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PREVALENCE AND CORRELATES OF DEPRESSION, ANXIETY, AND DISTRESS AMONG FILIPINOS FROM LOW-INCOME COMMUNITIES IN THE PHILIPPINES

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Abstract

Introduction: More than one billion people worldwide are affected by mental health disorders, making up 16% of the world's population. However, psychological morbidity has been understudied and disparately estimated among Filipinos living in low-income communities in the Philippines.

Purpose: The specific aims of this descriptive, cross-sectional study were to 1) describe depression, anxiety, distress, and quality of life in a large sample of Filipinos from low-income communities in the Philippines; and 2) determine the prevalence and correlates of depression, anxiety, and distress in this sample.

Methods: A convenient sample of Filipinos (≥ 18 years old) were recruited to participate in the study and asked to complete a general health survey. Only one person per household was eligible to participate in the study to avoid biases based on the prevalence of mental health disorders.

Results: One thousand two hundred three participants, mean age, 49.5 ± 17.6 years, primarily women (64.6%) and married (58.4%) reported the following cardiometabolic disorders: overweight/obesity (29%), hypertension (43%), hyperlipidemia (21%), type 2 diabetes (14%), and current smoker (19%). The mean physical and mental quality of life was 46.2 ± 8.1 and 48.6 ± 7.7, respectively. Depression (21%), anxiety (39%) and distress (82%) were prevalent in the sample. Depression was associated with older age, higher distress and anxiety, and lower quality of life. Anxiety and distress were associated with younger age, female gender, higher depression, and lower quality of life.

Conclusion: Mental health disorders are prevalent in Filipinos from low-income communities. Findings provide empirical support for the provision of mental health services consistent with the World Health Organization's action plan in this understudied population. The high association between psychological morbidity and perceived physical and mental quality of life signifies the need to screen for depression in older adults and anxiety and distress in younger adults and women.

Keywords

Introduction

Mental health disorders affect a significant portion of the global population and are a public health concern worldwide; it imposes personal, social, medical, familial and economic burdens (Heo, Murphy, Fontaine, Bruce, & Alexopoulos, 2008). In 2016, mental health disorders accounted for 16% of the total global burden of diseases (Rehm, 2019). In a nationally-representative sample of older adults in six low and middle-income countries, an average of one in every 13 participants suffered from depression (Lotfaliany et al., 2019). The rates of depression in the U.S. alone is expected to increase by 117% between 2000 and 2050 (Heo et al., 2008). Mental health researchers have begun to pay more attention to critical mental health issues and its impact on the quality of life in different racial and ethnic populations (i.e. Asian-Americans). However, research to date is largely drawn from high-income countries and suggests that disadvantaged and marginalized groups have a higher mental health disorder burden, but there has been a dearth of research studying this relationship within low- and middle-income countries (Ruan et al., 2018). Likewise, there are few studies examining mental health disorders, specifically depression, anxiety, and distress, among specific subgroups including Filipinos living in the U.S. and even less among Filipinos living in their native country.

In 2004, over 4.5 million cases of depression were reported in the Philippines, according to the Department of Health (DoH-PH, 2007). Reports show that the Philippines has the highest number of depressed people in Southeast Asia and the National Statistics Office reported that mental illness is the third most common form of disability in the country (Tomacruz, 2019); younger individuals were at greater risk for depression (De Guzman, 2018). The total expenditure on health as a percentage of gross domestic product is 3.78% and the per capita government expenditure on health is $39.0 (Mental Health Atlas 2011 - Philippines, 2011). A more recent report by the Global Burden of Disease in 2015 showed that 3.3 million people in the Philippines lived with depression and an almost equal number of individuals suffered from anxiety (Reddy, 2016). The numbers are most likely much higher since many who suffer from depression and anxiety often hesitate to seek help due to the stigma that surrounds mental disorders (Mental Health Atlas 2011 - Philippines, 2011). Clearly, existing reports on the rates of depression in the Philippines varies widely from one report to the other. Likewise, the proportion of the estimated 100 million individuals who suffer from anxiety and distress in rural areas, especially from lower-income communities living in the Philippines is not well-understood. As these numbers are anticipated to continue

to increase, studies to better understand those at increased risk for mental health disorders are needed to inform the Philippine government about the programmatic needs of the service delivery system and highlight the need for assessment, prevention, and treatment of mental health disorders (Heo et al., 2008). This study was conducted as a first step toward this goal. The specific aims of this descriptive, cross-sectional study were to 1) describe depression, anxiety, distress and quality of life in a large sample of Filipinos from low-income communities in the Philippines; and 2) determine the prevalence and correlates of depression, anxiety, and distress in this population.

Methods

Adults (≥ 18 years old) from low-income communities in the Philippines, mainly rural, who were willing to complete a survey and able to read and understand English were recruited to participate in the study between January 16, 2017 – June 14, 2017. The study used a convenience sampling design. Only one person per household was eligible to participate in the study to avoid biases based on levels of risk factors or prevalence of mental health disorders. The study was reviewed and approved by the Institutional Review Board at the University of California Irvine and the University of the Philippines Manila, Research Ethics Board. Informed consent was waived as the study was deemed a very low risk for participants; however, all data collected were de-identified to support anonymity and confidentiality.

Data were collected by trained health care workers who were familiar with the community resources. The use of health care workers was supported to enhance the familiarity of potential participants with the personnel they saw regularly at their community health care centers. The surveys were crossed checked by the trained health care worker for completeness and sent to a member of the research team (MAH) for data entry.

Study Procedures

After the study was explained to the individual and upon verbal consent, participants were weighed in clothing without shoes (to the nearest 0.1 kg) using a professional beam scale (model 402KLS; Health-o-Meter, Bridgeview, IL). Height was measured to the nearest 0.5 centimeters using a stadiometer. Blood pressure was measured according to American Heart Association standards using a calibrated aneroid sphygmomanometer (Pickering et al., 2005). Participants were then asked to complete a survey packet; the average time for completing the surveys was 15–20 minutes.

Instruments

A standardized instrument (i.e. Sociodemographic Form) was used to gather data on participants' age, gender, education level, marital status, and income. Previous medical history (e.g., hypertension, hyperlipidemia, myocardial infarction, type 2 diabetes, overweight/obesity) and smoking history were collected as binary variables (i.e. yes or no).

Quality of Life was measured using the Short Form 12, version 2 (SF-12V2). This tool measures functional health and well-being from the patient's point of view (Gandhi

et al., 2001). The SF-12v2® is a valid measure of physical and mental health and is particularly useful in large population health surveys. The SF-12 covers the same eight health domains as the SF-36v2® with 1–2 questions per domain (Pickard, Johnson, Penn, Lau, & Noseworthy, 1999).

Depression and anxiety were assessed with the Hospital Anxiety and Depression Scale (HADS), a fourteen-item scale that generates ordinal data. Seven of the items relate to anxiety and seven relate to depression (Spinhoven et al., 1997). Researchers created this outcome measure specifically to avoid reliance on aspects of these conditions that are also common somatic symptoms of illness, for example, fatigue and insomnia or hypersomnia. The single-item Distress Thermometer (DT) was used to measure levels of distress. The DT asks participants to circle the number that best describes their overall distress using a visual analog scale ranging from 0 = 'no distress' to 10 = 'extreme distress' (Jacobsen et al., 2005). The DT has convergent validity with the HADS, with a cut-off point of four typically resulting in optimal sensitivity and specificity (Jacobsen et al., 2005).

Statistical Analysis

Data were analyzed using the SPSS for Windows (IBM Corp., 2016). Descriptive statistics including means, ranges, and standard deviations were used to describe sociodemographic characteristics, cardiometabolic disorders, quality of life, and levels of depression, anxiety, and distress. Univariate analyses using Pearson's product-moment or Spearman Rho correlation coefficients were used to explore correlates of depression, anxiety, and distress.

Results

The sociodemographic characteristics of the sample (N = 1203) are illustrated in Table 1. The average age of participants was 49.5 ± 17.6 years (range 18 – 83). Patients were primarily women (64.6%), married (58.4%), unemployed/retired (51.3%), and had ⩽ high school education (50.4%). The clinical profile shows twenty-nine percent were overweight or obese and 13% were underweight. The rate for atherosclerotic cardiovascular disease (i.e. myocardial infarction and congestive heart failure) was only 3.6% but 29.4%, 42.5%, 21.1%, 14.4%, and 19.4% suffered from cardiometabolic diseases including overweight/obesity, hypertension, hyperlipidemia, type 2 diabetes, and were current smokers, respectively. The mean physical quality of life score was 46.2 ± 8.1 and the mean mental quality of life was 48.6 ± 7.7.

The overall prevalence of depression, anxiety, and distress were 21%, 39%, and 82%, respectively; mean scores for these mental health disorders are presented in Table 2. The major sources of distress were financial issues (60%) and having to care for family and children (35%). Of those that were employed, 65% attributed their stress to work while school was reported as a source of stress among 47% of the students in the study.

A correlational matrix of the key variables is presented in Table 3. Depression was associated with older age, higher distress and anxiety and lower physical and mental quality of life. Anxiety and distress were associated with younger age, female gender, higher depression, and lower physical and mental quality of life.

Discussion

Mental health disorders are common and may significantly affect quality of life. However, mental health disorders such as depression, anxiety, and distress are often under-recognized even though appropriate diagnosis, treatment, and rehabilitation may be beneficial in optimizing function and quality of life. Specifically, very little is known about the prevalence and correlates of depression, anxiety, and distress among Filipinos across the globe (WHO, 2004); and to our knowledge, this has never been examined among Filipinos living in the Philippines (Mental Health Atlas 2011 - Philippines, 2011). Furthermore, most mental health studies were conducted in the U.S. and tended to lump Asian Americans together as a homogeneous ethnic category. Thus, the amount of research and published materials on subgroup differences is limited (Kim et al., 2010). For example, it is essentially assumed that Asian Americans have few mental health problems and that they have resources within the family or ethnic community to meet their mental health needs (Mateo, 2017). This popular belief has served to justify the lack of attention to their unique psychological needs. Consequently, the number of investigations conducted with Asian Americans focusing on the prevalence of mental disorders is extremely limited, compared with other ethnic minority groups.

Study was conducted to address these major gaps in research and to confirm whether these assumptions were true in a large sample of Filipinos from primarily low-income communities in the Philippines. To our knowledge, this study is the first to describe cardiometabolic disorders, quality of life, and the prevalence and correlates of depression, anxiety, and distress in this population. Although reported quality of life scores was comparable to gender and racially matched cohorts in the U.S. (Ware, 1993) cardiometabolic disorders were highly prevalent. The high rates of cardiometabolic disorders, defined as a cluster of closely interrelated diseases including hypertension, hyperlipidemia, type 2 diabetes and overweight/obesity (Miura, Shiga, Ike, & Iwata, 2019) is consistent with studies conducted among Filipino Americans in the U.S. In one study comparing Filipinos with four other subgroups of Asian Americans (e.g., Chinese, Japanese, Koreans and Vietnamese), Filipinos along with their Vietnamese counterparts tended to have poorer physical health and reported the greatest number of chronic diseases including asthma, high blood pressure and heart disease and the highest level of disability (Kim et al., 2010). In a separate study, Filipinos also exhibited the highest level of disability most likely due to also having the greatest number of chronic diseases including asthma, high blood pressure, diabetes, and heart disease (McBride, 2019). Although the Philippines was not included in a study examining cardiometabolic disorders among older adults in six low- and middle-income countries, the authors' speculation that the underlying social, environmental, and economic shifts in low- and middle-income countries have led to increasing rates of cardiometabolic disorders (Ruan et al., 2018), which is what we observed in individuals from low-income communities in the Philippines. This highlights the critical need to target multi-sectorial efforts to reduce the high burden of cardiometabolic disorders among this subgroup of Filipinos.

Our findings show that depression, anxiety, and distress were highly prevalent in our sample of Filipinos living in low-income communities. We observed higher depression rates than

the crude population prevalence for depression of 7.4% (Lotfaliany et al., 2019). The high depression rates that we observed in our study are consistent with findings from a research study among Filipino Americans in the U.S. (Kim et al., 2010). Researchers also reported a similar prevalence rate for depression (22%) among Filipino patients with cancer in a tertiary hospital (Que et al., 2013). Counter-intuitively, in a separate study conducted among Asian Americans in the U.S., Filipinos reported lower levels of depressive symptoms compared to other Asian subcategories (Rhee, 2009). As previously mentioned, these percentages are most likely much higher since many who suffer from depression often hesitate to seek help due to the stigma that surrounds mental disorders (Mental Health Atlas 2011 - Philippines, 2011).

Our findings also showed that higher rates of depression were associated with reduced quality of life and increased anxiety and distress which is consistent with another study that documented the association of depressive symptoms with impaired quality of life and psychological distress (Que et al., 2013). Finally, depression was associated with older adults which contradicts recent reports that depression was more common among younger Filipinos (Tomacruz, 2019). Nevertheless, the inconsistent findings signify the need for early assessment, identification, and treatment of depression across the lifespan, with increased scrutiny among older adults living in low-income communities that characterize our sample. This is particularly important given that older adults also suffer from greater medical comorbidities including other mental health disorders and chronic diseases that increase mortality (Heo et al., 2008).

Our findings that anxiety and distress were moderately high is consistent with previous research. The occurrence of mental health disorders among older Filipino-Americans living in the U.S. has previously been reported in comparison to other older Asian Americans and showed that Filipinos exhibited the highest psychological distress scores and second to the lowest self-rated health compared to other subgroups of Asian Americans (Kim et al., 2010). Work was the primary source of stress among those that were employed in the study while school was a source of stress among students; financial concerns and having to care for family and children were also reported as sources of stress for at least a third of the sample. In a recent study of adults with co-occurring drug use and depressive symptoms, financial stress, stress due to community features, and stress involving a person's network were the major sources of stress (Tomohlen, 2018). Clearly, clinicians, researchers, government entities, and other stakeholders need to work collaboratively to address development and poverty indicators to potentially reduce levels of anxiety and distress in this population (Pullar et al., 2018).

Data from the current study also showed that higher levels of anxiety and distress were associated with younger age, female gender, higher depression, and lower quality of life. These findings are consistent with a study done in another low-income country where younger participants and rural residents were more likely to report the co-existence of more than one mental health disorder (Pelzom, Isaakidis, Oo, Gurung, & Yangchen, 2017). Data support the need to be more attentive to younger individuals and women when assessing for anxiety and distress. Future research on the associations between socioeconomic status and

mental health disorders are warranted to support the development of strategies to reduce the burden associated with mental health conditions in all individuals.

A recent report by the World Health Organization shows that the Philippine government has established a National Mental Health Program to increase mental health awareness and support both an anti-stigma program and a suicide prevention program as well as an increased number of outpatient and inpatient care facilities available to offer mental health services that have been integrated into the national policy (WHO, 2018). In the mid 1990s, the National Mental Health Program in the country also made an effort to integrate mental health services in community settings to support early identification and management of mental health disorders; however, the lack of human resources (with only 3.47 individuals working in mental health for 100,000 general population) seems to have staggered these efforts (DOH-PH, 2007).

Strengths and Limitations

One of the main strengths of this study is its large sample size that enabled us to estimate the prevalence of depression, anxiety, and distress and its associations with sociodemographic factors and cardiometabolic disorders with relatively high accuracy. In addition, the study supports the World Health Organization's goal to better understand health disparities associated with mental health disorders, in racial and ethnic subgroups for which data are limited, in order to develop interventions to reduce population specific mental health disorders. Moreover, the current study used nationally representative data from geographically diverse areas in the Philippines where there were fewer valid data for mental health disorders and less was known about its prevalence and its correlates. The involvement of trained health care workers who were familiar to the participants also increased participant engagement and willingness to support the study.

There were some limitations as well. As a cross-sectional study, we cannot be sure of the directions of the associations we identified and causality and mediation pathways between the outcomes of interest cannot be inferred. Likewise, the data for cardiometabolic disorders were based on self-reports, which may lead to recall bias. However, validated instruments were used to determine the prevalence rates of mental health disorders. The study also has a number of methodological limitations which could negatively impact on the validity and generalizability of the findings. Although only one person per household was eligible to participate in the study to avoid biases based on the prevalence of mental health disorders, the use of a convenience sample may have introduced some selection bias. Finally, social determinants of cardiometabolic disorders and their ability to prevent or reduce mental health disorders were not taken into account as were health literacy and education levels of participants.

Conclusion

In conclusion, the prevalence of depression, anxiety, and distress were moderately high in our sample of Filipinos living in low-income communities in the Philippines. The findings provide empirical support for the development of mental health services in this understudied

population. The World Health Organization's comprehensive mental health action plan 2013–2020 calls for a change in the attitudes that perpetuate stigma and discrimination that have isolated people since ancient times –(WHO, 2013). Best practice guidelines recommend greater awareness about mental health disorder; individuals at risk should be routinely assessed for psychosocial stressors and provided with appropriate counseling (Arnett et al., 2019). Likewise, it is urgent and imperative that new approaches engage every Filipino in a serious national chat on mental health disorders and hopefully lead to more openness in discussing depression, anxiety, and distress, the demystification of these conditions, and eventually the de-stigmatization of mental health issues.

Recommendations

The number of Filipinos suffering from depression and anxiety are most likely higher than reported due to the stigma surrounding mental disorders. Research to explore factors hampering people with mental health issues to seek and access needed treatment (e.g., lack of support for people with mental disorders, the fear of stigma) is warranted (Mateo, 2017). Renewed efforts to implement a multifaceted approach for primary and secondary prevention of mental health disorders that can ultimately increase risks for other medical conditions are advocated and should be addressed at the national level (Lotfaliany et al., 2019). Subsequently, strategies to develop information-based mental health plans with clear baseline information and targets need to be developed to reduce mental health disorders (Mental Health Atlas 2011 - Philippines, 2011). At a community and national level, we need to monitor progress in providing community services and involving users, families, and other stakeholders in mental health promotion, prevention, care, and rehabilitation. Finally, efforts to implement reform policies to support mental health screening and early treatment and management at all levels of care among Filipinos are warranted (Tomacruz, 2019).

Biography

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Table 1.

Baseline Sociodemographic and Clinical Characteristics (N =1203)

Age, years (Mean±SD)	49.5 ± 17.6
Female, N (%)	777 (64.6)
Married, N (%)	703 (58.4)
High school education, N (%)	606 (50.4)
Unemployed/retired, N (%)	617 (51.3)
Body Mass Index Categories, N (%)	
Underweight	157 (13.1)
Normal weight	692 (57.5)
Overweight or Obese	354 (29.4)
Hypertension, N (%)	551 (42.5)
Hyperlipidemia, N (%)	254 (21.1)
Myocardial infarction, N (%)	17 (1.4)
Congestive heart failure, N (%)	26 (2.2)
Diabetes mellitus, Type 2 N (%)	173 (14.4)
Current smoker, N (%)	233 (19.4)

Table 2.

Mean Scores of Mental Health States and Quality of Life

Variables	Range		Mean ± SD	
	Lower	Higher	Mean	Standard Deviation
Depression[a]	0	21	5.0	3.6
Anxiety[a]	0	21	6.9	3.8
Distress[b]	0	10	4.8	1.5
Quality of Life (SF-12)[c]				
Physical	18.1	61.9	46.2	8.1
Mental	19.1	66.1	48.6	7.7

[a]Hospital Anxiety and Depression Scale;

[b]Distress Thermometer;

[c]Short Form-12

Table 3.

Correlates of Depression, Anxiety, Distress, and Quality of Life

Variables	1	2	3	4	5	6	7	8
1 Age	1.00							
2 Gender	.002	1.00						
3 Marital status	.535 **	.124 **	1.00					
4 Depression	.114 **	-.032	.028	1.00				
5 Anxiety	-.066 *	.156 **	-.060	.557 **	1.00			
6 Distress	-.109 **	.076 *	-.044	.234 **	.338 **	1.00		
7 Physical QOL	-.111 **	-.026	-.045	-.416 **	-.411 **	-.159 **	1.00	
8 Mental QOL	.046	-.079 *	.028	-.429 **	-.478 **	-.270 **	.211 **	1.00

**
correlation is significant at the 0.01 level (2-tailed);

*
correlation is significant at the 0.05 level (2-tailed); QOL – quality of life