my body. I also have an immune system that works and a trust in God. Both didn't fail me To the extent that I didn't, it was because I felt it was not commensurate given the risk, based on the data I was exposed to.</i>
Government & authority	18 <i>I have discovered many layers of corruption in our country, my state and in the world, that I had previously no interest in. This is a plan-demic. All of it is planned and the higher ups don't care about regular Americans suffering so I won't fall into their agenda. I will continue being a free American. I thought the government was breaching my rights by placing so many restrictions</i>
Mixed Messaging	21
Mixed messaging	21 <i>Lack of clarity and information about what protocols entailed The information constantly changing hard following what was real or not I hate the mask thing. Mixed messages on effectiveness.</i>

Protection

The most common theme identified in the data was protection, which appeared to be a motivation to comply with socially agreed upon, preventive measures. Subthemes of protection of self and protection of family were motivational factors for the intended outcome of engaging in compliance behaviors. Often intertwined into responses were high-risk factors for the individual or their loved ones. The belief that positive outcomes of protecting self and protecting family would occur through engaging in these behaviors aligned with the subjective norm of compliance with these measures.

Social responsibility

The next most common theme identified was social responsibility. Within this theme, subthemes of societal obligation, stopping the spread and helping health care systems were identified as motivators for engaging in compliance behaviors. Respondents spoke of wanting to do their part, and a recognition of societal expectations of each member of their community. Unlike the theme of protection, which identified specific persons as the point of concern, social responsibility directed motivations for behaviors toward members of society in general. Societal obligation was the most often identified subtheme and reflected a duty of

citizenship and a need to maintain public health. Similar to the concept of subjective norms in the theory of reasoned action, aligning oneself with the subjective norm of following recommendations was perceived as a social duty, and contributed to their intention to engage in these behaviors. Respondents also expressed the theme of wanting to contribute to stopping the spread of the disease, especially for the sake of community members who were of higher risk, as well as identifying a desire to not overwhelm the health care system.

Trust

The trust theme represented a belief that recommendations were valid and based on the best available evidence. Within this theme, the subtheme of trust in science indicated positive feelings toward engaging in behaviors that followed recommendations based on science. Respondents expressed feelings that science, medicine and specific scientific experts were providing the most up to date and reliable information that would help bring about positive outcomes such as keeping people safe and helping with prevention efforts. The subtheme of trust in government and authority was also identified, although less often than science. Respondents described that having confidence in state leadership, or Canadian province leadership, contributed to their positive attitudes toward engaging in compliance behaviors.

Clarity

The theme clarity also appeared to align with developing positive feelings and attitudes toward compliance behaviors. Instead of relying on science or government for confidence in recommendations, these responses expressed their own abilities to establish a clear understanding of the need to engage in compliance behaviors. The subtheme of common sense indicated attitudes of relying on logical reasoning and their feelings that the recommendations were clear, easy to engage in and would lead to positive outcomes. Another subtheme of clarity was identified as acquired knowledge. This theme was usually based on front line health care workers' experience or a specialized education, that contributed to a clear understanding of the seriousness of COVID-19 that others did not have, and how strict compliance with these recommendations was essential behaviors.

Disagreement with following preventive measures

Fewer respondents reported that they disagreed with recommendations, and/or did not follow, or did not consistently follow, state prescribed prevention measures, than those who expressed agreement. Reasons for disagreement were categorized by the themes of risk assessment, distrust and mixed messaging. Risk assessment responses seemed to resist the perceived subjective norm of engaging in behaviors of compliance, while themes of distrust and mixed

messaging seemed to reflect negative attitudes toward recommendations. According to the TRA, negative attitudes toward societal norms can impact intention to engage in behaviors that are in noncompliance with those norms.

Risk assessment

Risk assessment was identified as the most common theme for disagreement related to following all recommendations. This perception of resistance seemed to be an active process of calculating risk assessment and intentionally choosing to not follow certain suggested protocols. Subthemes of priorities illustrated a conscious decision-making process of assessing and prioritizing which outcome of following recommendations was worse for respondents, personally, such as social distancing and mask wearing versus mental health and need for socialization. Additionally, some respondents perceived that they were complying with certain recommendations in different settings, for example, following all recommendations at home, but not necessarily at work. Of note, some respondents perceived seeing family or one friend as disagreement with following recommendations, while some did not seem to perceive this as noncompliance. In addition, there were several people that indicated variations in their behaviors over time. Some respondents expressed very strict adherence to preventative measures at first, but then easing up over time, for various reasons. Other respondents did not initially follow guidelines, but then began to comply for various reasons, such as receiving new information. Lastly, there were several people who made different decisions based on the particular situation they were presented with. Only those that reported that they resisted some of the recommendations under certain conditions were included in the category, due to their perception of resistance against some of the perceived subjective norm of compliance behavior.

Distrust

Some respondents ($n = 40$) revealed attitudes of distrust toward preventative measures and an intention to not comply. A subtheme identified was that recommendations were too excessive. Respondents reported that they perceived the recommendations as too restrictive or over exaggerated, thus indicating intentions to not follow them. Distrust in science was also expressed, often describing a different understanding of science, health and disease, rather than those commonly provided by scientific experts. Additionally, a distrust in government and lack of enforcement by authority was perceived, expressing beliefs that the situation was influenced by political interests, or that the government was impinging on their rights. These attitudes resulted in resistance to engaging in compliance behavior and provided a justification for their intentions to not follow recommendations.

Mixed messaging

Mixed messaging was also expressed by some respondents, which did not fully reveal disagreement, but more so, a confusion related to what information to believe. These responses seemed to contribute to inconsistent attitudes and an expression of variability in terms of their intention to engage in compliance behaviors. Respondents spoke of information often changing or competing information that led to their attitude of confusion about who to believe and what recommendations to follow.

Discussion

These findings mirror another study that looked at people's motivations to prevent the swine flu (Janahi et al., 2011). The majority of people in that study also chose to comply, supported the health authorities, and closing of schools and universities, but many did not perceive the threat of disease to be severe, and thus considered preventative measures to be excessive. In Janahi et al.'s (2011) study, as well as here, gender was not a significant predictor of expressed compliance, which contradicts with previous research that found females were more likely to engage in recommended preventive behaviors when compared to men (Moran & Del Valle, 2016; Simonsen et al., 2012). Rather, only age, political ideology and satisfaction with national and state/provincial government were associated with levels of compliance were found to be significant in this study.

The present study can be used to inform how people make their decisions related to compliance behaviors and possible motivational factors that certain groups consider most important. Although the qualitative data answers provided were from a one-item open ended question, the large sample of responses provided meaningful insight into the complexity of individual decision-making in preventive health behaviors during the early stages of the COVID-19 pandemic. People made decisions to comply with preventative measures for a variety of reasons. Similar to other studies involving public response to adherence intention for preventive measures during H1N1, respondents reported motivations for engaging in preventive behaviors came primarily out of a desire to protect themselves, family or a social responsibility to society in general (Bults et al., 2011; Smith et al., 2016). However, unlike in studies of previous pandemics, the theme of social responsibility also included a motivation to follow measures for not only the greater good but also to serve as an example to others by modeling behavior. For example, one respondent noted that "I also feel I need to model for my teenager and adult children". This seemingly linked individual compliance behavior to the need for this to be practiced on a larger group level.

As suspected, no matter how much education and expert opinion was provided to follow preventive measures, a portion of the sample did not

believe that they could or should act in ways that will limit the threat (Sheppard & Thomas, 2020). There were several reasons for not following preventative measures, such as not believing it was necessary, distrust in science and/or authority, and belief in free choice. Similar to other studies, reluctance to follow recommendations appeared to also occur with expressions of distrust in government and authority as well as mixed messaging on recommendations (Bults et al., 2011; Carlsen & Glenton, 2016). The most common themes expressed for not following preventative measures seemed connected to issues with the measures themselves (too restrictive, unrealistic, getting mixed messages) instead of concern for own personal well-being and mental health. These reasons need to be acknowledged and validated. It has been suggested that acknowledging diverse levels of risk tolerance, as well as designing culturally sensitive messages, is critical as best practices in risk communication (Zhang et al., 2020). For example, the fact that people have diverse perspectives on health beliefs was evident here (e.g., believing that wearing a mask was harmful to breathing, a healthy diet will prevent COVID-19, and that God will protect them). A non-confrontational approach to such beliefs systems, inclusive of cultural or other differences, is critical when designing public health efforts and interventions.

There were also political reasons such as anger toward the government, getting mixed messages from various sources, others not following while the rules were not being “enforced” and feeling oppressed. This in theory, could provide an opportunity for governmental agencies and organizations to provide the public with the accurate information and to assess their methods of delivering such information (Janahi et al., 2011), which may be contrary to what actually occurred in the USA during the COVID-19 pandemic. This major influence of compliance versus noncompliance is a reminder to social workers that it is not sufficient to address the individuals’ motivations and personal factors or provide preventative education, but rather, to consider and strategize at the macro level.

Implications for practice

The swiftness, along with the severity and grave ramifications of COVID-19, compounded by the complex political and economic influences potentially makes adherence to preventative measures a convoluted outcome. Another unique consideration is that although pandemics have swept the world before, COVID-19 was unprecedented in that the globalization and advances in technology to expedite travel increased the spread of the virus. Additionally, with increased social media and internet access globally, there were many more modes of communication available than in the past, along with multiple methods of conveying diverse information sources. The extent that readily available information from diverse sources contributed to the mixed messaging,

warrants further investigation on how to provide media literacy educational opportunities to the public for assessing reliability of sources of information.

Although there is already a wealth of information about health behaviors and decision-making in health care, less is known about how this process is impacted during an emergency widespread pandemic and even less about potential opportunities for social work intervention. Human behavior in these types of situations may be motivated by a need to engage in protective behaviors, and these behaviors can be impacted by anxiety, trauma response, grief, shock and unpreparedness. Previous advocacy and intervention efforts have demonstrated social workers competence and effectiveness in providing both direct and community level support to high-risk populations with potentially communicable diseases.

Social workers can partner with public health to affect change. Social workers have shown effectiveness in providing direct service risk behavior reduction counseling amongst those diagnosed with HIV (Silverman et al., 2009) Tuberculosis (Black & Bruce, 1998) and SARS (Hui & Tsui, 2004). Social workers have also assisted with community organization efforts through organized communication and education to reduce community stress and increase civic responsibility during SARS (Hui & Tsui, 2004; Yuen-Tsang & Tsien-Wong, 2004). Early social work response globally to COVID-19 has incorporated public health social work with community organization to provide education and advocacy for reducing infection risk for vulnerable communities (Truell, 2020; Walter-McCabe, 2020). For example, social workers have assisted communities with starting soap manufacturing in Sierra Leone to fight infectious diseases, as they did during the Ebola crisis (Truell, 2020), and have organized political advocacy campaigns for the release of incarcerated individuals charged with technical violations and nonviolent offenses in order to help reduce the spread of COVID within prisons (Walter-McCabe, 2020).

The findings of this study help to identify and explain reasons for compliance with recommendations for health prevention. These findings can be essential information for social workers to inform how individual attitudes and adherence to perceived social norms of compliance behavior may directly impact public health efforts during COVID-19. Public health social workers' perspective can be particularly informative to policymakers and health care institutions during a health crisis that has been created and can currently only be controlled through efforts directed at how humans behave within their social environment. As social workers, assessment, engagement, and education with the community related to matters of public health and best preventive health care practice are rooted in the Code of Ethics and in social work's expertise in integrated practice. This expertise may, in turn, provide opportunities for innovative practice models and policy efforts within micro, mezzo and macro fields of practice.

Limitations of the study

There are several limitations to this study that are worth noting. The primary limitation is that the convenience/snowball sampling method employed does not suggest generalizability beyond the sample. The overall study sample differs from the general population in terms of gender, race, political ideology, and educational attainment. The study sample had a very high proportion of women, over-representation of white respondents, respondents with more liberal views than the general public, and higher educational levels than found in the general USA and Canadian populations.

This content analysis was merely a “count” of reasons; however, linkages cannot be made, nor account for non-linear behaviors. The nature of the brief responses did not allow for in-depth analysis or understanding behind the reasons. Further, it is possible that many of the responses are actually related, but not articulated in that way by the respondents. For example, a response such as “hope to flatten the curve” was coded as “hope to end Covid/stop spread,” however, the motivations of “social responsibility” and “protection of hospitals/healthcare” could also be behind the reason for wanting to “flatten the curve.” Another example is that many respondents simply wrote “caution” or “safety” without detailing why or who they were trying to protect. It is quite plausible that many of these respondents also had high-risk medical issues but were not noted thus could not be coded as such.

More in-depth data, in the form of interviews and focus groups, would help us better understand some of the motivations around certain topics (e.g., social responsibility, decisions made around younger children and older parents, mental health, and frustration with information and leadership), as well as rationales for those who indicated fluidity and changing levels of compliance.

The COVID-19 pandemic is an ongoing crisis. The present data provide insight into the preliminary thought-processes of individuals at the time of data collection, only, which may be considered as early response to the pandemic. The data were collected three months after the COVID-19 pandemic began, and the pandemic and public response continue to intensify, even at the time of this writing. Thus, the potential for changing rationales, behaviors, and motivation are likely, and warrant continued investigation.

Despite these limitations, the findings of this study provide important information about how people responded to the outbreak and how to possibly address social work interventions during the pandemic. Social workers who work in public health are specialists in building community capacity and have shown flexibility and innovation in implementing virtual direct service delivery systems for isolated individuals and vulnerable communities (Truell, 2020; Walter-McCabe, 2020). Public health social work as a specialization can bring together a unique expertise in assessment, engagement and intervention with communities for public health education. The

social work profession's unique knowledge and skills of competently engaging and assessing diverse communities are invaluable in effectively meeting the needs of various populations. In fact, given our lenses and expertise, social work could also contribute to the education and distribution of the COVID vaccine.

At the time of this writing, there was a wealth of information about COVID-19 published from the scientific perspective, but much less about the social and emotional implications of the pandemic, which will undoubtedly unfold for a very long time. The information gleaned from this article is just beginning, preliminary information about a social issue that will most likely need a tremendous amount of attention for the foreseeable future.

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