

RESEARCH ARTICLE

Depression among and access to mental care of young Filipino ophthalmologists during the COVID-19 pandemic

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Objective: This study determined the prevalence of depression among young ophthalmologists during the COVID-19 pandemic and determined their access to mental healthcare.

Methodology: In this cross-sectional study, members of the Philippine Network of Young Ophthalmologists were surveyed using an online Patient Health Questionnaire-9 (PHQ-9), a short self-administered tool which included questions related to their current work to assess depression. The respondents were also asked if there was available, accessible, affordable, adequate, and acceptable mental healthcare to them answerable by yes, no, or maybe.

Results: Seventy (70) respondents were included in the analysis. The mean age was 33±5 years with 54% being female. Forty-five (45) or 64% were resident trainees with a mean number of years in the training of 2±1 years. The median score for the PHQ-9 was 6.5 (3,12). Forty-two (42) or 60% of the respondents had some degree of depression. Nine (9) or 13% of the respondents had no available service, 6 (9%) had no accessible service, 7 (10%) had no affordable service, and 4 (6%) had no adequate service for mental healthcare for them.

Conclusion: More than half of the ophthalmologists-in-training and newly practicing suffered from some degree of depression based on the PHQ-9 questionnaire. A significant proportion was either not sure or do not have available, accessible, affordable, and adequate mental healthcare services for them.

Keywords: mental health, COVID-19, mental status, young ophthalmologist, PHQ-9

Introduction

Studies have shown that the ongoing COVID-19 pandemic and ensuing lockdowns have significantly affected the mental health of hospital workers in the frontlines including young ophthalmologists causing depression mainly [1-3]. Many of them actively man the hospital triage or report in the COVID wards disrupting their regular training schedule [4]. Their workload has also increased since the medical clerks and interns were pulled out from the clinics [5]. Newly practicing ophthalmologists are primarily affected financially since many just bought or acquired loans for ophthalmic equipment. The disruptions in the training and income can add to the mental health burden of these young Filipino ophthalmologists. A recent study done in India to assess the effect of the pandemic on the mental

health of ophthalmology residents and newly practicing ophthalmologists found that a third of them suffered some form of depression [6]. They also found that depression was more common among the younger population.

Mental healthcare services are needed to address depression. However, accessibility to these services remains generally limited in the Philippines [7]. Access to mental healthcare includes its availability, accessibility, affordability, adequacy, and acceptability [9]. There is no data on the effects of the COVID-19 pandemic on the mental health of young ophthalmologists in the Philippines and their access to mental health care services. As such, this study determined the prevalence of depression among young ophthalmologists

during the COVID-19 pandemic as well as their access to mental healthcare.

Methodology

This is a cross-sectional study conducted from July to August 2021. An online survey was created using Google Forms containing the Patient Health Questionnaire-9 (PHQ-9) and additional questions pertaining to access to mental healthcare. The survey was made available to members of the Philippine Network of Young Ophthalmologists (PiNoY) by posting it on its social media account at <https://www.facebook.com/groups/298618321333033>. PiNoY is a Philippine Academy of Ophthalmology interest group committed to supporting ophthalmologists in training and those in their early years of practice aged 40 years and younger while fostering camaraderie among its members.

The survey collected the following data: age, sex, region of origin, employment status (in training vs. practicing clinician) and location of practice, marital status, and involvement in COVID-19-related duties (with COVID-19-related duties or those who see COVID-19 patients in their practice) to determine the effect of the demographics on the development of depression. Responses from members with no consent to participate and with incomplete answers were excluded from the data analysis.

The online survey included the Patient Health Questionnaire-9 (PHQ-9), a short self-administered tool to assess depression. PHQ-9 has been validated as a screening tool for depression [9] and was chosen for its ease of use. It is composed of nine questions based on the nine criteria of the Diagnostic and Statistical Manual of Mental Disorders-IV for depression. The questions were answerable by four options namely: not at all, several days, more than half the days, and nearly every day. Each answer had a corresponding score which was summed [9]. The respondents were also asked if there was available, accessible, affordable, adequate, and acceptable mental healthcare to them answerable by yes, no, or maybe. Availability refers to having a psychiatrist and psychiatric services available to them in their unit of work or in the vicinity of their area. Accessibility refers to psychiatric services being accessible most of the time (e.g. outside work hours) and convenient. Affordability refers to whether availing the service will be free of charge or subsidized by their unit. Adequate refers to being attended to immediately if needed, despite patient load and does not need to be referred elsewhere for additional services. Acceptable refers to the overall experience of the participant with the availed

service. This study was approved by the University of the Philippines Manila Research Ethics Board.

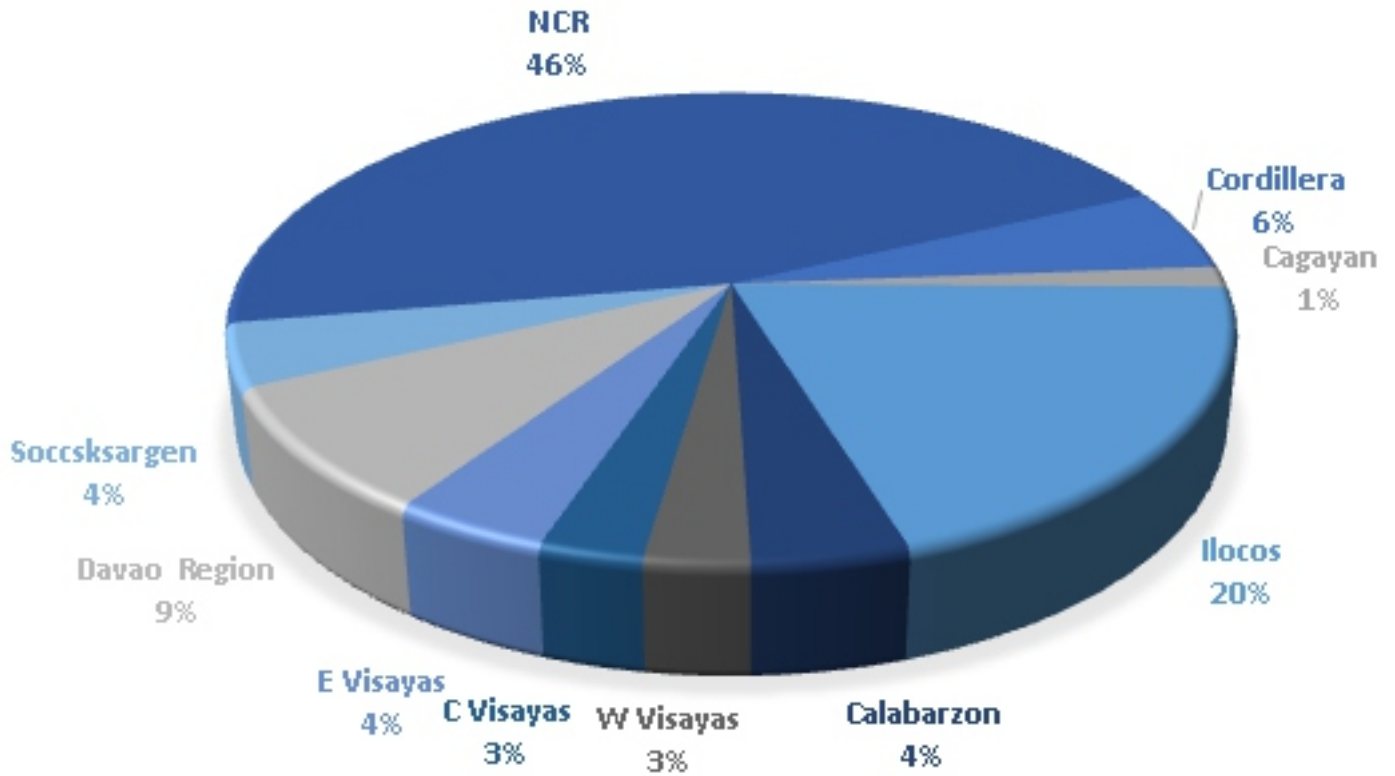
Data on demographics and the dimensions of access to mental health care services were tabulated and summarized using Microsoft Excel version 2016 (Microsoft Corporation, Redmond, WA, USA). Mann-Whitney U test was used to compare PHQ-9 scores due to its non-parametric distribution based on age, sex, region of origin, status of practice, marital status, involvement in COVID-19 duties, and location of duties using Stata 14 (StataCorp, College Station, TX: StataCorp LP). Statistical significance was determined at $p < 0.05$. The computed sample size for a population of 400, based on the number of PiNoY member then, with a confidence level of 90% and a margin of error of 10%, was 59.

Results

Seventy (70) responses were included in the analysis. The mean age of the respondents was 33 ± 5 years where 40 (57%) respondents were younger than 33 years old. Thirty-eight (38) or 54% were females. Forty-five (45) or 64% were resident trainees with a mean number of years in training of 2 ± 1 years. The mean number of years in practice for the newly practicing ophthalmologists was 4 ± 2 years. Almost half of the respondents were from the National Capital Region (NCR) (Figure 1). Thirty-nine (39) or 56% of the respondents were from government hospitals. Forty-one (41) or 59% were single. Fifteen (15) or 21% of the respondents rotated in COVID-19 wards while 17 (24%) had previous rotations in the COVID-19 wards.

The median score and interquartile range for the PHQ-9 was 6.5(3-12). The distribution of severity of depression is summarized in Figure 2. Forty-two (42) or 60% of the respondents had some degree of depression. Significant differences were noted in the PHQ-9 score based on age ($p < 0.01$), status of practice ($p < 0.001$), and marital status ($p < 0.02$). Respondents who were less than 33 years old, in training, or unmarried had significantly higher PHQ-9 scores and were significantly more depressed (Table 1). Sex, region of origin, involvement in COVID-19-related duties, and location of duties did not significantly affect PHQ-9 scores.

Nine (9) (13%) of the respondents did not have available mental healthcare service to them, 6 (9%) with no accessible mental healthcare service, 7 (10%) with no affordable mental healthcare service, and 4 (6%) with no adequate mental healthcare service (Table 2). Two (2%) respondents were not sure of the availability of mental healthcare service, 9 (13%)



E Visayas – Eastern Visayas
 C Visayas – Central Visayas
 W Visayas – Western Visayas
 NCR – National Capital Region

Figure 1. Geographic Distribution of Respondents Per Region in the Philippines.

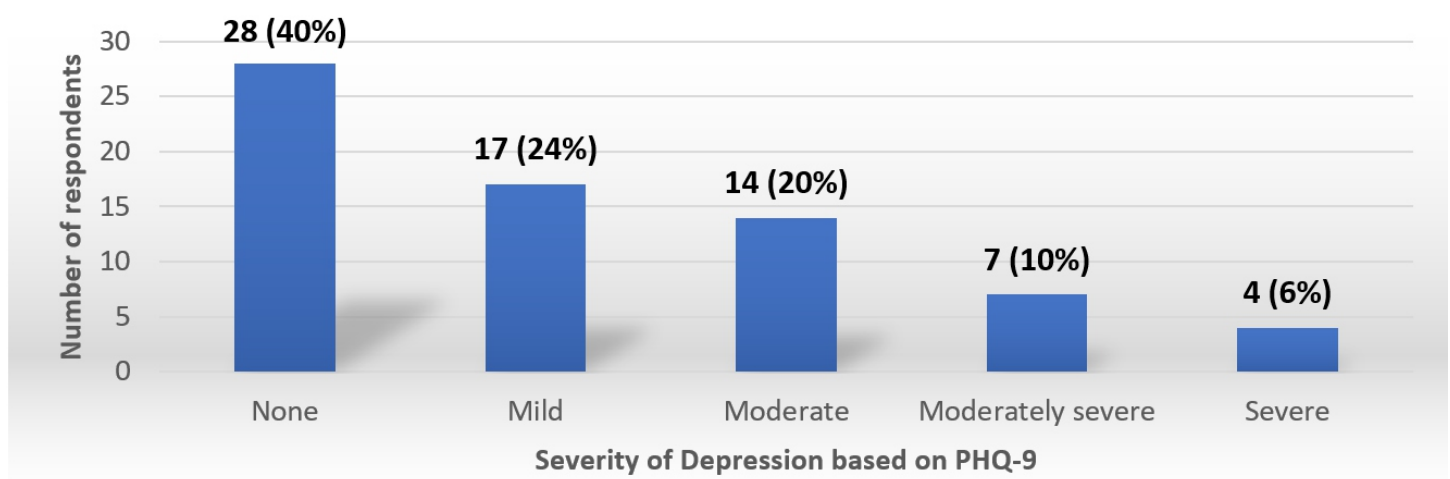


Figure 2. Distribution of respondents based on severity of depression using PHQ-9 classification.

Table 1. Operational Definition of Variables

Variable	Median PHQ-9 scores (interquartile range)		p-value
Age (<33 vs >33 years old)	8.5 (4,14)	4 (2,8)	0.01*
Sex (Male vs. Female)	5 (2,12)	8 (4,12.5)	0.44
Region of Origin (NCR vs. outside NCR)	8 (3,14)	5 (2.2, 7)	0.18
Status of Practice (Training vs. Practicing)	9 (4, 14)	4 (2,7)	0.001*
Marital status (Single vs. Married)	8 (4,14)	4 (2,8)	0.02*
Exposure to COVID-19 duties (With COVID-19 Duties vs. no COVID-19 duties)	8 (3.5,14.5)	5 (2,11.5)	0.13
Location of duties (Government vs. Private hospital)	8 (3.5, 12.7)	4 (2,12)	0.11

* statistically significant; PHQ-9 - Patient Health Questionnaire-9; NCR- National Capital Region

Table 2. Dimensions Affecting the Utilization of Mental Healthcare Services Among Respondents.

Dimension	Number of Responses, n (%)		
	Yes	No	Maybe
Is it available?	59 (84%)	9 (13%)	2 (3%)
Is it accessible?	55 (78%)	6 (9%)	9 (13%)
Is it affordable?	39 (56%)	7 (10%)	24 (34%)
Is it adequate?	22 (31%)	4 (6%)	44 (63%)

on accessibility, 24 (34%) on affordability, and 44 (63%) on adequacy. There were 15 (21%) respondents who cited stigma while 13 (18%) cited privacy concerns as deterrents to their utilization of mental health care services.

Discussion

This study's findings showed that 60% of the respondents were depressed based on their PHQ-9 answers. Respondents less than 33 years old, in training, or unmarried had significantly higher median PHQ-9 scores and were significantly more depressed than their counterparts. Sex, region of origin, involvement in COVID-19-related duties, and location of duties did not significantly affect PHQ-9 scores. Around 10% of the respondents did not have available, accessible, and affordable mental healthcare services.

The proportion of young ophthalmologists who participated in this study with depression was almost twice higher than the ophthalmologists surveyed in India (60 vs 33%, respectively) [6]. The median PHQ-9 was also higher in this study than the study in India (6.5 vs 3.98, respectively). These findings may be explained by the younger mean age of the respondents of this paper. Younger age was found to be a risk factor for depression [6,10]. These highlight the

importance of mental health assessment especially on depression especially in this difficult time.

In this study, gender had no effect on the PHQ-9 score. This is in contrast with the study findings of Tee *et al.* in the general Filipino population where depression in response to the ongoing COVID-19 pandemic was significantly lower ($p < 0.001$) among Filipino male respondents. However, they used a different tool to assess mental health, the Depression, Anxiety, and Stress Scale (DASS-21) [11].

There were significant differences in the median PHQ-9 scores among those in training versus those who had completed training and were practicing as clinicians. Specifically, trainees had higher median PHQ-9 scores than practicing clinicians. Similar to the study findings of Tee *et al.*, student status was a risk factor for depression [11]. The COVID-19 pandemic may be limiting the opportunity of the students and trainees to learn optimally [11,12].

Compared to respondents who are married, single respondents had a significantly higher median PHQ-9 score. The results of this study are similar to the study findings of Kowal *et al.* and Tee *et al.* [10,11]. The higher median PHQ-9 score of single respondents was attributed to the absence of opportunity for dyadic coping [10,13]. Dyadic coping is a process of coping with stress between partners through different individual or partner strategies including stress communication [14].

It is unsettling that around 15-20% of the respondents in this study were either not sure or do not have available or accessible mental healthcare services to them. Similarly, 40-70% of the respondents were either not sure or do not have affordable or adequate mental healthcare services to them. Stigma and privacy concerns remain deterrents to seeking

mental healthcare. These reflect the common perceptions and hindrances of seeking mental healthcare and the status of mental healthcare services in the Philippines [5]. The findings of this study will be forwarded to the appropriate organizations to better assist our younger colleagues in dealing with depression during the current pandemic.

Although the respondents came from different regions of the Philippines, two-thirds were from NCR and Ilocos Region introducing a possible sampling bias. However, a significant portion of ophthalmology residency training institutions and ophthalmologists in practice are in the NCR. Unfortunately, the number of respondents was not large enough to allow multivariate analysis of the individual factors. The online survey questionnaire was filled out anonymously to ensure that respondents will not feel uncomfortable and answer the PHQ-9 truthfully. This introduces, however, the possibility of multiple entries by the respondents. However, the responses were reviewed and the demographical data were screened for redundancy of entries.

In conclusion, more than half of young ophthalmologists in the Philippines suffered from some degree of depression based on the PHQ-9 questionnaire. Respondents who were younger than 33 years of age, single, or currently in training at the time of the survey had higher PHQ-9 scores than their counterparts. A significant proportion was either not sure or does not have available, accessible, affordable and adequate mental healthcare service to them.

Conclusion

Identifying strategies that effectively reduce HIV/AIDS discrimination is crucial to alleviate the suffering faced by PLWHA, and to ensure the success of global HIV/AIDS prevention and treatment efforts. With this being said, this study offers insights on how improving the comprehensive knowledge of the public should be done to address this problem. Among the eligible respondents in this study, only 26.24% had comprehensive knowledge on HIV/AIDS and 76.87% had discriminatory attitudes towards PLWHA. The results of the multiple logistic regression showed that there is a statistically significant relationship between comprehensive knowledge on HIV/AIDS and discriminatory attitudes towards PLWHA ($p < 0.001$). A Filipino woman without comprehensive knowledge on HIV/AIDS is 2.53 times more likely to have discriminatory attitudes than women with comprehensive knowledge. This association indicates the need to improve comprehensive knowledge to reduce discriminatory attitudes, which could be done by incorporating necessary

concepts on HIV/AIDS transmission, prevention, and common misconceptions into existing campaigns. Through the results of this study and other studies, policymakers, leaders, and stakeholders can hopefully be guided in doing their part to achieve the global goal of zero stigma and discrimination against PLWHA.

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