



# Resident Mental Health During the Peak of the Covid-19 Pandemic

## A New York City Safety Net Hospital Experience

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### Background

The novel coronavirus (Covid-19) created an unprecedented strain on healthcare systems worldwide, with New York City at the epicenter of the Pandemic. As a designated non-profit safety net hospital serving an underprivileged community, Brookdale University Hospital Center Medical Center (BUHMC) was one of the hardest hit. Tremendous effort was allotted toward Covid-19 disease management and personal protective equipment distribution, with less focus on frontline worker well-being. We studied mental health, as well as Covid-19 clinical characteristics and concurrent psychiatric symptoms among the resident physician population at BUHMC during the height of the Covid-19 pandemic.

### Materials & Methods

Over 200 residents across five ACGME programs undergo training at BUHMC. We created a hybrid multiple-choice survey (ranging from “Strongly Disagree” (1) to “Strongly Agree” (5)) Likert scale to explore resident mental health during the coronavirus pandemic. Questions assessed general demographics, burnout, emotional wellbeing and rise of psychiatric symptoms. We also assessed Covid-19 status and symptomatology. Surveys were distributed in person from May 8th, 2020 to May 15th, 2020. Group comparisons were determined with Pearson’s  $\chi^2$  tests of independence to examine mean differences in demographics for dichotomous variables, and Student t-test for independent groups of continuous variables.

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Brookdale University Hospital – Resident Wellness Survey

Resident Mental Health Survey During the COVID-19 Pandemic

Age: \_\_\_\_\_ Sex:  Male  Female  Other \_\_\_\_\_

Department:  IM  Surgery  ED  Psychiatry  Other: \_\_\_\_\_  
Year:  PGY-1  PGY-2  PGY-3  PGY-4  Other: \_\_\_\_\_

1. On a scale of 1 to 10, I rate my current emotional well-being as (10 being the best):  
 1  2  3  4  5  6  7  8  9  10

2. Mental health resources have been readily available to me by administration during the pandemic:  
 Strongly Disagree  Somewhat Disagree  Neutral  Somewhat Agree  Strongly Agree

3. I was aware of the following mental health resources available to me (Check all that apply):  
 Emotional Hotline by Residents  Employee Well Being Hotline  Free Subscription to mental health app (i.e. Headspace)  Union (CIR) sponsored mental help hotline  
 Other \_\_\_\_\_

4. I have felt frightened for my family or my life since the start of the pandemic:  
 Strongly Disagree  Somewhat Disagree  Neutral  Somewhat Agree  Strongly Agree

5. I or someone I know has lost a friend or loved one to the coronavirus:  Yes  No

6. I feel I've made a significant difference in the lives of my patients during this pandemic:  
 Strongly Disagree  Somewhat Disagree  Neutral  Somewhat Agree  Strongly Agree

7. I have experienced an increase in burnout since the start of the pandemic (10 being the most):  
 1  2  3  4  5  6  7  8  9  10

8. I've used the following to cope with the stress of the pandemic (Check all that Apply):  
 Alcohol  Family Support  Recreational Drugs  Therapy  Prescription medication  
 Other \_\_\_\_\_

9. I have experienced an increase in the following emotions since the start of the pandemic:  
 Anger  Sadness  Irritability  Indifference  Hopelessness  Fear  
 Other \_\_\_\_\_

10. The most unsettling symptom(s) I've experienced since the start of the pandemic is (are):  
 Loneliness  Hopelessness  Fear  Anger  Suicidal Ideation

11. I feel a greater satisfaction from my job now as compared to before the pandemic:  
 Strongly Disagree  Somewhat Disagree  Neutral  Somewhat Agree  Strongly Agree

12. I feel as if I am a better physician now that before the pandemic began:  
 Strongly Disagree  Somewhat Disagree  Neutral  Somewhat Agree  Strongly Agree

13. I was tested for Covid-19:  Yes  No  
a. I got tested at:  Brookdale Hospital  A Private Clinic  Other

14. I was confirmed:  COVID positive  COVID negative  Never tested  Clinically COVID

15. I experienced the following new physical symptoms over the past six weeks (check all that apply):  
 dry cough  fever  fatigue  dyspnea  myalgia  
 Other \_\_\_\_\_

### Results

A total of 104 residents responded (62 male, 41 females) with an average age of 32.6 ±4.3, from 5 residency programs (65 Internal Medicine (IM), 20 Psychiatry, 8 Emergency Medicine (EM), 3 Surgery/OMFS). On a scale of 1-10, emotional wellbeing was 5.7 ±2.1. A significant difference was found between Internal Medicine (IM) and other specialties (5.4 vs 6.5, p<.001) **table(1)**. Burnout among all residents was 7.74 ±2.2. Sub analysis revealed a significant difference in burnout between IM residents vs others (8.2 vs 6.8, p<0.01). Burnout was higher in females than males across specialties (8.3 vs 7.4, p=0.04) **table(2)**. 92/101 individuals (91%) lost someone to Covid-19, or knew someone who did. Job dissatisfaction was noted across specialties (2.6 ±1.3). Only 41% (42/103) of residents were tested for Covid-19, of which 48% (20/42) were confirmed positive. Nearly all respondents experienced coronavirus spectrum symptoms. Most residents sought family support to cope. Overall mental health resource awareness was neutral (3.0 ±1.2), with greater awareness among psychiatry residents. Residents experienced a rise in fear (47%), hopelessness (43%), anger (34%), and loneliness (30%). Two residents reported suicidal ideation.

Table 1

Group Statistics					
		N	Mean	Std. Deviation	Std. Error Mean
Burnout	1.00 Internal Medicine	64	8.156	1.9454	.2432
	2.00 All other Departments	31	6.839	2.4644	.4426

Results were statistically significant, p<0.05

Table 3

Group Statistics						
	FirstYearvsOthers	FirstYearsOthers	N	Mean	Std. Deviation	Std. Error Mean
EmotionalWellBeing	1.00 First Year Residents		38	5.579	2.2736	.3688
	2.00 All other Years		41	6.098	1.6704	.2609

Table 2

Notes					
Group Statistics					
	Sex Gender	N	Mean	Std. Deviation	Std. Error Mean
Burnout	1.0 Male	62	7.403	2.2937	.2913
	2.0 Female	40	8.275	1.8256	.2886

Results were statistically significant, p=0.04

Table 4

Group Statistics						
	FirstYearvsOthers	FirstYearsOthers	N	Mean	Std. Deviation	Std. Error Mean
Burnout	1.00 First Year Residents		37	8.189	1.7925	.2947
	2.00 All other Years		42	7.524	2.3709	.3658

### Conclusions

Mental health and emotional well-being of residents from all training programs were greatly affected by the Covid-19 pandemic. It is evident that emotional well-being was low and burnout was high with IM residents being most effected. Presence of negative emotions as well as psychiatric symptoms in nearly all residents was noted. Disparities were noticed in subgroups by training program, gender and PGY. It was also noted that there was a general lack of awareness of mental health resources. Job satisfaction was also noted to be low if not neutral. This data should serve as an impetus for greater mental health awareness among graduate medical trainees. In addition, emphasis should also be placed on resident emotion and mental wellbeing should another surge of Covid-19 occur in the near future.

### References

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