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Understanding Adolescent Depression in Ethnocultural Context

Updated With Empirical Findings

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As a continuation of the discussion of the ethnocultural variations in adolescent depression, a cross-sectional, school-based study was designed to examine ethnocultural variations in depression and somatic symptoms in white, African American, Hispanic American, and Asian American adolescents ($N = 307$). Ethnocultural variations in the relationship between depression and somatic symptoms were also explored. Each ethnocultural group of adolescents had its own particular tendency to symptoms of depression. Ethnocultural-specific patterns of relationship were also found between depression and somatic symptoms. This study confirmed the importance of understanding ethnocultural variations in adolescent depression.
Key words: *adolescent depression*, *ethnocultural variations*, *somatic symptoms*

THE previous article[1] "Understanding adolescent depression in an ethnocultural context" raised questions about the cultural sensitivity of the current mental disorders classification systems and argued that ethnocultural variations in expressions of adolescent depression should be considered in research and practice. However, the article did not provide empirical evidence to support the argument. Thus, the present study was developed to empirically strengthen the previous article. As a continuation of the debate, the present study explores the ethnocultural variations in adolescent depression in 4 ethnocultural groups of young adolescents: whites, African Americans (AAs), Hispanic Americans (HAs), and Asian Americans. Specifically, this study focuses on the ethnocultural variations in the distribution of symptom scores and symptom expression. The ethnocultural variations in the relationship between depression and somatic symptoms are also explored.

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ETHNICITY, CULTURE, AND ETHNOCULTURAL GROUP

Ethnicity is defined as "group-shared patterns of social interaction, values, social customs, behavioral roles, perceptions, and language usage."[2(p7)] Ethnicity is a useful concept in health research and practice since the concept contains information about beliefs, values, and behaviors as well as the biological characteristics of a person.[1] *Culture* is defined in nursing as "the learned, shared, and transmitted values, beliefs, norms, and lifeways of a particular group that guides their thinking, decisions, and actions in patterned ways."[3(p47)] Ethnicity and culture are closely related, and it is hard to talk about one without the other. It is particularly true when discussing the role of ethnicity and culture in health and illness. To grasp the influences of both ethnicity and culture on adolescent depression, Choi[1] introduced the comprehensive term *ethnocultural group*. This term has been previously used in other studies.[4–6]

Looking at variations in adolescent depression from this comprehensive perspective is important because ethnicity and culture are inseparable concepts, and the epidemiology of adolescent depression is shaped by both ethnicity and culture. This concept, ethnocultural group, will be used in the present study as well.

ETHNOCULTURAL VARIATIONS IN ADOLESCENT DEPRESSION

To be diagnosed with a major depressive disorder, adolescents should exhibit at least 5 of the following symptoms for at least 2 weeks: depressed or irritable mood; significantly decreased interest in most activities; changes in weight, appetite, or sleep patterns; psychomotor agitation; decreased energy or ability to concentrate; feelings of worthlessness or guilt; or suicidal ideation.[7] The prevalence of major depressive disorders is approximately 5% to 8% of adolescents.[8] In a community-based sample, about 9.2% to 18% of adolescents reported depressive symptoms.[9,10]

Depression is not equally distributed among ethnocultural groups. Saluja et al[10] reported the prevalence of depression as being highest for American Indian adolescents (29%) followed by HAs (22%), whites (18%), Asian Americans (17%), and AAs (15%). In another study,[11] among whites, AAs, HAs, and Asian Americans, HAs reported the highest score on depression followed by Asian Americans, AAs, and whites. When whites, AAs, and HAs were compared after controlling for the effects of age, gender, and socioeconomic status (SES), HAs had a significantly higher depression score than the other groups, which is consistent with other studies.[12] However, Asian Americans reported the highest somatic symptom scores, followed by AAs, HAs, and then whites.

As the ethnocultural composition of the United States has changed, ethnocultural variations in adolescent depression have been acknowledged and have received increasing attention. However, studies on ethnocultural variations in adolescent depression mostly discuss the differences in the number of adolescents who are depressed or the risks for depression in a given time period. The literature provides little information regarding ethnocultural variations in other aspects of depression, including symptom expression. Choi[1] claimed that adolescents from different ethnocultural groups would express depression in different ways. For example, AAs tend to use strong words to express their feelings; thus, increased anger, aggression, and irritability are often noted among depressed AA adolescents. For HAs and Asian American adolescents, somatic symptom is a culturally acceptable way to express their depressed feelings.

Marsella and Yamada[13] pointed out that symptoms should be one of the main focus of cross-cultural studies.

> A symptom is a communication, an interpretation, and an experience. It is also a signal and a changing set of expectations and demands. In all these instances, whether it is expressed idiomatically or within conventional Western medical terms and context, a symptom reveals culture and its influences.[13(p19)]

A symptom tells us more than what people are experiencing. A symptom is a window that allows us to look at culture. Thus, it is important to explore various aspects of depression beyond comparing the level or the severity of the problem.

ADOLESCENT DEPRESSION AND SOMATIC SYMPTOMS

Existing studies have found a strong relationship between depression and somatic symptoms and identified somatic symptoms as reliable indicators of depression, particularly for young adolescents and ethnocultural minorities.[9,14] Choi[1] also has argued that somatic symptom is regarded as a culturally acceptable way to express depressed feelings in certain ethnocultural groups, such as Asian Americans and HAs. Asian American adolescents often complain about depressed

feelings somatically because of a strong stigmatization, cultural beliefs, and shame about mental illness. Machismo in Hispanic culture also leads HA adolescents to choose somatic complaints as a way of expressing depressed feelings.[15] Thus, somatic symptoms should be considered when depression is assessed, particularly for ethnocultural minority adolescents.[16–18]

In spite of known significant correlations between depression and somatic symptoms, the ethnoculture-specific patterns of the relationship between the 2 variables have not been fully understood. Existing studies have tended to focus on the ethnocultural variations in depression or somatic symptoms in isolation but not on the variations in their relationship by ethnocultural group. Thus, this study measured a wide range of somatic symptoms and explored ethnocultural variations in the relationship between depression and somatic symptoms.

To fill gaps in the current knowledge, this study was designed to examine variations among 4 ethnocultural groups of adolescents, whites, AAs, HAs, and Asian Americans, in depression and somatic symptoms and in the relationship between depression and somatic symptoms. The following are the research questions for the present study: (1) How do adolescents from the 4 ethnocultural groups exhibit different patterns of score distribution and symptom expression in the *DSM* Scale for Depression (DSD) and Somatic Symptom Scale? and (2) How is the relationship between depression and somatic symptoms different for each ethnocultural group? The ethnocultural variations in adolescent depression and somatic symptoms were examined by comparing the distribution of scores and symptom expression. The distribution of scores shows how the depression scores are distributed within each ethnocultural group. In this study, symptom expression is defined as the most commonly reported symptoms in each ethnocultural group. To assess the relationship between depression and somatic symptoms, this study, particularly, assessed the ethnocultural variations to what extent somatic symptoms contribute to depression.

METHODS

This school-based study is designed to examine ethnocultural variations in adolescent depression and somatic symptoms and in the relationship between depression and somatic symptoms among 4 ethnocultural groups of adolescents, whites, AAs, HAs, and Asian Americans. Using cross-sectional data, this study compared the distribution of scores, symptom expression, and the extent to which somatic symptoms contribute to depression among 4 ethnocultural groups.

TARGET POPULATION AND STUDY SETTING

The target population for this cross-sectional study was white, AA, HA, and Asian American adolescents attending middle schools (grades 6–8, ages 11–14) in a metropolitan area in southeast Texas. The annual incidence of depression begins to rise steeply at age 13; in addition, adolescents whose depression onset was early (before age 15) experience longer lasting episodes of depression.[19,20] Assessing for and intervening in depression among young adolescents before they reach this transitional period is critical. Thus, young adolescents were selected as a target population for the present study.

SAMPLING AND DATA-COLLECTION PROCESS

After the Committee for the Protection of Human Subjects of the University of Texas Health Science Center at Houston and the research committee of the participating school district approved the proposal, the investigator conducted this study in 3 middle schools (grades 6–8) with ethnoculturally diverse student bodies.

The sample for the study consisted of voluntary participants who self-identified as white, AA, HA, or Asian American. Self-identification of ethnocultural group membership has been used in previous studies that researched ethnocultural group differences in psychosocial variables among adolescents.[21] A nonprobability sampling strategy was used to identify prospective participants from designated middle schools for this study. All middle school students who returned a signed parental consent form were invited to be in the study. The inclusion criteria for the study participants were (1) self-identify as white, AA, HA, or Asian Americans; (2) able to read, write, and understand English; and (3) willing to participate.

Students were assembled in the cafeteria during the extracurricular period and asked to read and sign the assent forms before completing the questionnaire. Participants, as a group, completed the questionnaire anonymously in 20–30 minutes without apparent difficulty. This is part of a larger study, and a postpower analysis for the purpose of the present study was calculated. A postpower analysis, assuming a small effect size, power of 0.90, and an alpha of .05, indicated a required sample size of 150.

MEASUREMENT OF VARIABLES

Depression was assessed by using the DSD. The 22-item DSD uses the past 2 weeks as its time frame. Reliability of the scale has been tested with ethnoculturally diverse samples of middle school students (α = .87–.93).[16,17,22] The DSD also showed good construct validity correlating inversely with self-esteem, social support, active coping, happiness, and optimism and positively with loneliness and life stress in an ethnoculturally diverse sample of middle school students.[16,17,22]

An 11-item Somatic Symptom Scale is based on a Chinese translation of the General Health Questionnaire.[23] The scale consists of the most frequent signs and symptoms reported by depressed adolescents, such as headache, chest pain, stomach pain, limb pain, or dizziness. The Somatic Symptom Scale has shown excellent internal consistent reliabilities (α = .78–.93) and high correlations with depression in diverse samples of Korean and Chinese American adolescents (sample Pearson's r = 0.61–0.62).[16] In the present study sample, the internal consistency statistic for the Somatic Symptom Scale was satisfactory (α = .69–.85). This scale also demonstrated significant correlations with related constructs such as social stress, family conflicts, family cohesions, self-esteem, and coping.[11] Both the DSD and Somatic Symptom Scale are scored as summated scales. Response categories are (1) Hardly Ever or Never, (2) Sometimes, (3) Often, and (4) Almost Every Day.

Socioeconomic status was measured by asking adolescents about perceived SES. An adolescent's perception of his or her SES has been used as a proxy for family SES and validated in previous studies of ethnocultural group differences in mental distress among adolescents.[22]

STATISTICAL ANALYSIS

Data were analyzed by using SPSS 13.0 and R 2.21. To answer the research questions, this study applied various statistical methods: descriptive statistics, kernel density estimation, ordinal logistic regression, and multiple regression analysis. For research question 1 (comparing patterns of score distribution and symptom expression), kernel density estimation, descriptive statistics, and ordinal logistic regression were used. Ethnocultural variations in the distribution of depression score were explored by using kernel density estimation curves. The kernel density curve is an effective method to examine the distribution of the scores and hidden structure of the distribution.[24] Descriptive statistics and ordinal logistic regression were performed to identify the most common symptoms in each ethnocultural group. The ordinal logistic regress model was chosen since the main study variables (depression

Table 1. Sociodemographic characteristics of the 4 ethnocultural groups*

Value label	Whites ($n = 144$) (46.9%)	AAs ($n = 66$) (21.5%)	HAs ($n = 77$) (25.1%)	Asian Americans ($n = 20$) (6.5%)
Age, y				
11 or younger	17 (11.8)	9 (13.6)	8 (10.4)	6 (31.6)
12	56 (38.9)	22 (33.3)	30 (39.0)	7 (36.8)
13	45 (31.2)	20 (30.3)	27 (35.1)	3 (15.8)
14 or older	26 (18.1)	15 (22.7)	12 (15.6)	3 (15.8)
Gender				
Male	66 (45.8)	24 (36.4)	23 (29.9)	10 (50)
Female	78 (54.2)	42 (63.6)	54 (70.1)	10 (50)
School grades				
Much below average	1 (0.7)	0 (0)	2 (2.6)	0 (0)
Below average	7 (4.9)	1 (1.5)	4 (5.3)	1 (5.0)
Average	46 (32.4)	38 (57.6)	39 (51.3)	5 (25.0)
Above average	68 (47.9)	25 (37.9)	21 (27.6)	9 (45.0)
Much above average	20 (14.1)	2 (3.0)	10 (13.2)	5 (25.0)
Socioeconomic status (compared with other families)				
Much worse off or somewhat worse off	6 (4.3)	2 (3.1)	11 (14.5)	5 (26.3)
About the same	68 (48.2)	42 (64.6)	48 (63.2)	8 (42.1)
Better off	51 (36.2)	17 (26.1)	11 (14.5)	5 (26.3)
Much better off	16 (11.3)	4 (6.2)	6 (7.9)	1 (5.3)
Birthplace				
US born	135 (93.8)	58 (87.9)	53 (70.7)	8 (40)
Foreign born	8 (5.6)	8 (12.1)	22 (29.3)	12 (60)
Don't know	1 (0.7)	0 (0)	0 (0)	0 (0)

*Percentages were calculated only for valid cases.

and somatic symptoms) are ordered categorical variables.

For research question 2 (identifying ethnoculture-specific patterns in the relationship between depression and somatic symptoms), multiple regression analysis was performed. Whites were used as a referent group for ordinal logistic regression and multiple regression analysis since the group has reported the lowest scores in the DSD and Somatic Symptom Scale. To determine whether the ethnocultural differences in study variables were the result of differences in sociodemographic factors, analyses were performed after controlling for potential confounding factors: age, gender, and SES.[25]

RESULTS

A total of 316 students from 3 middle schools completed the self-administered questionnaires: 144 whites, 66 AAs, 77 HAs, 20 Asian Americans, and 9 others. Only 307 adolescents from the 4 ethnocultural groups were included in the analysis. Sociodemographic characteristics of the respondents are presented in Table 1.

Research question 1: Ethnocultural variations in score distribution and symptom expression

Overall, HAs reported the highest depression score among the 4 ethnocultural groups.

Table 2. Ethnocultural differences in the depression score (by percentile)

	0%–25%	25%–50%	50%–75%	75%–100%	Mean	Range
Whites	28	33	42	60	40.5	26/104
African Americans	32	38	44	59	42.9	26/76
Hispanic Americans	31	39	48	65	45.2	27/100
Asian Americans	32	41	48	57	43.3	28/73
ANOVA test						
F value	18.68	41.38	18.39	1.03		
P value	<.0001	<.0001	<.0001	.3844		

The Kernel Density Curves demonstrated the distributional differences between ethnocultural groups. A bootstrap test of equality of these differences between ethnocultural groups was significant enough to reject the equality ($P < .001$).[24]

To explore the distributional differences in the depression score among ethnocultural groups further, we grouped adolescents in quartile range. As shown in Table 2, the ethnocultural variation in the depression score was more prominent among adolescents in the low to medium quartile than those in the high quartile. One-way ANOVA tests for mean depression score differences between ethnocultural groups were significant for only adolescents in the low to medium quartile. For somatic symptoms, no significant distributional differences in symptom scores between ethnocultural groups were found.

To assess the ethnocultural variations in symptom expression, first, the most frequently reported depression symptoms in each group were examined. Among 22 different symptoms, the most prevalent symptoms were insomnia, loss of interest, and irritable or mad mood. Indecisiveness and pessimistic view were also commonly reported symptoms across the 4 groups.

As a next step, we tested the significances of the ethnocultural differences in symptom expression, using ordinal logistic regression. Compared with Whites, AAs tended to report diminished pleasure (OR = 2.6, 95% CI = 0.55–1.71), Asian Americans were more likely to experience sadness (OR = 2.6, 95% CI = 0.04–1.86); HAs were more likely to experience diminished pleasure (OR = 3.1, 95% CI = 0.09–1.20), decreased energy (OR = 1.9, 95% CI = 0.08–1.22), low self-esteem (OR = 1.9, 95% CI = 0.10–1.22), crying (OR = 2.3, 95% CI = 0.26–1.36), and difficulties in concentration (OR = 1.9, 95% CI = 0.11–1.22). On the other hand, AAs were less likely than whites to have poor body image (OR = 0.45, 95% CI = –1.42 to –0.18).

The same steps of analysis were performed for somatic symptoms. Headache, stomachache, back pain, and limb pain were the most prevalent symptoms across the 4 groups. Among 11 somatic symptoms, ethnocultural differences were statistically significant only in 2 symptoms: bowel symptoms and nausea/indigestion. Compared with whites, HAs were more likely to report constipation or diarrhea (OR = 2.25; CI = 0.01–1.62), while they were less likely to experience nausea or indigestion (OR = 0.34; CI = −0.20 to −0.18).

Research question 2: The relationship between depression and somatic symptoms

The second research question for the study was how patterns in the relationship between depression and somatic symptoms would be different for each ethnocultural group. Using the multiple regression analysis, the relationship between depression and somatic symptoms was explored. Overall, somatic symptoms were strongly associated with

Table 3. Multiple regressions of somatic symptoms on depression

	Estimated coefficient	Standard error	*t* value	*P* value
Somatic Symptoms	2.07	0.16	12.90	.000
AAs × Somatic Sx	−0.95	0.32	−3.02	.003
HAs × Somatic Sx	0.83	0.35	2.34	.020
Asians × Somatic Sx	−1.78	0.44	−4.09	.000
Age	−0.53	0.60	−0.89	.377
Gender (female)	1.82	1.16	1.57	.118
SES	−0.78	1.19	−0.65	.515
AAs	15.45	5.22	2.96	.003
HAs	−9.25	5.65	−1.64	.103
Asians	28.13	7.56	3.72	.000

depression in all ethnocultural groups. However, the magnitude of changes in depression score associated with somatic symptom score significantly differed by ethnocultural group. As seen in Figure 1, compared to that in other ethnocultural groups, the depression score was most responsive to changes in somatic symptom scores in the HA group. That is, the extent to which somatic symptoms contribute to the depression score was larger in HAs than in any of the other ethnocultural groups. On the other hand, depression scores in the Asian American group were the least responsive to the changes in somatic symptom scores. Depression scores remained almost constant, irrespective of the influence of somatic symptom scores. Compared with whites, other ethnocultural groups showed significantly different patterns in the relationship between the 2 variables ($P = .05$) (Table 3 and Fig 1).

DISCUSSION

Using age-appropriate and reliable measures, this school-based study examined ethnocultural variations in depression score distribution, symptom expression, and the relationship between depression and somatic symptoms among white, AA, HA, and Asian American adolescents. The main findings of the present study are as follows. (1) Significant ethnocultural variations in the

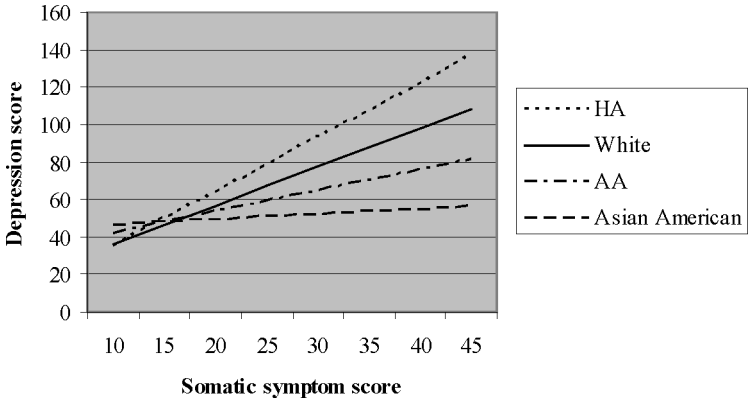

Figure 1. Ethnocultural variations in relationship between depression and somatic symptoms. HA indicates Hispanic Americans; AA, African Americans.

distribution of depression scores existed. When symptom expression in the DSD was compared, besides the core symptoms, insomnia, irritable mood, loss of interest, indecisiveness, pessimistic view, AAs, and HAs were more likely to report diminished pleasure than whites. In addition, HAs tended to experience decreased energy (loss of energy), low self-esteem and crying (worthlessness/guilt), and difficulties in concentration (thinking difficulties). There was no significant ethnocultural differences in the symptom endorsement patterns in somatic symptoms, except for higher rates of constipation (or diarrhea) and lower rates of nausea (or indigestion) in HAs than in whites. (2) Ethnoculture-specific patterns of relationship were found between depression and somatic symptoms. Among 4 ethnocultural groups, the depression score was most responsive to changes in somatic symptom scores in the HA group.

Ethnocultural variations in score distribution and symptom expression

Ethnocultural minority adolescents, particularly HAs, are found to be at increased risk for depression. In the previous article,[1] the increased risks for depression were explained as resulting from low level of education, identity/role confusion, and culture-related factors such as fatalism and pessimism. Being exposed to high levels of social stress, particularly stress related to acculturation and discrimination, has been proposed as another predisposing factor for depression in HAs.[11,26,27]

Ethnocultural variations were prominent in the distributional patterns of scores as well. The distributional differences were particularly significant among adolescents in the low to medium quartile. The findings indicated that mental healthcare, particularly programs focusing on preventing depression among adolescents who are at low or medium risks, should be tailored for each ethnocultural group. The findings also indicated that not only the level or severity of the symptoms but also overall response patterns to items should be examined.

Core symptoms of adolescent depression,[7] insomnia, irritable or mad mood, loss of interest, indecisiveness, pessimistic view were commonly reported in the present study. A community-based study also has identified depressed mood, anhedonia, sleep disturbance, and thinking problems as the most commonly reported symptoms among adolescents.[28] However, ethnocultural differences existed in that AAs tended to report diminished pleasure; Asian Americans were more likely to feel sad; HAs were more likely to experience diminished pleasure, decreased energy, low self-esteem, crying, and difficulties in concentration. In Alva and Reyes's study,[29] HA adolescents who are exposed to high levels of psychosocial stress (culturally specific stress) tend to experience high levels of depression, be less competent, and have low academic achievement. The findings indicated that difficulties in concentration, academic achievement, and depression are closely related in HA group. In the present study, only 40.8% of HAs reported their school grades as above average or much above average than other students whereas 62% of whites and 70% of Asian Americans reported their school grades as above or much above average.

HA and Asian American adolescents have displayed lower levels of self-esteem than whites and AAs.[11,30] Those who are socially, economically, and culturally different are often discriminated against[31]; thus, ethnocultural minority adolescents may struggle with establishing positive self-esteem. The challenge is exacerbated for adolescents who are growing up in between 2 contradicting cultures, old and new cultures, because of acculturation. Thus, considering the ethnoculture-specific symptom expression patterns, when assessing depression with HA adolescents, it is important to inquire about the changes in energy level, ability to concentrate, and self-esteem. Variances in sociocultural context, perceived meaning of the symptoms, and the social responses or attitudes to the symptoms

across different ethnocultural groups should also be considered.[12]

Consistent with a previous study,[32] Asian American adolescents reported the highest somatic symptom scores among 4 ethnocultural groups. HAs also have showed a strong tendency to exhibit somatic symptoms.[33] In this study, headache, stomachache, back pain, and limb pain were the most commonly reported symptoms. According to the literature, headache, musculoskeletal pain, and stomachache were the most prevalent somatic complaints in an ethnoculturally diverse sample.[34] Particularly, headache has been identified as the most prevalent symptom in a number of studies.[34,35]

Ethnocultural variations in the relationship between depression and somatic symptoms

Depression and somatic symptoms were positively correlated in all ethnocultural groups. Significant positive association between adolescent depression and somatic symptoms has been previously reported.[35,36] For instance, youths who experienced recurrent abdominal pain had significantly higher levels of depression than youths without recurrent abdominal pain.[37]

The present study clearly demonstrated that ethnoculture-specific patterns in the relationship between depression and somatic symptoms exist. Specifically, the magnitude of changes in depression score associated with the somatic symptoms score was greatest in the HA group. The finding empirically confirmed the previous argument that HAs tend to express their depressed feeling somatically and proved the importance of assessing somatic symptoms for HAs. Given the significant correlation between depression and somatic symptoms, these questions deserve consideration. "Is somatic symptom a way of expressing adolescent depression?" or "Is somatic symptom one of the significant predisposing factors for adolescent depression?" Roberts[33] identified the substantial role of somatic symptoms in the presentation of depression among HA adolescents. He proposed that HAs may be less prone to differentiate between mind and body. In contrast, on the basis of the longitudinal analysis, William and her colleagues[38] addressed that perceived somatic symptoms may cause adolescent depression by limiting their social and academic activities. However, the causal relationship was statistically significant only in girls. Thus, it is required to examine the longitudinal relationship between 2 variables further with a representative sample.

While Asian American adolescents reported the highest somatic symptom scores among 4 ethnocultural groups, the magnitude of changes in depression score associated with somatic symptoms score was lowest in Asian Americans. Since Asian Americans were known to somatize their feelings because of a cultural and social taboo on mental illness, the finding was surprising. The unexpected finding may be attributable to a small sample size and small variations in the score. The relationship between depression and somatic symptoms in Asian Americans deserves further investigation. The physical conditions of the study participants were not screened in the present study. This also could contribute to the unexpected findings in Asian Americans. It is not clear to what extent somatic symptoms measured in this study are attributable to an existing physical illness.

Other limitations to the study should be mentioned. These are small sample sizes and the nature of cross-sectional study. Last, in the present study, SES was measured using the adolescents' perceptions of SES, which is only one aspect of SES. To precisely explore the influence of SES, which is a multidimensional construct, other objectives measures need to be included.[39] SES determines adolescents' mental health through various pathways. It affects the diagnosis and treatment process as well as onset, course, duration, and severity of mental illness.[2] Even if the confounding effect of SES was statistically controlled in this study, delineating the specific impact of SES in each of the pathways was not possible. The role of SES in ethnocultural variations in

adolescent depression should be examined in a broader ecological perspective. Despite the addressed limitations, the present study made significant contributions to our understanding of ethnocultural variations in adolescent depression.

CONCLUSIONS AND IMPLICATIONS

The previous article[1] reviewed the role of ethnicity and culture in adolescents' mental health in the literature and stated that ethnocultural variations in adolescent depression should be considered in research and practice. The purpose of the present study was to empirically strengthen the argument that there are ethnocultural variations in the way adolescents from different ethnocultural groups experience depression. The present study explored how adolescents from different ethnocultural groups, whites, AAs, HAs, and Asian Americans express depression. This study identified unique patterns of score distribution and symptom expression in each ethnocultural group and thus confirmed the importance of understanding ethnocultural variations in adolescent depression. The study also showed the ethnoculture-specific patterns in the relationship between depression and somatic symptoms.

The findings offered implications for research and practice. For research, when assessing ethnocultural variations in the prevalence of adolescent depression, researchers should apply differential score systems or weigh scores differently for each ethnocultural group with the understanding of ethnoculture-specific symptom expression patterns. Exploring ethnocultural variations in adolescent depression with both clinical and community samples will allow us to capture a comprehensive picture of the ethnoculture-specific symptom expression patterns.

For future studies, analysis of a large dataset using various statistical methods is also recommended. For instance, Kernel Density Estimation and Latent Class Regression Analysis (or finite mixture regression model) will allow us to identify an optimal grouping of data and explore multidimensional aspects of the relationship between depression and somatic symptoms. Longitudinal analysis of ethnoculture-specific patterns of the association will be another useful approach to understand the relationship.

Since racial categories of the US census were revised in 2000, health disparities among the mixed race group have begun to emerge.[40,41] In the present study, only 3 adolescents identified themselves as a mixed race group. However, considering the increasing number of mixed race culture and unique features of the group, this group should be included in future research.

In terms of clinical practice, the differential symptom patterns identified in this study offered rationale for providing tailored mental healthcare for each ethnocultural group. In the assessment of symptoms in adolescents with suspected depression, special attention should be given to the ethnoculture-specific symptoms. Evidently, healthcare providers should inquire about somatic symptoms and perceptions of physical health when working with ethnocultural minority adolescents. For instance, Lewis-Fernández and his colleagues[17] provided recommendations for assessing and managing HAs with depression and somatic symptoms. These recommendations include (1) assessing the patient's own interpretations and understanding of the somatic symptoms, (2) discussing somatic symptoms in the context of his or her life situations and stressors, (3) being sensitive to the cultural idioms used to express specific somatic symptoms, and (4) listening to them with empathy and compassion; an incredulous attitude will aggravate their symptoms.

The findings of this study heightened the importance of using comprehensive and culturally sensitive assessment skills for depression and somatic symptom in research and practice. Understanding of ethnocultural variations in adolescent depression is necessary to ensure timely and effective management of the problem.

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