THE EFFECT OF ETHNIC MINORITY STATUS IN THE RELATIONSHIP BETWEEN BORDERLINE PERSONALITY FEATURES, THWARTED BELONGINGNESS, AND SUICIDAL IDEATION IN ADOLESCENTS

by

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ABSTRACT

Suicide is a matter of grave concern given its inherent threat to human life and the alarming increase in suicide rates throughout the past couple of decades. It is particularly important to investigate suicide in adolescents, as reports on its prevalence throughout the lifespan implicate this developmental period as a predominant point of onset. Past research has focused primarily on unitary constructs or psychopathology more broadly as a risk factor for suicide, with the Interpersonal Theory of Suicide providing one of the first empirically meaningful frameworks for understanding the onset, maintenance, and development of suicidal thoughts and behaviors. The IPTS emphasizes the role of social factors in suicide risk and resilience, and subsequent studies have supported the theory, showing that the interpersonal context plays an important role in suicidal outcomes. An interpersonal approach to the study of suicide is particularly relevant to the phenomenology of borderline personality disorder, a disorder where suicidality is prevalent. However, specific research of interpersonal risk factors in the context of this disorder is relatively limited. Furthermore, the extent to which race (and any unique social factors related to racial minority groups) moderates these complex relations remains unclear. Against this background, then present study aimed to investigate the relationship between borderline personality features and the IPTS construct of thwarted belongingness in their relationships to suicidal ideation in an adolescent clinical sample (n = 336). Furthermore, minority status was investigated as a potential moderator in this relationship in order to assess for differential functioning of these variables among adolescents of different ethnoracial backgrounds. The specific aims of the present study were: (a) to examine thwarted belongingness as a mediator in the relation between borderline personality features and suicidal ideation, and (b) to examine minority status as a moderator in this mediational relation. Furthermore, acculturative stress was investigated as a factor that may be related to the moderating effect of minority status. Results indicate that thwarted belongingness partially mediated the relationship between borderline

features and suicidal ideation, and that this relation was significantly moderated by minority status, such that the relation between thwarted belongingness and suicidal ideation was stronger in minority adolescents. However, the hypothesis that this difference may be attributable to acculturative stress was not supported. Findings of the current study emphasize the importance of interpersonal deficits as a risk factor for suicidal ideation in adolescents with features of borderline personality disorder and highlight the additional risk associated with minority status; emphasizing the importance of utilizing treatments that focus on interpersonal factors in the treatment of suicidal patients and remaining mindful of multicultural considerations in clinical practice.

TABLE OF CONTENTS

LIST OF TABLES

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Background and Significance

Suicidal Thoughts and Behaviors

According to a recent report by the CDC on suicide mortality in the United States, suicide rates have increased significantly in the past two decades, rising in rank from the tenth leading cause of death for all ages, to the fourth leading cause of death in ages 35-54, and the second leading cause of death in ages 10-34 (Hedegaard et al., 2018). Suicidality is defined broadly as a collection of factors related to suicide (e.g., suicide attempts, suicidal gestures, planning, etc.), and suicidal ideation (SI) more specifically refers to an individual's thoughts of suicide, including planning and desire to die (Beck et al., 1979; Posner et al., 2007). While SI should not be directly equated with attempted suicide, it is considered to be the first step of a series of processes leading to an eventual suicide attempt, and is highly predictive of suicide risk, with more severe SI being associated with a higher odds of eventual attempt (Beck et al., 1999; Klonsky & May, 2015). In a cross-national study of SI in adults, the lifetime prevalence of SI was estimated at 9.2%, with 33.6% of ideators developing a plan, and 29.0% of ideators attempting suicide (Nock et al., 2008). The study also found that across all countries, 60% of the transitions from SI to plan and attempt occur within the first year of the onset of SI, highlighting the importance of timely identification and intervention.

Suicidal Thoughts and Behaviors in Adolescents

Adolescence is a critical period regarding the development of suicidal thoughts and behaviors, and the presence of suicidal behaviors in adolescents is associated with poor mental and physical health outcomes, even compared to individuals with similar diagnoses and levels of psychopathology (Goldman-Mellor et al., 2014). A nationwide survey of risk behaviors in youth conducted by the CDC in 2017 found that 17.2% of high school students seriously considered

attempting suicide at some point in the year proceeding the survey, and 13.6% of students had plans on how they would attempt suicide (Kann et al., 2018). A 2017 CDC report of suicide rates in persons aged 10 to 24 that found death-by-suicide rates of 1.5 per 100,000 persons in ages 10-14, 11.8 per 100,000 in ages 15-19, and 17.0 per 100,000 in ages 20-24 (Curtin & Heron, 2019). These findings indicate that suicidal thoughts and behaviors primarily onset in middle adolescence and increase through young adulthood. Adolescence is a particularly vulnerable developmental period in general, as adolescents experience an intensification of emotional and behavioral states in the presence of relatively rudimentary cognitive and emotional coping skills (Stoep et al., 2009). This phenomenon can be observed at the biological level, as neurological development during adolescence is characterized by a rapid growth of the limbic system (areas of the brain associated with emotion) with the development of prefrontal structures (areas of the brain associated with regulation and executive functioning) lagging behind through early adulthood (Casey et al., 2011; Giedd, 2008). A study on the neurobiological correlates of suicide in adolescent girls found that suicidal patients possessed smaller orbitofrontal cortex gray matter volumes, and larger amygdala volumes than non-suicidal patients (Monkul et al., 2007), implicating this particular biological phenomenon in adolescent suicide risk.

In addition to the biological vulnerabilities present in adolescence, social factors associated with adolescence also warrant attention. Peer relationships often grow more complex as one transitions into adolescence: social status becomes unstable; cliques form, disband, and reform; romantic relationships are often transient; and pre-existing friendships may become difficult to maintain due to the influx of new peers and environmental factors (Brown, 2004). This is concerning, given that interpersonal problems appear to be a prominent risk factor for adolescent suicide. A 14-year longitudinal study found that SI in adolescents is associated with poor self-esteem and interpersonal problems (Reinherz et al., 1995). A study of the difference

between single- and multiple-attempters found that adolescents who made multiple suicide attempts had poorer interpersonal relationships than adolescents with a single attempt (Choi et al., 2013). There is also evidence of suicide contagion in adolescents in the form of clustering, with studies indicating that adolescents who have friends or acquaintances who attempted or died by suicide are themselves at higher risk for developing suicidal thoughts or behaviors (Bearman & Moody, 2004; Borowsky et al., 2001; Johansson et al., 2006). A studies of suicide clustering by age groups have found that clustering effects primarily occur in adolescents ages 14-19, and posited little risk beyond age 24 (Gould et al., 1990, 1994). Thus, suicide contagion via interpersonal exposure appears to be a social risk factor that is relatively unique to adolescents, highlighting the importance of interpersonal functioning from a developmental perspective.

Early Directions of Suicide Research

Early directions on suicide research have heavily focused on its prevalence in other mental disorders such as depression, personality disorders, and schizophrenia (Miles, 1977), and resultant suicide prevention research focused on the treatment of general psychological distress, as well as more tangible factors such as restriction to means and media exposure (Mann et al., 2005). Similarly, many early phenomenological conceptions of suicide were either nebulously broad; seen as resulting from elevations of general distress and depressive symptoms (Crichton-Miller, 1931; Shneidman, 1998), or overly narrow, such as an early postulation that suicidality stems from the interruption of auto-erotic behavior (Menninger, 1936). These directions formed a climate of suicide research that some found lacking in terms of theoretical frameworks that propose proximal risk factors that are meaningful, coherent, and non-specific to psychiatric disorders. It is in this context that Joiner sought to remedy the shortcomings of suicide research by highlighting the importance of social factors in the onset, maintenance, and development of

suicidality (Joiner, 2007). He drew upon ideas presented in Durkheim's sociological approaches to suicide during the 19th century, which conceptualized suicide as the result of social pressures on the individual, in the development of a new model of suicidality: the Interpersonal Theory of Suicide.

Thwarted Belongingness and an Interpersonal Context of Suicide

Joiner's interpersonal theory of suicide (IPTS; Joiner, 2007) is a prominent model of suicide that asserts that suicidal ideation (SI) occurs as a result of feelings of thwarted belongingness (TB) and perceived burdensomeness (PB), and leads to a suicide attempt in the presence of an acquired capacity for suicide (ACS). Thwarted belongingness refers to feelings of lacking a connection with others and an unmet need to belong, and empirical evidence supports the IPTS model by highlighting its association with SI (Buitron et al., 2016; Cukrowicz, Cheavens, Van Orden, Ragain, & Cook, 2011; Hill & Pettit, 2014; Jahn & Cukrowicz, 2011; Van Orden, Lynam, Hollar, & Joiner, 2006) as well as suicide attempts (Hill & Pettit, 2014; Van Orden et al., 2006) in adults. Additionally, there is evidence that supports the validity of IPTS in the conceptualization of suicidal thoughts and behaviors in adolescents. A study of key IPTS constructs in a clinical adolescent sample found that, after controlling for hopelessness and depressive symptoms, PB and TB were significantly and independently associated with SI, the interaction between PB and TB distinguished between adolescents with passive and active SI, and ACS was associated with recent suicidal intent (Horton et al., 2016). A Study by Hill, Hatkevich, Pettit, and Sharp (2017) found that TB, PB, and gender were related to suicidal ideation in an adolescent inpatient sample via a three-way interaction, providing further evidence of the IPTS's utility in adolescent samples, and highlighting the importance of potential gender differences. A study of adolescent psychiatric inpatients by King and colleagues (2019) also

produced similar results, with an interaction between PB and TB predicting SI frequency prior to hospitalization.

In addition to more explicit studies of TB, findings from studies of related interpersonal factors provide evidence for the role of TB in the onset and maintenance of suicidal thoughts and behaviors in adolescents. Factors such as perceived peer rejection, lower levels of close friendship support, and bullying have been associated with an elevated risk of SI (Holt et al., 2015; Prinstein et al., 2000). In a nation-wide longitudinal study of interpersonal risk factors of suicide in American adolescents, social isolation and dissonant friendship networks were significant predictors of suicidal ideation in adolescent girls, whereas having a higher density of friendship ties was associated with a reduced risk of suicide attempt in boys and reduced suicidal ideation in girls (Bearman & Moody, 2004). These findings are supported in a subsequent study by Wong and Maffini (2011), where social support in family, school, and peer group contexts were all found to be protective against suicidality in adolescents, lending further support to the IPTS in the conceptualization of suicide risk and resilience. Additionally, in a study of perceived invalidation by peers and family in at-risk adolescents, Yen and colleagues found that perceived family invalidation was associated with the presence of suicidal events at 6-month follow-up in boys, and perceived peer invalidation was associated with self-mutilating behaviors in both boys and girls at follow-up (Yen et al., 2015). While findings from this study provide further evidence for the differential functioning of interpersonal risk factors between genders, these factors are still implicated as relevant in the conceptualization of suicidal behaviors in adolescents.

Borderline Personality Disorder and Suicidal Thoughts and Behaviors

Borderline Personality Disorder (BPD) is characterized by difficulties in emotion regulation, and often leads to turbulence in the interpersonal relationships of individuals with the

disorder. This is evidenced directly by some of its diagnostic criteria, which includes paranoid ideation, abandonment avoidance, impaired relationships, and affective instability, and implicitly by the remaining criteria (anger, impulsivity, self-injury, feelings of emptiness, dissociation, and identity disturbance) and their implications regarding one's ability to successfully interact with others (American Psychiatric Association, 2013). This is in line with studies that have found that patients with BPD exhibit deficient social-cognitive functioning, as indicated by difficulties in recognizing emotions, thoughts, and intentions (Minzenberg et al., 2006; Preißler et al., 2010). Furthermore, social impairment related to leisure activity, interpersonal relationships, and vocation have been found to be greater in individuals with BPD than in those with other disorders such as Major Depressive Disorder (MDD) and Obsessive-Compulsive Personality Disorder (Gunderson et al., 2011; Skodol et al., 2002), emphasizing the severity of the disorder. In a study by Yen and colleagues (Yen et al., 2004) which investigated the relationship between criteria of BPD and suicidal behavior, affective instability was found to be the strongest predictor of suicidal behavior and suicide attempts. A noteworthy finding in this study is that symptoms of major depressive disorder did not significantly predict suicidal behaviors, implying that emotional lability plays a larger role in the prediction of suicidal behaviors that general depressive mood states. In addition, a 10-year longitudinal study investigating differences between single and multiple attempters found that multiple attempters were significantly more likely to meet criteria for BPD, whereas there were no significant differences found in baseline Axis I disorders (Boisseau et al., 2013).

Although some dispute the validity of BPD in adolescents, there is evidence that supports its place in adolescent psychopathology. Results from studies of borderline personality pathology in adolescents indicate that adolescent BPD mirrors BPD in adults in terms of prevalence (Becker et al., 2002), phenomenology (Miller, Muehlenkamp, & Jacobson, 2008), and stability

(Sharp & Romero, 2007). For instance, the prevalence rate of BPD in adolescents is estimated at approximately 1-3% in the community (Johnson et al., 2008), 11% in adolescent outpatients (Chanen et al., 2008), and between 11% and up to 49% in adolescent inpatients (Kaess et al., 2014). Adolescent BPD is associated with vocational or academic problems, social impairment, drug use, lower GAF scores, and juvenile delinquency, mirroring the phenomenology of BPD in adults (Fossati, 2014). BPD in adolescence has been found to be more strongly associated with SI and self-injurious behaviors than MDD (Sharp, Green, et al., 2012), with results from studies of adolescent suicide estimating that approximately 55% of adolescents who attempt suicide (Crumley, 1979), and 33% of adolescents who die by suicide (Runeson & Beskow, 1991) meet criteria for the disorder. In a study of suicidal behaviors in at-risk adolescent inpatients, BPD was a significant predictor of the time to a subsequent suicide attempt within the 6-month follow up period, whereas PTSD was the only Axis I disorder that was also significantly predictive (Yen et al., 2013). Furthermore, studies have that BPD primarily onsets in adolescence (Chanen & Kaess, 2012; Paris, 2008; Shiner, 2009) and there are multiple psychometrically-sound measures for assessing BPD in adolescents (e.g., Fossati, Sharp, Borroni, & Somma, 2016; Noblin, Venta, & Sharp, 2014; Sharp, Ha, Michonski, Venta, & Carbone, 2012; Zanarini et al., 2003). A review of adolescent personality pathology by Sharp (2017) provides a comprehensive consolidation of empirical evidence in support of the stability and discriminant, criterion, and construct validity of personality pathology in adolescents. In conclusion, due to the severe nature of BPD and emerging evidence for the support of the efficacy of early intervention (Chanen & McCutcheon, 2013), it would be remiss to neglect the study of borderline pathology in adolescents.

Borderline Personality Features

Section III of the fifth iteration of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5; American Psychiatric Association, 2013) introduces a dimensional approach to personality disorders in contrast to the historically-utilized categorical approach. In this respect, the concept of borderline personality features represents this reconceptualization of personality pathology as a dimensional framework of observing personality trait expression. A categorical approach to the study of BPD neglects the heterogeneity of the disorder, while a dimensional approach allows for a more comprehensive identification of borderline symptoms and disorder constellations at both the clinical and sub-clinical levels (Crick et al., 2005; Sharp et al., 2014) Considering that symptom presentation and impairment are comparable at the clinical and subclinical levels (Ellison et al., 2016; Taylor & Reeves, 2007), subclinical expressions of borderline personality traits warrant clinical and scientific consideration.

Borderline Pathology and the IPTS

Given the deficits in interpersonal functioning associated with BPD, the IPTS provides a framework of suicidality that is highly relevant to the phenomenology of this disorder. In a study of the IPTS framework in several mental disorders in adult outpatients, a diagnosis of BPD was positively predictive of both TB and PB, which may potentially explain the elevated risk of suicidal thoughts and behaviors in individuals with the disorder (Rogers & Joiner, 2016). Although this study has not been explicitly replicated in adolescents, BPD in adolescents is associated with lower levels of social support, impaired social role functioning, and lower relationship qualities (Winograd et al., 2008), which implies a relationship analogous to that found in adults. Furthermore, behavioral and temperamental factors relevant to BPD that have been implicated as risk factors for suicide in adolescents such as anger (Brown, Overholser,

Spirito, & Fritz, 1991; Daniel, Goldston, Erkanli, Franklin, & Mayfield, 2009; Weniger, Distelberg, & Vaswani, 2017) and impulsivity (Dougherty et al., 2009; Horesh et al., 1999) have also been linked to poor interpersonal outcomes (Koenigsberg et al., 2001; Nickel et al., 2005; Wehmeier et al., 2010). Thus, it is plausible that these traits may have an indirect effect on suicidality through interpersonal deficits, and future research may seek to explore the relationships between these BPD-associated traits, interpersonal deficits, and suicidal outcomes more explicitly.

Considering the IPTS constructs of TB and PB are largely dependent of the individual's subjective perceptions of their interpersonal circumstances (Van Orden et al., 2010), one's attributions of the internal mental states of others warrants attention. Mentalizing refers to the social-cognitive capacity to interpret the perspectives and mental states of one's self and others, and is often conceptualized as a Theory of Mind construct (Bateman & Fonagy, 2012; Frith & Frith, 2006, 2008, 2012). Attribution of internal mental states as governed by mentalizing processes determine how one perceives the thoughts, feelings, desires, beliefs, and goals of others. While mentalizing capacity is best represented on a continuum, deficits in mentalizing capacity are generally characterized as either hypermentalizing (a distorted overattribution of internal states in the absence of rational evidence) or hypomentalizing (a neglection of or dissociation from the cognitive and emotional factors of an experience)(Bateman & Fonagy, 2012). Early research utilizing these categories of mentalizing deficits has identified a unique relationship between BPD and hypermentalizing, implicating hypermentalizing as a potential key construct in the conceptualization of borderline pathology (Sharp et al., 2011; Vaskinn et al., 2015). The hypersensitive attenuation to social cues that is assoaciated with hypermentalizing has been found to be associated with suicidal ideation in adolescents (Hatkevich, Venta, et al., 2019), and considering that the neural regions associated with mentalizing develop primarily

during adolescence (Vetter et al., 2014), a specific focus on social-cognitive risk and borderline pathology in this developmental phase is warranted.

Multicultural Considerations

Discussion of risk and resilience factors as they relate to members of racial and ethnic minority groups, as well as factors unique to these groups, warrants attention as they are crucial in forming a multiculturally-valid conceptualization of suicide risk. Early research has implied that minorities are relatively resilient regarding suicidal thoughts and behaviors, as studies have indicated lower rates of suicide among African Americans (Garlow et al., 2005), Hispanic Americans (Sorenson & Golding, 1988), and Asian Americans (Shiang et al., 1997), compared to whites. Furthermore, a study of ethnic and sex differences in suicide rates relative to MDD found that Mexican Americans and Puerto Ricans, as well as Cuban American and African American women, had lower rates of suicide than their White American counterparts at similar levels of depression; there were no significant differences in the suicide rates of Cuban American and African American men compared to Caucasian men (Oquendo et al., 2001). Cultural factors that are strongly associated with African American culture and values such as family cohesiveness, involvement in African American church organizations and religious well-being more broadly, black consciousness, and belonging to African American social groups and social networks, have all been associated with lower rates of suicide in this ethnic group (Anglin et al., 2005; Kaslow et al., 2004; Kirk & Zucker, 1979). A large-scale study of suicidal ideation and attempts among Latino subgroups in the United States found that family support was associated with lower rates of suicidal ideation, and that family conflict was associated with higher likelihoods of suicidal ideation and attempts (Fortuna et al., 2007). Considering familism (family centeredness) is an important value in most Latino cultures (Romero et al., 2014), this finding implies that culture

plays a protective role within this ethnic group as well. This is supported in a study by Peña and colleagues where familism in Latina youth was associated with family cohesion which, in turn, was associated with lower rates of suicide attempts (Peña et al., 2011).

However, despite studies highlighting cultural factors as potential sources of resilience and early comparative studies showing reduced rates of suicide in minorities, there is another side of the literature that paints a very different picture. Studies indicate that, since the 1990s, rates of suicide have been increasing in African American children (Bridge et al., 2015) and adults (Day-Vines, 2007). A similar increase in suicide attempts was found in Puerto Rican- and Cuban-Americans between the 1990s and 2000 (Baca-Garcia et al., 2011). Wong and colleagues (Wong, Sugimoto-Matsuda, Chang, & Hishinuma, 2012) analyzed data from Youth Risk Behavior Surveys administered to American high school students from 1999 to 2009 and found that African American, Hispanic, American Indian, Pacific Islander, and Multiracial adolescents were all at significantly higher risk for making a suicide attempt, and were more likely to make a higher-severity suicide attempt than their white peers. While there were no significant differences between Asian American adolescents and white adolescents in their likelihoods of attempting suicide, Asian American adolescents were significantly more likely to have a suicide plan. While prior research has identified cultural factors that may serve as protective factors in ethnic minority groups, membership to these groups appears to be a double-edged sword with respect to suicide risk. For example, perceived discrimination has bee implicated as a risk factor for suicidal ideation in African Americans (Oh, Stickley, Koyanagi, Yau, & DeVylder, 2019; Walker, Salami, Carter, & Flowers, 2014), Latinx Americans (Hwang & Goto, 2008; Oh et al., 2019), and Asian Americans (Cheng et al., 2010; Hwang & Goto, 2008; Oh et al., 2019). Additionally, while familism was once widely considered to be a protective factor for Latino Americans, more recent research has demonstrated that the role familism plays in mental health

outcomes in this population is more complex than initially thought. Particularly, a study by Nolle and colleagues demonstrated that familism was associated with higher rates of suicide attempts in Latina adolescents who hold beliefs that their families would be better off without them (Nolle et al., 2012), highlighting the possibility that cultural factors may exhibit differential effects depending on the context in which these constructs manifest. While research on cultural risk and resilience factors are largely heterogeneous given the nature of diverse cultural values and experiences across groups, one factor that appears to exhibit a trans-cultural effect across minority groups is acculturative stress.

Acculturation and Acculturative Stress

Acculturation refers to a set of processes that occur when an individual of one cultural background is exposed to an outside culture, and impacts an individual's values, attitudes, behaviors, and identity (Williams & Berry, 1991). Early research on acculturation has gravitated towards notions such as melting pot theory, which investigates acculturation from the standpoint of cultural assimilation (e.g., Broom & Kitsuse, 1955; Handlin, 1959; Park & Burgess, 1924), and cultural pluralism, which refers to the ability for groups to retain their traditional cultural values and practices, and communities while existing within a different dominant culture (Fairchild, 1918; Smith, 1955, 1960). A common implication underlying these early models and theories of acculturation is that acculturation is a unidimensional construct where the response to acculturation ranges from a maintenance of traditional cultural values to assimilation into the dominant culture (Berry, 2006). It was against this background that Berry and colleagues (1989) proposed that an individual's response to acculturation falls into one of four types of acculturative attitudes (later termed acculturative strategies), depending on the affinity for one's home and host cultures. These strategies include integration (high affinity for both the host and

heritage cultures); assimilation (high affinity for the host culture and low affinity for the heritage culture); separation (low affinity for the host culture and high affinity for the heritage culture); and marginalization (low affinity for both the host and heritage cultures.). This introduced a multidimensional framework of acculturation that has been widely adopted and guides modern research on the acculturation of various ethnic groups in the United States (e.g., Ari & Cohen, 2018; Choi, Tan, Yasui, & Hahm, 2016; Xing, Popp, & Price, 2020), as well as throughout the globe; including but not limited to Europe (Hindriks, Verkuyten, & Coenders, 2015; Kim, Choi, Lee, & Li, 2018), South America (Brunnet et al., 2019; Urzúa et al., 2017), and Asia (Kim et al., 2018; Tonsing, Tse, & Tonsing, 2016).

Acculturative stress refers to psychological strain resulting from conflicts that stem from intercultural experiences that are perceived as problematic and not easily surmounted (Berry, 2006). Such conflict can occur in a variety of contexts, including environmental, familial, social, and attitudinal domains (Padilla et al., 1985), and the literature highlights factors such as perceived discrimination (Mena et al., 1987; Stafford et al., 2020), family functioning (Hovey, 1999; Lueck & Wilson, 2010), and, in studies conducted in the United States, English proficiency (Kim, 2011; Lueck & Wilson, 2010; Yeh & Inose, 2003). Studies have found that acculturative stress is associated with poor outcomes such as depression (Constantine et al., 2004; Greene et al., 2006; Torres, 2010), eating disorders (Perez, Voelz, Pettit, & Joiner, 2002; Van Diest, Tartakovsky, Stachon, Pettit, & Perez, 2014), and alcohol abuse (Pittman et al., 2017; Zamboanga et al., 2009). Furthermore, acculturative stress has also been implicated as a risk factor for suicide, with acculturative stress and its related factors associating with suicidal ideation in studies of Latinx immigrants (Hovey, 2000), Asian Americans (Cheng et al., 2010), and African American men (Walker, 2003). There also appears to be evidence for differential functioning of acculturative stress across ethnics groups; a study by Walker and colleagues found

that acculturative stress significantly moderated the relationship between depressive symptoms and suicidal ideation in African Americans, but not in European Americans (Walker, Wingate, Obasi, & Joiner, 2008). The association between acculturative stress and suicidal ideation also appears to be present in adolescents, with studies providing similar evidence in Latinx American (Hovey & King, 1996), and Korean American (Cho, 2003) adolescents. More research needs to be done to further elucidate the nature of the associations between acculturative stress and suicidal ideation in adolescents of various cultural and ethnic backgrounds.

Aim 1: TB as a mediator between BPD and SI in adolescents

A key feature of BPD is the phenomenon of hypermentalizing, which refers to an over-attribution of the mental states of one's self or others that are often inaccurate and not grounded in reality (Sharp, 2014). The tendency to hypermentalize is a social-cognitive vulnerability that may perpetuate adverse interpersonal experiences in individuals with BPD. Due to evidence in support of Joiner's IPTS (both independent of, and within the context of BPD), the implication of hypermentalizing in suicidal outcomes (Hatkevich, Venta, et al., 2019), and the interpersonal nature of this feature of BPD, we expected the relationship between BPD symptomatology and SI to be mediated by feelings of thwarted belongingness. If this hypothesis is supported, it would highlight the risk associated with the interpersonal impairment that is characteristic of BPD and underscore the importance of social-cognitive treatment components. A conceptual model of this hypothesis is illustrated in Figure 1.

Aim 2: Ethnic minority status moderating this mediational relationship

While research on specific cultural risk and resilience factors of suicide is relatively sparse, the literature consistently indicates that rates of SI and suicidal behavior are overall lower in ethnic minorities than in whites. This is despite the presence of cultural risk factors that

positively predict suicidal thoughts and behaviors when considered independently. With this consideration in mind, there appears to be a broad protective factor associated with ethnic minority status. Thus, we hypothesized that ethnic minority status would have a moderating effect on SI outcomes, such that the relationship between TB and SI would be exacerbated in minorities. If this hypothesis is supported, it would highlight the importance of cultural consideration in further research as well as the conceptualization and treatment of suicidal youth. A conceptual model of this hypothesis is illustrated in Figure 2. Research on acculturative stress consistently implicates its role in psychopathology more broadly, as well as in the development and maintenance of suicidal ideation in several racial minority groups. Acculturate stress is predominantly investigated within the context of acculturation of minority groups to the majority culture, and largely conceptualized as a risk factor that is unique to minority groups. Because of this, and because facets of acculturative stress (e.g., perceived discrimination and familism) are largely interpersonal in nature, we wanted to investigate acculturative stress as an auxiliary aim. While we are not fully powered to test acculturative stress as a primary aim, we want to investigate its relationship to key study variables at the bivariate level, and preliminarily investigate the role it may have among variables in our primary aims.

Methods

Participants

The current study was approved by the appropriate institutional review boards. Adolescents were recruited from a pool of consecutively admitted inpatients at a university-affiliated acute-care psychiatric hospital in a large urban area. Patients were excluded from participation if they exhibited psychosis, were diagnosed with a pervasive developmental disorder, as determined by clinician diagnosis and the Youth Self-Report, or if they had an IQ

below 80 as determined by standard IQ assessments carried out on the units as part of the routine clinical workup. Adolescents who meet exclusion criteria, decline or withdraw from participation, or fail to complete all study materials were excluded from analyses. After exclusion, the final sample will consist of 336 adolescents age 12 to 17 (M_{age} = 14.76, SD = 1.44). The included sample is 64% female, and breakdown of racial backgrounds are as follows: 26.5% African American, 25.0% White, 40.2% Hispanic, 5.7% Multi-racial, and 2.1% Asian.

Procedures

This study is part of a larger investigation that is currently approved by the appropriate institutional review board. The investigation is a cross-sectional study of suicide risk among adolescent psychiatric inpatients. If parents and adolescents provided consent and assent for participation, respectively, adolescents completed a series of questionnaires and interviews prior to their discharge.

Measures

Thwarted Belongingness. Thwarted belongingness was assessed using the Interpersonal Needs Questionnaire (INQ; Van Orden, 2009). The INQ is a 25-item measure designed to measure feelings of thwarted belongingness, as well as perceived burdensomeness. Respondents are asked to rate the degree to which various statements (e.g., “These days, I feel disconnected from other people.”) are true for them using a 7-point Likert scale. The subscales have been validated for use in adolescents (Hill et al., 2015). This measure demonstrated good reliability in our sample (α = .82)

Ethnic Minority Status. Participants indicated their race/ethnicity in the administered demographics questionnaire as a part of their participation in a larger study. For data analysis,

individuals are considered as belonging to an ethnic minority group if they indicated that they were non-white on the demographic questionnaire.

Borderline Features. Borderline personality features were measured using the Borderline Personality Features Scale for Children (BPFS-C; Crick, Murray–Close, & Woods, 2005). The BPFS-C is a 24-item self-report measure that examined features of Borderline Personality Disorder in adolescents. It uses a 5-point Likert scale to assess for the main components of BPD, including affective instability, identity problems, self-harm, and intense interpersonal relationships. Prior research has supported its internal consistency, construct validity, and criterion validity (Chang et al., 2011; Crick et al., 2005). This measure demonstrated good reliability in our sample ($\alpha = .84$)

Suicidal Ideation. Levels of suicidal ideation were assessed using the Modified Scale for Suicidal Ideation (MSSI; Miller, Norman, Bishop, & Dow, 1986). The MSSI assesses for the presence or absence of suicidal ideation as well as the degree of severity of SI. Examples of items include "Do you want to die now; If yes, how strong has the desire been?" and "Over the past year when you have thought about suicide how long did the thoughts last?" Items are rated on a scale of 0 to 3, with zero indicating an absence of SI, and 3 indicating the presence of severe ideation. This measure possessed excellent reliability in our sample ($\alpha = .93$)

Acculturative Stress. Acculturative Stress was measured using a modified version of the Social, Attitudinal, Familial, and Environmental scale (SAFE; Mena et al., 1987). The SAFE is a self-report measure that includes items such as "It bothers me that family members I am close to do not understand my new values," and "Because of my ethnic background, I feel that others often exclude me from participating in their activities," that are designed to assess for acculturative stress across several domains. Items are rated on a 6-point Likert scale ranging from 0 (Not Applicable) to 5 (Extremely Stressful). This modified version differs from the

original measure developed by Padilla, Wagatsuma, and Lindholm (FASE; 1985) in that it is shorter and contains a perceived discrimination domain in addition to the familial, attitudinal, social, and environmental domains. This measure demonstrated good reliability in our sample (α = .88)

Data Analytic Plan

All data analytic procedures were completed using IBM SPSS version 25. Due to the PROCESS macro's procedure of exclusing cases with missing data, Little's test of missing completely at random (MCAR; Little, 1988) was used to determine if missing data was biased prior to analysis. Then, the relationships between study variables were examined at the bivariate level through correlational and mean-difference analyses. Total scores on the BPFSC, SAFE, MSSI, and the TB scale of the INQ were used as measures of borderline features, acculturative stress, suicidal ideation, and TB, respectively. Results of bivariate analyses served to determine whether further analysis was warranted, and to identify potential covariates such as age and gender that were statistically controlled for in subsequent analyses. The specific aims of the present study were investigated using version 3.4 of the PROCESS macro for SPSS developed by Hayes (2017). Study aims were tested through a moderated mediation analysis (model 14), that specifies thwarted belongingness as a mediator in the relationship between borderline features and suicidal ideation, and specifies minority status as a moderator in the relation between thwarted belongingness and suicidal ideation.

Results

Descriptive statistics of all main study variables are depicted in Table 1. Raw scores were utilized for calculating means, standard deviations for main study variables. Descriptive statistics (means, standard deviations) and bivariate correlations were used to examine all main study

variables and their inter-relations, including prominent sociodemographic factors (age, race/ethnicity, gender). Little's MCAR test indicated that missing data was random for the BPFSC ($\chi^2(291) = 159.62$, $p = 1.00$), INQ-Thwarted Belongingness ($\chi^2(391) = 70.57$, $p = 1.00$), and SAFE ($\chi^2(243) = 209.07$, $p = .94$). However, a significant chi-square for the MSSI indicates that there was bias in missing data for this measure ($\chi^2(71) = 116.81$, $p = .001$). This bias is likely due to the protol for administrating the measure; if a threshold is not met after the first four items are scored, the measure is discontinued, and the sum score is calculated using the first four items. Due to the nature of the measure's instructions, missing data was associated with a non-endorsement of suicidal ideation, which is still represented by total scores on this measure.

Aim 1: The Mediating role of Thwarted Belongingness in the relation between borderline features and suicidal ideation. Bivariate analyses indicated significant correlations between borderline features and suicidal ideation ($r = .424$, $p < .001$). Furthermore, the relationships between TB and borderline features ($r = .211$, $p < .001$) and suicidal ideation ($r = .250$, $p < .001$) were also significant. A full correlation matrix is provided in Table 2. Additionally, girls scored higher than boys on measures of suicidal ideation ($t(334) = 4.24$, $p < .001$), and borderline features, ($t(334) = 2.664$, $p < .01$), and lower than boys on acculturative stress ($t(295) = -2.465$, $p = .014$). Considering its relation to several key study variables, gender was entered as a covariate in subsequent regression analyses in order to control for its potential effects.

The relationship between borderline features and suicidal ideation was moderated by feelings of thwarted belongingness. The standardized regression coefficient between borderline features and TB was statistically significant, as was the regression coefficient between thwarted belongingness and suicidal ideation. The standardized indirect effect was (.206)(.164) = .034. We tested the significance of this indirect effect using bootstrapping procedures. Unstandardized

indirect effects were computed for each of 5,000 bootstrapped samples, and the 95% confidence interval was computed by determining the indirect effects at the 2.5^{th} and 97.5^{th} percentiles. The bootstrapped unstandardized indirect effect was .033, and the 95% confidence interval ranged from .010, .063. Thus, the indirect effect was statistically significant. Standardized and unstandardized regression coefficients are reported in Table 4.

Aim 2: The Moderating role of Racial Minority Status. In addition to the significant bivariate correlations reported in the analyses of Aim 1, there were significant differences between white participants and minority participants. Minority participants reported higher mean levels of suicidal ideation ($t(334) = 2.45$, $p = .02$), but lower mean levels of TB($t(334) = 2.01$, $p = .05$) than white participants. There was no significant difference between white and minority participants on borderline features ($t(334) = 1.848$, $p = .066$).

Minority status was examined as a moderator of the relation between TB and SI in the mediation model specified by Aim 1. The analyses show a significant main effect of borderline personality features on thwarted belongingness ($b = .194$, $p < .001$; Table 5). Analyses also show significant main effects of borderline features ($b = .350$, $p < .001$) and minority status ($b = -.971$, $p < .01$) on suicidal ideation. Furthermore, there was a significant interaction effect of TB and minority status on suicidal ideation ($b = .238$, $p = .03$). A 95% confidence interval for the index of moderated mediation was generated using 5000 bootstrapped samples. The index of moderated mediation was .05, with a confidence interval of .001, .111. As detailed by Hayes (2015), a confidence interval that does not contain zero indicates that the relationship between the indirect effect and the moderator is not zero, thus indicating a moderated mediation. The interaction between minority status and thwarted belongingness is visually depicted in Figure 3.

Regarding the exploration of acculturative stress, bivariate analyses show significant relationships between acculturative stress and borderline features ($r = .328$, $p < .001$) and TB (r

= .114, p = .049). However, acculturative stress was not significantly related to suicidal ideation (r = .105 , p =.072) in this sample. Furthermore, there was no significant difference between white participants and minority participants in acculturative stress ($t(295) = -1.457$, p = .146). In regression analysis, there was no significant main effect of acculturative stress on suicidal ideation (b = .200, p = .209), nor were the interactions between acculturative stress and minority status (b = -.201, p = .267), nor acculturative stress and TB (b = -.201, p = .267) significant. Furthermore, the three-way interaction between acculturative stress, thwarted belongingness, and minority status was non-significant as well (b = .009, p = .079).

Discussion

The overall aim of this study was to empirically investigate the role of social-cognitive factors in the relation between borderline personality features and suicidal ideation in adolescents. Specifically, I examined feelings of thwarted belongingness as a potential link in the relation between borderline personality pathology and suicidal ideation, potential differences in these relations between minority and non-minority adolescents, and the role of acculturative stress in the relation between feelings of thwarted belongingness and suicidal ideation. As hypothesized, results from the current study indicated significant positive relationships between borderline features and suicidality; borderline features and feelings of thwarted belongingness; and thwarted belongingness and suicidal ideation. Furthermore, the relationship between TB and SI was significantly moderated by minority status, supporting our hypothesis and indicating that the relationship between TB and SI is stronger in minority adolescents than in white adolescents.

The evidenced mediating role of thwarted belongingness in the relationship between borderline personality features and suicidal ideation indicates that there is a relationship between BPD pathology and suicidal ideation, and this relationship is partially attributed to feelings of

thwarted belongingness. That is, clinically impaired adolescents who possess deficits in self- and other-oriented personality functioning are likely to present with more severe suicidal ideation than adolescents whose personality functioning is more normative. This phenomenon is partially explained by elevated feelings of social disconnectedness, rejection, and isolation which are associated with the presence of personality pathology features. This finding is in line with previous work that identifies significant relationships between borderline pathology and TB (Rogers & Joiner, 2016) and between TB and SI (Horton et al., 2016) specifically. This is also in line with the IPTS more broadly (Joiner, 2007;Van Orden et al., 2010), which identifies interpersonal deficits as a salient precursor for suicidal ideation. Feelings of thwarted belongingness may present both a subjective and objective risk for patients with borderline features, as excessive hypermentalizing in these individuals often leads to a misinterpretation of other's thoughts and emotions (Sharp et al., 2011), and borderline features may elicit negatively reciprocal interactions, as evidenced by a study by Stepp and colleagues where BPD pathology and negative parenting trajectories were mutually reciprocal (Stepp et al., 2014). Furthermore, the relationship between borderline features and suicidal ideation remained significant with the inclusion of thwarted belongingness to the regression equation. This indicates that thwarted belongingness alone is not the only factor related to BPD pathology that explains its relationship to suicidal ideation, and that other inter- or intra-personal factors also contribute to suicidal ideation in these individuals. This makes sense when considering the heterogeneous nature of BPD, and literature that implicates factors such as dissociation (Sumlin et al., 2020) and emotion regulation difficulties (Hatkevich, Penner, et al., 2019) in the relation between BPD and suicidal ideation. While the present study provided support for the relationship between TB and SI, it should be noted that literature does not entirely support its role in relation to suicidal ideation. In a systematic review of the IPTS, Ma and colleagues found that, among the 55 analyses that

investigated the effect of TB on SI, only 40% found a significant relationship (2016). By comparison, of the 69 analyses that investigated the effect of perveived burdensomeoness on suicidal ideation, 82.6% found significant a significant relationship. The source of this discrepancy is not entirely clear, but findings of the present study suggest that sample demographics, particularly racial breakdowns, may contribute to mixed findings.

The current study also indicated that minority status significantly moderated the relation between thwarted belongingness and suicidal ideation. Specifically, the relationship between TB and SI was stronger in minority adolescents than in white adolescents. In addition to elevated mean levels of these variables in minorities, a significant moderation implies that feelings of thwarted belongingness poses more of a risk in minority adolescents, implicating it as a factor to be particularly mindful of in the treatment of these groups. The finding that this relationship functions differently in minorities compared to white adolescents highlights the importance of remaining aware that psychological phenomena may not present identically in different groups; a notion expressed in Henrich's identification and critique of the overutilization of WEIRD (western, educated, industrialized, rich, and democratic) samples to form and test phychological theories (Henrich et al., 2010).

While study findings indicated an increased risk for minority adolescents, the hypothesis that acculturative stress explains this difference was not supported. While previous research has identified acculturative stress as a predictor of suicidal ideation (Cheng et al., 2010; Hovey, 2000; Walker, 2003), acculturate stress was not related to suicidal ideation in our sample, and there was no significant difference in acculturative stress between minority and non-minority adolescents, despite acculturative stress being significantly related with TB. This partially in-line with findings in a similar study by Walker and colleagues (Walker et al., 2008), where ethnic identity moderated the relationship between depressive symptoms and suicidal ideation in

African American college students but not white students, yet acculturative stress significantly moderated this relationship in both groups. Perhaps acculturative stress is a construct that is more salient in certain populations than in others, as it is most widely studied in immigrant and Latin-American samples. If so, nonsignificant differences in acculturative stress between white and minority adolescents in the present study may be due intra-group differences between the constituent ethnicities of the minority grouping, or possibly due to varying degrees of immigration status, which was not assessed in the present study. It should also be noted that only the total score on the SAFE was analyzed for the purpose of this study. The SAFE assesses for several facets of acculturative stress (familism, environment, attitudes, social factors, and perceived discrimination), which may function differently in different groups. Further research should investigate these factors of acculturative stress across racial groups individually in order to evaluate which aspects of acculturative stress are most salient in particular cultural backgrounds. It is also possible that acculturation (and, by extension, acculturative stress) presents differential effects depending on the salience of multiculturalism in the geographic location in which samples are drawn from. The present study was conducted in a large metropolitan area with a diverse population. It is possible that participants have experienced a degree of multicultural exposure and acceptance that impacted the effect of acculturative stress to an extent not seen in samples recruited from locations with more homogenous demographic characteristics. A meta-analytic study of acculturation and acculturative stress in locations with varying degrees of diversity would elucidate if the effects of acculturative stress are impacted by demographic diversity.

Another possible explanation for this finding is that the impact of acculturative stress may have been minimized due to elevated levels of impairment associated with clinical populations. Particularly, while there may be a degree of overlap between the of acculturative

stress (which measures stress related to factors such as perceived discrimination and familism) and TB (which is comprised of feelings of isolation and rejection more broadly), TB may be a more representative construct by which to define interpersonal functioning in clinical populations. Replication of the present study in a community sample may produce larger variance estimates of this variable, and increase the ability to detect the role acculturative stress may play in the relationship between study variables.

While the results of the study support the hypotheses of Aims 1 and 2, it should be noted that the use of a clinical sample may have impacted the findings of these analyses as well, and findings may not generalize to community samples. Moreover, the classification of participants into a binary minority/nonminority grouping variable undermines the diverse nature of the minority category's constituent ethnicities. This is a limitation of the models proposed by Aim 2, as the specification of each ethnicity in the moderator terms would result in the analysis of race as a pseudo-continuous variable, which would lead to uninterpretable interaction slopes. On the other hand, while investigation of mediation models in each ethnic group would yield results that are more representative of their respective demographics, the differences between the relations of study variables could only be observed qualitatively. Thus, the present study opted for a dichotomous minority/nonminority classification, that differences in the relationships between study variables could be investigated empirically, if broadly. Further research should investigate these relationships on a per-ethnicity basis to provide a more comprehensive and meaningful understanding of how these variables apply to specific ethnic groups.

In addition to limited generalizability, it should be noted that the data analyzed in the study is cross-sectional. Therefore, while significant relations were found between study variables in regression analyses, study findings do not necessarily indicate causal relations. The present study would need to be replicated using a longitudinal design in order to test hypotheses

of causality. Furthermore, while prior research has emphasized the incremental validity of BPD in suicide risk (Sharp, Green, et al., 2012), the present study did not include the explicit investigation of patients' clinical diagnoses. Future examination of differences between diagnostic presentation would allow for conclusions that have transdiagnostic utility.

Notwithstanding these limitations, the current study stands as the first-known investigation of the relation between borderline features, thwarted belongingness, and suicidal ideation between minority and non-minority adolescent inpatients. An empirical examination of these relations allowed us to provide a preliminary understanding of how social-cognitive functioning may be an important aspect of the conceptualization of suicide risk in adolescents who present with features of BPD, and how social-cognitive functioning may exhibit differential risk between patients of various racial-ethnic backgrounds. This was a particularly relevant question, given the evidenced efficacy of treatments with social-cognitive components such as MBT and DBT in the treatment of suicidal patients (Bateman & Fonagy, 2009; Linehan et al., 2006). Ultimately, findings from the current study provide important implications for adolescent suicide intervention in clinical settings, and provide additional support for the use of Dialectical Behavior Therapy (DBT; A. L. Miller, Rathus, & Linehan, 2006) and Mentalization-Based Treatment (MBT;Bateman & Fonagy, 2012) as treatment modalities for suicidal thoughts in adolescents, considering the strong focus on interpersonal factors in these models. While the efficacy of multicultural competencies in treatment remains an understudied area in clinical research, findings of the present study emphasize the importance of remaining mindful of potential differences that may be attributable to patients' diverse cultural backgrounds.

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Tables and Figures

Table 1.

Descriptive statistics of key study variables

Variable	Mean (SD)
Age	14.76(1.43)
MSSI Total Score	19.13 (13.30)
INQ_Thwarted Belongingness	29.86 (12.91)
BPFSC Total Score	70.83 (13.73)
SAFE Total Score	40.70 (22.21)

Note: MSSI = Modified Scale of Suicidal Ideation; INQ = Interpersonal Needs Questionnaire; BFSC = Borderline Features Scale for Children; SAFE = Social, Attitudinal, Familial, and Environmental Scale of Acculturative Stress.

Table 2.

Bivariate correlations

		1	2	3	4	5	6	7
1.	Age	-						
2.	Gender	.129*	-					
3.	Minority Status	.024	.032	-				
4.	Suicidal Ideation	.060	-.226***	-.133*	-			
5.	Borderline Features	.060	-.144**	-.101	.424***	-		
6	Thwarted Belongingness	.009	-.056	-.109*	.250***	.211***	-	
7.	Acculturative Stress	.064	.142*	.105	.105	.328***	.114*	-

Note: ***. Correlation is significant at the .001 level (2-tailed) **. Correlation is significant at the .01 level (2-tailed); *. Correlation is significant at the .05 level (2-tailed); For the purpose of analysis, participants who identified solely as Caucasian on demographics forms were considered nonminority participants (Minority Status = 0) and all other designations were considered minority participants (Minority Status = 1)

Table 3.

Group differences between minorities and non-minorities on study variables

	t	*df*	Mean difference	*p*
Suicidal Ideation	2.450	334	4.075	.015
Thwarted Belongingness	2.013	334	3.262	.045
Borderline Personality Features	1.848	334	3.187	.066
Acculturative Stress	-1.457	295	-4.296	.146

Note: For the purpose of analysis, participants who identified solely as Caucasian on demographics forms were considered nonminority participants (Minority Status = 0) and all other designations were considered minority participants (Minority Status = 1)

Table 4.

Thwarted belongingness as a mediator between borderline personality features and SI

Outcome	Predictor	Coeff.	*B*	*SE*	*p*
Thwarted Belongingness					
	Borderline Features	.194	.207	.051	.000
	Gender	-.725	-.027	-1.454	.623
Suicidal Ideation					
	Borderline Features	.355	.366	.048	.000
	Thwarted Belongingness	.169	.164	.051	.001
	Gender	-4.536	-.164	1.344	.001

Note: Coeff. refers to unstandardized regression coefficients, while *B* refers to standardized regression coefficients.

Table 5.

Racial minority status as a moderator in the relation between borderline personality features, TB, and SI

Outcome	Predictor	Coeff.	*SE*	*p*
Thwarted Belongingness				
	Borderline Features	.194	.051	.000
	Gender	-.715	1.455	.623
Suicidal Ideation				
	Borderline Features	.350	.048	.000
	Thwarted Belongingness	-.001	.089	.992
	Minority Status	-.971	3.65	.008
	Thwarted Belongingness x Minority Status	.238	.107	.027
	Gender	-4.24	1.34	.002

Note: Coefficients for regression terms are unstandardized, as the PROCESS macro for SPSS does not compute standardized coefficients when conducting analyses with moderator terms.

Table 6.

Acculturative Stress as an Additional Moderator in the relation between BPD features, TB, SI, and Minority Status

Outcome Variable	Predictor Variable	Coeff.	*SE*	*p*
Thwarted Belongingness				
	Borderline Features	.189	.053	.001
	Gender	.281	1.512	.854
Suicidal Ideation				
	Borderline Features	.351	.056	.000
	Thwarted Belongingness	.336	.194	.083
	Minority Status	.169	8.170	.984
	Acculturative Stress	.200	.159	.209
	Thwarted Belongingness x Minority Status	-.160	.241	.507
	Thwarted Belongingness x Acculturative Stress	-.008	.004	.054
	Minority Status x Acculturative Stress	-.201	.181	.267
	Thwarted Belongingness x Minority Status x Acculturative Stress	.009	.005	.079
	Gender	-4.24	1.34	.002

Note: Coefficients for regression terms are unstandardized, as the PROCESS macro for SPSS does not compute standardized coefficients when conducting analyses with moderator terms.

Figure 1.

Conceptual model of Aim 1

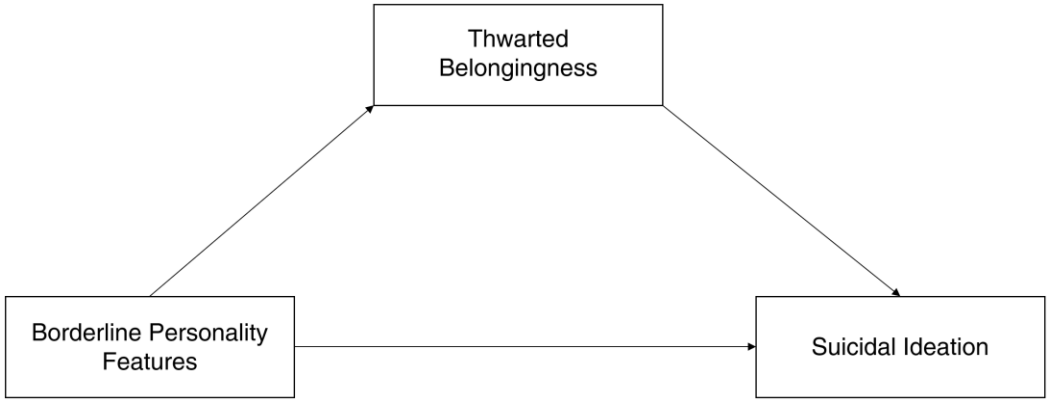


Figure 2.

Conceptual model of Aim 2

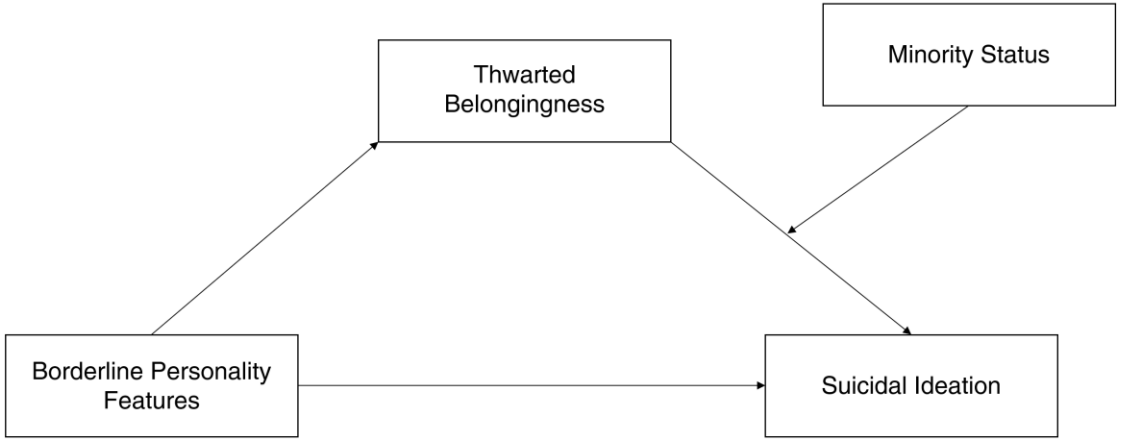
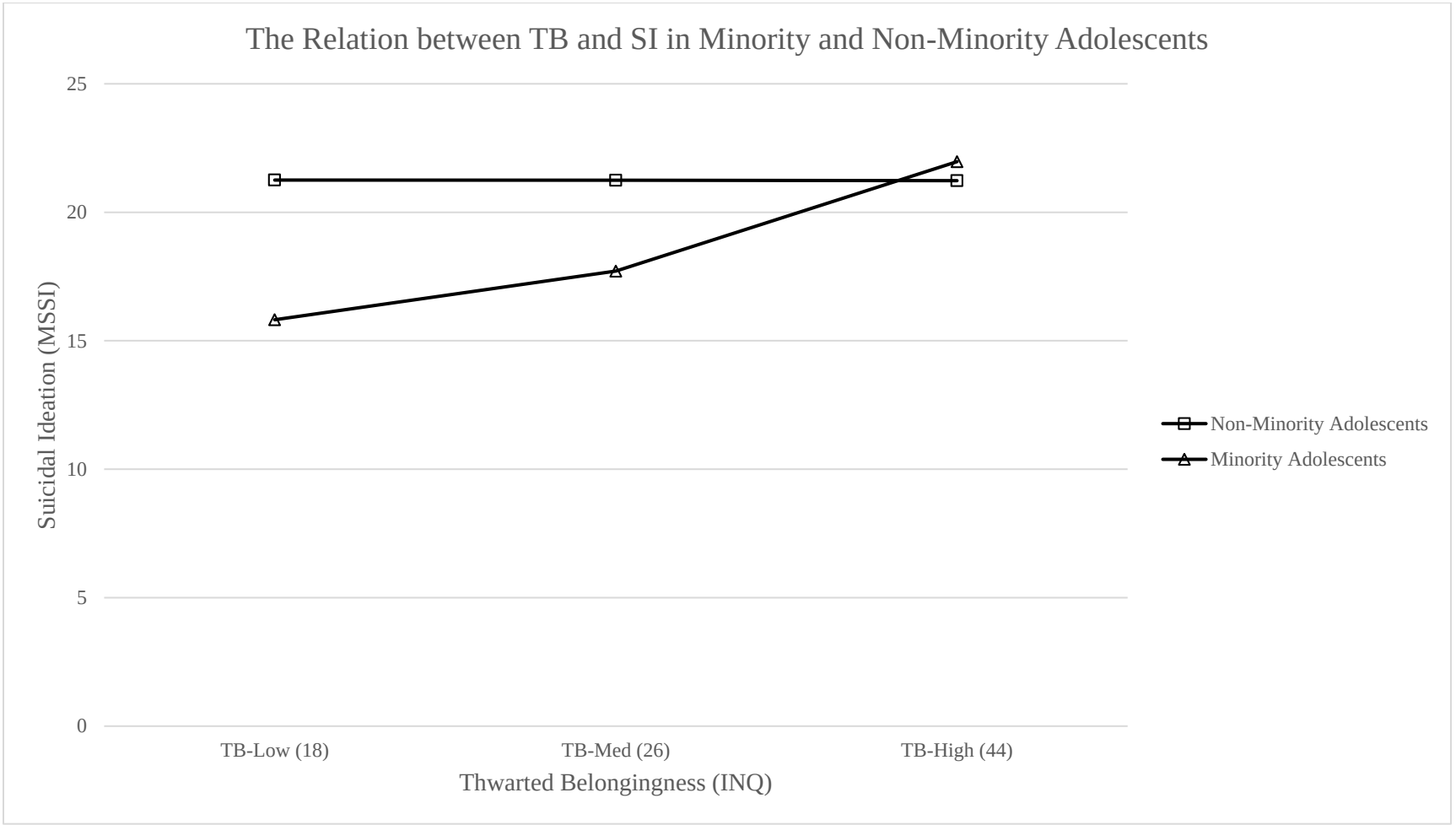


Figure 3.

The relation between thwarted belongingness and suicidal ideation in minority and non-minority adolescents



Note: TB = thwarted belongingness as measured by the Interpersonal Needs Questionnaire (INQ); SI = suicidal ideation as measured by the Modified Scale of Suicidal Ideation (MSSI); Anchor points for Low, Medium, and High levels of thwarted belongingness were determined by the PROCESS Macro for SPSS.