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Disability and Comorbidity among Major Depressive Disorder and Double Depression in African-American Adults

Elisa R. Torres [Assistant Professor]

600 Highland Ave., Clinical Science Center K6/326, School of Nursing, University of Wisconsin, Madison, WI 53792-2455, United States

Abstract

Background—Few studies have examined differences in disability and comorbidity among major depressive disorder (MDD), dysthymia, and double depression in African-Americans (AA).

Methods—A secondary analysis was performed on AA in the National Survey of American Life. Interviews occurred 2001–2003. A four stage national area probability sampling was performed. DSM-IV-TR diagnoses were obtained with a modified version of the World Health Organization's expanded version of the Composite International Diagnostic Interview. Disability was measured by interview with the World Health Organization's Disability Assessment Schedule II.

Results—Compared to non-depressed AA, AA endorsing MDD ($t=19.0$, $p=.0001$) and double depression ($t=18.7$, $p=.0001$) reported more global disability; AA endorsing MDD ($t=8.5$, $p=.0063$) reported more disability in the Getting Around domain; AA endorsing MDD ($t=19.1$, $p=.0001$) and double depression ($t=12.1$, $p=.0014$) reported more disability in the Life Activities domain. AA who endorsed double depression reported similar disability and comorbidities with AA who endorsed MDD. Few AA endorsed dysthymia.

Limitations—This was a cross-sectional study subject to recall bias. The NSAL did not measure minor depression.

Conclusions—The current study supports the idea of deleting distinct chronic subtypes of depression and consolidating them into a single category termed chronic depression.

Keywords

Mental Health; Minority Health; Epidemiology

1. Introduction

Depression is the leading cause of disability worldwide and a major contributor to the global burden of disease (World Health Organization [WHO], 2013). Dysthymia is characterized

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Phone: 1 (608) 263-5268, Fax: 1 (608) 263-5458, ertorres@wisc.edu.

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Conflict of interest

The author declares no conflict of interest.

Contributor

Dr. Elisa Torres designed the study, performed the literature search and analyses and wrote the manuscript.

by less severe depressive symptoms than major depressive disorder (MDD) (American Psychiatric Association, 2000). However, recent studies show dysthymia associated with comparable (Subodh et al., 2008) or more disability than MDD (Hellerstein et al., 2010; Rhebergen et al., 2010). Compared to MDD, dysthymia is more likely to have a comorbid anxiety disorder (Rhebergen et al., 2009), which may explain the higher rates of disability associated with dysthymia.

Many individuals with dysthymia develop concurrent MDD, a phenomenon called “double depression” (Keller and Shapiro, 1982). Compared to MDD, double depression is associated with more disability (Hellerstein et al., 2010). Double depression is also associated with more comorbid anxiety (Rhebergen et al., 2012; Sang et al., 2011), panic (Sang et al., 2011) and obsessive-compulsive disorders (Holm-Denoma et al., 2006), and agoraphobias (Sang et al., 2011; Holm-Denoma et al., 2006) which may explain the higher rates of disability in double depression compared to MDD. Double depression and dysthymia have similar disability and comorbidities (Hellerstein et al., 2010; Rhebergen et al., 2009). Few studies have examined differences in disability and comorbidity among MDD, dysthymia and double depression and no depression in African-Americans (AA), which is the purpose of this study.

2. Methods

2.1 Study design and population

A secondary analysis was performed on the National Survey of American Life (NSAL). Heeringa et al. (2004) described a four stage national area probability sampling; 1) stratified probability sample of 1990 U.S. census blocks households where <10% and 10% were reported to be AA, 2) area segments formed by linking geographically continuous census blocks, and 3) systematic random sample of housing units where an interviewer 4) randomly selected a respondent from a complete list of eligible household members. Inclusion criteria were U.S. adults who were age 18+ residing in households in the contiguous 48 states who were able to complete the interview in English and consented to participate in the study (Heeringa et al., 2004). Pretesting of questionnaires and training of interviewers were described by Jackson et al. (2004). Oral consent was obtained prior to the interview (Pennell et al., 2004). Interviewing occurred between 2001–2003. There was racial matching of interviewers and respondents, with face-to-face interviews lasting on average 2 hours 20 minutes, response rate 70.7% (Jackson et al., 2004). The Institutional Review Board (IRB) at the University of Michigan approved the NSAL (Jackson et al., 2004). The IRB at the University of Iowa approved the current study.

2.2 Measures

DSM-IV-TR diagnoses were obtained with the WHO Composite International Diagnostic Interview (CIDI) developed for the World Mental Health Survey Initiative (Jackson et al., 2004). The CIDI was an expansion of the Diagnostic Interview Schedule, the first fully structured psychiatric diagnostic interview administered by trained lay interviewers. Diagnoses generated by the lay interviewers were consistent with those obtained by clinicians who contacted a probability sample of survey respondents who previously met with lay interviewers (Kessler and Üstün, 2004). Based on the presence of MDD and dysthymia within 30 days of the interview, MDD was defined as meeting the criteria for MDD but not dysthymia, dysthymia was meeting the criteria for dysthymia but not MDD, and double depression was meeting the criteria for both MDD and dysthymia, ignoring the sequence of onset. The non-depressed participants did not meet the criteria for either MDD or dysthymia. When MDD or dysthymia were better explained by another mental disorder, the participant had a value of “did not meet DSM-IV-TR criteria” for MDD or dysthymia.

Comorbidity of Axis I & Axis II disorders within 30 days of the interview were assessed for the following: Major Depressive Episode, Mania, Panic Attack, Panic Disorder, Social Phobia, Agoraphobia without Panic Disorder, Agoraphobia with Panic Disorder, Generalized Anxiety Disorder, Alcohol Abuse, Alcohol Dependence, Drug Abuse, Drug Dependence, Anorexia and Bulimia.

Disability was measured with the WHO Disability Assessment Schedule II (WHODAS-II) modified for the World Mental Health Surveys (Von Korff et al., 2008). The WHODAS-II was based on the International Classification of Functioning, Disability and Health (Von Korff et al., 2008). Limitations 30 days preceding the interview were assessed in five domains: Understanding and Communicating (e.g. concentration, memory); Getting Around (e.g. standing for long periods, moving around inside home); Self-Care (e.g. getting dressed, feeding self); Getting Along with Others (e.g. maintaining friendships, making new friends); and Life Activities (e.g. work) (Von Korff et al., 2008). In the first four domains, there was a filter question, a series of items with severity ratings, and a question about days in the last month that these interferences occurred (Von Korff et al., 2008). The number of days that symptoms caused difficulty in the given area of functioning was weighted by level of difficulty; none, mild, moderate, severe and very severe were weighted 0, 0.25, 0.50, .0.75 and 1.0 respectively and transformed to 0 to 100 scale where 0 = no impairment and 100 = complete impairment (Williams et al., 2007). The Life Activities domain did not use a filter question (Von Korff et al., 2008) and was measured as the number of days in the 30 days preceding the interview that respondents were unable to carry out their normal activities (Williams et al., 2007). A Global Disability Scale score was estimated by averaging the scores of all the domains (Von Korff et al., 2008). Psychometric testing found loadings in confirmatory factor analyses to be moderate to high with alphas between .79–.96 (Von Korff et al., 2008). For the present study, the alpha was .85.

2.3 Statistical analyses

Chi square and ANOVA for complex samples compared three groups ($p < .05$), with a Bonferroni correction ($p < .0167$) for multiple comparisons.

3 Results

Dysthymia was endorsed by only 2 individuals and was eliminated from subsequent analyses. Women were more likely to endorse MDD and double depression than men. There was a statistically significant difference in income, with AA who endorsed double depression reporting lower incomes than non-depressed AA.

There was a statistically significant difference among the groups in the following disability domains: Global, Getting Around, Getting Along with Others, and Life Activities. Compared to non-depressed AA, AA endorsing MDD ($t = 19.0$, $p = .0001$) and double depression ($t = 18.7$, $p = .0001$) reported more global disability; AA endorsing MDD ($t = 8.5$, $p = .0063$) reported more disability in the Getting Around domain; AA endorsing MDD ($t = 19.1$, $p = .0001$) and double depression ($t = 12.1$, $p = .0014$) reported more disability in the Life Activities domain. Although there was a statistically significant difference among the groups in the Getting Along with Others domain, subsequent analyses were not significant with corrections for multiple comparisons.

Major depressive episode was the only comorbidity that was significantly different among the groups. AA who endorsed MDD and double depression reported more major depressive episodes than AA who endorsed no depression.

3 Discussion

The current study addresses the nosology of mood disorders in a large carefully characterized cohort of AA. This study investigated the extent to which AA with MDD, dysthymia, double depression and no depression could be distinguished from each other in terms of disability, and if comorbidities explained differences in disability.

AA who endorsed double depression reported similar disability with AA who endorsed MDD, which contradicts the literature (Hellerstein et al., 2010; Rhebergen et al., 2009; Goldney and Fisher, 2004). In non-AA samples, double depression was associated with more comorbid anxiety disorder (Rhebergen et al., 2012; Sang et al., 2011), panic disorder (Sang et al., 2011), various agoraphobias (Sang et al., 2011; Holm-Denoma et al., 2006), and obsessive-compulsive disorder (Holm-Denoma et al., 2006), which may explain the higher rates of disability associated with double depression compared to MDD. However, in the current study, double depression was not associated with more comorbidity, which may explain why AA who endorsed double depression reported similar disability with AA who endorsed MDD.

In general, AA did not endorse dysthymia without MDD. In non-AA samples, most who recover from dysthymia go on to have further episodes of dysthymia and many experience major depressive episodes (Klein et al., 2006). The current study supports the idea that dysthymia and double depression are part of the multiple expressions of MDD as opposed to being distinct from MDD (Rhebergen et al., 2012). There has been a long history of recommending the consolidation of different types of depression with a single category termed chronic depression (Akiskal, 1983), including more recently (Gelenberg et al., 2006; McCullough et al., 2003; McCullough et al., 2000), and is the recommendation of this paper.

4.1 Limitations and strengths

Although no significant differences were observed between MDD and double depression, there may be differences in areas that were not assessed in the NSAL. This was a cross-sectional study, with data collected retrospectively and subject to recall bias.

The current study was comprised of a nationally representative sample of AA with race/ethnic matching of interviewers and respondents during face-to-face interviews. Disability was measured with an instrument with well-established psychometrics. DSM-IV-TR diagnoses were obtained with a fully structured psychiatric diagnostic interview with established validity.

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Characteristics of African-Americans in the National Survey of American Life with major depressive disorder, double depression and no depression

Table 1

	Major Depressive Disorder N=54		Double Depression N=21		No Depression N=3,356		χ^2 (df=34)		p	
	N	%	N	%	N	%	N	%	N	%
Female	46	85	17	81	2,153	64	8.0	.0008*		
	Mean	SE	Mean	SE	Mean	SE	F (2,33)	p		
Age	42	3.0	42	3.1	42	0.5	0.0	1.0		
Education	12	0.6	12	0.7	12	0.8	0.7	.5		
Income	34,093	8,639	24,444	3,478	36,325	1,320	5.9	.0062*		
Disability Domains										
Global	15.0	2.4	18.4	3.2	4.4	0.2	20.3	<.0001*		
Understanding & Communicating	5.3	2.1	9.6	3.5	1.4	0.1	3.3	.0496		
Getting Around	13.9	4.2	13.9	4.2	4.4	0.3	5.7	<.0001*		
Self-Care	3.1	1.5	3.5	2.1	0.9	0.1	2.1	.1452		
Getting Along with Others	5.4	1.9	7.2	3.1	0.8	0.1	4.6	.0169*		
Life Activities	47.3	7.4	58.0	12.4	14.7	0.7	17.9	<.0001*		

* p<.05

Comorbidities associated with major depressive disorder, double depression and no depression in African-Americans in the National Survey of American Life

Table 2

Endorsed Comorbidities	Major Depressive Disorder N=54		Double Depression N=21		No Depression N=3,356		χ^2 (df=34)		p
	N	%	N	%	N	%			
Major Depressive Episode	54	100	21	100	17	0.1	663.5	<.0001	
Mania	0	----	0	----	7	0.2	0.0	1.0	
Panic Attack	0	----	1	4.8	95	2.8	0.5	.7	
Panic Disorder	0	----	0	----	45	1.3	0.2	.9	
Social Phobia	2	3.7	0	----	59	1.8	0.7	.6	
Agoraphobia without Panic Disorder	0	----	0	----	11	0.3	0.1	1.0	
Agoraphobia with Panic Disorder	0	----	0	----	7	0.2	0.1	1.0	
Generalized Anxiety Disorder	0	----	0	----	30	0.9	0.2	.9	
Alcohol Abuse	1	1.9	0	----	19	0.6	1.9	.2	
Alcohol Dependence	0	----	0	----	10	0.3	0.1	.9	
Drug Abuse	0	----	0	----	9	0.3	0.1	.9	
Drug Dependence	0	----	0	----	5	0.1	0.0	.9	
Anorexia	0	----	0	----	0	----	----	----	
Bulimia	0	----	0	----	6	0.2	0.0	.9	