


Suicidal Ideation and Mental Health Help-Seeking Behaviors Among Older Chinese Adults During the COVID-19 Pandemic

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Abstract

Objective: To examine prevalence and correlates of suicidal ideation in older Chinese adults (OCAs) during the COVID-19 pandemic, as well as mental health help-seeking behaviors of suicidal OCAs. **Background:** Few data on suicidal behaviors of older adults during the pandemic are available. **Methods:** In this cross-sectional survey, 1159 OCAs completed an online self-administered questionnaire between 23 February and 25 March 2020. A standardized single question and the 12-item General Health Questionnaire were used to assess the presence of suicidal ideation and common mental health problems (CMHPs), respectively. Suicidal ideators were further asked about their perceived need for mental health care and help-seeking from mental health workers. **Results:** 4.1% of the OCAs experienced suicidal ideation during the past 2 weeks. Among the suicidal OCAs, 31.9% perceived a need for mental health care but only 10.6% had sought help from mental health workers. Factors significantly associated with suicidal ideation were a marital status of “others” (OR=2.39, $P = .021$), disagreement regarding the successful containment of the pandemic (OR=2.43, $P = .022$), physical health problems (OR=2.23, $P = .012$), and CMHPs (OR=4.99, $P < .001$). **Conclusions:** During the COVID-19 pandemic, OCAs constitute a subpopulation that needs mental health services for suicidal problems but tends not to seek mental health help. Mental health services for OCAs may include mental health education, periodic evaluation of risk of suicide, expanded psychosocial support, and, when necessary, psychological crisis intervention and psychiatric treatment.

Keywords

suicidal ideation, elderly, COVID-19, perceived need, help-seeking

Introduction

While the suicide rate in the whole Chinese population has decreased substantially during recent decades, the rate of completed suicide in the elderly Chinese population remains high and is higher than that in persons of any other age group in China and most major East Asian and Western countries/regions.^{1,2} China has the largest older adult population in the world, but this population is disproportionately impacted by suicide; for example, nationally, older adults (65+ years) made up 8.9% of the population but accounted for 38.2% of suicides in 2013–2014.^{1,3} Suicidal behaviors are conceptualized on a continuum rather than as discrete entities; the continuum begins with suicidal ideation, continues with suicide planning, and ends with suicide attempts and completed suicides.⁴

Suicidal thoughts and plans and suicide attempts are generally regarded as the prodrome for later suicide; therefore, the early recognition and management of

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suicidal ideation present the greatest opportunity to prevent subsequent attempted and completed suicides.⁵⁻⁹

There is evidence that social crisis is associated with an increase in the elderly suicide rate of a society; for example, during the SARS outbreak in Hong Kong in 2003, there was a sharp upturn from a previous downward trend in the suicide rate among older adults.¹⁰ Since the COVID-19 outbreak, older adults have been disproportionately affected by the COVID-19 pandemic around the world because of the overrepresentation of older adults in hospitalized COVID-19 patients and the greater risk of severe complications and fatality rate in elderly COVID-19 patients.¹¹ The pandemic containment measures have further exacerbated the vulnerability of older adults; for example, physical distancing and restrictions on social gatherings increased the risk of social isolation and feelings of loneliness, and the lockdown and suspension of public transportation resulted in difficulties in access to healthcare.¹²⁻¹⁴ As a result, there have been increasing concerns regarding mental health problems and suicidal ideation and behaviors of older adults during the COVID-19 pandemic.¹⁵

Empirical data on the prevalence of and factors associated with suicidal ideation among older adults during the pandemic have been very limited. To the best of our knowledge, only one study has investigated this topic, examining the risk of suicide in a small sample of 66 community-dwelling older adults amid the COVID-19 pandemic.¹⁶ This study reported that 27% of older adults had a high risk of suicide, as defined by a Suicidal Behaviors Questionnaire-Revised (SBQ-R) score of 7 or greater, and death anxiety was a significant correlate of a high risk of suicide. In contrast, suicidal ideation has been extensively examined in general populations of different countries.^{17,18} Nevertheless, existing studies have defined suicidal ideation among the general population in a variety of ways: subtypes of suicidal ideation have been described to include passive ideation, active ideation, and both subtypes of ideation; the time frames of suicidal ideation assessed have included the past week, the past month, the past year, the outbreak period only, and the participant's lifetime; the survey methods used have included online self-administered questionnaires and telephone interviews; and assessments of suicidal ideation have included self-report questions, the Patient Health Questionnaire-9 (PHQ-9), the SBQ-R, and the Columbia Suicide Severity Rating Scale (CSSRS).¹⁷ Therefore, the reported prevalence of suicidal ideation in the general population during the pandemic varies widely, ranging from 1.5% to 35.4%.^{19,20} In the available studies, factors associated with suicidal ideation have been reported to include mental health problems such as depressive and anxiety symptoms and COVID-19-related variables such as economic loss due to the pandemic, COVID-19 infection of loved ones, and fear

of COVID-19 infection.²¹⁻²⁴ One consistent finding from prior studies is the lower prevalence of suicidal ideation in older adults than in younger adults.^{22,23,25,26} However, this finding does not indicate that suicidal older adults have a lower priority for psychological crisis intervention services, because, compared to younger adults, older adults are more likely to use immediately lethal means with greater planning and determination to complete suicides.²⁷

Psychological crisis intervention plays a pivotal role in the containment of the COVID-19 pandemic.¹⁴ Evidence has shown that most persons with suicidality do not seek help, with a lack of perceived need for treatment being one of the major barriers.²⁸ To facilitate the planning and development of appropriate mental health services for older adults during the pandemic, it is equally important to investigate both suicidal ideation and mental health help-seeking behaviors among suicidal older adults. Unfortunately, few data on the mental health help-seeking behaviors of suicidal older adults during the pandemic are available. This study examined the prevalence and correlates of suicidal ideation among older Chinese adults during the COVID-19 pandemic, as well as suicidal older adults' perceived need for mental health care and mental health help-seeking behaviors.

Methods

Participants

This study was an online, anonymous, cross-sectional, self-administered questionnaire survey that was conducted from 23 February to 25 March 2020. Because household-based sampling was not feasible during the outbreak period, participants were conveniently recruited through Wechat, China's largest social media platform with over 1.2 billion monthly active users.²⁹ Older adults who were 50 years old or above,³⁰ voluntarily participated in the survey, and resided in communities in mainland China at the time of this survey were eligible for this study. We excluded older adults with known or suspected COVID-19 infection and those who had difficulties completing the questionnaire.

The study protocol was approved by the Ethics Committee of Wuhan Mental Health Center. All participants electronically signed the informed consent form.

Measures

Demographic variables in the questionnaire included sex, age, education, marital status, employment status, and residence place (Wuhan vs other places in China).

Risk perception of COVID-19. Three standardized questions were used to assess participants' perceived risk of COVID-19 infection, risk of death due to COVID-19

infection, and likelihood of a cure for COVID-19: “Would you please give me an estimate of the likelihood that you would be infected with COVID-19?”; “To the best of your knowledge, what is the possibility of dying due to COVID-19 if a person were infected with COVID-19?”; and “To the best of your knowledge, what is the likelihood of a cure for COVID-19?”. The response options were “low” and “high”.

Economic loss due to the COVID-19 pandemic was assessed by asking “Did you suffer economic loss due to the COVID-19 pandemic?”.

Attitudes toward the COVID-19 pandemic were assessed by three questions: “To what extent do you have concerns about the COVID-19 pandemic?” (not concerned, concerned, very concerned); “Do you agree that the COVID-19 pandemic will eventually be successfully controlled?” (agree vs disagree); and “Would you please provide an estimate of the time to the successful containment of the COVID-19 pandemic in China?” (1–2 months, 3–6 months, 6+ months).

The presence of physical health problems was assessed with a two-week morbidity question, which was directly adapted from the National Health Services Survey in China.³¹ This question asked participants whether they had experienced any physical discomfort in the past two weeks, including major medical conditions. Common mental health problems (CMHPs) were assessed with the validated Chinese 12-item General Health Questionnaire (GHQ-12).^{32,33} The GHQ-12 assesses the severity of 12 mental health symptoms over the past two weeks, with each item having four response categories and being scored on a binary scale of 0-0-1-1 for positively worded items and 1-1-0-0 for negatively worded items.³⁴ In China, a GHQ-12 score of 3 or higher is used to denote the presence of CMHPs.³³

A standardized question adapted from the National Comorbidity Survey was used to assess the presence of suicidal ideation: “During the past two weeks, have you ever seriously thought about committing suicide?”.³⁵

Respondents who reported suicidal ideation were further asked about their perceived need for mental health care and mental health help-seeking behaviors for suicidal ideation: “In the past two weeks, did you recognize that you need help from mental health workers for your suicidal problems? These workers include psychiatrists, psychotherapists, and psychological counselors” and “In the past two weeks, did you seek help from mental health workers for your suicidal problems?”.

Statistical Analysis

The rate of suicidal ideation among the total sample and rates of perceived need for mental health care and mental health help-seeking behaviors among suicidal ideators

were calculated. Rates of suicidal ideation between/across subgroups according to demographic and COVID-19-related characteristics were compared by using the Chi-square test and Fisher’s exact test, where appropriate. Multiple logistic regression with backward stepwise entry of all significant factors in the Chi-square test and Fisher’s exact test was used to identify factors associated with suicidal ideation. Odds ratios (ORs) and 95% confidence intervals (CIs) were used to quantify the associations between factors and suicidal ideation. The statistical significance level was set at $P < .05$ (two-sided). SPSS software version 15.0 package was used for all analyses.

Results

A total of 1159 older adults were included in the current analysis. The final sample consisted of 412 men (35.5%) and 747 women (64.5%), and the average age of the sample was 56.1 years (standard deviation: 6.0, range: 50–95). Detailed demographic and COVID-19-related characteristics are shown in Table 1.

A total of 47 older adults reported serious suicidal ideation during the past two weeks. The two-week prevalence of suicidal ideation was 4.1% (95%CI: 2.9–5.2%). Significantly higher prevalence rates of suicidal ideation were observed in persons who had a marital status of “others” (vs. married), perceived a high risk of COVID-19 infection (vs. low), disagreed that the pandemic would be successfully contained (vs. agreed), estimated that at least 6 months would be needed to successfully control the pandemic (vs. 1–2 months), suffered from physical health problems, and had CMHPs ($P \leq .014$) (Table 1).

As shown in Table 2, factors significantly associated with suicidal ideation were a marital status of “others” (OR = 2.39, $P = .021$), disagreement regarding the successful containment of the pandemic (OR = 2.43, $P = .022$), presence of physical health problems (OR = 2.23, $P = .012$), and presence of CMHPs (OR = 4.99, $P < .001$).

Among the 47 suicidal ideators, 15 (31.9%, 95%CI: 18.6–45.2%) perceived a need for mental health care, and only 5 (10.6%, 95%CI: 1.8–19.5%) had sought help from mental health workers.

Discussion

To the best of our knowledge, this is the first study in China to examine suicidal ideation in older adults during the COVID-19 pandemic. Unlike previous studies,^{17,18} we defined suicidal ideation in a more clinically relevant and accurate way. First, compared to the commonly used PHQ-9 suicidal item in existing studies (“thoughts that you would be better off dead or hurting yourself in some way”), the item used in our study, that is, “seriously thought about committing suicide,” indicates stronger suicidal intention.

Table 1. Sample characteristics, prevalence rates of suicidal ideation by demographic, and COVID-19-related characteristics.

Characteristic		Total Sample (n = 1159)	Suicidal Ideators (n = 47), N (%)	χ^2	P
Residence place	Wuhan	492	20 (4.1)	.001	.988
	Other places	667	27 (4.0)		
Sex	Male	412	13 (3.2)	1.330	.249
	Female	747	34 (4.6)		
Age-group (years)	50–59	867	37 (4.3)		.598 ^a
	60+	292	10 (3.4)		
Marital status	Married	1030	36 (3.5)	7.461	.006
	Others ^b	129	11 (8.5)		
Employment status	Employed	948	37 (3.9)	.310	.577
	Unemployed	211	10 (4.7)		
Education	Middle school and below	256	13 (5.1)	.884	.347
	Associate's degree and above	903	34 (3.8)		
Perceived risk of COVID-19 infection	Low	826	26 (3.1)	6.085	.014
	High	333	21 (6.3)		
Perceived risk of death due to COVID-19 infection	Low	676	23 (3.4)	1.777	.183
	High	483	24 (5.0)		
Perceived likelihood of a cure for COVID-19	Low	394	21 (5.3)	2.493	.114
	High	765	26 (3.4)		
Economic loss due to COVID-19 pandemic	Yes	1027	45 (4.4)	2.470	.116
	No	132	2 (1.5)		
Degree of concerning about the COVID-19 pandemic	Very concerned	1009	38 (3.8)	1.675	.196
	Concerned	150	9 (6.0)		
The successful containment of COVID-19 pandemic	Agree	1079	36 (3.3)		<.001 ^a
	Disagree	80	11 (13.8)		
Estimated months to the successful containment of COVID-19 pandemic in China	1–2	615	16 (2.6)	19.360	<.001 ^a
	3–6	495	22 (4.4)		
	6+	49	9 (18.4)		
Physical health problems	Yes	332	27 (8.1)	19.881	<.001
	No	827	20 (2.4)		
Common mental health problems	Yes	338	34 (10.1)	44.207	<.001
	No	821	13 (1.6)		

^aFisher's Exact Test.^b"Others" included never-married, re-married, co-habiting, separated, divorced, and widowed.

Second, the time frame of “the past two weeks” in the current study is less subject to recall bias than time frames of “the past month” and “the past year” in the majority of prior studies.³⁵ Perhaps for these reasons, the 4.1% estimated prevalence of suicidal ideation in older adults falls into the lower range of prevalence rates of suicidal ideation reported in the general population during the COVID-19 pandemic.^{17,19,20} However, compared to the 2.6% one-year prevalence of suicidal ideation in urban older Chinese adults, the 5.7% one-year prevalence of suicidal ideation in rural older Chinese adults, and the .8% one-month prevalence of suicidal ideation in a national representative sample of older Chinese adults,³⁶⁻³⁸ the prevalence of suicidal ideation in older Chinese adults in our study was still higher during the pandemic than before the pandemic.

The psychological challenges that the COVID-19 pandemic has posed are unprecedented and wide-ranging, particularly for older Chinese adults who were already vulnerable before the pandemic because of China's profound socioeconomic and cultural changes during the past four decades.^{39,40} In the context of the pandemic, we argue that the complex interactions of biological, psychological, and social factors exacerbate the risk of suicide among older adults. As supported by the results of multiple logistic regression, factors regarding physical health, mental health, and attitudes toward the pandemic were associated with suicidal ideation. According to Durkheim's sociological perspectives of suicide,⁴¹ restrictions imposed on daily life, such as physical distancing, may foster feelings of alienation and loneliness and decrease social integration, which in turn triggers anomic suicidal

Table 2. Multiple Logistic Regression Analysis on Factors Associated with Suicidal Ideation.

Factor		OR (95%CI)	P
Marital status	Married	1	.021
	Others ^a	2.39 (1.14, 5.01)	
Successful containment of the pandemic	Agree	1	.022
	Disagree	2.43 (1.14, 5.21)	
Physical health problems	No	1	.012
	Yes	2.23 (1.19, 4.17)	
Common mental health problems	No	1	<.001
	Yes	4.99 (2.52, 9.89)	

^a“Others” included never-married, re-married, co-habiting, separated, divorced, and widowed.

behaviors. On the other hand, as older adults are one of the high-risk groups for COVID-19 infection, the fear of COVID-19 infection and subsequently spreading it to loved ones may trigger altruistic suicidal behaviors, including suicidal ideation.⁴²

Consistent with previous studies on suicidal ideation among the general population during the pre-pandemic, a marital status of “others”, the presence of physical health problems, and the presence of CMHPs were significantly associated with suicidal ideation in older adults during the pandemic.³⁶⁻³⁸ Nevertheless, we speculate that older adults who feel pessimistic about the containment of the pandemic may experience a high level of hopelessness and therefore may be more likely to consider suicide during the pandemic. It is worth mentioning that due to the pandemic, older adults may have difficulties receiving timely treatments for their physical health problems and CMHPs, and the delayed treatments would further result in an elevated risk of suicidal ideation.

Less than one-third of the suicidal older adults perceived a need for mental health care, and approximately one-tenth sought help from mental health workers. In China, 73% of older adults prefer to manage their emotional and suicidal problems by using self-regulation strategies or by seeking help from good friends.⁴³ Therefore, the low level of mental health literacy might be the primary reason for the low rate of perceived need for mental health care among suicidal ideators. In addition to the low willingness to seek help from mental health workers, the very low rate of mental health help-seeking behaviors among suicidal ideators might be explained by stigmatizing attitudes toward suicide, the unavailability of routine mental health services during the pandemic, and difficulties accessing the online mental health services.

This study has a few limitations. First, the sample of older adults included Wechat users who volunteered to participate, and this sample was younger and more socioeconomically advantaged than general community-dwelling older adults. Therefore, caution is needed when generalizing the study findings to all community-dwelling older adults. Second, owing to our limited research budget, we did not interview suicidal older adults to collect qualitative data on reasons for not seeking help

from mental health workers. Such data would have deepened our understanding of barriers to psychological crisis intervention services in older adults during the pandemic. Third, we did not investigate other subtypes of nonfatal suicidal behaviors, such as suicidal planning and attempted suicides, which are also important for assessing the risk of suicide in older adults. Fourth, our set of response options for the risk perception of COVID-19 was slightly arbitrary because only binary options were used, without an intermediate level of risk.

In summary, suicidal ideation during the past two weeks was observed among 4.1% of the older Chinese adults amid the COVID-19 pandemic; however, among the suicidal ideators, only 31.9% perceived a need for mental health care for suicidal problems, and only 10.6% had sought help from mental health workers. This study demonstrated a relatively high risk of suicidal ideation, a low level of perceived need for mental health care, and a very low rate of mental health help-seeking behaviors in the elderly Chinese individuals, suggesting that older adults constitute a subpopulation that needs mental health care but that tends not to seek mental health help during the pandemic. Several factors associated with suicidal ideation in older adults before the pandemic are also correlates of suicidal ideation during the pandemic, but the negative psychological effect of these factors may be magnified by the pandemic; thus, older adults who are not married, who have physical health problems, and who have CMHPs should be considered as the target population for mental health services during the pandemic. Mental health services for older adults may include mental health education; periodic evaluation of risk of suicide and screening for major risk factors for suicide, such as major depression; expanded social support that specifically focuses on improving psychological well-being; and, when necessary, psychological crisis intervention and psychiatric treatment.

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