	Poor outcome cases (n=25) n (%) or mean (SD)	Non poor outcome cases (n=92) n (%) or mean (SD)	p (Poor outcome *vs.* Non poor outcome)	International students as May 1st, 2014 (n=1733) n (%) or mean (SD) 1)	p (Poor outcome *vs.* International students)
Male	12 (48.0%)	43 (46.7%)	1	936 (54.0 %)	0.593
Age	26.6 (3.2)	25.6 (3.6)	0.221	25.9 (3.4)	0.417
Japanese oral ability	2.4 (1.1)	2.4 (1.1)	0.945	n.d. 2)	-
Period (months)	16.7 (16.4)	16.3 (16.7)	0.773	n.d.	-
GAF 3)	55.7 (22.4)	72.1 (11.0)	<.001	n.d.	-
Having a past history	7 (28.0%)	20 (21.7%)	0.593	n.d.	-
Region					
Asian countries	11 (44.0%)	61 (66.3%)	0.049	1380 (79.6 %)	<.001
China	5 (20.0%)	27 (29.3%)	0.452	764 (44.1%)	0.024
Republic of Korea	2 (8.0%)	9 (9.8%)	1	241 (13.9%)	0.564
Other Asian countries	4 (16.0%)	25 (27.2%)	0.306	375 (21.6%)	0.629
Non-Asian countries	14 (56.0%)	31 (34.8%)	0.049	353 (20.4%)	<.001
Europe including NIS 4)	4 (16.0%)	15 (16.3%)	1	156 (9.0%)	0.278
Africa	4 (16.0%)	3 (3.3%)	0.037	54 (3.1%)	0.008
Latin America	4 (16.0%)	3 (3.3%)	0.037	41 (2.4%)	0.003
Noth America	1 (4.0%)	4 (4.3%)	1	47 (2.7%)	0.501
Other countries	1 (4.0%)	6 (6.5%)	1	55 (3.2%)	0.557

P

Comparison between the poor outcome cases and non-poor outcome cases

e comparison between the poor outcome cases and non-poor outcome cases is shown in Table 1. e GAF score of the poor outcome group was signif cant`mlower than was that of the non-poor outcome group (p<0.001). e mean GAF score in the poor outcome group, which was 55.7 (SD=22.4), indicated moderate symptoms or moderate di cu`tmin functioning. On the other hand, the GAF score in the non-poor outcome group was 72.1 (SD=11.0), indicating transient or expected reactions to psychosocial stressors and no more than slight impairment in functioning [9].

| Not having any particular reason | 0 (0.0%) | 6 (6.5%) | 0.339 |

Table 3: Stressors affecting mental disorders.

Help-seeking behavior

The ratios of help-seeking behaviors are shown in Table 4. Among the 25 poor outcome cases, only nine (36.0%) sought help themselves. Five of these nine students (20.0%) sought out medical services for themselves. On the other hand, in the 92 non-poor outcome cases, 66 students (71.7%) sought help themselves, including 42 students (45.7%) who sought medical services themselves. The ratio of help-seeking behavior by themselves in the poor outcome cases was significantly less than that of the non-poor outcome cases (p=.002). Especially, the ratio of seeking medical services by themselves in the poor outcome group was significantly lower compared to the non-poor outcome students (p=.023).

	Poor outcome cases (n=25) n (%)	Non-poor outcome cases (n=92) n (%)	p (Poor outcome *vs.* Non poor outcome)
Help seeking by themselves	9 (36.0%)	66 (71.7%)	0.002
Seeking medical help by themselves	5 (25.0%)	42 (45.7%)	0.023
Seeking non-medical help by themselves	4 (20.0%)	24 (26.1%)	0.591
Help seeking by others	16 (64.0%)	26 (28.3%)	0.002
Seeking medical help by others	13 (52.0%)	15 (16.3%)	0.003
Seeking non-medical help by others	3 (12.0%)	11 (12.0%)	1

stressful state with very mild symptoms), only 26.3% and 14.3% were European and Latin American, respectively. Additionally, regarding the ratio of students seeking help themselves, European students comprised 57.9%, but Latin American students only 14.3%. ese deviations among the national regions can be partially accounted for by the di erence between cultures in terms of the mind-set for mental disorders and primary education for mental health care [14]. According to previous studies, stigma against mental disorders can be altered through appropriate education [15], which in turn improves help-seeking behavior [16]. However, further detail studies are needed to make this clearer.

Non-regular student status as a risk factor for poor-outcome mental health issues

As shown in Table 1, non-regular student status was a signif cant risk factor for poor mental health outcomes. In general, such students do not belong to a given laboratory or have close ties with their supervisors. Additionally, their Japanese ability tends to be poorer than that of regular students, and their length of stay in Japan tends to be shorter. As a result, it is di cu`t for some of them to obtain su cient social support, and detection of mental disorders among them tends to be later than that among regular students. Previous studies have suggested that social support is an essential individual-level variable in the acculturation process [17,18]; thus, non-regular student status is may be one of the risk factors for poor mental health outcomes, possibly due to poor acculturation.

Y characteristics of F2-categorized cases in the poor outcome group

As shown in Table 2, the breakdown according to mental disorders is very distinct, particularly concentrating on three ICD-10 c`assif cations: F2, F3, and F4. e ratio of F2 among the poor outcome group was far higher than that in the non-poor outcome group. More interestingly, most F2 cases were categorized as F22 or F23. F23 refers to an acute and transient psychotic disorder, which is characterized by delusions, hallucinations, disorganized speech, and/or grossly disorganized behavior that generally resolve within one month.

Previous studies have similarly noted that international students and travelers are at risk of brief psychotic disorders [17,19]. e F2 cases demonstrated three characteristic tendencies. First, all of the cases showed a conspicuous persecution complex. Very interestingly, their oral Japanese ability was never poorer than the other groups (Tables 1 and 5); however, it is nonetheless too insu cient to perfectly read the social atmosphere in Japanese.

is halfway language ability may accelerate the idea of persecution. us, they refused any advice and support, resulting in many involuntary medical admissions. In this way, they could not continue their studies, and had to return to their home countries. Second, as shown in Table 5, the onset takes a very short time: about less than six months. According to one theory of acculturation [20], three to nine months is needed to overcome culture shock at f rst, while true adaptation to a new culture requires 10 to 24 months. erefore, it is speculated that this f rst step of acculturation is associated with the risk of an outbreak of F2-categorized mental disorders. In particular, greater geographical and cultural distance, few compatriots, and being a non-regular student status are speculated to be major risk factors for F2-categorized mental health issues.

ird, their help-seeking behavior is extremely poor. A possible reason for this is that their psychiatric functioning was too poor to

Other issues	0 (0.0%)	4 (20.0%)	0.549
Help seeking behavior			
Seeking help by themselves	1 (20.0%)	8 (40.0%)	0.621
SD=standard deviation; GAF=the score of Global Assessment of Functioning score at the first examination.			

Table 5:

12. Searle W, Ward C (1990) e prediction of psychological and sociocultural adjustment during cross-cultural transitions. Int J Intercult Rel 14: 449-464.

13. Zhou Y, Jindal-Snape D, Topping K, Todman J (2008) eoretica`