



# Suicidal Ideation and Attitudes Toward Help Seeking in U.S. Nurses Relative to the General Working Population

Findings show that nurses who need mental health care are often reluctant to seek it.

**D**ata gathered during the severe acute respiratory syndrome and COVID-19 pandemics suggest that health care workers who have direct contact with infected patients experience high rates of depression, anxiety, and other forms of psychological distress.<sup>1-6</sup> Indeed, in a survey of 22,316 nurses conducted by the American Nurses Association (ANA) last January and February, 23% of respondents reported feeling depressed and 1% reported suicidal ideation within the past 14 days.<sup>7</sup> Even in the absence of a pandemic, nurses appear to be at high risk for these conditions. After analyzing data from several national databases for the years 2007 through 2018, Davis and colleagues found that nurses were more likely to die by suicide than people in the general population.<sup>8</sup>

Although nurses constitute the largest group of health care professionals, surprisingly little is known about their risk factors for suicide. Suicide is difficult to study. There are challenges to obtaining reliable statistics for its incidence and prevalence, in part because of the relative rarity of an event, as well as ethical and safety concerns.<sup>9</sup> An alternative end point often used by researchers is suicidal ideation, which is a well-recognized precursor to suicide attempts.<sup>10</sup> In studies conducted among physicians and medical students, factors associated with suicidal ideation include depression and burnout,<sup>11-13</sup>

but these associations have been less well studied among nurses. It's been reported that about 35% of U.S. nurses have experienced depressive symptoms and 35% to 45% have had at least one symptom of burnout.<sup>14-16</sup>

**Study purpose.** This study investigated the prevalence of suicidal ideation and attitudes toward help seeking among U.S. nurses relative to other workers; and, among nurses, the extent to which personal and professional factors, including burnout, were related to suicidal ideation.

## A REVIEW OF THE LITERATURE

**Depression and suicidal ideation.** According to the World Health Organization, depression is a leading cause of disability worldwide,<sup>17</sup> and a well-recognized risk factor for suicide.<sup>18</sup> In a cross-sectional study of 1,171 hospital nurses licensed in North Carolina, 12% had moderate depression, 4% had moderately severe depression, and 2% had severe depression, as measured by the nine-item Patient Health Questionnaire (PHQ-9).<sup>19</sup> These values are higher than have been reported for the general U.S. population.<sup>20,21</sup> Other studies among nurses indicate that personal health problems, lower job satisfaction, job-related stress, lack of supervisor support, and workplace violence are associated with higher risk of depression.<sup>19,22</sup> In the aforementioned study by Davis and colleagues, the

## ABSTRACT

**Purpose:** Although previous studies have revealed professional consequences of burnout among nurses, less is known about the potential personal consequences. This study investigated the prevalence of suicidal ideation and attitudes toward help seeking among U.S. nurses relative to other workers, and the extent to which personal and professional factors, including burnout, were related to suicidal ideation.

**Methods:** In November 2017, a cross-sectional survey was sent to 86,858 nurses who were members of the American Nurses Association and to a probability-based sample of 5,198 U.S. workers. The survey included questions regarding suicidal ideation, burnout, symptoms of depression, individual and professional characteristics, and willingness to seek professional help if a serious emotional problem arose. Multivariable logistic regression analyses were conducted to identify factors associated with suicidal ideation after controlling for other factors.

**Results:** Among the 7,378 nurse respondents, 403 (5.5%) reported having suicidal ideation within the past year. Most nurses (84.2%) indicated willingness to seek professional help for a serious emotional problem. Yet nurses with suicidal ideation were less likely to report that they'd seek such help (72.6%) than nurses without suicidal ideation (85%). In a multivariable analysis of nurses' data, after controlling for other personal and professional characteristics, we found that burnout was strongly associated with suicidal ideation. Adjusted combined multivariable analyses showed that nurses were more likely than other workers to have suicidal ideation. Both nurses and other workers who reported suicidal ideation were less likely to seek help than were those who did not report such ideation.

**Conclusions:** Compared with other U.S. workers, nurses are at higher risk for suicidal ideation, and nurses with such ideation are more reluctant to seek help than those without it. Burnout contributes to the risk of suicidal ideation. These issues warrant greater attention. Systems- and practice-level interventions must be identified and implemented, both to address the higher prevalences of burnout and suicidal ideation in nurses and to mitigate the stigma about mental health problems and other barriers to seeking help.

**Keywords:** burnout, depression, help-seeking attitudes, suicidal ideation

researchers found that during 2017 and 2018, nurses had an 18% higher incidence of suicide than people in the general population.<sup>8</sup> Even more striking, female nurses had nearly twice the incidence of suicide as women in the general population.<sup>8</sup> Risk factors for suicide among nurses may include depression and high work and home stress.<sup>23</sup>

**Burnout and suicidal ideation.** In a cross-sectional survey of 2,734 female nurses working in hospitals in Taiwan, suicidal ideation was higher among those with burnout than in those without.<sup>24</sup> Although we couldn't find similar studies conducted among U.S. nurses, cross-sectional surveys of 7,905 U.S. surgeons<sup>12</sup> and 4,833 physicians<sup>13</sup> have reported similar relationships between suicidal ideation and burnout. A longitudinal study of U.S. medical students found that burnout, independent of depressive symptoms, was predictive of suicidal ideation.<sup>11</sup> This study also provided some evidence that the risk of suicidal ideation decreased after recovery from burnout.

**Help-seeking attitudes.** Stigma associated with mental health issues is a well-known barrier to seeking and accessing mental health care.<sup>25,26</sup> Health care professionals, including nurses, aren't immune to this stigma, and there is evidence that it's a bar-

rier for them as well.<sup>12,13,27-29</sup> In the aforementioned ANA survey of 22,316 U.S. nurses conducted earlier this year, stigma was among the reasons for not seeking mental health support.<sup>7</sup> Yet willingness to seek help for emotional problems is a necessary first step to accessing care and buffering against suicidal ideation and attempts. We were unable to find prior studies on help-seeking attitudes of nurses with suicidal ideation.

## METHODS

**Study design and sample.** We conducted a cross-sectional survey of a random sample of nurses who were members of the ANA. After receiving institutional review board (IRB) approval from the Mayo Clinic, we obtained a list of e-mail and postal mail addresses of nurses from the ANA in November 2017. After removing duplicate entries, we e-mailed a cover letter with a link to an electronic survey to 89,995 nurses. This mailing revealed 3,137 non-functional e-mail addresses, resulting in 86,858 nurses receiving the invitation. A random selection of 500 nurses who did not respond to the electronic survey were mailed a printed survey along with \$10, followed by a second mailing three weeks later without an accompanying incentive. Data were

collected from November 1 through December 13, 2017. Participation was voluntary and responses were anonymous. All participants were provided information on the national suicide hotline.

**Other U.S. workers.** For the purpose of comparison to nurses, from October 13 through October 21, 2017, we surveyed a probability-based sample of other workers ages 29 to 65 years via KnowledgePanel ([www.ipsos.com/en-us/solutions/public-affairs/knowledgepanel](http://www.ipsos.com/en-us/solutions/public-affairs/knowledgepanel)), which is designed to be representative of the general U.S. population. Individuals were randomly selected by telephone numbers and residential addresses and were contacted by telephone or postal mail with an invitation to participate. Those who responded completed the electronic survey (and if necessary were provided with the means to do so). To enable comparison with the nurse sample, individuals who were unemployed were excluded. This survey of other U.S. workers was approved by both the Mayo Clinic and Stanford University IRBs.

**Survey instruments.** The survey incorporated two well-known tools for assessing burnout and depression. It also included previously published items inquiring about suicidal ideation, attitudes toward help seeking, and demographics.

*Suicidal ideation* was evaluated by asking participants, “During the past 12 months, have you had thoughts of taking your own life?” This question, which originated in an inventory developed by Meehan and colleagues,<sup>30</sup> has been used to assess suicidal ideation in physicians and medical students,<sup>11, 12, 31</sup> and is similar to a question used to assess suicidality in a large U.S. epidemiological study.<sup>32</sup> For this single question, no reliability data can be obtained, and whether responses to this item predict future behavior is unknown. Findings from the National Comorbidity Survey (NCS) suggest that about a third of people who report suicidal ideation go on to develop a plan, and of these, nearly three-fourths will attempt suicide.<sup>10</sup> Furthermore, about one in four people with suicidal ideation have made an unplanned suicide attempt.<sup>10</sup>

*Burnout* was measured in the nurse sample via the 22-item Maslach Burnout Inventory–Human Services Survey (MBI-HSS).<sup>33</sup> This instrument measures three subscales of burnout: emotional exhaustion, depersonalization, and low sense of personal accomplishment. For each subscale, respondents are asked to rate the frequency of symptoms using a seven-point Likert scale (0, never; 1, a few times a year or less; 2, once a month or less; 3, a few times a month; 4, once a week; 5, a few times a week; or 6, every day). Possible subscale scores range from 0 to 54 (emotional exhaustion), 0 to 30 (depersonalization), and 0 to 48 (low sense of personal accomplishment). The MBI-HSS is a valid and reli-

able survey instrument for use among human service professionals and is widely considered the gold standard for assessing burnout.<sup>15, 34</sup> In keeping with convention,<sup>31, 35, 36</sup> we considered nurse respondents to have burnout if they scored 27 or above on the emotional exhaustion subscale, 10 or above on the depersonalization subscale, or both.

To minimize survey length, the survey of other U.S. workers included two single-item measures from the MBI: from the emotional exhaustion subscale, “I feel burned out from my work,” and from the depersonalization subscale, “I have become more callous toward people since I took this job.” We chose these two items because there is robust validity evidence for each.<sup>34, 37</sup> They are considered among the best and most pragmatic measures of burnout.<sup>38</sup>

**Depression.** Symptoms of depression were assessed in both samples using the two-item depression screening portion of the Primary Care Evaluation of Mental Disorders (PRIME-MD).<sup>39</sup> The questions are: “During the past month, have you often been bothered by feeling down, depressed, or hopeless?” and “During the past month, have you often been bothered by little interest or pleasure in doing things?” This two-item screen has demonstrated a sensitivity of 86% to 96% and a specificity of 57% to 75%, and is considered useful for detecting major depression.<sup>40</sup>

**Help-seeking attitudes.** Attitudes toward seeking mental health care were assessed in both samples using an item drawn from the NCS that has been used in previous studies evaluating the general population’s willingness to seek mental health care.<sup>41, 42</sup> This question asks respondents about their willingness to seek professional help if a serious emotional problem arose. Response options were “would definitely go,” “would probably go,” “would probably not go,” and “would definitely not go.” For analysis purposes, responses of the first two types were collapsed, as were responses of the last two types, allowing us to dichotomize responses as affirmative or negative. The strength of associations between responses to this item and actual help seeking is unknown. That said, the stigma associated with mental health issues extends to their treatment and is known to lead to decreased help-seeking behavior.<sup>25, 43</sup>

**Demographics** assessed in both sample groups included age, gender, and relationship status. The nurses’ survey also included questions about race and ethnicity as well as parental status. Both surveys included questions about the number of hours worked per week and highest level of education. The nurses’ survey included additional items about professional characteristics (highest nursing degree, advanced practice certification,

**Table 1.** Characteristics of Nurses with and Without Suicidal Ideation in the Previous 12 Months

Characteristic	All Nurses, N (%) (N = 7,378)	Nurses with Suicidal Ideation, n (%) (n = 403)	Nurses Without Suicidal Ideation, n (%) (n = 6,975)	Unadjusted Odds Ratio (95% CI)	P
Age in years, median (IQR) (n = 7,272)	51 (38–60)	44 (34–56)	52 (39–60)	0.97 (0.97–0.98)	< 0.001
Gender (n = 7,306)					0.008
Male	530 (7.3)	42 (7.9)	488 (92.1)	Reference	
Female	6,776 (92.7)	354 (5.2)	6,422 (94.8)	0.64 (0.46–0.89)	
Relationship status (n = 7,330)					0.001
Single	1,691 (23.1)	122 (7.2)	1,569 (92.8)	Reference	
Married	4,899 (66.8)	238 (4.9)	4,661 (95.1)	0.66 (0.52–0.82)	
Partnered	505 (6.9)	33 (6.5)	472 (93.5)	0.90 (0.60–1.34)	
Widow/widower	235 (3.2)	9 (3.8)	226 (96.2)	0.51 (0.26–1.02)	
Have children (n = 7,295)	5,175 (70.9)	241 (4.7)	4,934 (95.3)	0.60 (0.49–0.74)	< 0.001
Age of youngest child, years (n = 5,081)					0.002
< 5	514 (10.1)	26 (5.1)	488 (94.9)	1.43 (0.91–2.23)	
5–12	763 (15)	50 (6.6)	713 (93.4)	1.88 (1.32–2.67)	
13–18	697 (13.7)	43 (6.2)	654 (93.8)	1.76 (1.21–2.55)	
19–22	553 (10.9)	29 (5.2)	524 (94.8)	1.48 (0.97–2.27)	
> 22	2,554 (50.3)	92 (3.6)	2,462 (96.4)	Reference	
Ethnicity (n = 7,262)					
Hispanic or Latino	360 (5)	20 (5.6)	340 (94.4)	1.03 (0.65–1.64)	0.90
Not Hispanic or Latino	6,902 (95)	373 (5.4)	6,529 (94.6)	Reference	
Race <sup>a</sup> (n = 7,295)					
White	6,377 (87.4)	362 (5.7)	6,015 (94.3)	1.39 (0.99–1.96)	0.06
Black or African American	497 (6.8)	13 (2.6)	484 (97.4)	0.45 (0.25–0.78)	0.004
Asian	292 (4)	18 (6.2)	274 (93.8)	1.14 (0.70–1.85)	0.60
American Indian or Alaska Native	133 (1.8)	12 (9)	121 (91)	1.73 (0.95–3.16)	0.07
Pacific Islander or Native Hawaiian	34 (0.5)	4 (11.8)	30 (88.2)	2.31 (0.81–6.60)	0.11
Other	201 (2.8)	12 (6)	189 (94)	1.10 (0.61–1.98)	0.76
Highest academic degree related to nursing (n = 7,373)					0.002
Associate degree	1,140 (15.5)	74 (6.5)	1,066 (93.5)	1.03 (0.78–1.36)	
Baccalaureate in nursing	3,025 (41)	191 (6.3)	2,834 (93.7)	Reference	
MSN	2,222 (30.1)	97 (4.4)	2,125 (95.6)	0.68 (0.53–0.87)	
DNP	322 (4.4)	19 (5.9)	303 (94.1)	0.93 (0.57–1.51)	
PhD	409 (5.5)	16 (3.9)	393 (96.1)	0.60 (0.36–1.02)	
Other	255 (3.5)	6 (2.4)	249 (97.6)	0.36 (0.16–0.81)	

**Table 1.** Continued

Characteristic	All Nurses, N (%) (N = 7,378)	Nurses with Suicidal Ideation, n (%) (n = 403)	Nurses Without Suicidal Ideation, n (%) (n = 6,975)	Unadjusted Odds Ratio (95% CI)	P
Nursing practice, years, median (IQR) (n = 7,342)	20 (6–34)	12 (4–27)	20 (7–35)	0.98 (0.97–0.98)	< 0.001
Hours worked per week, median (IQR) (n = 7,241)	40 (35–40)	38 (36–42)	40 (35–40)	1.01 (1.00–1.02)	0.54
Additional APRN certification <sup>b</sup> (n = 7,378)	2,060 (27.9)	86 (4.2)	1,974 (95.8)	0.69 (0.54–0.88)	0.003
Primary practice setting <sup>c</sup> (n = 7,325)					0.17
Hospital based	3,477 (47.5)	206 (5.9)	3,271 (94.1)	Reference	
ED	292 (4)	22 (7.5)	270 (92.5)	1.29 (0.82–2.04)	
Ambulatory/outpatient clinic	1,063 (14.5)	53 (5)	1,010 (95)	0.83 (0.61–1.14)	
Community based	491 (6.7)	30 (6.1)	461 (93.9)	1.03 (0.70–1.53)	
Nonclinical	358 (4.9)	15 (4.2)	343 (95.8)	0.69 (0.41–1.19)	
Other	1,644 (22.4)	77 (4.7)	1,567 (95.3)	0.78 (0.60–1.02)	
Number of times working mandatory or unplanned overtime in the last month, mean (SD) (n = 6,662)	3 (5.86)	3.6 (5.76)	3 (5.86)	1.01 (1.00–1.03)	< 0.001
Burnout					
Respondents with high emotional exhaustion score <sup>d</sup> (n = 7,248)	2,494 (34.4)	263 (10.5)	2,231 (89.5)	4.00 (3.24–4.95)	< 0.001
Respondents with high depersonalization score <sup>e</sup> (n = 7,211)	1,470 (20.4)	190 (12.9)	1,280 (87.1)	3.93 (3.20–4.83)	< 0.001
Respondents with burnout <sup>f</sup> (n = 7,264)	2,772 (38.2)	277 (10)	2,495 (90)	3.94 (3.17–4.90)	< 0.001
Depression screen positive (n = 7,350)	3,182 (43.3)	366 (11.5)	2,816 (88.5)	14.51 (10.31–20.42)	< 0.001

APRN = advanced practice registered nurse; CI = confidence interval; DNP = doctor of nursing practice; IQR = interquartile range.

<sup>a</sup> Respondents could select multiple choices for race.

<sup>b</sup> APRN includes certified NPs, clinical nurse specialists, certified nurse midwives, certified registered nurse anesthetists.

<sup>c</sup> Hospital-based settings include acute care, intensive care, operating, recovery, procedure care, obstetrics units. Community-based settings include hospice, home health care, public health care, schools.

<sup>d</sup> Respondents with high score on the emotional exhaustion subscale (score  $\geq 27$ )

<sup>e</sup> Respondents with high score on the depersonalization subscale (score  $\geq 10$ )

<sup>f</sup> Respondents with high score on the emotional exhaustion and/or the depersonalization subscale are considered to have symptoms of burnout.

Note: Totals less than N = 7,378 reflect missing responses. Percentages are based on the number of actual responses to an item.

years of nursing experience, practice setting, and number of mandatory or unplanned overtime shifts worked in the last month). The other workers' survey included questions about highest level of education and occupation.

**Data analysis.** Standard descriptive statistics were summarized to characterize the samples and estimate the prevalence of suicidal ideation, burn-

out, and depressive symptoms. We looked for univariate differences in suicidal ideation in the past year by using  $\chi^2$  (for categorical variables) or Kruskal-Wallis (for continuous variables) tests. All tests were two-sided, and significance was set at  $P \leq 0.05$ . We conducted three multivariable analyses. In the first model, we sought to identify factors associated with suicidal ideation in

the previous year among nurses, after controlling for all the aforementioned demographic characteristics, burnout, and depressive symptoms. In the second and third models, we combined the other workers sample with an age-matched sample of nurse responders ages 29 to 65 years, in order to identify personal and professional characteristics associated with having suicidal ideation within the past year (in other words, recently) and willingness to seek help for a serious emotional problem, respectively. In the combined model for suicidal ideation, factors examined included age, gender, number of hours worked per week, relationship status, and burnout. In the combined model for willingness to seek help, factors examined included age, gender, number of hours worked per week, relationship status, and recent suicidal ideation. Multicollinearity was considered during the modeling procedures but was deemed unlikely to affect the results. Statistical analyses were conducted using SAS version 9.4.

## RESULTS

**Nurses.** A total of 7,378 nurses responded to the survey. Their median age was 51 years (interquartile range [IQR], 38 to 60 years), and nearly all were female (92.7%) and White (87.4%). Most were married or partnered (73.7%) and had children (70.9%), with the youngest child older than 22 years (50.3%). Nurse respondents had a median of 20 years (IQR, 6 to 34 years) of nursing experience and worked a median of 40 hours (IQR, 35 to 40 hours) per week. Most reported holding a baccalaureate (41%) or an MSN (30.1%) as their highest academic degree. More than a quarter (27.9%) held an additional advanced practice certification. A hospital-based setting (47.5%) was the most common practice site. The mean number of mandatory or unplanned overtime shifts worked in the last month was three.

A total of 403 (5.5%) nurses reported considering suicide within the past year. More than one-third of all nurses (38.2%) had at least one symptom of burnout. The mean emotional exhaustion score was 21.7, with 34.4% having scores indicating a high level of such exhaustion. The mean depersonalization score was 5.4, with 20.4% having scores indicating a high level of depersonalization. Close to half of all nurses (43.3%) screened positive for depression symptoms.

Several personal and professional characteristics were associated with prevalence of suicidal ideation. Nurses with high levels of emotional exhaustion, high levels of depersonalization, burnout, or depressive symptoms were significantly more likely to have had suicidal ideation in the past year, compared with nurses without these characteristics. For more details on nurses' demographics and results from this analysis, see Table 1.

In the first multivariable logistic regression model, both burnout and depressive symptoms were strongly associated with recent suicidal ideation, after controlling for other personal and professional characteristics (see Table 2). Indeed, after controlling for depressive symptoms and other personal and professional characteristics, we found that nurses with burnout were nearly twice as likely to have recent suicidal ideation. And after controlling for burnout and other personal and professional characteristics, we found that nurses with depressive symptoms were 11 times more likely to have such ideation. After controlling for all other factors, a significant difference did emerge by race, with White nurses having higher odds of suicidal ideation compared with nurses of other races and ethnicities. No other professional or personal characteristics remained associated with suicidal ideation after adjusted analysis.

**Help-seeking attitudes.** Overall, most nurses (84.2%) indicated they would "probably" or "definitely" seek professional help if they had a serious emotional problem. But nurses with suicidal ideation were less likely to report they would "probably" or "definitely" seek help (72.6%) than nurses without such ideation (85%) (see Figure 1A).

**Comparison of nurses and other workers.** A total of 5,198 workers between the ages of 29 and 65 years in the general population responded to the survey and were compared with an age-matched sample of 6,022 nurses. See Table 3 for the personal and professional characteristics of both groups. Compared with their counterparts, these nurses were more likely to be younger, female, and married or partnered. They also worked fewer hours per week (mean, 38.2 hours) than workers in the other sample (mean, 40.3 hours).

In the age-matched cohorts, among respondents answering the question about suicidal ideation, significantly fewer other workers (4.3%) reported having such ideation than did nurses (5.8%). The other workers were also significantly less likely (63.2%) than nurses (84.2%) to indicate that they'd "probably" or "definitely" seek professional help for a serious emotional problem (see Figure 1B). But there were no significant differences in help-seeking attitudes among other workers with or without suicidal ideation.

The second, combined multivariable analysis model explored factors potentially associated with suicidal ideation. After controlling for age, gender, hours worked per week, relationship status, and burnout, we found that nurses had significantly higher odds (38%) of having suicidal ideation than other workers. For all respondents, after controlling for depressive symptoms and personal and professional characteristics, burnout was associated with nearly threefold higher odds of suicidal ideation.

**Table 2.** Factors Associated with Suicidal Ideation in the Previous 12 Months on Multivariable Analysis for Nurses

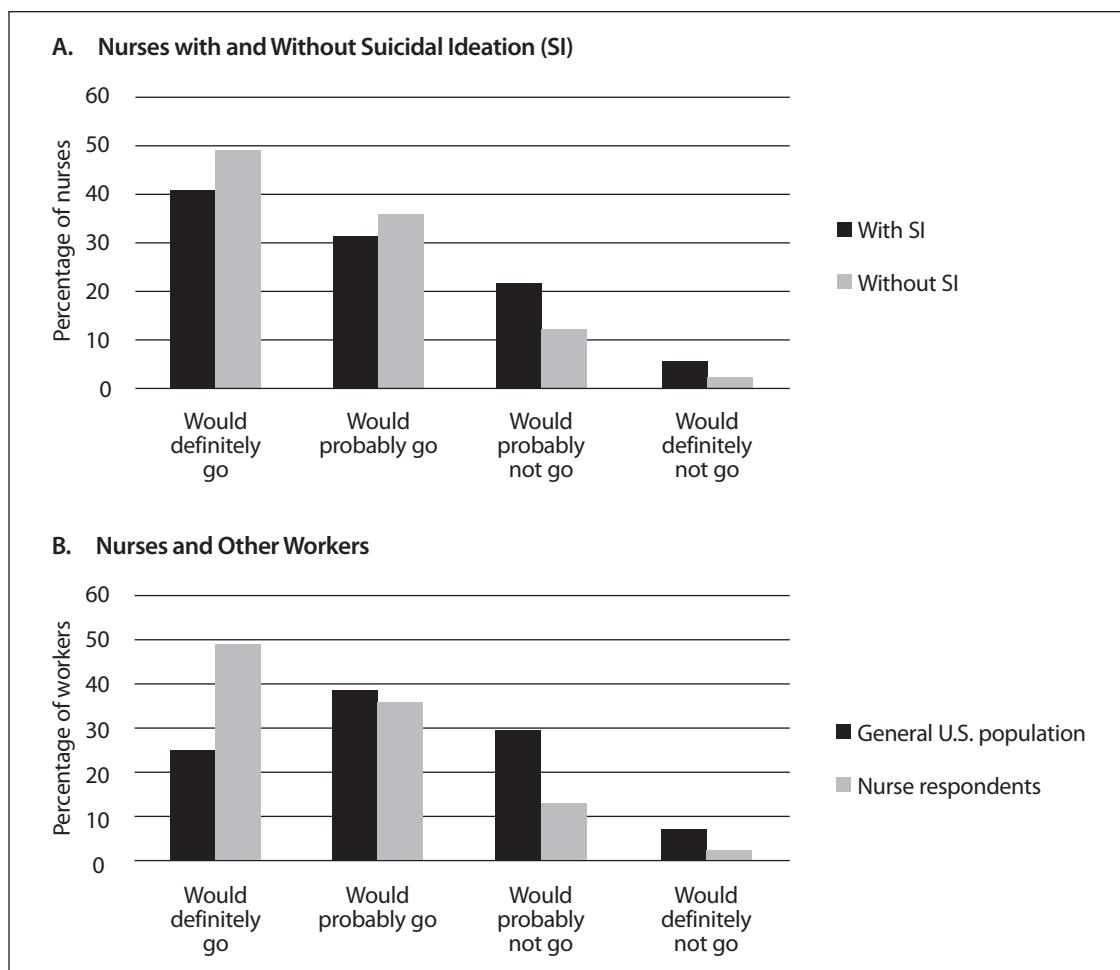
Variable	Odds Ratio (95% CI)	P	Overall P
Age (for each additional year older)	0.99 (0.98-1.01)		0.32
Female gender (vs. male)	1.29 (0.87-1.90)		0.21
Race/ethnicity			
Hispanic (vs. non-Hispanic)	0.87 (0.51-1.47)		0.60
White (vs. other)	1.73 (1.16-2.60)		0.01
Relationship status			0.49
Married (vs. single)	0.82 (0.62-1.08)	0.15	
Partnered (vs. single)	0.84 (0.54-1.32)	0.46	
Widow/widower (vs. single)	1.06 (0.50-2.24)	0.88	
Children			0.77
Youngest child 18 years of age or younger (vs. no children)	0.96 (0.71-1.29)	0.78	
Youngest child older than 18 years of age (vs. no children)	0.87 (0.61-1.26)	0.47	
Highest degree			0.13
Associate degree (vs. baccalaureate in nursing)	1.10 (0.81-1.51)	0.54	
MSN (vs. baccalaureate in nursing)	1.10 (0.79-1.53)	0.58	
DNP (vs. baccalaureate in nursing)	2.25 (1.25-4.03)	0.007	
PhD (vs. baccalaureate in nursing)	1.39 (0.71-2.74)	0.33	
Other (vs. baccalaureate in nursing)	0.81 (0.34-1.94)	0.63	
APRN certification <sup>a</sup> (vs. none)	0.77 (0.55-1.08)		0.12
Hours worked per week (for each additional hour)	0.99 (0.98-1.01)		0.25
Years of nursing experience (for each additional year)	1.00 (0.98-1.01)		0.50
Practice setting <sup>b</sup>			0.29
Ambulatory/outpatient clinic (vs. hospital based)	1.35 (0.94-1.93)	0.10	
Community based (vs. hospital based)	1.41 (0.91-2.19)	0.13	
ED (vs. hospital based)	0.91 (0.52-1.58)	0.73	
Nonclinical (vs. hospital based)	0.79 (0.42-1.49)	0.48	
Other (vs. hospital based)	0.97 (0.69-1.36)	0.86	
Burned out (vs. not burned out)	1.98 (1.54-2.56)		< 0.001
Depression screen positive (vs. negative)	11.53 (7.81-17.02)		< 0.001
Mandatory or unplanned overtime in the last month (for each additional instance)	1.00 (0.98-1.02)		0.96

APRN = advanced practice registered nurse; CI = confidence interval; DNP = doctor of nursing practice.

<sup>a</sup> APRN includes certified NPs, clinical nurse specialists, certified nurse midwives, certified registered nurse anesthetists.

<sup>b</sup> Hospital-based settings include acute care, intensive care, operating, recovery, procedure care, obstetrics units. Community-based settings include hospice, home health care, public health care, schools.

**Figure 1.** Attitudes Toward Seeking Professional Help for a Serious Emotional Problem Among U.S. Nurses with and Without Suicidal Ideation and U.S. Nurses and Other Workers



Older respondents and those who were married, partnered, or widowed had lower odds of suicidal ideation than younger and single respondents.

The third combined multivariable analysis model explored factors potentially associated with willingness to seek help for a serious emotional problem. After controlling for age, gender, work hours, relationship status, and recent suicidal ideation, we found nurses had twofold higher odds of reporting they would “probably” or “definitely” seek help than did other workers. For all respondents, women and older respondents were also more likely to report willingness to seek help. But individuals who reported recent suicidal ideation had lower odds of reporting this. For details on the combined multivariate analyses, see Table 4.

## DISCUSSION

In this study of more than 7,000 U.S. nurses, conducted in 2017, 5.5% (about one in 18)

reported having suicidal ideation within the past year. This finding is supported by a more recent, as yet unpublished, survey conducted by the American Medical Association (AMA) across 85 health care organizations between April and December 2020, which found that 5% of the 2,333 responding nurses reported such ideation (Christine Sinsky, MD, AMA vice president of professional satisfaction, personal communication, May 3, 2021). In our study, the prevalence of suicidal ideation was higher in nurses than in other workers, and this finding persisted on multivariable analysis after controlling for age, gender, relationship status, hours worked per week, and burnout. Our findings further suggest that burnout may be a risk factor for suicidal ideation among nurses.

Fortunately, the majority of nurses indicated they would seek professional help if they had a serious emotional problem. And compared with other

**Table 3.** Demographic Differences Between U.S. Nurses (N = 6,022) and Other Workers (N = 5,198)

Characteristic	Nurses	Other Workers	P
Gender, n (%)			< 0.001 <sup>a</sup>
Male	457 (7.6)	2,702 (52)	
Female	5,533 (92.4)	2,496 (48)	
Missing	32	0	
Age in years			< 0.001 <sup>b</sup>
N	6,022	5,198	
Mean (SD)	49.1 (10.6)	50.1 (10.1)	
Median	51	52	
Range	29–65	29–65	
Age in years (categorical), n (%)			< 0.001 <sup>a</sup>
< 35	760 (12.6)	500 (9.6)	
35–44	1,349 (22.4)	1,000 (19.2)	
45–54	1,561 (25.9)	1,498 (28.8)	
55–64	2,352 (39.1)	2,200 (42.3)	
Relationship status, n (%)			< 0.0001 <sup>a</sup>
Single	1,249 (20.8)	1,436 (27.6)	
Married	4,206 (70.1)	3,429 (66)	
Partnered	405 (6.8)	229 (4.4)	
Widow/widower	140 (2.3)	104 (2)	
Missing	22	0	
Hours worked per week			< 0.001 <sup>b</sup>
N	5,962	5,194	
Mean (SD)	38.2 (10.8)	40.3 (11.8)	
Median	40	40	
Range	0–99	0–168	
Hours worked per week (categorical), n %			< 0.001 <sup>a</sup>
< 40	2,807 (46.6)	1,368 (26.3)	
40–49	2,335 (38.8)	2,813 (54.2)	
50–59	642 (10.7)	693 (13.3)	
60–69	193 (3.2)	234 (4.5)	
70–79	27 (0.4)	53 (1)	
80+	18 (0.3)	33 (0.6)	
Missing	0	4	
Highest level of education, n (%)			
Less than high school		114 (2.2)	
High school graduate		1,156 (22.2)	
Some college, no degree		1,025 (19.7)	
Associate degree	1,015 (16.9)	606 (11.7)	
Bachelor's degree	2,452 (40.7)	1,291 (24.8)	

**Table 3.** Continued

Characteristic	Nurses	Other Workers	P
Master's degree	1,818 (30.2)	721 (13.9)	
Professional or doctorate	583 (9.7)	285 (5.5)	
Other	152 (2.5)		
Missing	2	0	
Occupation, n (%)			
Professional <sup>c</sup>		2,217 (43.1)	
Health care <sup>d</sup>		386 (7.5)	
Service <sup>e</sup>		386 (7.5)	
Sales <sup>f</sup>		331 (6.4)	
Office and administrative		469 (9.1)	
Farming, forestry, fishing		22 (0.4)	
Precision production, craft, and repair <sup>g</sup>		339 (6.6)	
Transportation and material		168 (3.3)	
Armed services		26 (0.5)	
Other		803 (15.6)	
Missing		51	

<sup>a</sup> $\chi^2$  P value.<sup>b</sup> Kruskal-Wallis P value.<sup>c</sup> Includes business/financial, management, computer/mathematical, architecture/engineering, lawyer/judge, life/physical/social sciences, community/social services, teacher non-university, teacher college/university, other.<sup>d</sup> Includes nurse, pharmacist, paramedic, lab technician, nursing aide, orderly, dental assistant.<sup>e</sup> Includes protective service, food preparation/service, building cleaning/maintenance, personal care/service.<sup>f</sup> Includes sales representative, retail sales, other sales.<sup>g</sup> Includes construction and extraction, installation/maintenance/repair, precision production (machinist, welder, backer, printer, tailor).

Note: Percentages are based on the number of actual responses to an item.

workers, nurses were more than twice as likely to indicate that they would do so. Yet nurses who had recently experienced suicidal ideation were less willing to seek professional help than were those who had not (the same was true for other workers). In other words, those most in need of professional help were also more reluctant to seek it. Similar findings have been reported in studies of physicians and medical students with suicidal ideation.<sup>12, 13, 27</sup>

Previous studies of nurses suggest that barriers to accessing mental health services also include concerns about the potential negative impact on one's career, concerns about confidentiality, difficulties in getting time off work for treatment, and challenges with scheduling an appointment.<sup>44, 45</sup> The fact that some states include questions about mental health on nursing licensure applications<sup>46</sup> may also be a factor. Further research is needed to better identify, understand, and address barriers to help seeking among nurses with suicidal ideation.

The finding that nurses with burnout were nearly twice as likely as those without burnout to have suicidal ideation supports similar find-

ings from previous studies among physicians and medical students.<sup>11-13</sup> These studies, as well as this one, used a depression screening tool rather than an instrument measuring depression severity. A recent study of 1,354 physicians that did include such a tool—the Patient-Reported Outcomes Measurement Information System Depression 4-Item Short Form—found that after adjusting for that score, the relationship between burnout and suicidal ideation was no longer significant.<sup>47</sup> This raises the possibility that burnout does not directly result in suicidal ideation, but might increase the risk of such ideation by heightening the risk of depression.

Collectively, this evidence convincingly builds the case that health care organizations must address systems-level causes of burnout, for the good of both patients and health care workers.<sup>15</sup> Moreover, as Shanafelt and colleagues have noted, to be effective, systems-level interventions must take into account the differences in various health care roles.<sup>48</sup> Such actions should concentrate on balancing job demands with job resources and on creating a constructive work

culture.<sup>15,49</sup> To these ends, strategies that focus on managing team conflict, ensuring appropriate staffing levels, creating fair work schedules, optimizing benefits, developing leaders, and facilitating professional growth and career advancement are useful.<sup>15,50</sup> The implications for nursing practice, education, and policy should include steps to build psychological safety in the workplace and reduce stigma (see *Nursing Implications for Practice, Education, and Policy*<sup>15</sup>). Given the increased stress nurses are experiencing during the COVID-19 pandemic, the need to act has never been more acute.

**Limitations** of our study include possible response bias, as our response rate was 8.5%. Although our respondents were demographically similar to other U.S. nurses,<sup>51</sup> we don't know if nurses with suicidal ideation were more or less likely to complete the survey. Furthermore, there is limited evidence regarding the validity and reliability of the survey items assessing suicidal ideation and

help seeking; and since the survey was cross-sectional, we can't infer causal relationships. Because of the complexity involved, we did not examine potential two-factor interactions. It's also likely that there are other factors related to burnout and suicidal ideation that were not measured in this study. Lastly, our study was conducted before the COVID-19 pandemic. Future studies are needed to understand this pandemic's impact on nurses' mental health.

## CONCLUSIONS

This large national study found that, compared with other U.S. workers, nurses were at higher risk for having had recent suicidal ideation. Moreover, burnout was strongly associated with that risk. A striking finding was that nurses who reported suicidal ideation were more reluctant to seek help for a serious mental health problem than were those without such ideation. Our findings demonstrate that these issues warrant urgent attention. Systems-

**Table 4.** Combined Multivariable Analysis of Nurses and Other U.S. Workers Exploring Factors Associated with Suicidal Ideation and Help-Seeking Attitudes

Variable	Odds Ratio (95% CI)	P	Overall P
<b>Recent suicidal ideation</b>			
Age (for each additional year older)	0.98 (0.97-0.99)		< 0.001
Female (vs. male)	0.88 (0.70-1.10)		0.25
Hours worked per week (for each additional hour)	0.99 (0.99-1.00)		0.15
Relationship status			0.004
Married (vs. single)	0.70 (0.58-0.85)	< 0.001	
Partnered (vs. single)	0.81 (0.56-1.17)	0.27	
Widowed/widower (vs. single)	0.94 (0.50-1.78)	0.85	
Burned out (vs. not burned out)	2.98 (2.50-3.54)		< 0.001
Nurse (vs. population)	1.38 (1.13-1.69)		0.002
<b>Help-seeking attitudes<sup>a</sup></b>			
Age (for each year older)	1.01 (1.00-1.01)		0.01
Female (vs. male)	1.77 (1.60-1.97)		< 0.001
Hours worked per week (for each additional hour)	1.00 (0.99-1.00)		0.11
Relationship status			0.15
Married (vs. single)	1.03 (0.93-1.14)	0.56	
Partnered (vs. single)	0.83 (0.68-1.02)	0.08	
Widowed/widower (vs. single)	1.13 (0.81-1.58)	0.48	
Recent suicidal ideation (vs. none)	0.65 (0.54-0.79)		< 0.001
Nurse (vs. population)	2.46 (2.22-2.73)		< 0.001

CI = confidence interval.

<sup>a</sup> Reported "probably" or "definitely" when asked about willingness to seek professional help if a serious emotional problem arose.

## Nursing Implications for Practice, Education, and Policy<sup>15</sup>

Nursing Implications		
Practice	Education	Policy
Adopt well-being in the workplace as a core value.	Curricula should include teaching students about <ul style="list-style-type: none"><li>the nature of burnout and other forms of personal and occupational distress, as well as what drives increased stress.</li><li>how to recognize the signs and symptoms of burnout and other forms of distress in oneself and others.</li><li>self-care and peer support as important responsibilities.</li><li>tools and techniques to improve one's mental, physical, emotional, and spiritual health.</li><li>how a nurse's health fosters better patient outcomes.</li><li>how to talk with managers, leaders, and coworkers in ways that promote a healthier work environment.</li><li>the need to eradicate stigma within our profession around mental health issues and help seeking.</li></ul>	Routinely assess nurses for burnout and address work environment and systems factors that erode nurses' well-being.
Establish a work environment that supports well-being, including <ul style="list-style-type: none"><li>appropriate staffing.</li><li>safe working conditions.</li><li>zero tolerance for violence, incivility, and bullying.</li><li>confidential mental health services.</li></ul>	Develop and implement management policies that support nurses' well-being.	Develop and implement management policies that support nurses' well-being.
Provide a way for individuals and teams to address moral distress.	Assess the potential impact of new rules and requirements on workload and work efficiency before implementation.	Develop policies that reduce the nursing burden of clerical tasks.
Promote a compassionate approach to coworkers. For example, <ul style="list-style-type: none"><li>affirm that "it's OK not to be OK."</li><li>instead of asking "How are you doing?" ask "How are you really doing?"</li><li>teach coworkers to identify potential signs of distress and suicide risk.</li></ul>	Implement policies that enhance flexibility at work (such as in staffing and scheduling) and support work-life balance.	Ensure that licensure policies of state boards of nursing include provisions that allow nurses to seek mental health care without negative consequences.

and practice-level interventions must be identified and implemented, both to address the higher prevalences of burnout and suicidal ideation in nurses and to mitigate stigma about mental health problems and other barriers to seeking help. ▼

*Elizabeth A. Kelsey is an NP and assistant professor at Mayo Clinic Minnesota in Rochester, where Colin P. West and Liselotte N. Dyrbye are professors and codirectors of the Mayo Clinic Program on Physician Well-Being and Daniel Satele is a statistician. Pamela F. Cipriano is first vice president of the International Council of Nurses and dean of the University of Virginia School of Nursing, Charlottesville; she is also a former president of the American Nurses Association (ANA). Cheryl Peterson is vice president-nursing programs at the ANA in Silver Springs, MD. Tait Shanafelt is chief wellness officer and associate dean at the Stanford University School of Medicine, Stanford, CA. Funding for this study was provided by the Mayo Clinic Program on Physician Well-Being and the ANA and was based on work partially supported by a National Science Foundation (NSF) grant (No. 2041339). Any opinions, findings, and conclusions or recommendations expressed in this article are those of the authors and do not necessarily reflect the views of the NSF. Funding sources had no role in study design; in the collection, analysis, and interpretation of data; or in the writing and publication of this article. Contact author: Elizabeth A. Kelsey, kelsey.elizabeth@mayo.edu. The authors have disclosed no potential conflicts of interest, financial or otherwise.*

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