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Original Study

Nursing Home Workers' Mental Health During the COVID-19 Pandemic in France



Mathilde M. Husky PhD^{a,*}, Roxane Villeneuve PhD^b, Maturin Tabue Teguo MD, PhD^{b,c},
Jordi Alonso MD, PhD^d, Ronny Bruffaerts PhD^e, Joel Swendsen PhD^f,
Hélène Amieva PhD^b

^a Université de Bordeaux, Laboratoire de Psychologie EA4139, Bordeaux, France

^b Université de Bordeaux, Inserm, Bordeaux Population Health Research Center, UMR 1219, Bordeaux, France

^c Centre Hospitalier Universitaire de Pointe-à-Pitre, Guadeloupe, France

^d IMIM Hospital del Mar Medical Research Institute, CIBERESP, Barcelona, Spain

^e Public Health Psychiatry, KU Leuven, Leuven, Belgium

^f Université de Bordeaux, INCIA, EPHE PSL Research University, Bordeaux, France

A B S T R A C T

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Objectives: The present study sought to examine mental health problems among nursing home workers in the context of the COVID-19 pandemic, to investigate COVID-19–related fears, and to identify pre-pandemic factors associated with current mental health issues.

Design: A cross-sectional, online survey was used.

Setting and Participants: All employees among 6 nursing homes in southwestern France (N = 455) were solicited between November, 2020 and June, 2021.

Methods: The survey instrument was developed within the World Mental Health consortium to screen for COVID-related fears, probable generalized anxiety, panic attacks, depression, posttraumatic stress and substance use disorders in the past 30 days.

Results: The survey was completed by 127 workers (89.0% female, mean age = 43.42 years, SD = 11.29), yielding a 28.5% response rate. Overall, 48.03% reported experiencing fear of infecting others at least most of the time. One in 8 (14.96%) indicated that close others feared being infected by them. One-third of the sample (34.65%) met criteria for at least 1 probable current mental disorder. Panic attacks (22.05%) were the most frequently reported mental health problem, followed by depression (16.54%). In multivariate analyses, the only factor associated with having a current probable mental disorder was the presence of any prepandemic mental health problem (adjusted odds ratio 4.76, 95% CI 2.08–10.89). Type of employment contract, full-time status, and medical vs nonmedical staff status were not significantly associated with mental health status.

Conclusions and Implications: The study reveals that one-third of nursing home workers in the sample report current probable mental disorders, and these were largely associated with prepandemic mental health status. Screening for common mental health problems and facilitating access to appropriate care should be prioritized in nursing homes.

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* Address correspondence to Mathilde M. Husky PhD, Université de Bordeaux, Laboratoire de Psychologie EA4139, 3 Ter, Place de la Victoire, 33076 Bordeaux, France.

E-mail address: mathilde.husky@u-bordeaux.fr (M.M. Husky).

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Concerns for the well-being of health care workers struggling to save lives in the height of the SARS-CoV-2 pandemic has prompted an international surge in studies investigating mental health problems in this population. Reviews and meta-analyses covering studies conducted in the first stages of the pandemic have reported high levels of depressive and anxiety symptoms as well as high levels of perceived stress among health care workers, with pooled prevalence estimates ranging from 24% to 29% for anxiety,^{1,2} 25% to 26% for depression,^{1,2} and 41% for general psychological distress.^{1,2} In contrast, a more recent meta-analysis estimated that the mental

health burden attributable to working in health care in the midst of the pandemic was statistically detectable, but small in magnitude.³ Furthermore, when compared to their prepandemic status, it has been reported that health care workers may not have experienced a significant increase in mental health burden during the pandemic.⁴ These disparate findings may reflect differences in methodology and sampling, country-specific risks and public health measures, as well as the substantial variability that exists between countries in work settings and conditions. For these reasons, accurate estimation of the impact of the pandemic on the health care workers may be best achieved through country-specific estimates that are focused on specific work contexts.

To date, little attention has been focused specifically on nursing home workers,^{5–7} despite the unique challenges they face with regard to their work context. In contrast with other sectors of health care, nursing homes are known to experience difficulties in staffing, as well as a very high rate of personnel turnover, which often requires the integration of social care staff with little experience or training.^{8–11} Persons holding such positions in nursing homes typically are women, have a low level of education, earn low wages, often have part-time positions, and report heavy workloads with difficult and straining tasks.^{9,12} Another potential source of burden stems from the relationships with residents' family members. Conflictual relationships with families have been shown to be associated with increased anxiety¹³ and burnout among nursing home staff.¹⁴ In addition to the existing difficulties among nursing home workers, it is also likely that nursing home staff have experienced significant distress due to inadequate preparation to face the challenges posed by the pandemic. These factors may be exacerbated by the fear of infecting others, including one's own family members, as shown during the severe acute respiratory syndrome (SARS) epidemic.¹⁵

The objective of the present study was to examine these issues among nursing home workers in southwestern France. Specifically, the present study sought to investigate current mental health problems experienced by these workers, to describe their COVID-19-related fears, and to examine the role of prepandemic factors relative to the probability of experiencing mental health problems during the pandemic.

Materials and Methods

Procedure and Participants

The present study relies on a convenience sample of nursing homes in Southwest France. Nursing home selection targeted facilities in both rural and urban regions, and both private and public sectors. Eligible nursing home directors were contacted by the research team and offered participation. Directors were asked to email an invitation to participate in an anonymous online survey to all employees, regardless of their type of contract or profession. Directors were also assured that their institution would participate anonymously, and all individual responses provided by their employees were also anonymous. In addition, in order to ameliorate employee response rates, a member of the research team visited each nursing home in person to present the study, distribute flyers and information, and answer any questions of the employees. All study procedures and materials were approved by the national ethics committee (CPP 2020-A02249-30), and all respondents completed an informed consent form for participation. A total of 6 nursing homes agreed to participate. All employees among these nursing homes ($n = 455$) were solicited between November 2020 and June 2021. All analyses are based on the 127 participants who completed the survey.

Measures

Survey instrument

The core online survey used in this study was developed within the World Mental Health consortium to evaluate mental health among health care workers across several countries including Spain¹⁶ and Belgium.¹⁷ The survey comprised sociodemographic and employment variables, COVID-related variables including one's infection status and that of close others, as well as COVID-related fears and experiences during the lockdown. The survey also included a screen for prior mental health problems and the assessment of current probable mental disorders.

Current probable mental disorders

The survey provided a screen for current probable mental disorders and relied on several commonly used instruments. Probable (ie, not verified by clinical interview) generalized anxiety disorder (GAD) in the past 2 weeks was assessed with the Generalized Anxiety Disorder–7 (GAD-7).¹⁸ The GAD-7 has a score range of 0–21: normal (0–4), mild (5–9), moderate (10–14), and severe (15–21) anxiety. A cutoff score of 10 was used to identify moderate to severe GAD. Respondents were then asked the number of panic attacks they had experienced in the past 30 days. This variable was then recoded to reflect the presence or absence of at least 1 panic attack. Probable major depressive disorder in the past 2 weeks (MDD) was assessed with the Patient Health Questionnaire (PHQ-9).¹⁹ A cutoff score of 10 was used to identify moderate to severe depressive symptoms. Among respondents who reported exposure to a traumatic event, 30-day probable posttraumatic stress disorder (PTSD) symptomatology was estimated using the PTSD Checklist for DSM-5 (PCL-5),²⁰ using a cutoff score of 33. Substance use disorder (SUD) was assessed using the Cut, Annoyed, Guilty, and Eye opener—Adapted to Include Drugs (CAGE-AID) since the COVID-19 outbreak²¹ with scores ranging between 0 and 4. A cutoff score of 2, indicating a moderate to severe problem, was used.

Prior mental health problems

Respondents were asked to indicate whether they had ever experienced or been diagnosed with emotional problems prior to the pandemic using the following 9 categories: depression, anxiety disorders (or problems with anxiety/nerves), problems with alcohol (use, abuse or dependence), problems with drugs (use, abuse or dependence), panic disorder (or panic attacks), bipolar disorder (manic depression or mania), burnout, and other serious emotional problems. The presence (coded 1) or absence (coded 0) of each problem was reported. Alcohol and drug use were combined to reflect the presence of substance use problems. Finally, a variable reflecting the presence or absence of any of the listed items was created for analysis.

COVID-19 infection status, experience during lockdown, and COVID-related fears

We included 3 COVID-19 risk domains. First, pandemic-related variables included whether participants had been tested for COVID-19 (yes, no), infected with COVID-19 (yes, no), whether they had a close other infected with COVID-19 (yes, no), and the condition of the close other who was the most ill because of COVID-19 (no symptoms, mild symptoms, severe symptoms, hospitalization, or cause of death). Second, respondents were asked about how stressful they perceived the national mandatory lockdown on a 3-point scale ranging from “not at all stressful” to “a very stressful experience.” Third, respondents were asked to rate the extent to which they feared infecting others, believed they would not survive if infected, and the extent to which others feared being infected by them on a 5-point scale ranging from “never” to “all the time.” Each of the latter 3 variables was then

recoded to reflect fears that were reported to be present at least “most of the time.”

Sociodemographic and employment characteristics

Sociodemographic variables included age, sex, and marital status (single, married or living with partner, widowed/divorced/separated). Employment variables included employment status (full-time, part-time), type of contract (permanent, temporary), and profession. For the statistical analyses, because of the small number of respondents in certain categories, profession was recoded into medical staff (eg, nursing assistants, nurses, caregivers with varying levels of medical and or social care training, physicians) vs nonmedical staff (eg, administration personnel, persons in charge of maintenance or meal preparation).

Data analysis

First, we examined the frequency of sociodemographic characteristics, prepandemic mental health problems, COVID-related variables, and current mental health status (Tables 1–3). Second, we presented the prevalence of any current probable disorder by sociodemographic, COVID-related variables, and prepandemic mental health status using cross-tabulations and univariate logistic regressions (Table 4). Third, multivariate logistic regressions were used to determine adjusted odds ratios (ORs) and 95% CIs associated with any current disorder. The adjusted model included variables for which χ^2 tests were associated with a $P \leq .20$ and included the following: age group, COVID-19 infection status, and any prepandemic mental disorders. Significance

Table 1
Sociodemographic Characteristics of the Nursing Home Workers in the Sample and Prepandemic Mental Health Problems

Sociodemographic Characteristics	Nursing Home Workers (n = 127)	
	n (%) or n (Mean)	SE or SD
Age, y	127 (43.42)	11.29
20–36	39 (30.71)	4.11
37–50	44 (34.65)	4.24
51 or older	44 (34.65)	4.24
Sex		
Women	113 (88.98)	2.79
Men	14 (11.02)	2.79
Marital status		
Single	23 (18.11)	3.43
Married or living with partner	90 (70.87)	4.05
Divorced, separated, or widowed	14 (11.02)	2.79
Profession		
Medical staff	98 (77.17)	0.79
Nonmedical staff	28 (22.05)	3.69
Employment		
Part time	11 (8.66)	2.51
Full time	116 (91.34)	2.51
Type of contract		
Permanent	54 (42.52)	4.40
Temporary	73 (57.48)	4.40
Prepandemic mental health problems		
Depression	16 (12.60)	2.96
Bipolar disorder	1 (0.79)	0.79
Panic attacks	4 (3.15)	1.56
Problems with anxiety	30 (23.62)	3.78
Problems with drugs or alcohol	1 (0.79)	0.79
Burnout	10 (7.87)	2.40
Any other serious emotional problem	8 (6.30)	2.16
Number of prepandemic mental health problems		
0	80 (62.99)	4.30
1	28 (22.05)	3.69
2 or more	19 (14.96)	3.18

SE, standard error.

Table 2
COVID-19 Testing and Infection Status, and Experiences Regarding Lockdown

	Nursing Home Workers (n = 127)	
	n (%)	SE
Tested at least once for SARS-Cov-2	112 (88.19)	2.88
Positive for COVID-19	8 (6.30)	2.16
Relative who was infected with COVID-19	38 (29.92)	4.08
Symptom severity in the relative the most ill		
No symptoms or mild symptoms	23 (62.16)	8.08
Severe symptoms, hospitalization or cause of death	14 (37.84)	8.08
COVID-19–related fears at least most of the time		
Fear of dying if infected	9 (7.09)	2.29
Fear of infecting others	61 (48.03)	4.45
Close others feared to be infected by him or her	19 (14.96)	3.18
Experience during lockdown		
Very stressful	38 (29.92)	4.08
A little stressful	57 (44.88)	4.43
Not at all	32 (25.20)	3.87

SE, standard error.

was set at $P < .05$. Analyses were conducted using SPSS, version 26. To ensure that our sample size was sufficient, we performed an *a posteriori* power analysis based on the results of the logistic regression model. Using a sample size of 127, an alpha equal to .05, and the probabilities of observing the events as a function of the predictive factor (ie, prepandemic mental health problems), we obtained a statistical power of 97%. Analyses were conducted using the *wb.logistic* function in R Package WebPower, version 0.6.

Results

Sociodemographic Characteristics and Prepandemic Mental Health Problems

Of the 445 employees solicited for participation, 156 initiated the survey, of whom 127 completed it (yielding a 28.53% response rate). The sample was mostly female (88.98%), with a mean age of 43.42 years (SD = 11.29) (Table 1). The majority of respondents were composed of medical staff (77.17%) and worked full-time (91.34%). In terms of the type of employment contract, 57.48% were employed through a temporary contract whereas 42.52% had a permanent type of employment.

Nearly 4 of 10 respondents (37.01%) indicated the presence of at least 1 prepandemic mental health problem, 22.05% reported only 1, and 14.96% reported 2 or more. Nursing home workers most

Table 3
Prevalence of Current Probable Mental Disorders Among Nursing Home Workers

	Nursing Home Workers (n = 127)	
	n (%)	SE
Any current probable mental disorder	44 (34.65)	4.24
Generalized anxiety disorder	12 (9.45)	2.61
Panic attacks	28 (22.05)	3.69
Major depression	21 (16.54)	3.31
Posttraumatic stress disorder	13 (10.24)	2.70
Substance use disorder	5 (3.94)	1.73

SE, standard error.

Table 4
Factors Associated With Current Probable Mental Disorders Among Nursing Home Workers

	Any Current Probable Mental Disorder (n = 127)		
	n (%)	OR (95% CI)	Adjusted OR* (95% CI)
Sex			
Male	14 (35.71)	Ref	—
Female	113 (34.51)	1.05 (0.33–3.36)	—
Age			
21–36 y	39 (48.72) [†]	2.53 (1.02–6.32)	2.36 (0.88–6.33)
37–50 y	44 (29.55)	1.12 (0.44–2.83)	0.78 (0.28–2.16)
≥51 y	44 (27.27)	Ref	Ref
Marital status			
Single	23 (30.43)	Ref	—
Married or living with partner	90 (35.56)	1.26 (0.47–3.39)	—
Divorced, separated, or widowed	14 (35.71)	1.27 (0.31–5.19)	—
Profession			
Nonmedical staff	28 (32.14)	Ref	—
Medical staff	98 (34.69)	0.89 (0.36–2.18)	—
Type of contract			
Permanent	54 (37.04)	1.20 (0.58–2.51)	—
Temporary	73 (32.88)	Ref	—
Employment			
Part time	11 (27.27)	Ref	—
Full time	116 (35.34)	1.46 (0.37–5.80)	—
COVID-19 infection	8 (12.50) [†]	0.25 (0.03–2.12)	0.32 (0.03–2.94)
Close other COVID-19 illness status			
No symptoms or mild symptoms, or no relative infected with COVID-19	113 (35.40)	Ref	—
Severe symptoms, hospitalization, or cause of death	14 (28.57)	0.73 (0.22–2.48)	—
Any prepandemic mental health problem	47 (55.32) [‡]	4.27 (1.96–9.29)	4.76 (2.08–10.89)

OR, odds ratio.

*Adjusted model controlled for all variables with a χ^2 at $P < .20$. Bold indicates significant ORs at $P < .05$.

[†] χ^2 P value $< .20$.

[‡] χ^2 P value $< .05$.

frequently reported prepandemic problems with anxiety (23.62%), depression (12.60%), and burnout (7.87%).

COVID-19 Testing, Infection Status, and Experiences Regarding Lockdown

The majority of the sample had been tested for SARS-Cov-2 at least once, and only 6.30% reported being infected with COVID-19 (Table 2). One-third of the sample reported having a relative or close other who was infected with COVID-19. In the majority (62.16%) of these cases, the person had either no symptoms or mild symptoms, whereas in 37.84% of the cases, the person had severe symptoms, was hospitalized, or died. Nearly one-half (48.03%) of the sample reported experiencing fear of infecting others at least most of the time. Only a minority (7.09%) reported a sustained fear of dying themselves if infected. One in 8 respondents (14.96%) indicated that close others feared being infected by them.

When asked how stressful they thought the mandatory lockdown had been for them, 25.20% reported it was not stressful at all, 44.88% experienced it as mildly stressful, and one-third (29.92%) experienced it as being very stressful.

Prevalence of Current Probable Mental Disorders Among Nursing Home Workers

Approximately one-third (34.65%) of the sample met screening criteria for at least 1 probable current mental disorder (Table 3), including 55.32% of those with a prior disorder vs 22.50% of those with no prior history of mental health problems. Panic attacks (22.05%) were the most frequent psychological difficulty, followed by probable depression (16.54%), PTSD (10.24%), GAD (9.45%), and substance use disorders (3.94%).

Factors Associated With Current Probable Mental Disorders Among Nursing Home Workers

In bivariate analyses, none of the work-related variables such as full-time status, permanent contract vs temporary contract, or medical vs nonmedical staff were significantly associated with the odds of screening positive for a current probable mental disorder (Table 4). The only sociodemographic characteristic associated with increased odds of current disorder was younger age (OR 2.53, 95% CI 1.02–6.32). COVID-19 infection or that of a close other for whom severe symptoms manifested were not significantly associated with the odds of current probable mental disorders. The presence of any prepandemic mental health problem (OR 4.27, 95% CI 1.96–9.29) was strongly associated with current mental health. Among those with a current mental health problem, 59.1% reported a prepandemic mental health condition. In multivariate analyses adjusted for all variables associated with any current disorder, the only factor associated with current mental health was the presence of any prepandemic mental health problem (adjusted OR 4.76, 95% CI 2.08–10.89).

Discussion

This study sought to investigate current probable mental disorders among nursing home workers during the pandemic and to identify factors associated with these conditions. The study also sought to investigate COVID-related fears reported by nursing home workers. The findings confirm that a significant proportion of nursing home workers met screening criteria for current probable mental disorders, regardless of sociodemographic or employment characteristics including being a medical vs nonmedical staff member, full-time vs part-time, or permanent vs nonpermanent staff. The factor that was most strongly associated with odds of current probable disorder was the presence of prepandemic mental health problems.

In line with what has been reported in several recent reviews and meta-analyses covering health care workers in other sectors,^{1,22,23} the proportion of nursing home personnel in our sample who met screening criteria for a probable mental disorder (including depression and anxiety) was relatively high and represented up to one-third of respondents, and 1 in 5 among those with no history of prior mental health problems. Prepandemic studies had described a higher proportion of mental health problems among health care workers as compared with other professions,²⁴ including a higher risk of suicidal thoughts and behaviors among physicians.²⁵ However, prior studies had rarely focused on nursing home workers, despite the known strain in that particular section of health care, both nationally and internationally.^{8,26}

In a region relatively spared by the SARS-CoV-2 virus,²⁷ and during a period of time that was approximately 6 months after the first national lockdown, the fact that one-third of the sample met screening criteria for a current mental health issue is noteworthy. Although caution is required in interpreting this finding as it relates only to survey respondents (and may have missed an even more vulnerable group among the nonresponders), employment characteristics were not associated with current mental health. Regarding the profession, it is possible that our categorization of the workforce (being part of the medical vs nonmedical staff) prevented us from identifying finer-grained distinctions between specific professions that have been reported previously.¹⁶ In contrast with prior evidence linking number of hours worked and poor mental health outcomes,²⁸ part-time work was not associated with outcomes in the present study. One plausible explanation is that part-time status does not preclude one from working additional jobs to complement their income. Lastly, as the staff in nursing homes is a female-dominated workforce,²⁹ the proportion of current anxiety-depressive symptomatology may be associated with the high proportion of women in the sample who typically have higher rates than men.^{16,29–31}

As expected, the factor that was the most strongly associated with current probable disorder in the present study was the presence of prepandemic mental health problems, consistent with prior studies.^{4,32} These findings are also in line with a large study conducted among health care workers in Spain which showed that prior lifetime disorders were the strongest predictor of current mental disorders, a finding that remained significant in multivariate analyses.¹⁶ In the latter study, multivariate models also underscored the increased risk of ongoing mental health problems associated with being female, younger age, caring for patients with COVID-19, and having been quarantined. The present findings further point to the fact that regardless of employee's professional status, mental health literacy is needed. France's health care system allows for specialized mental health services at little or no cost to patients, yet there remains a significant gap in the provision of services to those in need.^{33,34} In addition, there is currently no systematic program in place to enhance individuals' mental health literacy and preparedness to face stressful situations such as epidemics.

A second important finding of this study concerns COVID-19–related fears, with nearly one-half of workers experiencing the fear of infecting others a significant portion of the time. As health care workers are at an increased risk of infection, virus-related worries such as fear of infecting vulnerable residents, family members, or friends are not surprising.³⁵ Relatedly, 1 in 8 nursing home workers indicated that close others feared being infected by them. These findings echo reports of stigmatization of health care workers and social rejection in different regions across the world and across various epidemics.²³ For instance, in 2020, instances were reported in which health care workers were asked by neighbors worried about being contaminated to move out of their apartment building, or to park their car a little further away.³⁶ Lastly, only a minority of participants reported a sustained fear of dying themselves if infected. This

small proportion of fear for one's own mortality contrasts with a number of studies recently reviewed.²³ This finding may be explained in part by the timing of the study, which was conducted when the risk factors associated with COVID-19 deaths were known to include being male, being older, and having a preexisting medical condition.³⁷ Indeed, the sociodemographic characteristics of the sample (largely aged <50 years and female) may have limited fear of COVID-19 death here.

Several limitations should be considered when interpreting these findings. First, although we sought to enroll 200 participants, only 156 initiated the survey and 127 completed it, yielding a response rate of 28.53%. Engaging adults at their place of employment to participate in a study of mental health is particularly challenging, especially in a setting with a high turnover of professional staff. Although a response rate in this range is in line with what has been reported in similar surveys,¹⁶ it limits the generalizability of the findings. That being said, the proportion of women in the present sample is similar to what is known of the health sector locally and in particular in nursing homes, although the proportion of temporary employees is greater in the sample than what has been reported locally.^{9,38,39} A second limitation of this study is that it was cross-sectional in nature, and it did not include a prepandemic cohort that could be compared to post-pandemic data in terms of mental health status. Third, although we relied on validated screening instruments to assess probable mental disorders, the assessments made cannot be equated to clinical diagnoses. Fourth, because of our small sample size, we were not able to provide a finer-grained analysis of types of positions among workers, for instance differentiating nurses from nursing assistants. We therefore categorized staff into medical vs nonmedical staff, which may have limited the pertinence of that variable, and larger sample sizes are needed to identify the potential association of findings with specific work positions. Lastly, self-reported instruments are necessary to access subjective states experienced by the individual, but they also have limitations and biases associated with personal and idiosyncratic interpretation of questions. It was not possible for us to determine whether overreporting or underreporting occurred through these measures and therefore caution is warranted in the interpretation of these estimates.

Conclusions and Implications

Notwithstanding the above limitations, the present study may contribute to increasing attention provided to mental health populations who work difficult jobs and who are likely to be at greater risk of being exposed to pandemic-related stressors. The present study found that one-third of nursing home workers presented with significant problems associated with anxiety and depression, the majority of whom had a prepandemic mental health problem. Considering that high levels of stress and psychological difficulties can have a negative impact on the efficiency and quality of care received by residents,^{40,41} facilitating access to appropriate mental health services is particularly challenging. Such settings may benefit from implementing mental health literacy campaigns, mental health screening, and facilitated access to care not only to workers who are part of the medical team but to all staff.⁴² In France, a recent scandal involving a large group of private nursing homes propelled nursing home care to the forefront of national news. The mediated event shed light on the potential lack of proper personnel training, lack of proper resources and time to care effectively for residents, mistreatment of older adults, thus prompting a national investigation.⁴³ However, acknowledging the importance of the mental health and well-being of the nursing home workforce is also an important subject to address in the goal of comprehensively improving this essential sector of health care.

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