# INTERPERSONAL INFLUENCES ON YOUNG ADULTS' SUICIDAL IDEATION: A CROSS-CULTURAL COMPARISON

By

Nikita Krishnan, M.S.



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FINAL APPROVAL OF COMPLETED DISSERTATION

NAME: Nikita Krishnan

TITLE OF DISSERTATION: Interpersonal influences on young adults' suicidal ideation: A cross-cultural comparison

DOCTORAL DISSERTATION COMMITTEE:

COMMITTEE CHAIR: Dr. Anthony Mancini
Name Degree

Associate Professor Pace University
Title Affiliation

COMMITTEE MEMBER: Dr. Alfred Ward
Name Degree

Associate Professor Pace University
Title Affiliation

COMMITTEE MEMBER: Dr. Paul Griffin
Name Degree

Associate Professor Pace University
Title Affiliation



FINAL APPROVAL OF COMPLETED DISSERTATION:

I have read the final version of the doctoral dissertation and certify that it meets the relevant requirements for the Ph.D. degree in Mental Health Counseling.

Anthony Mancini — 11/26/2019
Committee Chair's Signature — Date

Alfred Ward — 11/26/2019
Committee Member's Signature — Date

Paul Griffin — 11/26/2019
Committee Member's Signature — Date

## ABSTRACT

Suicide continues to be a major mental health concern globally, with almost one million people dying by suicide every year (Nock et al., 2008). This study is guided by T. Joiner's (2005) interpersonal-psychological theory of suicidal behavior, which proposes that the presence of two negative interpersonal states—perceived burdensomeness and thwarted belongingness—can potentially result in an individual's inclination to die by suicide. Therefore, one of the purposes of this study is to examine the mediation effect of two interpersonal risk factors—perceived burdensomeness and thwarted belongingness—on the association between academic stress, perfectionistic family discrepancy, and suicidal ideation in a sample of American college students studying in the United States and Indian college students studying in India. In addition, because hopelessness has been found to be a stronger and more stable predictor for suicidal behavior than depression and substance use disorder (Kuo, Gallo, & Eaton, 2004), and has been proven one of the strongest predictor variables towards suicidal ideation in cross-cultural research (Stewart et al., 2005), it is assessed in the present study as an outcome variable along with suicidal ideation. Another important component of this study is to investigate the moderation effect of culture (individualistic culture in the United States as opposed to collectivistic culture in India) on the relationship between interpersonal factors and suicidal ideation in a sample of American college students and Indian college students. The aim here is to gather findings that will provide an increased understanding of the impact of interpersonal factors on this population from a clinical perspective, especially among students from collectivistic cultures.



*Keywords*: suicide ideation, academic stress, perfectionism, interpersonal factors, mediation-moderation, American students, Indian students.

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## INTRODUCTION

### Statement of Purpose

Suicide continues to be a major mental health concern globally, with almost one million people dying by suicide every year and many more people attempting suicide each year (Bertolote, 2001; Nock et al., 2008; Wasserman, Cheng, & Jiang, 2005). Further, suicidal ideation has been recognized as a significant predictor of completed suicide (Wang, Wong, & Fu, 2013) and has been linked with increased risk of future suicide attempts (Miranda, Ortin, Scott, & Shaffer, 2014). Suicidal ideation is defined as "thoughts regarding harming or killing oneself" (CDC, 2008) and is one of the best predictors of suicide attempts and completed suicide (Wang, Wong, & Fu, 2013).

Significantly, almost 73% percent of suicides worldwide occur in developing nations, more than half (54%) of which occur in India and China (Vijaykumar, 2004). In those nations, societal structure and specific stressors have a significant impact on suicidal behavior (Vijaykumar et al., 2005). In addition, one of the largest databases collected on suicide worldwide (including data on 90 countries) shows that the mean suicide rate for the United States is 8.0, close to the global mean of 7.4, whereas the mean rate of suicide in Sri Lanka, a part of the Indian subcontinent, is 46.5—almost six times the global mean rate (Wasserman et al., 2005).

Suicide has been identified as one of the leading causes of death in adolescents and young adults during their developmental years (WHO, 2001). According to recent data on suicidal trends analyzed by the CDC, suicide was the third leading cause of death among youth

and young adults aged 10-24 in the United States (CDC, 2007; Gould & Kramer, 2001). Suicide is the second leading cause of death among people 15-29 years of age in India and China (Phillips & Cheng, 2012).

In attempting to understand the variation in suicide rates in different countries, it is imperative to understand the ways in which cultures differ from one another (Eskin, 2013). Individualism and collectivism have been identified as two distinct features of human societies, according to cross-cultural psychology (Hofstede, 1984). Although there has been debate about the impact of individualism and collectivism on suicidal behavior (Triandis, 2001), some studies have found a link between culture and suicidal behavior. For example, Chang (1998) found ethnicity to be a significant predictor of suicide, accounting for a nine percent variance in suicidal risk in Asian-American students as compared to European students.

According to Beck, Kovacs, and Weisman (1979), while the most effective methodology would be to conduct research on individuals who are at a high-risk for suicide, this would require an expensive, longitudinal study; therefore, it is difficult to acquire a sample of completed suicides in the general population. Further, much of the data collected after completed suicide and suicide attempts has provided "postdictors" rather than predictors. Therefore, since suicide is understood to exist on a continuum that starts with suicidal ideation, is followed by attempted suicide, and ends with completed suicide (Cole, Protinsky, & Cross, 1992), it is important to have a solid grasp of the concept of suicidal ideation and related risk factors in order to develop effective treatment strategies (Dutta & Gupta, 2014).

Among Asian populations, in comparison to their Western counterparts, risk factors including academic stress and perfectionistic family discrepancy have been found to correlate strongly with suicidal ideation. Several studies have documented an association between

academic stress and suicidal ideation (Akgun & Ciarrochi, 2003; Ang & Huan, 2006; Wilburn & Smith, 2005). One possible reason for the stronger link between academic stress, perfectionistic family discrepancy, and suicidal behavior in Asian countries is the presence of familial and cultural demands for academic excellence and the attempt to meet high expectations. For Asian adolescents, the strong need to do well academically and to meet the expectations of significant others (parents and teachers, for example) is not only self-governed, but also a requirement of society. If those expectations are not met, individuals can experience loss of face and further loss of support from one's family (Yeh & Huang, 1996), possibly leading to future depression (Carrera & Wei, 2017). In addition, an individual's perception that he/she has failed to meet family standards is considered a risk factor for suicidal behavior (Choi, Rogers, & Werth, 2009; Hewitt, Flett, & Weber, 1994; Hyatt, 2010). Building on several extant studies that have identified a significant relationship between academic stress, perfectionistic family discrepancy, and suicidal ideation, especially in certain Asian populations in comparison to their Western counterparts (Ang & Huan, 2006; Castro & Rice, 2003; Lee & Larson, 2000), the aim of the present study is to examine whether these relationships differ across young adult populations in the United States and India.

Rice, Bair, Castro, Cohen, and Hood (2003) postulated that individuals experiencing high maladaptive perfectionism are at a higher risk for suicide, hopelessness, and depression. In addition, results from a study on Korean adolescents demonstrated that hopelessness mediated the relation between school-related stress and suicidal ideation. Further, since "hopelessness" refers to negative expectations toward the future, its association with the concept of being a burden, absence of positive prospects, and sense of alienation are interesting aspects to explore in a cross-cultural study.

Considering the association between negative interpersonal states and suicidal ideation, Joiner's (2007) interpersonal psychological theory of suicide is applicable to Asian populations (Wong et al., 2011). According to this theory, suicidal behavior is the result of an individual's tendency to feel that he/she is a burden on family, friends, or society (described as perceived burdensomeness), and of an individual's feeling of alienation from others or a specific group (described as thwarted belongingness). Perceived burdensomeness is a particularly important risk factor among Asian-Americans, because it can make individuals in this population feel deprived of the Asian collectivistic value of bringing honor to one's family (Wong et al., 2011). Similarly, because of the emphasis on group cohesion in traditional Asian cultures, being alienated from valued family members or one's social group can be devastating (Chung, 2004). Several studies have demonstrated that the interaction between indicators of perceived burdensomeness and thwarted belongingness are associated with increased suicidal ideation (Joiner, 2009; Van Orden et al., 2006, 2008).

As noted previously, suicidal behavior continues to be a major issue in developing nations such as India and China (Vijaykmar et al., 2005). Further, because motives for suicide seem to differ by culture, it is necessary to develop a theory that can be applied to different ethnicities, cultures, and genders (Park, Baik, Kim, & Lee, 2017). The constructs of the interpersonal theory of suicide have demonstrated strong "predictive power" (Park et al., 2017) in relation to suicidal behavior in several Asian studies (Wong et al., 2011; Zhang et al., 2013). Considering that the interpersonal psychological theory of suicide has never been tested on an Indian population, the logical next step undertaken in the present study is to examine the relationship between specific interpersonal constructs (i.e., perceived burdensomeness and

thwarted belongingness) and suicidal ideation among Indian young adults and compare this to young adults in the United States.

Based on the assumption that humans are motivated by a sense of belonging, Wong et al. (2011) addressed the fact that not being able to achieve family expectations in academics can incite a perception of being a burden and a low sense of belongingness in an individual (Wong et al., 2011). Further, perfectionistic family discrepancy has been associated with the interpersonal constructs of perceived burdensomeness and thwarted belongingness in a study conducted on Asian international students (Wang et al., 2013). Therefore, another purpose of this study is to examine whether the relationship between academic stress, perfectionistic family discrepancy, and suicidal ideation and hopelessness will be mediated by interpersonal risk factors among young adults in India and the United States.

Finally, this study aims to assess whether country of residence will moderate the mediating effect of interpersonal risk factors (perceived burdensomeness and thwarted belongingness) between the predictor variables—academic stress and perfectionistic family discrepancy—and the outcome variables—suicidal ideation and hopelessness—in the Indian population in contrast to the population in the United States. In other words, culture is understood as a fourth variable in the present study, to enable an evaluation of whether it impacts this mediating effect between the predictor variables and outcome variables.

There remains a lack of empirical literature on suicidal ideation in India (Nath, Paris, Thombs, & Kirmayer, 2012), which may be explained by the fact that suicide rates are skewed. Due to legal, social, and religious issues on the Indian subcontinent, suicides are often reported as "accidental" as opposed to a "suicide attempt." Therefore, I have included a review of studies

examining Asian-American suicidal ideation statistics, because of the shared values of these two Asian groups.

Given that suicide continues to be a major mental health concern worldwide, especially in developing nations such as India, and that suicide rates vary by culture (Lester, 2008; Radhakrishnan & Andrade, 2012), the purpose of this study is to contribute to the literature on suicidal ideation in India by addressing whether cultural differences between the United States and India can explain variations in the rate of suicidal ideation.

## Literature Review

Suicide continues to be a significant public health issue throughout the world. The global suicide rate has increased by 32% in the last two decades and is projected to increase even more in the coming decades (Rane & Nadkarni, 2014). Approximately one million people die worldwide every year by suicide (Nock et al., 2008), but there is notable variation in the rate of suicide cross-nationally. According to an epidemiological survey, suicides occur in the United States at a rate of approximately 10.8 per 100,000 people, thus making it the 11th leading cause of death; internationally, this number is 16.7 per 100,000 people, making it the 14th leading cause of death worldwide (Nock et al., 2008).

According to the WHO (2008), the global suicide rate is estimated to be 11.6 per 100,000 individuals. Notably, however, the suicide rate has been found to be highest in Southeast Asia, at 15.6 per 100,000 people (Varnik, 2012). This further supports previous data released by the WHO (2004), which revealed that approximately 900,000 people die annually by suicide globally; this number is 170,000 in India alone. Other studies have also found that India and China alone account for 49% of global suicides (Beautrais, 2014; Phillips & Cheng, 2012).

**Cultural Variation in Suicide Rates**

Although it may be argued that these figures can be attributed to the fact that India and China account for half of the population of the world, and could therefore be understood as proportional, the results of detailed independent autopsies of unnatural deaths in some of India's rural areas suggest that suicide rates are almost five times higher than the rates recorded by India's National Crime Record Bureau (NCRB) (Gajalakshmi & Peto, 2007; NCRB, 2011; Rane & Nadkarni, 2014). This under reportage can be explained by the fact that a suicide attempt is considered a punishable crime in India, leaving the families no other option than to avoid reporting it to the authorities. In addition, suicide continues to have significant social stigma and an association with shame in India, thus leading to underreporting (Nath et al., 2012; Patel et al., 2012; Vijaykumar, 2007).

While the true rate of suicide in developing nations is contested, the relatively high numbers of suicides occurring in countries such as India has received insufficient attention in extant scholarship (Khan, 2002; Phillips & Cheng, 2012). This failure may be a result of the developing nations being constrained in their efforts to address suicide-related issues, due to both their self-inflicted nature as well as other pressing issues such as poverty, limited health facilities, poor education, and higher death rates due to infectious and communicable diseases such as HIV/AIDS and malaria (Gunnell & Edlleston, 2003; Milner & Leo, 2010). In addition, some countries' governments tend to treat suicide as a social or political issue rather than a mental health concern, which can impact the validity of the resulting estimates (Nock et al., 2008).

**Suicidal Behavior**

Suicide is defined as the act of ending one's own life. Nonfatal suicidal thoughts and behaviors, also referred to as "suicidal behavior," can be classified into three categories: 1) suicidal ideation, which refers to thoughts of engaging in behavior to end one's own life; 2) suicide plan, which refers to formulating a plan pertaining to how to end one's own life; and 3) suicide attempt, which refers to the actual implementation of a suicidal plan to end one's own life, with or without a fatal outcome (Nock et al., 2008; Rane & Nadkarni, 2014). Suicide appears to exist on a continuum beginning with suicidal ideation, followed by attempted suicide, and ending with completed suicide (Cole et al., 1992).

Because suicidal ideation is one of the best predictors of suicide attempt and completed suicide (Cole et al., 1992; Wang et al., 2013), it is important to fully understand the concept of suicidal ideation (Dutta & Gupta, 2014). Nock et al. (2008) found that about a third of those who have suicidal thoughts continue to make suicidal plans, and about another third make a suicide attempt. According to Kessler et al. (2005), 34% of lifetime suicide ideators move forward with making suicide plans, and 72% of individuals who make a suicide plan go on to make a suicide attempt. Interestingly, 26% of suicide ideators without a plan eventually make an unplanned attempt, usually within the first year after the onset of suicidal ideations (60% for planned first attempt and nine percent for unplanned first attempt). These findings emphasize the importance of identifying suicidal ideation as a risk factor from a clinical perspective, as well as the need to address triggers that can lead to suicidal ideation (Chamberlain, Goldney, Delfabbro, Gill, & Dal Grande, 2009).

**Developmental Factors in Suicidal Behavior**

Suicide is one of the three leading causes of death among adolescents and young adults during their developmental years (WHO, 2001). Jin (2009) noted that the adolescent subpopulation (15-19 years) is one of the most vulnerable groups with respect to suicidal behavior (suicidal ideation and suicide attempt). In addition, suicide has been identified as the second leading cause of death for individuals aged 12-18 years as well as college-aged youths (aged 18-24 years) (CDC WISQARS, 2015). Adults have a lower lifetime prevalence of suicidal behavior in comparison to adolescents (Nock et al., 2008).

Both suicidal behavior (suicidal ideation and attempts) and non-suicidal self-injury have been found to more prevalent during the developmental phase of adolescence and young adulthood (Nock, Prinstein, & Sterba, 2017). Adolescence is an important phase in individuals' developmental process, as they start to encounter increasing challenges related to puberty, peer pressure, and academic pressure. This phase has been associated with higher risks in terms of psychological difficulties such as emotional and behavioral problems (Rudolph, Lambert, Clark, & Kurlakowsky, 2001). Simultaneously, according to a survey conducted on 26,000 graduate and undergraduate students across 70 universities in the United States, a higher suicide risk, almost equivalent to that associated with substance abuse, depression, and eating disorders, was attributed to factors such as academic and school problems, problems with romantic relationships, relief from emotional/physical pain (Drum, David J; From Press release, APA, 2008), interpersonal loneliness, and impulsive and aggressive behavior. Giedd (2004) also attempted to explain this association, using Magnetic Resonance Imaging (MRI) to examine anatomical changes in brain structure. Giedd (2004) found that the dorsolateral prefrontal cortex, which is associated with the ability to inhibit impulses and evaluate consequences of

actions, is usually still developing after puberty for almost a decade, only fully developing by the time a person is in their late 20s. Research further suggests that, during the hormonal changes that accompany puberty, there is a significant developmental lag between the heightening of emotions and behavioral states and being proficient in the emotional and cognitive coping skills that develop during early adulthood or late adolescence (Stoep et al., 2009). This lag makes adolescents and young adults more prone to biased interpretation, increased moodiness, poor judgment, and self-criticism (Hyde, Mezulis, & Abramson, 2008). According to a study conducted by Garrison et al. (1991), these characteristics may make adolescents and young adults more prone to suicidal ideation during this transitional stage.

**Gender Differences in Suicidal Behavior**

Interestingly, males are substantially more likely to die by suicide than females during adolescence and young adulthood worldwide—except for in India and China (Nock et al., 2008; Varnik, 2012). The male-to-female ratio of death by suicide across the globe is typically between 3:1 and 7.5:1, whereas the male-to-female ratios are 1.3:1 and 0.9:1 in India and China, respectively. Patel et al. (2012) found that the suicide rate in India was 18.6 per 100,000 among males and 12.7 per 100,000 among females. Previously, Nock et al. (2008) found that the suicide rate for young males had decreased from 15.7 per 100,000 to 11.4 per 100,000 from 1990 to 2005. Other studies have investigated autopsy records between 1994 and 2001 in India, finding that the most common age group to have died by suicide was between 15 and 30 years old, 40% males and 56% females, again evidencing a closer male-to-female ratio in comparison to that in the West (Mayer & Ziaian, 2002; Patel et al., 2012). Such findings further emphasize the need to develop country-specific analyses in order to develop suicide prevention programs (Rane & Nadkarni, 2014).

**Risk Factors for Suicidal Behavior**

Many possible contributing risk factors for suicidal behavior have been recognized worldwide. Suicidal behavior is considered to be a complex, multifaceted phenomenon influenced by interactions among biological, genetic, psychological, social, environmental, and situational factors (Bannan, 2006; Richardson, Bergen, Martin, Roeger, & Allison, 2005; Wassermann, 2001). Several studies have identified the presence of psychiatric disorders—such as mood disorders, major depression, anxiety, substance abuse, conduct disorders, and personality disorders—in nearly 80-90 % of suicide attempters and suicide completers (Cash & Bridge, 2009; Fergusson, Woodward & Horwood, 2000; Kessler et al., 1999; Kirkcaldy et al., 2006).

Though the literature on suicidal behavior has identified various risk factors, there remains a lack of consensus regarding risk factors that lead to suicidal behavior in adolescents and young adults (Beautrais, 1999). Beautrais (2003) categorized risk factors into different domains: psychopathology; social and educational disadvantage; childhood and family adversity; individual and personal vulnerabilities; exposure to stressful life events and circumstances; and social, cultural, and contextual factors.

**Life stressors.** One risk factor that has received a great deal of empirical consideration over the past four decades is life stressors. For example, a systematic review conducted by Liu and Miller (2014) investigated the relationship between suicidal ideation and life stressors. Another study examined the association between loneliness, negative life events, and suicidal behavior and hopelessness. Chang, Sanna, Hirsch, and Jeglic (2010) found that loneliness accounted for 24% to 29% variance for hopelessness, and suicidal behavior and negative life events accounted for an additional three percent variance for hopelessness.

Exposure to stressful events, such as lower socio-economic status ($p < .05$); poor parental attachment ($p < .0001$); exposure to childhood sexual abuse ($p < .0001$); and parental alcohol problems ($p < .05$) during adolescence and early adulthood have been identified as trigger factors for suicidal behavior in a 21-year longitudinal study (Fergusson et al., 2000). This study revealed that individuals who were exposed to these risk factors concurrently or sequentially displayed seven times higher rates of suicidal ideation than individuals who were not. Significantly, Fergusson et al. (2000) also found that the suicidal behaviors tend to increase with exposure to adverse life events, independent of mental health issues. In addition, a survey comparing 258 individuals who had attempted suicide and 325 individuals who had no previous history of suicide/psychiatric disorder, conducted in a general hospital emergency room, demonstrated that stressful life events such as conflict with partner, interpersonal conflict (OR = 10.5), and adult physical abuse (OR = 7.1) were strongly associated with suicide attempts (Baca-Garcia et al., 2007).

Beautrais (2003) conducted a comparative study to assess the impact of various risk factors such as social and educational disadvantage, childhood and family adversity, and psychopathology among young people under the age of 25 among suicidal and non-suicidal participants ($N = 129$) in New Zealand. The results revealed that factors such as "low socioeconomic status," based on New Zealand standards, (OR= 3.5, 95% CI [2.6-13.9]); " no formal educational level," which referred to no secondary or trade qualification (95% CI [OR= 7.3, 4.0- 13.1]); family environment, which was assessed based on parental separation or divorce (95% CI [OR= 3.4, 1.8-6.2]) and/or poor parental relationship (95% CI [OR= 4.9, 2.3- 10.2]); and childhood adversity, assessed on sexual abuse (95% CI [OR= 7.4, 3.4-16.0]) correlated with increased risk of suicidal behavior. Interestingly, the study revealed that stressful life events had