

Factors Related to Suicidal Ideation among College Students on Guam

Mao-Sheng Ran, MD., PhD

Professor

Division of Health Sciences

School of Nursing and Health Sciences

University of Guam

Research Team: Salomon MI, Cruz T, Bamba-Ada M, De Jesus L, Howell D, Rodriguez P, Usalla A, Valencia K, Pan JY, Chan CLW

Introduction

- Suicide, a public health problem, is the third leading cause of death among 18- to 24-year-olds in the United States (CDC, 2005)
- Approximately 10% college students seriously considered suicide (ACHA, 2008)
- More studies should be conducted to explore the risk and protective factors of suicide behaviors among college students, especially minority students
- Although suicide on Guam is predominantly youth suicide (Ran, 2007; Booth, 2010), it is not clear about the rate of suicide behavior and the factors related to suicide behavior among college students

- * Guam, a U.S. territory, an island with a total population of approximately 180,000 in Micronesia
- * Many immigrants from Micronesia and other Asian countries (e.g. Philippines, Palau, Japan, Korea, China, etc)



University of Guam
(UOG) is the only
US-accredited, four-
year institution of
higher learning in
Micronesia



UNIVERSITY OF GUAM

A photograph of the University of Guam entrance. In the foreground, a large, low, circular concrete wall serves as a sign, with the words "UNIVERSITY OF GUAM" inscribed on it. The wall is flanked by two large, dark, rounded concrete pillars. Behind the wall, there is a paved road and a parking lot with several cars. In the background, a multi-story, light-colored building with a flat roof and a balcony is visible. The area is landscaped with green grass, palm trees, and other tropical plants. The sky is overcast.

UOG has a student
population of
approximately 4,000,
most of them are
Chamorro, Filipino, and
other Micronesians



Objectives

- To identify the rates of suicidal ideation and suicide attempt among college students on Guam
- To explore the risk and protective factors related to suicidal ideation among college students on Guam

Methods

- A cross-sectional survey among college students at UOG
- *Subjects:*
 - * The college students (full- or part-time) from different colleges and schools of UOG who agreed to participate in this study
 - * N = 207 students
- Time: Oct-Nov, 2009

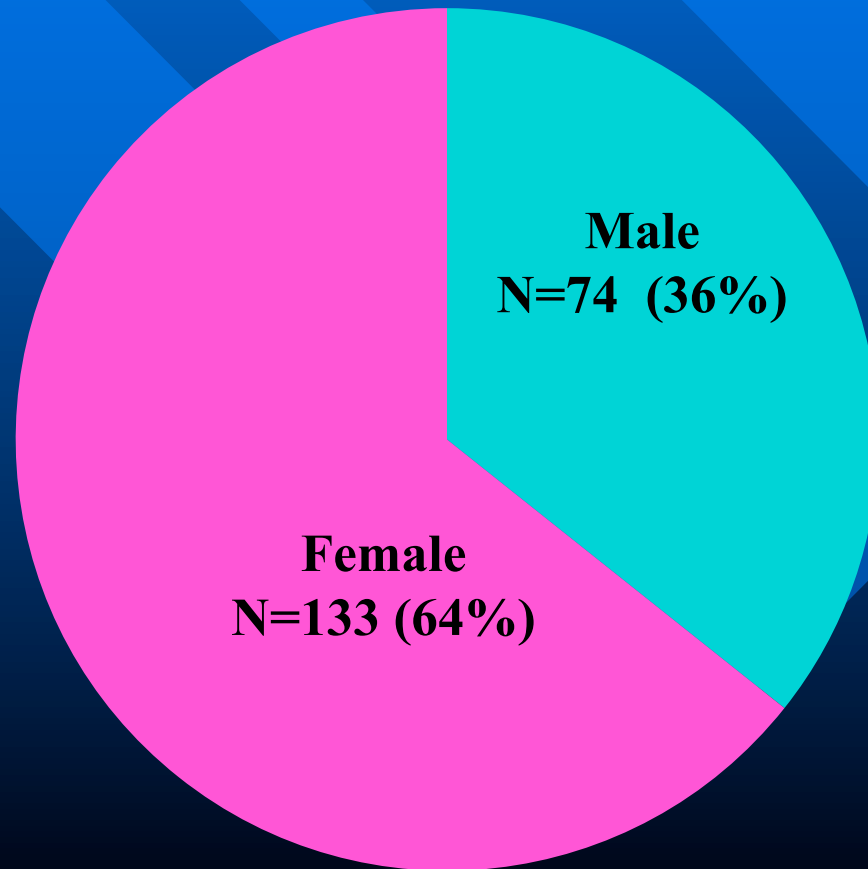


Measurement

- General Information (e.g., demographic information)
- Suicidal ideation & suicide attempt
- Acculturative Hassles Scale (AHS)
- Stress Appraisal Measure (SAM)
- Making Sense of Adversity Scale (MSAS, Pan et al., 2008)
- Personal Meaning Profile (PMP)
- Affect Scale (AS, Pan et al, 2008)

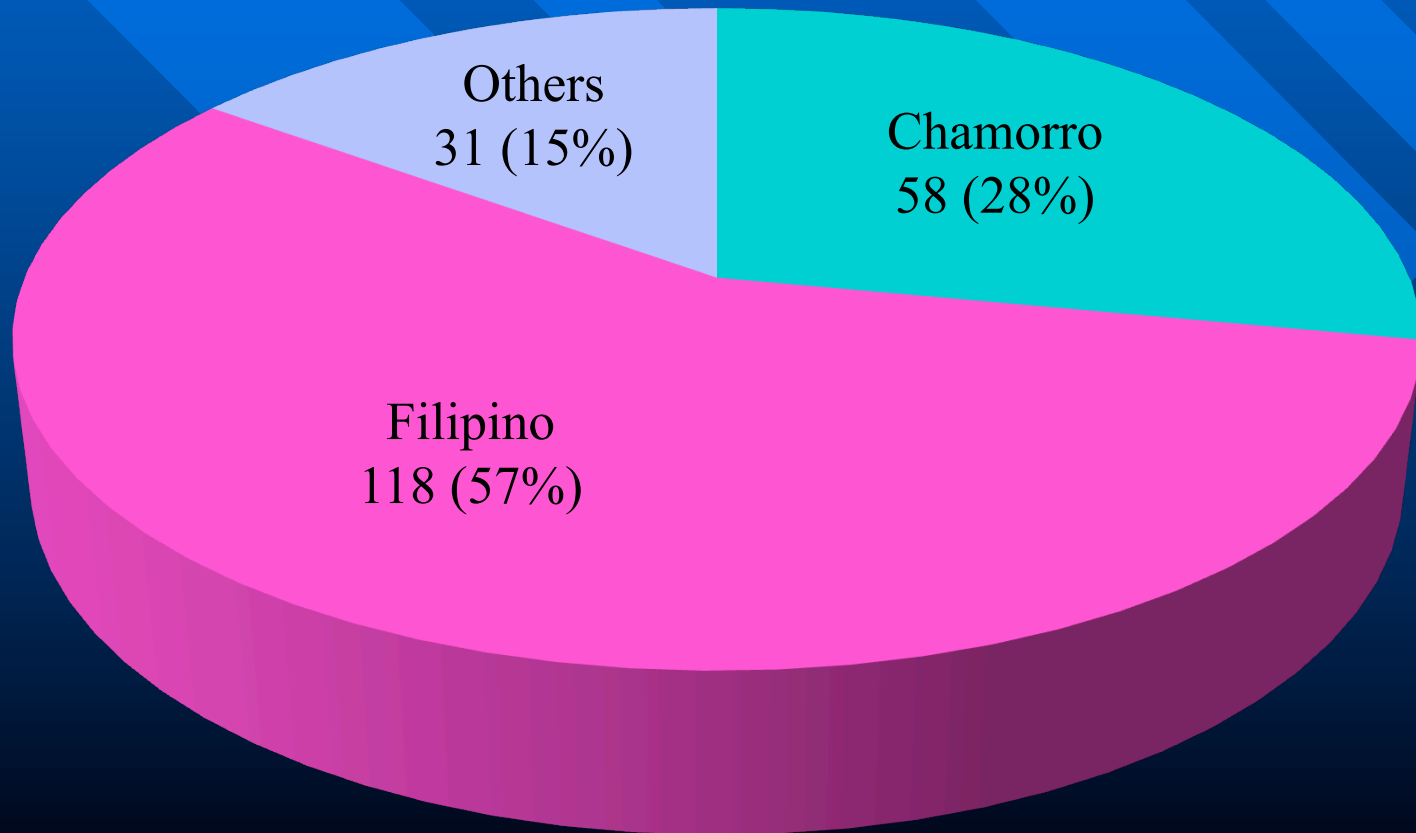
RESULTS

Total Number: 207 Students

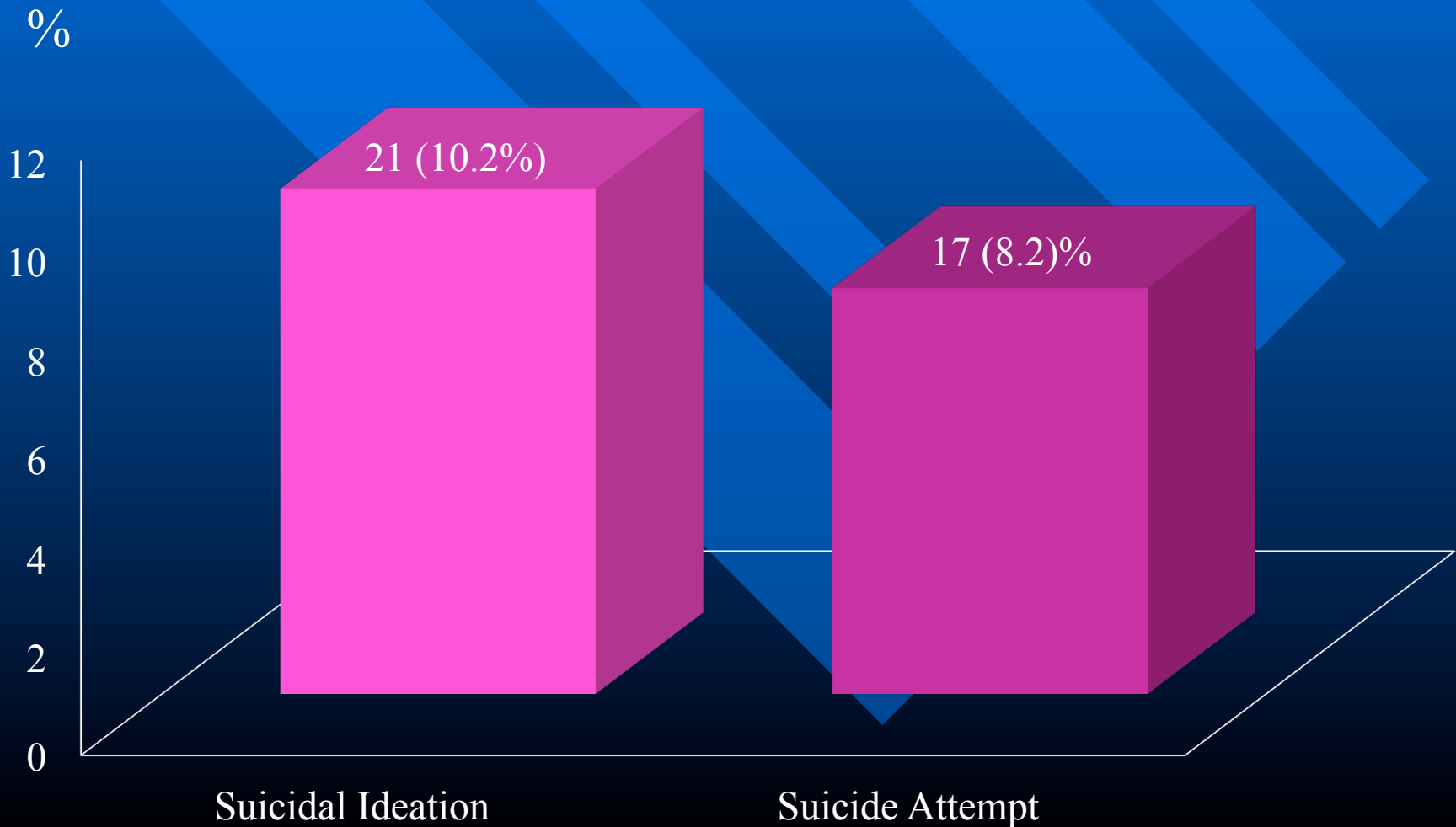


Ethnic Group

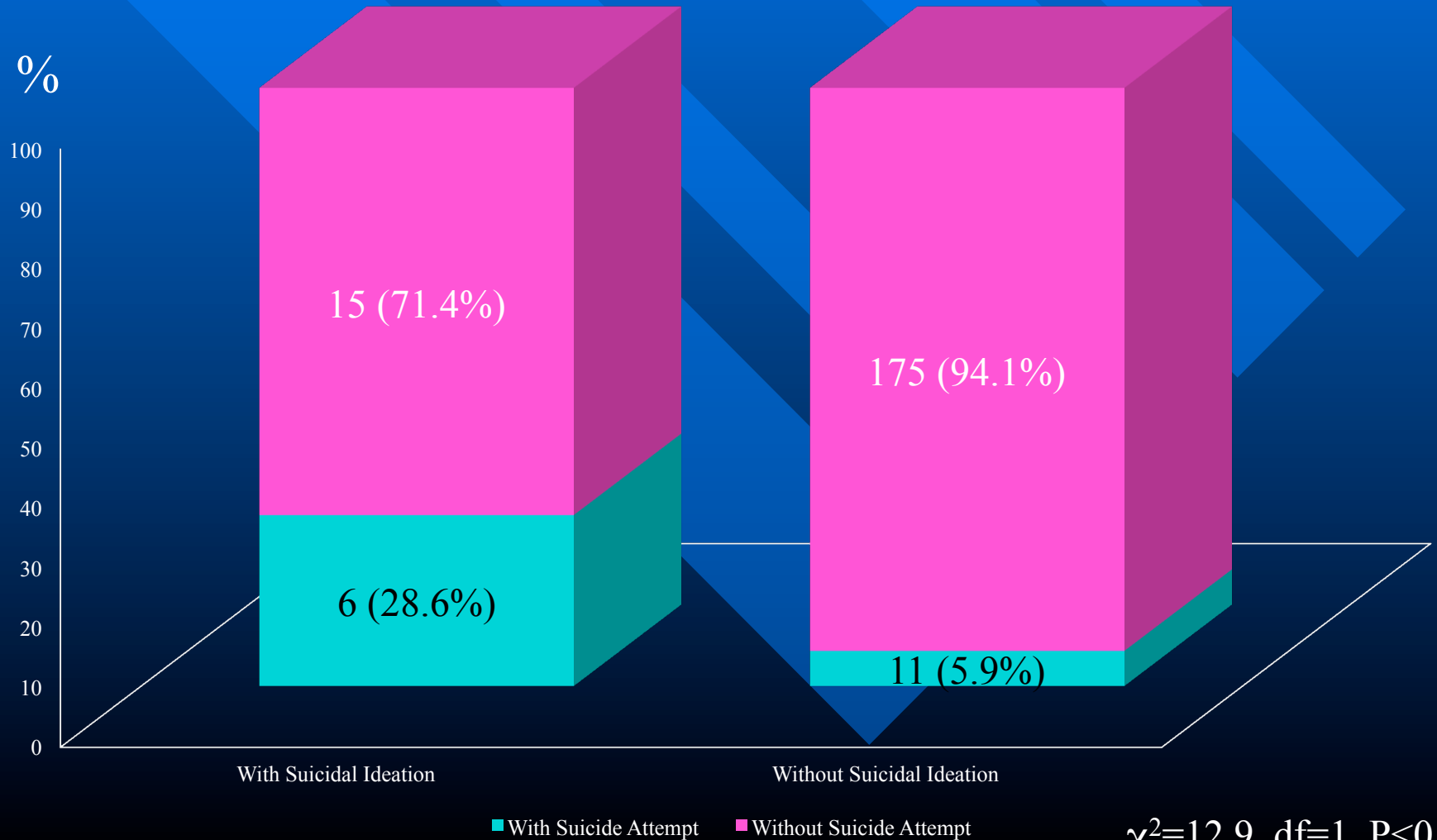
Total Number of Subjects: 207



Suicidal Ideation & Suicide Attempt



Relationship between Suicidal Ideation & Suicide Attempt



Comparison of Suicidal Ideation & Lifetime Suicide Attempts

	Suicidal Ideation (%)	Lifetime Suicide Attempt (%)	Reference
UOG	10.2	8.2	Ran et al
Emory U	11.1	16.2	Garlow et al, 2008
Korean College Student	9.8	3.3	Lee et al, 2008
NCHRBS	10.0		Brener et al, 1999
University of Maryland	6.0		Arria et al, 2009

	Without Suicidal Ideation N (%)	Suicidal Ideation N (%)	χ^2	df	p
Sex			0.5	1	0.469
Male	68 (36.6)	6 (28.6)			
Female	118 (63.4)	15 (71.4)			
Ethnic Group			4.5	2	0.108
Chamorro	55 (29.6)	3 (14.3)			
Filipino	106 (57.0)	12 (57.1)			
Others	25 (13.4)	6 (28.6)			
U.S. Citizenship			6.6	1	0.010*
Yes	168 (90.3)	15 (71.4)			
No	18 (9.7)	6 (28.6)			
Religion					0.068
Without	7 (3.8)	3 (14.3)			
With	179 (96.2)	18 (85.7)			
Family on GU			2.3	1	0.129
Yes	139 (82.7)	13 (68.4)			
No	29 (17.3)	6 (31.6)			
	Mean (SD)	Mean (SD)	t	df	p
Age (years)	23.4 (5.6)	21.5 (3.6)	1.5	201	0.141
Living in GU (months)	195.0 (108.2)	137.6 (136.7)	2.2	198	0.030*
Current GPA	3.2 (0.4)	3.2 (0.5)	0.6	190	0.555

Factors Related to Suicidal Ideation

	Without Suicidal Ideation	Suicidal Ideation			
	Mean (SD)	Mean (SD)	t	df	P
Acculturative Hassles Scale (AHS)					
Language deficiency	0.91	2.57	-3.2	204	0.001*
Social interaction	2.00	4.33	-3.8	205	0.000*
Academic work	3.48	6.19	-3.6	204	0.000*
Cultural difference	1.77	3.71	-3.8	204	0.000*
Stress Appraisal Measure (SAM)					
Threat	9.61	12.33	-3.1	204	0.002*
Challenge	12.15	13.10	-1.0	205	0.326
Making Sense of Adversity Scale (MSAS)					
Making positive sense of adversity					
Making negative sense of adversity	36.46	36.57	-0.1	200	0.945
	7.84	10.10	-3.0	204	0.003*

Factors Related to Suicidal Ideation

	Without Suicidal Ideation	Suicidal Ideation			
	Mean (SD)	Mean (SD)	t	df	p
Personal Meaning Profile (PMP)					
Self-development	44.34	43.71	0.4	204	0.701
Achievement	46.28	42.57	2.4	204	0.019*
Acceptance and content	30.16	25.14	3.5	203	0.001*
Relationship	52.61	46.90	3.1	203	0.002*
Pursuit of purpose	24.77	23.71	1.4	205	0.154
Family	16.94	13.75	3.8	203	0.000*
Being close to nature & authentic	16.33	15.48	1.2	205	0.230
Affect Scale (AS)					
Positive affect	43.25	37.86	2.6	202	0.009*
Negative affect	29.59	35.24	-2.7	203	0.008*

Predictors of Suicidal Ideation

	Odds Ratio	95% CI	P
Previous suicide attempt	0.23	0.03-0.61	0.010
Shorter period of living in Guam	0.99	0.98-0.99	0.030
Higher scores on cultural difference	1.31	1.06-1.62	0.012
Lower scores on family	0.83	0.72-0.96	0.013
Higher scores on negative affect	1.07	1.00-1.14	0.047

Logistic Regression Analysis

Discussion

- This is the first study of risk and protective factors related to suicidal ideation among college students on Guam.
- The results of the present study should be helpful for understanding the risk and protective factors of suicidal ideation and planning the campus suicide prevention program.

Why International College Students Had Higher Rate of Suicidal Ideation than U.S. Students

- To face significant cross-cultural challenges as they undertake their college studies in U.S. (Yen & Steven, 2004)
- To adapt to Westernization and Guam's pace of life
- To live without the support of their families and extended kinship networks
- To overcome linguistic barriers

Barriers affecting foreign born/minority students' success in college school

- English language (Yeh & Inose, 2003)
- Academics: more decrement of academic achievement are more likely to have suicidal ideation (Lee et al, 2008)
- Discrimination

The results of the present study indicate that language deficiency of English and poor academic work are risk factors of suicidal ideation

Factors Related to Suicidal Ideation

Risk Factors	Protective Factors
Previous suicide attempt	Family
Cultural difference	Positive affect
Negative affect	Better relationship
Language deficiency	Better acceptance and content
Poor social interaction	
Poor academic work	
Making negative sense of adversity	

Social Support and Suicidal Ideation

- Higher levels of social support and connectedness predicted lower levels of acculturative stress (Yeh & Inose, 2003).
- A loss of social support has a significant influence on the psychological well-being of international students.
- The present study indicates that students who had poor social interaction and relationship and higher scores on cultural difference were more likely to have suicidal ideation.

Suggestions

- College students should be assessed regularly.
- A specific campus program (e.g., self-help group) should be established to support students.
- Interventions on students' suicide behavior should be conducted (e.g., campus suicide prevention program).
- The positive interaction and dialogue between students and faculty should be established.

Suggestions

- Cultural-specific intervention designed to enhance social support should be facilitated for the international students.
- Given suicidal feelings and actions are relatively common in Asians group, the specific mental health care and interventions (e.g., counseling) should be provided.
- More studies on suicide behavior among college students should be conducted.

Limitation

- The convenient sample
- Relatively small sample size



Thank You