

## Sigma's 29th International Nursing Research Congress

### Prevalence and Risk Factors of Irritable Bowel Syndrome in Korean College Students

**Jin-Hee Park, PhD, RN**

*College of Nursing, Ajou University, Suwon, Korea, Republic of (South)*

Sun Hyoung Bae, PhD, RN

*College of Nursing, Ajou University, SUWON, Korea, Republic of (South)*

**Purpose:** Irritable bowel syndrome (IBS) is a common, costly and potentially functional gastrointestinal disorder characterized by abdominal pain or discomfort with altered bowel habits, but without any organic damages to the intestine such as tumor or inflammation. IBS is a common functional gastrointestinal disorder in the West. But information on the prevalence of IBS in Asia is still lacking, especially in Korea. Despite its uncertain etiology, risk factors, such as psychological stress and sleep quality, are well correlated with the prevalence of the disease. The purpose of this study was to determine the prevalence of IBS and to investigate the related factors in Korean college students.

**Methods:** A sample of 420 college students was recruited among five universities. Socio-demographic and data with IBS symptoms (Rome III criteria), Life style(diet and physical activity), psychological variables (Depression Anxiety Stress Scales), and sleep quality (Pittsburgh Sleep Quality Index) were collected using structured questionnaire. This study was carried out from June to Jukky 2017. Descriptive statistics and logistic regression analysis were used to analyze data.

**Results:** Among the 420 students that participated in this study, 101 students (24.0%) suffered from the symptoms of IBS according to the Rome III criteria. The prevalence of the IBS subtypes were IBS-M: 75.2%, IBS-D: 17.8%B, IBS-C: 5.0%, and IBS-U: 2.0%. IBS were associated with greater anxiety, depression, stress, and a lower sleep quality compared with those without IBS. Logistic regression analysis revealed that co-morbidity in gastrointestinal disorders (OR=2.24), family history of IBS (OR=2.98, p=.008), lower sleep quality (OR=9.55, p=.002), mild anxiety (OR=2.75, p=.017), and moderate anxiety (OR=2.02, p=.042) were independent predictors for the prevalence of IBS.

**Conclusion:** IBS are as common in Korean college students as in western populations. Independent risk factors associated with IBS included lower sleep quality and anxiety. Therefore, when diagnosing IBS in the future, mental health aspects should be considered in addition to physical health.

---

#### **Title:**

Prevalence and Risk Factors of Irritable Bowel Syndrome in Korean College Students

#### **Keywords:**

Psychological stress, irritable bowel syndrome and risk factors

#### **References:**

Cain, KC., Jarrett, ME., Eugenio, MD., & Heitkemper, MM. Relationship between patterns of alcohol consumption and gastrointestinal symptoms among patients with irritable bowel syndrome. *The American journal of gastroenterology*. 2013; 108(2), 270-276.

Löwe B, Lohse A, Andresen V, Vettorazzi E, & Rose M, Broicher W. The Development of Irritable Bowel Syndrome: A Prospective Community-Based Cohort Study. *Am J Gastroenterol*. 2016;111(9):1320-9.

Naeem, SS., Siddiqui, EU., Kazi, AN., Memon, AA., Khan, ST., & Ahmed, B. Prevalence and factors associated with irritable bowel syndrome among medical students of Karachi, Pakistan: a cross-sectional study. *BMC research notes*. 2012;5(1), 255.

Sibelli A, Chalder T, Everitt H, Workman P, Windgassen S, Moss-Morris R. A Systematic review with meta-analysis of the role of anxiety and depression in irritable bowel syndrome onset. *Psychol Med*. 2016;46(15):3065-3080.

Tang, Y, Yang, W, Wang, YL., & Lin, L. Sex differences in the symptoms and psychological factors that influence quality of life in patients with irritable bowel syndrome. *European journal of gastroenterology & hepatology*. 2012;24(6), 702-707.

Wu, J. P., Song, Z. Y., Xu, Y., Zhang, Y. M., & Shen, R. H. Probe into sleep quality in the patients with irritable bowel syndrome. *Zhonghua nei ke za zhi*. 2010;49(7), 587-590.

### **Abstract Summary:**

Irritable bowel syndrome (IBS) is a common functional gastrointestinal disorder in the West. But information on the prevalence of IBS in Asia is still lacking, especially in Korea. The purpose of this study was to determine the prevalence of IBS and to investigate the related factors in Korean college students.

### **Content Outline:**

**Purpose:** Irritable bowel syndrome (IBS) is a common functional gastrointestinal disorder in the West. But information on the prevalence of IBS in Asia is still lacking, especially in Korea. Despite its uncertain etiology, risk factors, such as psychological stress and sleep quality, are well correlated with the prevalence of the disease. The purpose of this study was to determine the prevalence of IBS and to investigate the related factors in Korean college students.

**Methods:** A sample of 420 college students was recruited among five universities. Socio-demographic and data with IBS symptoms (Rome III criteria), Life style (diet and physical activity), psychological variables (Depression Anxiety Stress Scales), and sleep quality (Pittsburgh Sleep Quality Index) were collected. Descriptive statistics and logistic regression analysis were used to analyze data.

**Results:** Among the 420 students that participated in this study, 101 students (24.0%) suffered from the symptoms of IBS. The relative frequencies of the IBS subtypes were IBS-M: 75.2%, IBS-D: 17.8%, IBS-C: 5.0%, and IBS-U: 2.0%. IBS were associated with greater anxiety, depression, stress, and a lower sleep quality compared with those without IBS. Logistic regression analysis revealed that co-morbidity in gastrointestinal disorders (OR=2.24), family history of IBS (OR=2.98, p=.008), lower sleep quality (OR=9.55, p=.002), mild anxiety (OR=2.75, p=.017), and moderate anxiety (OR=2.02, p=.042) were independent predictors for the prevalence of IBS.

Conclusion: IBS are as common in Korean college students as in western populations. Independent risk factors associated with IBS included lower sleep quality and anxiety. Therefore, when diagnosing IBS in the future, mental health aspects should be considered in addition to physical health.

First Primary Presenting Author

***Primary Presenting Author***

Jin-Hee Park, PhD, RN

Ajou University  
College of Nursing  
Professor  
Suwon  
Korea, Republic of (South)

**Professional Experience:** Jinhee Park has completed research in a wide range of studies, which includes the management of symptoms in patients with chronic disease, such as cancer and cardiovascular disease, and intervening to improve the quality and outcome of care.

**Author Summary:** Jinhee Park serves as a professor with the College of Nursing at Ajou University. In this position, she draws upon her previous experience in clinical nursing to educate and inspire the next generation of nurses.

Second Secondary Presenting Author

***Corresponding Secondary Presenting Author***

Sun Hyoung Bae, PhD, RN

Ajou University  
College of Nursing  
Professor  
YONGTONGGU  
SUWON  
Korea, Republic of (South)

**Professional Experience:** 2008-present -- Research fellow, College of Nursing, Ajou University, South Korea 2006-2007 -- Aute care nurse practitioner, College of uring, University of Cincinnati, Ohio, US. 1999-2001 -- Registered nurse, Yonsei medical center, Seoul, South Korea.

**Author Summary:** 2008-present -- Research fellow, College of Nursing, Ajou University, South Korea 2006-2007 -- Aute care nurse practitioner, College of uring, University of Cincinnati, Ohio, US. 1999-2001 -- Registered nurse, Yonsei medical center, Seoul, South Korea.