Racial-Ethnic Variation in U.S. Mental Health Service Use Among Latino and Asian Non-U.S. Citizens

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Objective: **This study examined the factors associated with service utilization for mental health conditions among Latino and Asian non-U.S. citizens in the United States by service type and race.** ***Methods:*** **Data were obtained from the National Latino and Asian American Study (NLAAS). The sample for this study was 849 Latino and 595 Asian non-U.S. citizens between ages 18 and 64 (N=1,444). Mental health services obtained through three types of service providers were examined: specialty mental health services, general medical services, and other services. Guided by the modified Andersen health behavioral model, analyses involved logistic regression models conducted with penalized maximum likelihood estimation.** ***Results:*** **Although having a psychiatric disorder increased mental health service use in both groups, only 32% of Latino and 52% of Asian non-U.S. citizens with psychiatric needs reported using mental health services during the past 12 months. Overall, noncitizen Latinos and Asians were more likely to use mental health services from general health care providers and other providers than from specialty mental health providers. Several significant predisposing, enabling, and need factors, such as age, health insurance, and having psychiatric conditions, also interacted with race.** ***Conclusions:*** **Findings of the study suggest that there are ethnoracial variations in mental health service use between Latino and Asian non-U.S. citizens. Mental health professionals should consider developing tailored mental health interventions that account for cultural variations to enhance access to services for these vulnerable subgroups of Latinos and Asians. Further research should examine ethnic disparities in mental health service use among various non-U.S. citizen racial-ethnic subgroups. (*Psychiatric Services* 65:68–74, 2014; doi: 10.1176/appi.ps.201200430)**

Foreign-born individuals in the United States consist of naturalized U.S. citizens and noncitizens. Significant disparities in mental health service utilization have been documented between U.S.-born and foreign-born adults (1–5) and between naturalized U.S. citizens and noncitizens (6). However, little is known about heterogeneity within the noncitizen adult population of the United States in terms of mental health service utilization. Noncitizens in this country include foreign-born individuals with legal status that ranges from legal permanent residents and temporary residents on nonimmigrant visas to undocumented immigrants (7).

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The 2010 U.S. Census showed that noncitizens comprise nearly 14% of the U.S. population (8). With an increase in the number of noncitizens in the United States, citizenship status has become more important for understanding mental health service utilization, particularly since the 1996 Welfare Reform Act, which banned noncitizens from receiving federally funded benefits, including Medicaid, during their first five years of U.S. residence (9,10). As a result of the welfare reform, there has been a substantial increase in the number of uninsured noncitizens (11–13). Moreover, recent economic downturns have reduced safety-net physical health and mental health service provisions, which likely affect uninsured noncitizens (14,15). For instance, a recent study using a nationally representative sample found that noncitizens were less likely than their naturalized U.S. citizen counterparts to use specialty mental health services (6).

As a result of dwindling resources for mental health services for adults who are not U.S. citizens, further research is necessary to identify vulnerable subgroups of non-U.S. citizens for targeted interventions. Thus, this study aimed to examine the extent of mental health service utilization and the associated factors among Latino and Asian non-U.S. citizens, the two fastest growing racial-ethnic minority groups in the United States between 2000 and 2010 (8).

In addition to the extent of service utilization, the literature has suggested that these two minority groups have

different factors associated with mental health service utilization. For instance, prior research found that limited English proficiency is a greater barrier to mental health service utilization for Latino Americans with psychiatric disorders than for their Asian-American counterparts (16). Guided by the modified Andersen health behavioral model (17,18), in this study we tested predisposing, enabling, and need factors and their interaction terms with race-ethnicity in an examination of factors associated with mental health service utilization among nationally representative samples of Latino and Asian non-U.S. citizens in the United States.

Methods

Data source and study sample

Data were obtained from the National Latino and Asian American Study (NLAAS). The NLAAS is a nationally representative survey that estimates the prevalence of mental disorders and rates of mental health service utilization by Latino and Asian Americans in the United States (19). The NLAAS data were collected in 2002 and 2003 by in-person household interviews or telephone interviews in English or in respondents' native languages, and the survey achieved a weighted response rate of 75.5% for Latinos and 65.6% for Asians (20). The NLAAS study obtained institutional review board (IRB) approval from Cambridge Health Alliance, the University of Washington, and the University of Michigan (21), and no additional IRB approval was necessary because the data were obtained from a publicly available secondary source.

The study sample consisted of 849 Latino and 595 Asian adults between 18 and 64 years old who were non-U.S. citizens (N=1,444). In the NLAAS, non-U.S. citizens are identified from the item that asks respondents whether they are U.S. citizens. No further questions are asked in the NLAAS regarding respondents' legal status. Accordingly, further classifications among non-U.S. citizens (specifically, whether respondents are permanent residents, temporary visa holders, or undocumented immigrants) are not available in the NLAAS. Even though this lack of data limited our ability to further examine heterogeneity among non-U.S. citizens by legal status, it also might have decreased the sensitivity attached to revealing one's legal status, especially among those who were undocumented. Only .15% of the NLAAS participants refused to answer this question.

In terms of race-ethnicity, participants identified themselves as Vietnamese (N=121), Filipino (N=99), Chinese (N=184), other Asian (N=191), Cuban (N=199), Puerto Rican (N=7), Mexican (N=379), and other Latino (N=264). We excluded older non-U.S. citizens (≥65 years) from this study because their health behaviors are known to differ from those of the nonelderly population because of their high levels of health care needs and the almost universal Medicare coverage among older adults.

Measures

Mental health service use was the dependent variable in this study. Study participants were asked whether they saw specific types of service providers for problems with emotions, nerves, or use of alcohol or drugs in the past 12 months. We used three categories of service provider of these mental health services: specialty mental health services by psychiatrists, psychologists, other mental health professionals, and mental health hotlines; general medical services by general practitioners, family doctors, nurses, occupational therapists, and other health professionals; and other services by social workers, counselors, religious or spiritual advisors, self-help groups, and Internet support groups (1,6). On the basis of the use of the three types of services (yes or no response), we also created a dichotomous variable to indicate whether or not respondents used any type of mental health services, with the understanding that this self-reported service use might be underestimated (19).

Predisposing factors included age (in years), gender, marital status, and educational attainment. Marital status was dichotomized: currently married or cohabiting versus divorced, separated, widowed, or never married. Educational attainment consisted of four categories: less than high school graduate, high school graduate, some university, and university degree or above.

Enabling factors included poverty status, insurance coverage, and social network characteristics. Poverty status was based on the 2001 U.S. Census income-to-needs ratio (yes or no). We dichotomized insurance coverage to indicate whether the respondent had any type of insurance. Social network variables included the frequencies of contact with relatives and friends who did not live with respondents, with items asking how often the respondent talked on the phone or got together: almost every day, a few times a week, a few times a month, once a month, and less than once a month.

Psychiatric disorders, a need factor, were measured by a modified version of the World Mental Health Composite International Diagnostic Interview (WMH-CIDI). The WMH-CIDI is a comprehensive, fully structured psychiatric diagnostic interview developed by the World Health Organization to provide valid information about the prevalence of mental disorders in the general population (22). We created four dichotomous variables to indicate whether or not the respondent had the following disorders during the 12-month period before the interview: mood disorders (major depressive disorder, major depressive episode, and dysthymia), anxiety disorders (panic attack, panic disorder, agoraphobia without panic disorder, agoraphobia with panic disorder, social phobia, generalized anxiety disorder, and posttraumatic stress disorder), substance use disorders (alcohol abuse or dependence and drug abuse or dependence), and eating disorders (anorexia, binge eating, and bulimia). We created an additional dichotomous variable to indicate whether or not the respondent had any of these four types of disorders (1).

Immigration-related factors included length of stay in the United States (zero to five, six to ten, 11–20, or ≥21 years), age at immigration (birth to 12, 13–17, 18–34, or ≥35 years), and English proficiency (excellent to good versus fair to poor).

Data analysis

We used the survey procedures of SAS version 9.3 to account for the NLAAS's complex sampling designs.

To compare the sample characteristics between Latino and Asian non-U.S. citizens, we conducted Rao-Scott chi square tests for all categorical variables (23) and calculated t statistics for a continuous variable of age. We conducted logistic regression analyses using penalized maximum likelihood estimation to examine the factors associated with each type of mental health service utilization. The penalized likelihood estimates (24) were used to account for potential biases in estimation in modeling rare service use events as the dependent variables. The preliminary multivariate model was tested without interaction terms. The final models then examined potential interaction terms with race and all other significant covariates. Pseudo-R-squared values were presented for all models as an indicator of model fit, with higher values indicating better model fit. Because of a small number of missing cases of respondents' sociodemographic and immigration-related characteristics, listwise deletion was conducted (25).

Results

The mean age of the sample was 34.5±.4 years. No significant age difference was found between Latino and Asian non-U.S. citizens. Rao-Scott chi square test results indicated that Latinos and Asians were significantly different ($p<.05$) in terms of all enabling characteristics and immigration-related characteristics (Table 1). In particular, the insured rate of Asian non-U.S. citizens was much higher than that of Latino non-U.S. citizens (80.0% versus 45.1%, respectively). Most Asian non-U.S. citizens (53.9%) reported their English proficiency was excellent or good, whereas only 15.8% of the Latino group reported the same. However, Asian non-U.S. citizens were more likely to be new immigrants with less than ten years of residence in the United States (68.3%) compared with their Latino counterparts (45.4%). Whereas nearly half of the Asians had university degrees or above (49.8%), more than 60% of the Latinos lacked a high school diploma. No significant difference between Latinos and Asians was found for need factors (psychiatric disorders) or mental health service use.

Table 2 shows the results of logistic regression models (N=1,444). Overall, even though we found different predictors of mental health service use and their interactions with race-ethnicity, depending on the type of service, the presence of a psychiatric disorder was a consistently strong predictor of all types of mental health service use ($p<.001$). Except in the model of general health care utilization, race-ethnicity had the strongest main effect, which provided a rationale for exploring racial-ethnic variation further.

The probability of using any of the three types of services increased with age, being Asian, being unmarried, being in poverty, being insured, having a psychiatric disorder, and being more proficient in English. None of the interaction terms were statistically significant, which suggests no racial-ethnic variations in the predictors of using mental health services.

Age, race-ethnicity, insurance status, psychiatric disorder, and English proficiency were significant predictors of specialty mental health service use. More frequent contact with relatives was also associated with lower odds of using specialty care (odds ratio [OR]=.70, $p<.05$). Furthermore, a significant interaction between race-ethnicity and psychiatric disorder was found (OR=.14, $p<.05$), implying that Latino non-U.S. citizens with psychiatric disorders were more likely to receive specialty care compared with their Asian counterparts. For this model, pseudo-R^2=.45, which indicates that this model had better fit than the other models.

In terms of receiving mental health services in general medical care settings, the models showed that having insurance (OR=2.73, $p<.05$) and having a psychiatric disorder (OR=12.58, $p<.001$) were associated with significantly increased odds of service use. No significant interactions were found in this model.

Finally, predisposing factors, such as age, gender, and race-ethnicity, were significantly associated with the use of mental health services from "other" providers. However, none of the enabling factors were found to be significant. Having a psychiatric disorder and better proficiency in English were significantly associated with the use of "other services" and the use of specialty mental health care. Two significant interaction terms (Asian × age and Asian × insurance) indicated that the effects of being older and having health insurance on the use of "other" providers of mental health services were greater among Latino non-U.S. citizens compared with Asian non-U.S. citizens ($p<.05$).

Discussion

In considering the vulnerability of non-U.S. citizens in accessing mental health services and the needs for targeted interventions to better facilitate their mental health service use, it is imperative to examine heterogeneity in mental health service utilization among non-U.S. citizens. Using a nationally representative sample, we inspected the heterogeneity within this population by comparing the two largest immigrant groups in the United States: Latinos and Asians. We also examined how the magnitudes of significant predisposing, enabling, need, and immigration-related factors differed by race-ethnicity. This study contributes to the literature by expanding knowledge of predictors of mental health service use by service type among Latinos and Asians without U.S. citizenship.

Consistent with the findings of previous studies (26,27), a finding from this study was that the presence of a psychiatric disorder was a strong predictor of mental health service utilization by Latino and Asian non-U.S. citizens. However, there was a gap between the need for and actual use of mental health services. Moreover, the gap was greater among Latinos than their Asian counterparts. Although 15.4% of the study population (15.5% Latino and 15.3% Asian non-U.S. citizens) reported having a psychiatric disorder during the past 12 months, only 5.6% used any mental health services during the same period. In other words, only approximately 36% of those in need (32% Latino and 52% Asian non-U.S. citizens) actually used mental health services. Legal immigration status may explain the gap between need and service utilization among non-U.S. citizens. For instance, previous research

Table 1

Sample characteristics of Latino and Asian non-U.S. citizens responding to the 2002–2003 NLAAS survey[a]

Characteristic	All (N=1,444)		Latino (N=849)		Asian (N=595)			
	Weighted %	SE	Weighted %	SE	Weighted %	SE	χ^{2b}	df
Predisposing factor								
Gender							.97	1
Male	52.2	1.7	52.8	2.2	49.7	1.8		
Female	47.8	1.7	47.2	2.2	50.3	1.8		
Marital status							.50	1
Married or living with partner	72.8	1.8	73.2	2.0	71.2	3.0		
Other	27.2	1.8	26.8	2.0	28.8	3.0		
Education							381.76**	3
Less than high school graduate	52.6	2.1	62.1	1.9	18.9	2.2		
High school graduate	18.0	1.1	18.8	1.3	14.9	1.9		
Some university	13.3	1.5	12.5	1.6	16.5	2.1		
University degree or above	16.1	2.1	6.6	1.1	49.8	4.3		
Enabling factor								
Poverty							52.99**	1
Yes	43.0	3.3	48.0	3.7	25.1	2.8		
No	57.0	3.3	52.0	3.7	74.9	2.8		
Insurance status (currently insured)							120.68**	1
Yes	52.8	3.1	45.1	3.1	80.0	2.5		
No	47.2	3.1	54.9	3.1	20.0	2.5		
Frequency of contact with relatives							12.12*	4
Less than once a month	15.0	1.2	14.8	1.4	15.5	1.3		
Once a month	17.4	1.7	19.0	1.9	11.7	1.2		
A few times a month	26.9	1.4	26.2	1.5	29.2	2.7		
A few times a week	28.0	1.7	26.7	2.1	32.3	2.2		
Almost every day	12.8	1.4	13.2	1.7	11.3	1.5		
Frequency of contact with friends							54.35**	4
Less than once a month	23.1	1.5	26.1	1.8	12.5	1.5		
Once a month	17.1	1.0	18.4	1.2	12.7	1.5		
A few times a month	25.2	1.7	25.4	1.9	24.6	2.2		
A few times a week	23.6	1.3	20.3	1.7	35.3	2.5		
Almost every day	10.9	1.4	9.8	1.5	14.9	1.5		
Need factor								
Any psychiatric disorder	15.4	1.3	15.5	1.5	15.3	1.7	.004	1
Mood disorder	5.7	.6	5.7	.6	5.4	.8	.06	1
Anxiety disorder	9.8	1.2	10.1	1.5	9.0	1.3	.31	1
Substance use disorder	.7	.3	.8	.4	.5	.1	.39	1
Eating disorder	2.6	.6	2.3	.6	3.9	1.0	2.68	1
Immigration-related factor								
Length of stay in the United States							69.67**	3
0–5 years	28.3	2.4	23.8	2.6	44.4	3.5		
6–10 years	22.1	1.4	21.6	1.9	23.9	1.7		
11–20 years	32.8	2.2	35.0	2.6	25.0	2.4		
≥21 years	16.8	1.2	19.6	1.3	6.8	1.7		
Age at immigration							72.06**	3
0–12 years	13.3	1.3	14.2	1.6	10.4	2.7		
13–17 years	17.6	1.6	21.2	1.9	4.8	.9		
18–34 years	57.0	2.0	55.1	2.1	63.5	3.2		
≥35 years	12.1	1.2	9.5	1.2	21.2	1.7		
English proficiency							197.20**	1
Excellent or good	24.2	1.8	15.8	1.4	53.9	2.9		
Fair or poor	75.8	1.8	84.2	1.4	46.1	2.9		
Dependent variables								
Any mental health service	5.6	.7	4.9	.8	8.0	1.3	4.51	1
Specialty mental health care	1.5	.3	1.5	.4	1.7	.3	.08	1
General medical care	2.3	.6	2.2	.7	2.4	.6	.03	1
Other service	3.2	.7	2.9	.8	4.4	1.1	1.67	1

[a] NLAAS, National Latino and Asian American Study

[b] Rao-Scott chi square test

*p<.05, **p<.001

Table 2

Predictors of mental health service use among 1,444 Latino and Asian non-U.S. citizens, by provider type[a]

Characteristic	Any mental health services		Specialty care		General medical care		Other providers	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Predisposing factor								
Age (in years)	1.05***	1.02–1.09	1.07**	1.02–1.13	1.04	1.00–1.08	1.04*	1.00–1.09
Female (reference: male)	1.13	.70–1.85	1.59	.69–3.89	.90	.47–1.75	2.39*	1.13–5.42
Asian (reference: Latino)	17.72*	1.55–201.20	129.20*	1.21–>999.99	.71	.02–22.46	52.23*	1.59–>999.99
Married (reference: unmarried)	.54*	.32–.90	.57	.25–1.32	.66	.34–1.34	.55	.27–1.16
Education (reference: high school graduate)								
<High school graduate	1.12	.58–2.23	1.17	.44–3.31	.87	.38–2.07	.63	.24–1.69
Some university	.89	.38–2.05	.45	.08–1.95	1.25	.44–3.48	.96	.29–2.99
University degree or above	1.16	.35–3.43	2.89	.56–13.92	.67	.11–2.84	1.17	.24–4.70
Enabling factor								
Poverty (reference: not in poverty)	2.17*	1.10–4.38	2.75	.94–8.72	1.15	.49–2.67	2.22	.90–5.77
Insurance (reference: uninsured)	3.01**	1.52–6.27	4.51**	1.50–16.43	2.73*	1.16–7.09	1.83	.76–4.69
Frequency of contact with relatives (reference: more contacts)	.92	.77–1.11	.70*	.51–.94	.85	.66–1.09	1.00	.77–1.32
Frequency of contact with friends (reference: more contacts)	.93	.75–1.11	.93	.67–1.28	.96	.74–1.25	.80	.59–1.06
Need factor: psychiatric disorder (reference: no psychiatric disorder)	13.71***	7.26–27.02	49.69***	14.72–259.89	12.58***	5.61–30.72	12.85***	5.54–32.96
Immigration-related factor[b]								
Length of stay in the U.S. (reference: 0–5 years)								
6–10 years	.68	.33–1.33	1.05	.29–3.64	.72	.26–1.85	.48	.15–1.35
11–20 years	.90	.47–1.69	1.00	.32–3.20	.94	.40–2.27	.65	.25–1.63
≥21 years	.95	.43–2.05	1.54	.43–5.48	1.13	.40–3.10	1.01	.33–2.95
English proficiency (reference: fair or poor)	3.24**	1.37–7.64	4.86*	1.31–19.25	1.84	.63–5.14	3.03*	1.01–9.01
Interaction								
Asian × age	.96	.92–1.01	.96	.88–1.03	1.02	.96–1.08	.91*	.84–.98
Asian × education (university degree or above)	1.39	.40–5.31	.17	.02–1.31	2.02	.34–15.69	4.18	.67–33.18
Asian × poverty	.77	.28–2.07	.36	.06–1.90	1.01	.23–4.06	1.59	.37–6.93
Asian × insurance	.40	.13–1.36	.34	.05–4.01	.99	.17–10.68	.14*	.03–.73
Asian × psychiatric disorder	.46	.17–1.18	.14*	.02–.78	.38	.09–1.40	.50	.12–2.12
Asian × English proficiency	.33	.11–1.05	.43	.06–2.92	.39	.08–1.87	.45	.09–2.36

[a] Multivariate logistic regression models used penalized maximum likelihood estimation. Summary statistics: any mental health services, b=–6.03, pseudo-R^2=.252; specialty care, b=–9.12, pseudo-R^2=.448; general medical care, b=–5.32, pseudo-R^2=.222; and other services, b=–6.02, pseudo-R^2=.339

[b] A variable for age at immigration was excluded from the models because of multicollinearity.

*p<.05, **p<.01, ***p<.001

has shown that undocumented Latino immigrants compared with their documented counterparts are less likely to access medical services because of fear of deportation (28). Further studies should investigate detailed information on legal immigration status, which could facilitate a better understanding of variations in mental health service use among the non-U.S. citizen population. The disparity between Asian and Latino non-U.S. citizens may also be explained by lower English proficiency and higher poverty rate among Latino immigrants because both English proficiency and household income work as barriers to naturalization among individuals born outside the United States (29).

Our study findings also revealed that Latino and Asian non-U.S. citizens

were more likely to seek mental health services from general health care providers and other providers than from specialty mental health providers. Stigma related to mental illness may act as a barrier to specialty mental health service use in these populations. Previous research has found that individuals with serious mental illness who are treated solely by their general medical provider tend not to receive minimally adequate treatment (30). Given that individuals with serious mental illness often have other comorbid physical conditions (31–34), the integrated behavioral and medical care model has been found effective in their treatment (35,36). A collaborative approach using a multidisciplinary team in primary care settings (37) would provide appropriate and adequate mental health services for this population.

People with health insurance were more likely than their uninsured counterparts to use mental health services provided by specialty and general medical providers. Coupled with a much higher uninsured rate among Latino non-U.S. citizens (54.9%) compared with their Asian counterparts (20.0%), this finding indicates the vulnerability of uninsured Latino non-U.S. citizens in accessing mental health services. We also found a significant interaction between race-ethnicity and insurance in using mental health services from "other" providers, which implies that the impact of having health insurance was greater for Latino than for Asian non-U.S. citizens in this type of service use.

Although no significant interaction by race-ethnicity was found among those living at poverty levels, both impoverished Latino and Asian non-U.S. citizens were more likely to use mental health services. This finding may be related to the fact that among insured Latinos in this study, 30.5% were insured through Medicaid (versus 14.5% among Asian non-U.S. citizens). In response to the welfare reform of 1996, which banned the nonemergency use of federal Medicaid funds for non-U.S. citizens during their first five years in the United States, and the ensuing increase in uninsured rates among non-U.S. citizens living in poverty, governments and private organizations should consider providing affordable health insurance options to non-U.S. citizens who are otherwise not eligible for pubic health care benefits because of their legal status or income (38). Even though the Affordable Care Act (ACA) aims to reduce the number of low-income uninsured individuals by expanding Medicaid coverage, the ban on federal Medicaid benefits for non-U.S. citizens will remain the same after the ACA is fully implemented (39). Because lack of health insurance results in more expensive forms of health service use for untreated health conditions (40), expanding insurance coverage that leads to treatment can reduce burden on the national economy in the long run.

The role of social networks in the individual's decision-making process for use of formal services has been documented (41–44). An individual's social network can reduce search costs, such as time, money, or efforts, through the provision of information on service providers and the service system (44). However, social networks often provide informal care and can affect a person's perceived efficacy of a particular mental health service. Therefore, even though it is agreed that social networks play a significant role in shaping individuals' service use behaviors, that social support can either enhance or reduce the use of formal service utilization. Our study indicates that availability of family members, including relatives or a spouse, reduced the likelihood of using specialty care or overall mental health services. To better understand the effect of social networks on mental health service use, further research should explore the characteristics of the community where individuals live (including availability of safety-net providers and population density of communities with broad racial-ethnic diversity), which are related to individuals' mental health service utilization (45,46).

Consistent with the findings of previous research (16), higher levels of English fluency were associated with greater use of specialty care and other services, but not of general care. Given that limited English proficiency is also associated with lower quality of care (47,48), it is important to provide culturally competent mental health services to the vulnerable populations of non-U.S. citizens. Potential ways to improve quality of care may include hiring bilingual staff and using interpreters while providing services (9,47). Community outreach programs through social media and public service announcements should be developed in the native languages of these populations, which will result in increasing awareness of how and when to access community resources in mental health services (49,50).

Conclusions

Identifying the factors associated with mental health service use by service type is important for mental health policy makers and service providers because it can facilitate an understanding of the barriers to mental health service use and in turn will contribute to eliminating the potential barriers to accessing services and facilitating the use of services. Mental health service providers and policy makers should also account for cultural contexts when developing tailored policies and interventions for each racial-ethnic group. With consideration of the great heterogeneity within the noncitizen population in the United States, further studies should examine variations in mental health service use among more diverse noncitizen ethnic subgroups by their country of origin, as well as variations by their further legal status.

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