PERCEIVED BURDENSOMENESS, ATTITUDINAL FAMILISM AND SUICIDAL IDEATION IN HISPANIC ADOLESCENT INPATIENTS

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A Dissertation

Presented to

The Faculty of the Department of Psychology

University of Houston

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In Partial Fulfillment

Of the Requirements for the Degree of

Doctor of Philosophy

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By

Claire Hatkevich

May, 2017

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ABSTRACT

Suicidal ideation is alarmingly prevalent in Hispanic adolescents, who report greater rates of ideation than other major ethnoracial same-aged groups in the United States (CDC YRBS, 2015). Elevated prevalence rates in this group remain particularly concerning, given that Hispanic youth have been shown to experience greatest unmet need for mental healthcare, and are under-identified for crisis intervention when suicidal (Kataoka, Zhang, & Wells, 2002; Kataoka, Stein, Lieberman, & Wong, 2003). Perceived burdensomeness, or beliefs that one is a burden or tax on close others and society, is one risk factor for suicidal ideation proposed by the interpersonal theory of suicide (Joiner, 2005), which has been evidenced in Hispanic individuals (Garza & Pettit, 2010; Hill & Pettit, 2012). Little is known about how culturally-relevant factors, such as attitudinal familism, may intersect this known risk relation to mitigate or exacerbate suicidal ideation in Hispanic youth. Understanding how attitudinal familism interacts with the relation between perceived burdensomeness and suicidal ideation in Hispanic adolescents remains of empirical and clinical importance, given that such an investigation would increase understanding of cultural-specific processes impacting interpersonal risk for suicide, and findings may inform the development of culturally-sensitive interventions for suicidal ideation in Hispanic youth.

Against this background, the current proposal studied the relation between perceived burdensomeness, attitudinal familism, and suicidal ideation in a psychiatric sample of $N = 81$ Hispanic adolescent inpatients. The aims of the current proposal were two-fold: 1) Aim 1: To investigate the direct relations between perceived burdensomeness, attitudinal familism, and suicidal ideation in a Hispanic adolescent

inpatient sample; and 2) Aim 2: To investigate the moderating effects of attitudinal familism (consistent the conceptualization provided by Lugo Steidel & Contreras, 2003) on the relation between perceived burdensomeness and suicidal ideation in Hispanic adolescent inpatients, while controlling for the effects of potentially relevant covariates (depressive symptoms, gender). Our central interaction hypothesis posited that attitudinal familism would mitigate the impact of perceived burdensomeness on suicidal ideation, above and beyond the effects of gender and depressive symptoms. Results showed a nonsignificant interaction effect for the role of attitudinal familism, which trended towards significance in a mitigating direction at $p = .08$ with low achieved power. Overall, the current study evidenced a nonsignificant interaction effect for the main study hypothesis, however low achieved power and effect size indicate increased likelihood of type II error and that a true mitigating effect may have been missed. Indeed, the trend towards significance does suggest that a trend for attitudinal familism buffering the impact of perceived burdensomeness on suicidal ideation, consistent with our hypothesis that perceived family support and cohesion may alleviate the effects of perceived burdensomeness in extra-familial relations on subsequent thoughts about suicide.

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Background and significance

Suicidal ideation, or thoughts about suicide and/or engaging in suicide-related behavior, is alarmingly prevalent in Hispanic adolescents in the United States. Epidemiological data from the CDC Youth Risk Behavioral Surveillance System (2015) indicate that 18.8% of Hispanic adolescents reported having seriously considered attempting suicide in the past 12 months, a rate higher than both the national average (17.7%), as well as those from other major ethnoracial, same-aged groups (White, 17.2%; and Black, 14.5%; CDC Youth Risk Behavior Surveillance System [YRBS], 2015). Elevated prevalence rates of suicidal ideation in Hispanic adolescents have been well-documented in the empirical literature (Olvera, 2001; Roberts & Chen, 1995), as well by earlier epidemiological work (CDC YRBS, 2008, 2013), with the most consistent evidenced finding indicating that Hispanic adolescent females experience suicidal ideation at rates greater than any other ethnoracial or gender-based subset of adolescents (CDC, 2015; Goldston et al., 2008).

Elevated prevalence rates of suicidal ideation in Hispanic adolescents remain particularly concerning, given that suicidal behavior remains prevalent in this population (CDC, 2015), and Hispanic youth often experience significant barriers to mental health care and are poorly identified for crisis intervention (Kataoka et al., 2003). According to most recent CDC data, the YRBS (2015) indicates 11.3% of Hispanic youth report at least one attempt in the twelve months leading up to the survey, relative to 6.8% of White and 8.9% of Black youth. Such elevated rates of suicidal symptoms remain particularly problematic and life-threatening, given that Hispanic youth have been identified as

experiencing greatest unmet need for mental healthcare, relative to other ethnoracial groups (Kataoka et al., 2002). Beyond this, findings also indicate that Hispanic youth experiencing suicidal symptoms are least likely to be identified for crisis intervention, relative to Caucasian adolescents (Kataoka et al., 2003). Hispanic youth therefore remain at especially high risk of suicide-related death, given that they experience elevated rates of suicidal ideation and often do not experience adequate mental health care or necessary treatment in times of crisis. Against this background, further empirical work is needed to understand suicidal ideation amongst Hispanic adolescents, and particularly, the interpersonal and sociocultural factors which may confer risk for ideation in these youth. Empirical study of these processes would serve to inform the understanding of culturally-relevant processes related to suicidal ideation in Hispanic adolescents, as well as to inform the development of culturally-sensitive interventions for suicidal symptoms in this population.

Relevant to the study of suicidal ideation and related sociocultural processes in Hispanic youth is the interpersonal theory of suicide (IPTS; Joiner, 2005). Proposed by Joiner (2005), the IPTS hypothesizes that lethal suicidal behavior occurs when multiple requisite conditions are present for an individual: 1) thwarted belongingness, or a sense of alienation and lack of group inclusion; 2) perceived burdensomeness, or the perception that one is highly ineffective, incompetent, and a burden/tax on close others and society; and 3) the individual has an acquired capacity to engage in self-directed, self-injurious behavior (Joiner, 2005; Garza & Pettit, 2010; Miller, Esposito-Smythers, & Leichtweis, 2015; Van Orden et al., 2010). Within this theory, Joiner hypothesizes that perceived burdensomeness and thwarted belongingness both contribute to a desire for death, which

when met with an acquired capacity to engage in suicidal behavior, create risk for serious attempts and potentially lethal suicidal behavior. Therefore, one implication of this theory is that one's perceptions of being ineffective and a burden on close friends, support network, and the greater society, confers risk for suicidal ideation and a desire to die. In other words, perceived burdensomeness is one proposed risk factor for suicidal ideation. Although thwarted belongingness and acquired capability for suicide are all key variables in this theory, only perceived burdensomeness was of central focus in the current study, given that existing sociocultural and suicide-related research point to a significant relation between perceived burdensomeness and suicidal ideation amongst Hispanic individuals, which will be discussed next.

Among Hispanic individuals, perceived burdensomeness has been linked to suicidal ideation in empirical research. In specific, work by Hill et al. (2012) and Garza et al. (2010) have demonstrated a link between perceived burdensomeness and suicidal ideation in Hispanic adults generally, as well as Mexican American immigrants specifically (Garza et al., 2010). Consistent with the IPTS, as well work utilizing predominantly Caucasian, non-Hispanic samples (e.g., Cukrowicz, Cheavens, Van Orden, Ragain, & Cook, 2011; Van Orden, Witte, Gordon, Bender, & Joiner, 2008), higher levels of perceived burdensomeness have been found to predict greater suicidal ideation in largely Hispanic adult samples (Garza et al., 2010; Hill et al., 2012). As Garza et al. (2010) began to touch on, perceived burdensomeness may be especially salient, distressing, and related to suicidal ideation in Hispanic individuals, given that perceptions of being a burden would be at odds with a strong family-orientation and tendency for collectivist values in Hispanic culture (Schwartz, 2006).

Despite preliminary research in Hispanic adults, much less is known about the link between perceived burdensomeness and suicidal ideation in Hispanic youth. As demonstrated by a review of adolescent IPTS studies (Stewart, Eaddy, Horton, Hughes, & Kennard, 2015), scarce literature exists on the study of the IPTS in Hispanic adolescents, with even less research on perceived burdensomeness and suicidal ideation specifically. To our knowledge, few studies have directly examined perceived burdensomeness and suicidal ideation in samples with Hispanic youth, and studies that do exist (e.g., Buitron et al., 2016; Hill & Pettit, 2016) provide somewhat mixed findings. For example, using a diverse adolescent inpatient sample which was 42% Hispanic, Buitron et al. (2016) demonstrated that perceived burdensomeness significantly predicted suicidal ideation, even when race/ethnicity was controlled for in the model. Although not specific to Hispanic adolescents, this study indicated that the link between perceived burdensomeness and suicidal ideation held across all adolescents, a substantial number of which were Hispanic. In contrast, work by Hill and Pettit (2016) demonstrated that in an intervention targeted at reducing perceived burdensomeness in a predominantly Hispanic female adolescent sample, reductions in perceived burdensomeness throughout treatment were not accompanied by significant decreases in suicidal ideation. This finding potentially provides evidence against a relation between perceived burdensomeness and suicidal ideation in Hispanic females, given that one would expect an intervention targeted at perceived burdensomeness to reduce comorbid suicidal ideation, if these constructs were indeed related. To this end, mixed, highly preliminary findings exist about the link between perceived burdensomeness and suicidal ideation in Hispanic youth.

Despite the lack of direct work on this relation, existing sociocultural and suicide-focused research provide rationale for a positive relation between perceived burdensomeness and suicidal ideation in Hispanic youth. In specific, Goldston et al. (2008) and Zayas et al. (2005) indicate that Latin youth often place heavy emphasis on collectivist values and gendered role-fulfillment in the family (e.g., *machismo*, or acting protective of the family; Goldston et al., 2008; Torres, Solberg, & Carlstrom, 2002), and that perceived conflict in these roles or values may elevate suicide risk. Although neither Goldston et al. (2008) or Zayas et al. (2005) directly speak to burdensomeness, one possible explanation for the purported relation in these models is that perceived burdensomeness (i.e., perceptions of burdening or draining the resources' of others; Hill & Pettit; 2014) may in part reflect an individual's beliefs that they are not contributing to the family, fulfilling their roles, or at worst, taxing family resources and ability to flourish. Given the well-documented emphasis on family-focused role fulfilment in Hispanic culture (Castro & Alarcón, 2002; Torres et al., 2002), it seems plausible that perceptions of being ineffective at one's role or burdening one's family (i.e., perceived burdensomeness) may contribute to suicidal ideation in Hispanic youth. Indeed, Garza et al. (2010) go as far as to suggest that suicidal thoughts may function to reduce perceived burden in Hispanic individuals. However, the literature currently lacks a focused investigation of the relation between perceived burdensomeness and suicidal ideation in Hispanic adolescents, as well as potential sociocultural variables which may impact this relation.

Familism – Definition. Familism is one culturally-relative phenomena that has been identified and linked to suicidal ideation in Hispanic adolescents. At a broad level,

familism has been recognized as a core process in Hispanic culture, emphasizing the centrality and interdependence of the family, as well as obligation, reciprocity, and loyalty towards the family unit, over and above the needs of the individual (Baumann, Kuhlberg, & Zayas, 2010; Cauce & Domenech-Rodriguez, 2002; Lugo Steidel & Contreras, 2003; Moore, 1970; Sabogal, Marín, Otero-Sabogal, Marín, & Perez-Stable, 1987). Conceptually, familism has been operationalized in a number of ways, such as a 'set' of attitudes and/or beliefs (Burgess & Locke, 1945; Delgado, 1992), a cultural value (Zinn, 1982; Stein, Gonzalez, Cupito, Kiang, & Supple, 2015), as well as a multidimensional construct, including structural, behavioral, and attitudinal components (Valenzuela & Dornbusch, 1994). In the current proposal, the predominant focus will be on attitudinal familism, one facet of familism identified in the empirical literature (Burgess, Locke & Thomas, 1963; Valenzuela et al., 1994; Lugo Steidel et al., 2003). Attitudinal familism was a central focus, given its well-documented role in Hispanic adolescent mental health and suicidal ideation, which will be further described next.

As defined by Lugo Steidel and Contreras (2003), attitudinal familism is a multidimensional construct involving strong identification and commitment with one's family of origin, and is comprised of the following four dimensions: 1) *Subjugation of the self for the family*, characterized by prioritizing family needs over the individual's; 2) *Familial Interconnectedness*, or valuing "emotional and physical closeness" with family members (p. 322); 3) *Familial Honor*, involving protection of the family from insult, dishonor, or threat; and 4) *Familial Support*, such that family members reciprocally support one another in times of need, regardless of circumstance (Lugo Steidel & Contreras, 2003, p. 313-325). Pulling from earlier definitions by Burgess et al. (1963) and

Valenzuela et al. (1994), Lugo Steidel et al.'s (2003) conceptualization of attitudinal familism therefore consists of a sense of perceived connectedness, commitment, honor, value and sacrifice for the family unit.

Research indicates that attitudinal familism has a number of adaptive, protective effects on the mental health and psychosocial development of Hispanic adolescents. In Hispanic youth, empirical studies find that higher familism associates with a multitude of positive psychological and interpersonal outcomes, including improved child-parent communication (Fuligni, Tseng, & Lam, 1999), greater school attachment (Stein et al., 2015), lower depressive symptoms (Stein et al., 2015), fewer risky sexual behaviors (Guilamo-Ramos, Bouris, Jaccard, Lesesne, & Ballan, 2009), less parent-child conflict (Kuhlberg, Peña, & Zayas, 2010), and less aggressive and rule-breaking behavior (Marsiglia, Parsai, & Kulis, 2009). Considering these findings within a developmental review, Stein et al. (2014) reports that attitudinal familism specifically appears to promote social competence in adolescence and mitigate mood symptoms. An explanation implicated by other articles (e.g., Berkel et al., 2010; Stein et al., 2015) is that greater orientation and commitment to familial relations promote close, prosocial parent-adolescent relations, which buffer adolescents from emotional, social, and behavioral problems, and promote adaptive functioning and social development.

Familism and Suicide in Hispanic adolescents – Theory. Although familism, more generally, has been linked to a number of adaptive, positive outcomes in Hispanic youth, a more complex relationship has been found to exist between familism and suicidal ideation. Beginning with theory, Goldston et al. (2008) and Zayas et al. (2005) provide the most comprehensive look at familism broadly and suicidal ideation in

Hispanic youth, with the latter going as far as to propose a conceptual model for Latina suicide risk. In this work by Zayas, Lester, Cabassa, and Fortuna (2005), a conceptual model is proposed for Latina suicide attempt risk, hypothesizing that an adolescent's family sociocultural environment (i.e., culture, cultural traditions; adolescent development; and family functioning) all underlie psychological and emotional vulnerability and a subjective experience of adolescent-family crisis, which together confer risk for a suicide attempt (p. 277-278). Pulling from theories of development (Vygotsky, 1978) and ecological systems approach (Bronfenbrenner, 1986), Zayas et al. (2005) posited that one part of the family/sociocultural environment relevant to Latina suicide attempt risk is familism, the broad cultural value emphasizing interconnectedness, reciprocity, and strong alliance to family members (Lugo Steidel et al., 2003; Sabogal et al., 1987). Authors posit that Latina adolescents may experience unique conflict between familism and pressures from the external environment and Western culture to adhere to values of independence, self-sufficiency, and extrafamilial relationships (Zayas et al., 2005). For example, Zayas et al. (2005) propose that Latina females are often socialized to *marianismo*, a traditional gender role emphasizing interdependence, amicability, passivity, deference for Hispanic women (Castillo, Perez, Castillo, & Ghosheh, 2010; Sanchez, Whittaker, Hamilton, & Zayas, 2015). One source of suicidal symptoms purportedly arises when Latina adolescents experience conflict in their role fulfillment, and/or perceive failure to adhere to their role within the family structure. To this end, familism may be one factor associated with suicide attempt risk in Latina adolescents. However, it is important to note that familism is not defined as either a 'risk' or 'protective' factor for suicide by this model, but rather a variable that can act as *either*

depending on its interactions with other sociocultural, environmental, and family processes impacting the individual.

Building on theory (Zayas et al., 2005; Goldston et al., 2008), empirical work has investigated and demonstrated a relation between attitudinal familism specifically and suicidal ideation in Hispanic adolescents, with preliminary findings indicating a negative correlation between attitudinal familism and suicidal ideation. Using data from the National Longitudinal Study of Adolescent Health, Piña-Watson, Castillo, Rodriguez, and Ray (2014) studied the relation between familism factors (i.e., mother, father connectedness, perceived parental caring, autonomy granting) and found that higher perceptions of parental caring significantly predicted lower suicidal ideation in Latina youth. This finding indicates that attitudinal familism may have mitigating effects on suicidal ideation, given that perceived parental caring and reciprocity is one facet of attitudinal familism identified by Lugo Steidel et al.'s (2003) conceptualization [i.e., familial support]. In parallel with this, research by Garcia, Skay, Sieving, Naughton, and Bearinger (2008) find that adolescents with higher perceived connectedness with the family are at lower risk for suicidal ideation, relative to those with lower family connectedness (Piña-Watson et al., 2014). Together, these findings indicate that multiple facets of attitudinal familism, notably familial interconnectedness and support, may play potentially protective roles and mitigate suicidal ideation in Hispanic youth.

Attitudinal Familism, Perceived Burdensomeness, and Suicidal Ideation. Cumulatively, the aforementioned research identifies attitudinal familism and perceived burdensomeness as two factors associated with suicidal ideation in Hispanic individuals. Given that perceived burdensomeness is premised in one's beliefs about interpersonal

relationships, and attitudinal familism is grounded in value and emphasis of the family, one would expect that these variables have been studied together extensively. However, to date, almost no adolescent research has looked at the overlap between perceived burdensomeness and attitudinal familism, despite the likely possibility that believing one is a burden to close others may be discordant and distressing for Hispanic adolescents with strong sense of commitment and unity with the family, a hypothesis proposed by adult work (Garza et al., 2010). Even less is known about the interplay between these highly interpersonal and culturally-relevant constructs in the context of Hispanic adolescent suicidal ideation, which remains the central focus of the current study.

Despite lacking empirical work, sociocultural data and limited available research (Garza et al., 2010) indicate that two alternative possibilities may exist in explaining how perceived burdensomeness and attitudinal familism interact to predict suicidal ideation in Hispanic adolescents. The first possibility is that greater levels of attitudinal familism may strengthen the relationship between high perceived burdensomeness and suicidal ideation in Hispanic youth. In the only known study examining these three constructs in a Hispanic adult sample, Garza et al. (2010) proposed this hypothesis based on the idea that for individuals with higher orientation and commitment to one's family, beliefs about being a burden to close loved ones may be more salient, distressing, and likely to result in increased suicidal ideation. Although derived from existing sociocultural data and theory, the hypothesis proposed by Garza et al. (2010) was not supported empirically by findings in this study—attitudinal familism did not significantly interact with perceived burdensomeness to predict suicidal ideation in Hispanic adults, despite significant main effects of perceived burdensomeness on suicidal ideation. Consequently, preliminary data

has not supported the assertion that greater attitudinal familism exacerbates the link between perceived burdensomeness and suicidal ideation in Hispanic individuals, though more research is needed to draw concrete conclusions.

In contrast to this explanation, an opposing hypothesis can be made, theorizing that greater levels of attitudinal familism may mitigate, or weaken, the relation between perceived burdensomeness and suicidal ideation in Hispanic adolescents. In Hispanic teens specifically, it is possible that higher levels of familism, or orientation/valuing of the family, may buffer the impact of perceived burdensomeness on suicidal ideation, especially when perceived burdensomeness occurs in the context of extrafamilial relationships. In other words, when Hispanic adolescents perceive that they are burdening their peer, romantic, or other non-familial relationships, having a high value/commitment to the family may act as a protective mechanism and provide the adolescent with an alternative source of social support to mitigate thoughts about suicide. Indeed, much previous empirical work demonstrates that attitudinal familism has a number of protective and adaptive effects on positive outcomes in youth (e.g., Marsiglia et al., 2009), buffers against peer problems (Germán, Gonzales, & Dumka, 2009), and this may extend to buffering the effects of perceived burdensomeness on suicidal ideation. Existing research on suicidal symptoms provides preliminary support for this, with Peña et al. (2011) finding that familism mitigates suicidal symptoms in Latina youth through impact on closeness of families (e.g., tight-knit vs. loose-knit). This, in combination with other studies (e.g., Piña-Watson et al., 2014) indicate that attitudinal familism buffers against suicidal ideation in Latina youth, and may extend to the relation between perceived burdensomeness and suicidal ideation.

Limitations in Existing Research. Despite these proposed hypotheses, significant limitations exist in the current literature, which prevent a clear understanding of the relation between perceived burdensomeness, suicidal ideation, and the moderating effects of attitudinal familism in Hispanic youth. As a first, and most apparent limitation to our understanding, no empirical studies have concurrently examined the links between perceived burdensomeness, attitudinal familism and suicidal ideation, nor moderation involving these variables, in Hispanic adolescents. To our knowledge, only one study has investigated these variables (Garza et al., 2010) and did so in a Mexican-American Immigrant sample, which may not generalize to Hispanic youth living in the United States. One significant reason these findings may not generalize is that Hispanic youth have been found to experience a number of developmentally-specific stressors, including acculturative strain between their family of origin and the Westernized, Anglo culture of their peers (Gil, Vega, & Dimas, 1994). Beyond this, the paucity of work on attitudinal familism, perceived burdensomeness, and suicidal ideation may partially reflect issues inherent to existing research of the IPTS and sampling. To explain, much adolescent-focused research to date on relations within the IPTS (e.g., the link between perceived burdensomeness and suicidal ideation) have largely occurred in ethnoracially homogenous samples, or those including low, negligible numbers of Hispanic-identifying youth. As mentioned previously, Stewart et al.'s (2015) review of adolescent IPTS research shows that only two adolescent IPTS studies utilize samples with more than 30% Hispanic/Latino youth, and we are currently only aware of one study (Hill et al., 2016) that has studied the IPTS in a predominantly Hispanic youth sample. Given that previous studies have included relatively low numbers of Hispanic-identifying

adolescents, the rationale and ability to study culturally-related variables, such as familism, was likely hindered. Beyond this, a second factor impacting the study of perceived burdensomeness, attitudinal familism, and suicidal ideation in Hispanic youth is related to discrepancies in the conceptualization and measurement of attitudinal familism. As discussed by Lugo Steidel et al. (2003) and Stein et al. (2014), conceptualizations of familism have varied widely in previous literature, precluding a clear study of this phenomena and ability to synthesize findings across studies. More specifically, attitudinal familism was not translated fully from conceptualization to measurement until 2003, when Lugo Steidel and Contreras developed and validated the Attitudinal Familism Scale (AFS) with the four proposed facets of attitudinal familism included. As a result, the study of attitudinal familism with empirically-valid psychological measures is relatively new, and this may have impacted the subsequent study of attitudinal familism in relation to other constructs, including the IPTS.

Despite these limitations, the study of perceived burdensomeness, suicidal ideation, and the moderating effects of attitudinal familism in Hispanic youth remains scholarly and important in the field for multiple reasons. First, a clear, directed investigation of the relations between these constructs would serve to expand understanding of the IPTS to a culturally-relevant context for Hispanic youth. In specific, investigation of perceived burdensomeness, attitudinal familism, and suicidal ideation would serve to elucidate key culturally-relevant processes (i.e., attitudinal familism) which may interact with other interpersonal variables (e.g., perceived burdensomeness) to predict suicidal ideation in youth. Understanding the role of culturally-relevant processes within known IPTS relations remains key, as this may: 1) shed light on broader

culturally-relevant mechanisms underlying elevated suicide risk in Hispanic adolescents specifically; and 2) inform the development of culturally-sensitive interventions for suicidal symptoms in Hispanic youth. In regards to the latter, study of perceived burdensomeness, attitudinal familism, and suicidal ideation in Hispanic adolescents remains significant to clinical treatment efforts, given that findings indicating attitudinal familism mitigates the impact of perceived burdensomeness on suicidal ideation, may reveal a potential protective mechanism which could be strengthened in interventions for suicidal Hispanic youth. Beyond this, findings demonstrating a mitigating effect could more broadly inform early suicide prevention, in the vein of preventative programs which bolster family interconnectedness, reciprocity, and support in young Hispanic youth. Even if the opposite were found, such that attitudinal familism exacerbates the relation between perceived burdensomeness and suicidal ideation, this may help to inform our understanding of one culturally-relevant mechanism maintaining suicide ideation risk in Hispanic youth. To this end, the direct empirical investigation of perceived burdensomeness, attitudinal familism, and suicidal ideation remains important for both improved knowledge of culturally-relevant processes impacting suicide risk in Hispanic adolescents, and informing the development of culturally-sensitive interventions for suicidal symptoms in these youth.

The Current Study

Against this background, the current proposal sought to act as a direct, preliminary empirical investigation of perceived burdensomeness, attitudinal familism, and suicidal ideation in Hispanic adolescents. In specific, the current study examined the moderating effects of attitudinal familism on the relation between perceived

burdensomeness and suicidal ideation, a well-established relation proposed by the IPTS. The current proposal sought to examine these relations in a sample of $N = 81$ Hispanic adolescent inpatients, recruited within an existing, cross-sectional psychiatric study of suicidal behaviors. Guided by the only existing adult study on these variables (Garza et al., 2010), the specific aims of the current proposal were two-fold: 1) Aim 1: To investigate the direct relations between perceived burdensomeness, attitudinal familism, and suicidal ideation in a Hispanic adolescent inpatient sample; and 2) Aim 2: To investigate the moderating effects of attitudinal familism (consistent the conceptualization provided by Lugo Steidel and Contreras (2003) on the relation between perceived burdensomeness and suicidal ideation in Hispanic adolescent inpatients, while controlling for the effects of potentially relevant covariates (depressive symptoms, gender). When examining relations between perceived burdensomeness, attitudinal familism, and suicidal ideation, we proposed to include depressive symptoms and gender as covariates in our analyses, given known associations shared with main study variables. First, gender is markedly and differentially related to suicidal phenomena in Hispanic and Latino youth (see Goldston et al., 2008; Zayas et al., 2005), with much empirical and epidemiological data (e.g., CDC, 2015) showing Hispanic adolescent females experiencing consistently greater risk for suicidal ideation and non-fatal suicidal attempt. Beyond this, sociocultural theory and research have documented notable differences in familism across Hispanic females and males, including the differences in gender roles emphasized within the family (e.g., *marianismo* for females, and *machismo* for males; Sabogal et al., 1987; Sanchez et al., 2015). For this reason, gender was included as a covariate in data analyses. Secondly, depressive symptoms were also included as a

covariate, given its well documented associations with suicidal ideation in Hispanic youth (Hovey & King, 1996; Roberts et al., 1995), as well as differential relations with other model covariates (i.e., gender; Céspedes & Huey Jr., 2008).

In order to investigate primary study aims, the current proposal implemented a cross-sectional design, which employed both self-report-based and interviewer-rated assessments to conceptualize main study variables (perceived burdensomeness, attitudinal familism, suicidal ideation) and potential covariates (depressive symptoms, gender). Specific hypotheses included in the current proposal were highly preliminary and based on limited, existing data available. First, for hypothesis (a), it was hypothesized that total INQ-15 perceived burdensomeness subscale score, with higher scores representing greater perceived burdensomeness, will be significantly positively correlated with total MSSI scores, with higher scores indicating greater suicidal ideation. This hypothesis was made based on the breadth of data from Hispanic and non-Hispanic samples, documenting a significant positive correlation between perceived burdensomeness and suicidal ideation (Garza et al., 2010; Hill et al., 2012**)**. Second, for hypothesis (b), it was hypothesized that total AFS score, with higher scores representing greater attitudinal familism, will be significantly negatively correlated with total MSSI scores. The hypothesis that greater attitudinal familism will significantly correlate with lower suicidal ideation is derived from work by Piña-Watson et al. (2014) and Garcia et al. (2008), indicating negative correlations between familism-related variables and suicidal ideation in Latina youth. Third, for hypothesis (c), it was hypothesized that the relation between INQ-15 perceived burdensomeness and suicidal ideation on the MSSI will be significantly moderated by attitudinal familism, such that

higher attitudinal familism will *mitigate* the relation between perceived burdensomeness and suicidal ideation. Attitudinal familism is expected to have a buffering impact on this relation, given that higher perceived emphasis and connectedness to one's family may be protective when adolescents experience burdensomeness in peer/romantic non-familial relationships, and this may subsequently weaken the expected association between perceived burdensomeness and suicidal ideation. Although this goes against hypotheses proposed in existing adult work (e.g., Garza et al., 2010), this hypothesis may be most developmentally-appropriate in the sense that adolescents place heavy emphasis on peer/romantic relations, and may likely to turn to family relationships for interpersonal support when perceiving conflict/concern in peer/romantic domains (e.g., perceived burdensomeness). To this end, for Hispanic adolescents particularly, attitudinal familism was expected to have a buffering effect on the relation between perceived burdensomeness and suicidal ideation, and this will exist while controlling for potentially-relevant covariates of depressive symptoms and gender.

Lastly, while the current study expected to find relations between perceived burdensomeness and suicidal ideation, attitudinal familism and suicidal ideation, and the moderating effect of attitudinal familism on the link between perceived burdensomeness and suicidal ideation, much less is known about the relation between perceived burdensomeness and attitudinal familism in Hispanic adolescents. Given that this relation has never been directly tested in an adolescent sample, and the only existing investigation remains in a Mexican-American Immigrant adult sample (i.e., Garza et al., 2010), the analyses proposed were partially exploratory and aimed at investigating the link between

perceived burdensomeness and attitudinal familism. Based on the exploratory investigation of this relation, no a-priori hypothesis was proposed.

Methods

Participants

The full sample consisted of *N* = 81 Hispanic adolescent inpatients between the ages of 12 and 17, recruited from the acute child and adolescent inpatient unit of a public psychiatric hospital, University of Texas Health Harris County Psychiatric Center (UTHCPC), in Houston, Texas. Participants were recruited from an existing IRB-approved cross-sectional study of suicidal behavior in adolescents. Of the N=414 adolescents providing assent, the *N* = 81 participants included in the study met the following inclusion criteria: a) between the ages of 12 and 17 years of age, b) speak English fluently, c) read at the equivalent of a third-grade (3.0) level or above, as established by the Wide Range Achievement Test 4 (WRAT4; Wilkinson & Robertson, 2006), d) were not diagnosed with an intellectual disability or psychotic disorder, by the admitting psychiatrist, e) were voluntarily admitted, and f) identified as Hispanic on a sociodemographic questionnaire. Of note, of the N=414 adolescents who assented and participated in the study, N=158 identified as Hispanic. Participants who did not complete all main study measures were not included in the final sample, resulting in a final sample of N=81.

Measures

Interpersonal Needs Questionnaire. Perceived burdensomeness was captured using the Interpersonal Needs Questionnaire- 15 Item Version (INQ-15; Van Orden, Cukrowicz, Witte, & Joiner, 2012), a 15-item self-report-based assessment of the original

INQ (Van Orden, Witte, Gordon, Bender, & Joiner, 2008), which assesses both perceived burdensomeness and thwarted belongingness. Participants will respond to all items on a 7-point Likert scale (range: 1 to 7), with 1 = not at all true, and 7 = very true for me (Hill et al., 2015). Perceived burdensomeness subscale score was computed with 6 items (e.g., "These days, I think I am a burden on society"; Van Orden et al., 2008) and thwarted belongingness subscale score was computed with 9 items (e.g., "These days, I feel disconnected from other people; Van Orden et al., 2008). Of note, both subscales were utilized in study analyses, although thwarted belongingness was only included for descriptive purposes. Adequate psychometric properties (reliability, validity, factor structure) have been established for the INQ, which has been used in a number of adolescent inpatient samples (e.g., Czyz, Berona, & King, 2015; Venta, Mellick, Schatte, & Sharp, 2014). Internal consistency, as measured by Cronbach's alpha, was evidenced at $\alpha = .93$ in previous adolescent inpatient work (Venta et al., 2014), and was calculated to be $\alpha = .85$ for the INQ-15 in the current study.

Attitudinal Familism Scale. Attitudinal familism was measured using the Attitudinal Familism Scale (AFS; Lugo Steidel & Contreras, 2003), an 18-item self-report-based assessment of attitudinal familism capturing familial interconnectedness, subjugation of self for family, familial support and honor. Participants responded to all items (e.g., "A person should rely on his or her family if the need arises"; Lugo Steidel & Contreras, 2003) on a 10-point Likert scale (range: 0-10), indicating how much they agreed with each statement (0 = strongly disagree, to 10 = strongly agree). Item responses were summed for a total AFS score, with greater scores indicating greater attitudinal familism (range: 18-180). Adequate psychometric properties (reliability, validity, factor

structure) have been established for the AFS, which was originally developed and validated for Latino and Hispanic individuals (Lugo Steidel et al., 2003). The AFS has been utilized in Hispanic adolescent samples (e.g., Esparza & Sanchez, 2008; Kuhlberg et al., 2010), with Esparza et al. (2008) indicating internal consistency, as measured with Cronbach's alpha, at $\alpha = .83$. In the current study, internal consistency was assessed at a Cronbach's alpha of $\alpha = .89$.

Modified Scale for Suicidal Ideation. Suicidal ideation was measured using the Modified Scale for Suicidal Ideation (MSSI; Miller, Norman, Bishop, & Dow, 1986), an 18-item, interviewer-rated assessment of suicidal ideation, capturing both desire of death and suicidal plans and preparation. In a semi-structured interview-based format, participants were asked to respond to all 18 items (e.g., desire to make an active attempt, intensity of thoughts), and the interviewer rated the response on a 4-point scale, ranging from 0 to 3 (Miller et al., 1986). Total MSSI scores were computed by summing all items, with greater total scores indicating more severe suicidal ideation. Adequate psychometric properties (reliability, validity, factor structure) have been established for the MSSI, and specifically for adolescent inpatient samples (Pettit et al., 2009), with internal consistency measured at $\alpha = .89$. In the current proposal, internal consistency was assessed, with Cronbach's alpha at $\alpha = .93$.

Beck Depression Inventory-II. Depressive symptoms were captured using the Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996), a 21-item self-report-based assessment of depressive symptoms, designed for individuals aged 13 years and above. Participants responded to all items on a 4-point Likert scale (range: 0-3), with higher scores indicating greater depressive symptoms. Items were summed for a total

BDI-II score (range: 0-63), with greater scores indicating greater depressive symptoms, with the following pre-determined score ranges specified: minimal depression (0-13), mild depression (14-19), moderate depression (20-28), and severe depression (29-63; Beck et al., 1993). Adequate psychometric properties (reliability, validity, factor structure) have been established for the BDI-II, which has been used across a range of adolescent psychiatric samples (e.g., Krefetz, Steer, Gulab, & Beck, 2002; Osman, Kopper, Barrios, Gutierrez, & Bagge, 2004), with an internal consistency of $\alpha = .92$ in a psychiatric adolescent sample (Grover et al., 2009). In the current study, internal consistency was measured with Cronbach's alpha at $\alpha = .92$.

Sociodemographic Questionnaire. Sociodemographic information was captured with a brief questionnaire developed for the inpatient sample included in the current proposal. Sociodemographic information assessed included self-identified gender, ethnicity/race, and age at time of assessment. For the current proposal, study inclusion was based on participant's self-identification as "Hispanic" on this questionnaire.

Procedures

The current proposal was based on an existing IRB-approved study of suicidal behaviors in psychiatric adolescents on a brief-stay, acute child and adolescent inpatient unit. Upon being admitted to the psychiatric hospital, nurses acquainted with study procedures obtained parental consent from the custodial parent or legal guardian. Parental consent was required for participation. Of those parent(s) and legal guardian(s) providing consent, adolescents were approached for assent within 1-3 days of their inpatient admission. If the adolescent provided assent, the adolescent participant completed the

study battery with a trained, doctoral-level assessor. Participants were reimbursed for study completion and received one $30 gift card to Target.

Data Analytic Strategy

Preliminary Analyses. The current proposal first tested the normality of all primary study variables (perceived burdensomeness, attitudinal familism, suicidal ideation) and continuously-rated covariates (depressive symptoms) using both numerical means (Shapiro-Wilk Test of Normality; skewness, kurtosis values) and graphical interpretations (normal q-q plots) in SPSS. Descriptive statistics were thereafter calculated. Bivariate relations were used to examine interrelations of proposed study variables (perceived burdensomeness, attitudinal familism, suicidal ideation, depressive symptoms, and gender), as well as other pertinent sociodemographic information (e.g., age). Independent sample t-tests were specifically used to examine gender differences in Hispanic youth in perceived burdensomeness, attitudinal familism, suicidal ideation, and depressive symptoms, prior to the completion of moderation analyses.

Moderation Analyses. The proposed moderation model was tested in SPSS Statistical Software Version 24.0 using the Process Macro (Hayes, 2013), a statistical add-on. The process macro has particular advantages above and beyond other approaches (e.g., bootstrapped moderation; Baron & Kenny, 1986), as process uses a regression framework which bootstraps both the regression coefficient distributions and products to estimate direct and indirect effects (Hayes, 2016). Process' ability to implement bootstrapping inherent to its framework remains important, given that bootstrapping is robust to non-normal data (Hayes 2013; 2016). Process automatically and accurately centers (i.e., standardizes) predictive variables in proposed models (Hayes, 2016), which

extended to the proposed model. In the current study, the proposed moderation model included total INQ-15 perceived burdensomeness score as independent variable (IV), total AFS score as the moderator, total MSSI score as dependent variable, and total BDI-II score and gender (coded dichotomously) as covariates. Direct and indirect effects were examined. In the moderation model, a significant direct effect was hypothesized, such that total INQ-15 perceived burdensomeness was expected to be significantly positively related with total MSSI score, over and above the effects of covariates (depressive symptoms per BDI-II, gender). A second, significant direct effect was expected, such that total AFS score was expected to significantly negatively relate with total MSSI score, over and above the effects of covariates (BDI-II depressive symptoms, gender). Third, a significant indirect effect was expected, such that a significant interaction would occur between INQ-15 perceived burdensomeness and attitudinal familism in the prediction of MSSI score, and that attitudinal familism would have a mitigating effect, above and beyond the effect of covariates (BDI-II depressive symptoms, gender).

Results

Preliminary Analyses

Normality testing was explored using numerical (Shapiro Wilk Test of Normality, skewness/kurtosis values) and graphical means (q-q plots) for continuous measures (MSSI, AFS, INQ-15 perceived burdensomeness, BDI-II). Numerical means are depicted in Table 1. All continuous measures had skewness and kurtosis values within acceptable limits (-/+ 2) for normality (George & Mallery, 2001), though evidence of non-normality was suggested by the Shapiro Wilk's Tests for both the MSSI and INQ-15 perceived

burdensomeness scale. Graphical interpretations were generally consistent with numerical testing indicating normality.

Table 1

Descriptive Analyses

Descriptive data on all continuous main study measures (MSSI, AFS, INQ subscales), symptom-based covariates (BDI-II), and sociodemographic information is depicted in Table 2. Demographically, the sample is 54.3% female (n=44), with an average age of M = 14.86 years (SD = 1.32). On measures of suicidal ideation, total MSSI score was estimated at M = 18.84 (SD = 12.94) for the full sample, which indicates elevated levels of suicidal ideation. On the INQ-15, perceived burdensomeness was estimated at M = 22.44 (SD = 10.88) and thwarted belongingness at M = 33.08 (SD = 10.29). On measures of attitudinal familism, total AFS score was estimated at M= 124.32 (SD = 27.64). On measures of symptom-based covariates (i.e., BDI-II), total depressive symptoms were estimated at M = 22.38 (SD = 12.64), falling within the moderate range of depressive symptoms (Beck et al., 1996).

Table 2

Bivariate Relations

Bivariate correlations were tabulated for all continuously-rated, primary study measures (MSSI, AFS, INQ-15 perceived burdensomeness, BDI-II) and demographic characteristics (age) using Pearson's correlation coefficient (denoted by r) and are depicted in Table 3. Of note, INQ-15 perceived burdensomeness was significantly correlated with suicidal ideation on the MSSI (r = .548, p < .001), indicating greater perceived burdensomeness associates with higher levels of suicidal ideation. Perceived

burdensomeness was also significantly correlated with depressive symptoms on the BDI-II (r = .647, p < .001), indicating greater perceived burdensomeness associates with greater depressive symptoms. Attitudinal familism was not significantly correlated with any other main study variables (MSSI, INQ-15 perceived burdensomeness, BDI-II) or age. Suicidal ideation on the MSSI was significantly positively correlated with self-reported BDI-II depressive symptoms (r = .601, p < .001), such that greater depressive symptoms associated with increased suicidal ideation. Lastly, and in regards to demography, age was non-significantly correlated with all primary study variables.

Table 3

Independent sample t-tests were calculated in order to examine gender differences across continuously-rated, primary study variables (MSSI, AFS, INQ-15 perceived burdensomeness, and BDI-II) prior to moderation analyses. Findings indicated no significant gender differences across MSSI suicidal ideation (t = 1.86, p = .067), BDI-II depressive symptoms (t = 1.17, p = .245), AFS attitudinal familism (t = -1.55, p = .126), and INQ-15 perceived burdensomeness (t = -.108, p = .914).

Moderation Analyses

The proposed moderation model was tested using linear regression analyses in SPSS 24.0 using the Process Macro (Model 1; Simple Moderation). In the model, INQ-15 perceived burdensomeness was entered as independent variable, AFS total was entered as the moderator variable, gender and BDI-II were entered as model covariates, and MSSI total was entered as dependent variable. Of the 81 adolescents, 1 was missing one of the measures included in the regression analyses, resulting in a sample of 80 used in these analyses. Results of the model are depicted in Table 4.

Table 4

Results indicated overall model significance ($F(5, 74) = 12.27$, $p < .001$, $R^2 = .453$), with 45.3% of variance due to the five predictors entered (AFS, INQ-15 perceived burdensomeness, the interaction term, BDI-II, and gender). In the model, the covariate of BDI-II depressive symptoms was significantly associated suicidal ideation ($b = .381$, $t(74) = 3.16$, $p = .002$), such that greater depressive symptoms associated with increased suicidal ideation. The covariate of gender was not significantly associated with suicidal ideation ($b = -4.660$, $t(74) = -1.98$, $p = .051$), though there was a marked trend towards significance. In regards to main variables, INQ-15 perceived burdensomeness was significantly associated with suicidal ideation ($b = 1.275$, $t(74) = 2.36$, $p = .021$), such that greater perceived burdensomeness associated with increased suicidal ideation. Attitudinal familism was not significantly associated with suicidal ideation ($b = .149$, $t(74) = 1.48$, $p = .427$). The interaction effect of INQ-15 perceived burdensomeness by attitudinal familism on the AFS was non-significant ($b = -.007$, $t(74) = -1.76$, $p = .083$, R^2 increase due to interaction = .0228, $f^2 = .0223$); although non-significant and of small effect size, results of the interaction effect indicate a trend towards significance at $p = .083$, and that attitudinal familism is trending towards a mitigating effect on the link between perceived burdensomeness and suicidal ideation, while covarying for depressive symptoms and gender.

In order to further understand the calculated interaction effect, power analyses were conducted post-hoc in order to compute achieved power for the interaction effect. Post-hoc analyses to calculate achieved power were conducted in G*Power Statistical Software Version 3.1 (Faul, Erdfelder, Buchner, & Lang, 2009), using the achieved effect

size (f^2 = .0223), alpha set to .05, and total sample size of 80. Achieved power for the interaction effect was calculated to be .172, a value far below the standard power metric of .8 in behavioral sciences (Aiken & West, 1991). In consequence, chances of detecting a true effect for the interaction was significantly underpowered.

Discussion

The present study had two primary aims, to 1) to investigate the direct relations between perceived burdensomeness, attitudinal familism, and suicidal ideation in a Hispanic adolescent inpatient sample, and 2) to investigate the moderating effects of attitudinal familism (consistent the conceptualization proposed by Lugo Steidel & Contreras, 2003) on the relation between perceived burdensomeness and suicidal ideation in Hispanic adolescent inpatients, while controlling for the effects of potentially relevant covariates (depressive symptoms, gender). The interaction hypothesis (hypothesis c) was that the relation between perceived burdensomeness and suicidal ideation would be significantly moderated by attitudinal familism, such that higher attitudinal familism would mitigate the relation between perceived burdensomeness and suicidal ideation, and this would exist above and beyond the effects of covariates (depressive symptoms, gender). The evidenced interaction effect was non-significant, though it trended towards significance in the proposed direction with a low effect size and achieved power. It was also hypothesized that perceived burdensomeness would significantly positively correlate with suicidal ideation (hypothesis a), and attitudinal familism would significantly negatively correlate with suicidal ideation (hypothesis b), both above and beyond the effects of depressive symptoms and gender. Findings supported hypothesis (a), that

perceived burdensomeness significantly positively associates with suicidal ideation, though support was not provided for hypothesis (b).

First, primary interaction findings will be discussed. Overall, results from the current study indicated a nonsignificant interaction effect of attitudinal familism on the relation between perceived burdensomeness and suicidal ideation, above and beyond the effects of depressive symptoms and gender. Despite this, there was a noted trend towards significance at $p = .08$, indicating a trend for attitudinal familism to mitigate the relation between perceived burdensomeness and suicidal ideation, consistent with hypothesis (c). This point remains critical, coupled with the post-hoc analyses indicating low achieved power for the interaction term—together, these analyses suggest that the current model had low probability of detecting a true interaction effect, and therefore our trend towards significance may in fact represent a true effect that we were not sufficiently powered to obtain in our present analyses. In other words, it is plausible that low achieved power for the interaction effect prohibited us from detecting a true mitigating, interaction effect of attitudinal familism on the link between perceived burdensomeness and suicidal ideation. Indeed, the trend does suggest that attitudinal familism plays a buffering role on this relationship, such that at higher levels of attitudinal familism, the link between perceived burdensomeness and suicidal ideation is weakened for Hispanic adolescents. However, given the low achieved power and effect size, interpretations of the trending interaction findings remain highly tentative and are interpreted with caution next.

The trend towards significance for the primary interaction suggests that attitudinal familism may play a potentially protective role in diminishing the impact of perceived burdensomeness on suicidal ideation. Indeed, this is consistent with rationale for the

proposed a-priori hypothesis, positing that when Hispanic adolescents perceive that they are a burden within their extra-familial relationships (i.e., peer, romantic), holding higher value, cohesion, and commitment to the family may provide the adolescent with an alternative source of perceived social support to mitigate thoughts about suicide. The fact that our trend suggests attitudinal familism may play a buffering role in intersecting a well-documented risk relation for suicidal symptoms is not entirely surprising—previous research (e.g., Kuhlberg et al., 2010; Peña et al., 2011) does indicate that familism has a protective effect on suicide risk in adolescent Latinas and may be an important identified factor to bolster in culturally-sensitive, suicide-focused prevention and intervention.

Beyond this, findings on the interaction between attitudinal familism, perceived burdensomeness, and suicidal ideation differ in distinct, though understandable ways from the only other existing study of the examined moderation model in Mexican-American adults (Garza et al., 2010). For one, a-priori hypotheses about the proposed interactive effect of attitudinal familism on the link between perceived burdensomeness and suicidal ideation between the two studies were opposite: the current study proposed that attitudinal familism would have a mitigating effect, given its potential to buffer against perceived burdensomeness within extra-familial relationships, whereas Garza et al. (2010) proposed that higher attitudinal familism would exacerbate the link between perceived burdensomeness and suicidal ideation. The difference between these proposed hypotheses makes sense in a developmental context: adolescence is a critical time period in which peer and romantic relationships are of particularly high importance (Brown & Larson, 2009; Collins, 2003), and perceptions of burdensomeness in these relations may thus elicit strong emotion and associated suicide ideation—however, if the adolescent has

an alternative perceived source of support (i.e., family), this could provide a buffer against perceived issues and subsequent thoughts about suicide. In contrast, for adults who hold the family unit in high value, concurrent perceptions of being a drain/burden to the family system may be particularly distressing and likely to lead to suicidal ideation.

Despite different initial hypotheses, both results of Garza et al. (2010) and the current study found nonsignificant interaction effects for attitudinal familism on the link between perceived burdensomeness and suicidal ideation, while covarying for depressive symptoms. However, unique to the current study, was a trend toward significance indicating a buffering effect for attitudinal familism in Hispanic adolescents only. This evidenced discrepancy could be explained by the above hypotheses, and also potentially to different interpretations of perceived burdensomeness on the INQ-15 by study samples. To explain, perceived burdensomeness on the INQ-15 is non-specific to any particular type of relationship; therefore, it does not specify what relationship (family, peer, romantic) an individual is to hold in mind while answering questions about whether they perceive themselves as a drain on particular relationships on the INQ-15. Given the increasing salience of peer/romantic relationships in adolescent, we believe it is plausible that adolescent participants in the current study may have held extra-familial relations in mind during INQ-15 measure completion, and subsequent results would reflect perceived burdensomeness about peer/romantic relationships, rather than family. The unique trend to significance for attitudinal familism as a mitigating factor, could thus reflect the extra-familial relationships adolescents uniquely held in mind while answering the INQ-15. However, data is not available from either Garza et al. (2010), nor the current study, to indicate *what type* of relationships participants held in mind while completing perceived

burdensomeness question on the INQ. To this end, the aforementioned explanation remains tentative, speculative, and in need of further exploration.

Aside from primary interaction effects, multiple significant main effects and bivariate relations were observed between main study variables, and are aligned with existing suicide-focused research in Hispanic adolescents, as well as established suicide theory (i.e., the IPTS). First, and consistent with a long-documented relation inherent to the interpersonal theory of suicide, perceived burdensomeness and suicidal ideation were significantly related, with higher perceived burdensomeness linked to greater suicidal ideation, in support of hypothesis (a). This link has been thoroughly evidenced in adolescent populations (e.g., Garza et al., 2010; Hill et al., 2012), though the current study is among few to demonstrate this above and beyond the effects of depressive symptoms and gender, and in a strictly Hispanic adolescent inpatient sample. Second, depressive symptoms on the BDI-II shared a robust, significant relationship with suicidal ideation, with greater depressive symptoms associated with increased suicidal ideation. This finding is parallel with longstanding research on diagnostic/symptom-based risk factors for suicidal symptoms, indicating depressive symptoms as a key risk factor (e.g., Friedrich, Reams, & Jacobs, 1982; & Hovey & King, 1996). Lastly, and in contrast with existing literature, there were no evidenced gender differences across any study variables, including suicidal ideation and depressive symptoms. This remains somewhat surprising, given that in Hispanic adolescents particularly, notable gender differences have been documented for both suicidal symptoms and depressive symptomatology (CDC, 2015; Céspedes & Huey Jr., 2008), leading to gender's inclusion as a covariate. It is possible

that, given the acute inpatient nature of the current psychiatric sample, depressive and suicidal symptoms were generally elevated across the sample, regardless of gender.

Related to main study findings, there are multiple limitations of note within the current study. First, a critical and central limitation of the current study is markedly low achieved power for detecting the interaction effect. Statistical literature (Rossi, 1990) indicates low statistical power can undermine ability to detect a true effect, thus leading to increased chance of Type II errors (i.e., false negatives). We believe low achieved statistical power for the interaction term may have decreased our likelihood of detecting a true significant effect, and that achieved power was affected by a small available sample size (N = 80) of Hispanic adolescent inpatients. To this end, future research is needed to replicate the current moderation model in a larger sample of Hispanic adolescent inpatients, given that this may provide increased power for detecting a true interaction effect, and also provide insight to whether the current trend towards significance of attitudinal familism having a mitigating effect holds across other Hispanic adolescent psychiatric samples. Indeed, it remains important to note that the small sample size of Hispanic adolescent inpatients observed in the current study may in part fact reflect ethnographic differences in mental health service access for suicidal youth—as mentioned in the introduction, work by Kataoka et al. (2002, 2003) indicate Hispanic youth experience greatest unmet need and are simultaneously under-identified for crisis intervention, which leads us to believe a noted portion of suicidal Hispanic youth simply do not present to psychiatric inpatient settings for mental healthcare, and thus aren't available to be assessed in research such as the current study.

Second, the INQ-15 included in the current study did not assess perceived burdensomeness relative to specific types of relationships, rather perceived burdensomeness was assessed generally across interpersonal relations. This remains problematic in the current study, given that our findings cannot fully speak to whether attitudinal familism mitigates the link between perceived burdensomeness and suicidal ideation, when perceived burdensomeness is surrounding extra-familial relationships for adolescents. Future work on the IPTS as it overlaps with culturally-relevant constructs for Hispanic adolescents would serve to develop a version of the INQ-15 which is specific to different types of relationships (i.e., peer, romantic, familial), and investigate whether attitudinal familism has disparate effects on the moderating relationship between perceived burdensomeness and suicidal ideation, when perceived burdensomeness occurs within the family versus outside of it (peer, romantic). Such a study may also provide insight to the discrepancies in hypotheses and findings evidenced between the current study in Hispanic adolescents and parallel moderation study in Mexican American adults (Garza et al., 2010). Third, the current study did not include or covary for other culturally-relevant constructs (i.e., acculturative stress, interdependence) which may be relevant to perceived burdensomeness' effect on suicidal ideation in Hispanic adolescents; for example, cultural stress associated with viewing the self as a burden could lead to increased suicidal ideation in Hispanic males who hold *machismo* and contribution to the family unit in high regard. Fourth, the current study also did not examine or covary for interpersonal constructs (i.e., attachment, emotional trust) which may relate to main study variables (e.g., attitudinal familism, perceived burdensomeness) and the examined moderation model. A comprehensive study which studies moderation

in the context of other relevant sociocultural and interpersonal variables may provide more nuanced insight to the role of attitudinal familism on the link between perceived burdensomeness and suicidal ideation in Hispanic youth.

Fifth, given that the AFS is a multidimensional scale, the current study was limited in the sense that only the total attitudinal familism was studied in association to adolescent suicidal ideation; differential examination of subjugation of self for family, familial support, familial interconnectedness, and familial honor in relation to suicidal ideation could have provided insight to *which* facets of attitudinal familism, if any, may be relevant to the evidenced interaction trend. Future work should explore whether there are differential associations between these facets of attitudinal familism with suicidal ideation in Hispanic adolescents, and. Sixth, although skewness values were within appropriate ranges for the MSSI, Shapiro Wilk test indicated non-normality for this measure, and future work may use strategies to normalize suicide ideation data, which may increase subsequent power. Seventh, the current study did not consider the possibility of varying degrees of acculturation in Hispanic adolescents comprising the current sample—we believe this is a limitation in the sense that Hispanic adolescents who have lived in the United States for their lifetime may differ in attitudinal familism, relative to Hispanic adolescents who migrated from other nations and are less acculturated within the United States. Lastly, we believe that including depressive symptoms as a covariate in our interaction model may have in part prevented us from detecting the true effect of perceived burdensomeness on suicidal ideation—to this end, future research should consider the link between perceived burdensomeness on suicidal

ideation without covarying for depressive symptoms, or by removing Item #9 from the BDI-II [see Appendix] if including depressive symptoms as a relevant covariate.

Notwithstanding these limitations, the current study had a number of strengths. For one, this study was the first known investigation of the moderating effect of attitudinal familism on the link between perceived burdensomeness and suicidal ideation in Hispanic youth—placing a well-established interpersonal theory of suicide within a culturally-relevant frame for Hispanic adolescents at high-risk for suicidal behavior and death. In a broad sense, the study also bridged two extant, but disparate, theories of suicide for adolescents—Zayas et al. (2005) conceptual model of Latina suicide risk implicating attitudinal familism, and the interpersonal theory of suicide (IPTS). An empirical investigation of suicidal symptoms bridging these two theories is important because it provides insight to whether distal, culturally-related familial factors (e.g., attitudinal familism) can intersect and buffer known interpersonal risk relations for suicidal symptoms in Hispanic youth. Inherent to this, the current study also has implications for treatments of suicidal symptoms. Preliminary findings indicating a trend towards significance for attitudinal familism are aligned with other empirical studies (Kuhlberg et al., 2010; Peña et al., 2011) suggesting high perceived connectedness, value, and cohesion to the family may alleviate suicidal thoughts and behaviors. To this end, current and previous research point to the salience of attitudinal familism as a key protective factor to integrate within culturally-competent suicide prevention and intervention programs. For example, treatments for suicidal symptoms could promote familial support and interconnectedness (i.e., two facets of attitudinal familism) by emphasizing help-seeking behavior and teaching Hispanic adolescents to elicit support

from family members when suicidal or in times of crisis; in this sense, adolescents may foster a greater sense of connectedness and support with their family members, which may mitigate the impact of perceived burdensomeness within other non-familial relations. Third, the present study provides validation and empirical support for the well-documented perceived burdensomeness-suicidal ideation link in a Hispanic adolescent specific sample, among scarce others (e.g., Hill et al., 2016) who have studied the IPTS in this ethnographic adolescent group. Fourth, the current moderation model accounted for the role of depressive symptoms and gender, two factors which have documented relations with multiple study variables (e.g., suicidal ideation) and may have confounded our findings. Lastly, with substantial follow-up and replication of original model to elucidate potentially mitigating effects of attitudinal familism, findings may serve to enhance culturally-sensitive and extra-individual treatments of Hispanic adolescent suicide risk. For example, if attitudinal familism does in fact mitigate peer/romantic perceived burdensomeness on suicidal ideation across studies, early suicide prevention programs may be modified to involve increased family communication, emphasis, support for interpersonal issues through development. Similarly, acute treatments for suicidal ideation in Hispanic youth may involve individual psychotherapy and benefit from added family-focused components.

Table 1

Normality statistics for main study measures.

	Skew	*Kurtosis*	*Shapiro-Wilk*	*p*
MSSI Total	.035	-1.209	.940	.001*
AFS Total	-.389	-.290	.979	.217
INQ-15 Perceived Burdensomeness	-.115	-1.249	.938	.001*
BDI-II Total	-.038	-.742	.971	.069

Table 2

Descriptive data for main study measures and continuous sociodemographic information

	Mean	*SD*	*Minimum*	*Maximum*
MSSI Total	18.84	12.94	0	47
AFS Total	124.32	27.64	44	174
INQ-15 Perceived Burdensomeness	22.44	10.88	6	42
INQ-15 Thwarted Belongingness	33.08	10.29	9	57
BDI-II Total	14.86	1.32	12	17
Age (years)				

Table 3

Bivariate correlation matrix for continuously-rated, primary study variables

	Age	MSSI	BDI-II	AFS	INQ-15 Perceived Burdensomeness
Age (years)	1.00				
MSSI Total	.035	1.00			
BDI-II Total	.127	.601**	1.00		
AFS Total	-.114	-.171	-.205	1.00	
INQ-15 Perceived Burdensomeness	.062	.548**	.647**	-.137	1.00

Note. * $p < .05$, ** $p < .001$

Table 4

Moderation analyses depicting the interacting effect of attitudinal familism on the relation between perceived burdensomeness and suicidal ideation, covarying for depressive symptoms and gender

	b	SE	*t*	*p*	R^2
				.000	.453**
Gender	-4.660	2.351	-1.98	.051	
BDI-II Depressive Symptoms	.381*	.121	3.16	.002	
AFS Total	.149	.100	1.48	.427	
INQ-15 Perceived Burdensomeness	1.275*	.539	2.36	.021	
AFS x INQ-15 Perceived Burden.	-.007	.004	-1.76	.083	

Note. *p < .05, **p < .001

Appendix

The Interpersonal Needs Questionnaire- 15 Item Version (INQ-15; Van Orden, Cukrowicz, Witte, & Joiner, 2012), a 15-item self-report-based assessment of the original INQ (Van Orden, Witte, Gordon, Bender, & Joiner, 2008), was used to examine perceived burdensomeness and thwarted belongingness in the current study. The below table depicts items included in each subscale (perceived burdensomeness, thwarted belongingness), per the 15-item version:

Perceived burdensomeness

1. These days, the people in my life would be better off if I were gone
2. These days, the people in my life would be happier without me
3. These days, I think I am a burden on society
4. These days, I think my death would be a relief to the people in my life
5. These days, I think the people in my life wish they could be rid of me
6. These days, I think I make things worse for the people in my life

Thwarted belongingness

1. These days, other people care about me
2. These days, I feel like I belong
3. These days, I rarely interact with people who care about me
4. These days, I am fortunate to have many caring and supportive friends
5. These days, I feel disconnected from other people
6. These days, I often feel like an outsider in social gatherings
7. These days, I feel that there are people I can turn to in times of need
8. These days, I am close to other people
9. These days, I have at least one satisfying interaction every day

The Attitudinal Familism Scale (AFS; Lugo Steidel & Contreras, 2003) is depicted below:

Attitudinal Familism Scale

1. Children should always help their parents with the support of younger brothers and sisters, for example, help them with homework, help the parents take care of the children, and so forth.
2. The family should control the behavior of children younger than 18.
3. A person should cherish the time spent with his or her relatives.
4. A person should live near his or her parents and spend time with them on a regular basis.
5. A person should always support members of the extended family, for example, aunts, uncles, and in-laws, if they are in need even if it is a big sacrifice.
6. A person should rely on his or her family if the need arises.
7. A person should feel ashamed if something he or she does dishonors the family name.
8. Children should help out around the house without expecting an allowance.
9. Parents and grandparents should be treated with great respect regardless of their differences in views.
10. A person should often do activities with his or her immediate and extended families, for example, eat meals, play games, or go somewhere together.
11. Aging parents should live with their relatives.
12. A person should always be expected to defend his or her family's honor no matter what the cost.
13. Children younger than 18 should give almost all their earnings to their parents.
14. Children should live with their parents until they get married.
15. Children should obey their parents without question even if they believe they are wrong.
16. A person should help his or her elderly parents in times of need, for example, helping financially or sharing a house.
17. A person should be a good person for the sake of his or her family.
18. A person should respect his or her older brothers and sisters regardless of their differences in views.

The Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996) is depicted below:

Beck Depression Inventory-II

1. Sadness
    0. I do not feel sad.
    1. I feel sad much of the time.
    2. I am sad all of the time.
    3. I am so sad or unhappy that I can't stand it.
2. Pessimism
    0. I am not discouraged about my future.
    1. I feel more discouraged about my future than I used to be.
    2. I do not expect things to work out for me.
    3. I feel that my future is hopeless and will only get worse.
3. Past failure
    0. I do not feel like a failure.
    1. I have failed more than I should have.
    2. As I look back, I see a lot of failures.
    3. I feel I am a total failure as a person.
4. Loss of pleasure
    0. I get as much pleasure as I ever did from the things I enjoy.
    1. I don't enjoy things as much as I used to.
    2. I get very little pleasure from the things I used to enjoy.
    3. I can't get any pleasure from the things I used to enjoy.
5. Guilty Feelings
    0. I don't feel particularly guilty.
    1. I feel guilty over many things I have done or should have done.
    2. I feel quite guilty most of the time.
    3. I feel guilty all of the time.
6. Punishment Feelings
    0. I don't feel I am being punished.
    1. I feel I may be punished.
    2. I expected to be punished.
    3. I feel I am being punished.
7. Self-Dislike
    0. I feel the same about myself as ever.
    1. I have lost confidence in myself.
    2. I am disappointed in myself.
    3. I dislike myself.
8. Self-Criticalness
    0. I don't criticize or blame myself more than usual.
    1. I am more critical of myself than I used to be.
    2. I criticize myself for all of my faults.
    3. I blame myself for everything bad that happens.
9. Suicidal Thoughts of Wishes

0. I don't have any thoughts of killing myself.
1. I have thoughts of killing myself, but I would not carry them out.
2. I would like to kill myself.
3. I would kill myself if I had the chance.

10. Crying
    0. I don't cry anymore than I used to.
    1. I cry more than I used to.
    2. I cry over every little thing.
    3. I feel like crying, but I can't.
11. Agitation
    0. I am no more restless or wound up than usual.
    1. I feel more restless or wound up than usual.
    2. I am so restless or agitated that it's hard to stay still.
    3. I am so restless or agitated that I have to keep moving or doing something.
12. Loss of Interest
    0. I have not lost interest in other people or activities.
    1. I am less interested in other people or things than before.
    2. I have lost most of my interest in other people or things.
    3. It's hard to get interested in anything.
13. Indecisiveness
    0. I make decisions about as well as ever.
    1. I find it more difficult to make decisions than usual.
    2. I have much greater difficulty in making decisions than I used to.
    3. I have trouble making decisions.
14. Worthlessness
    0. I do not feel I am worthless.
    1. I don't consider myself as worthwhile and useful as I used to.
    2. I feel more worthless as compared to other people.
    3. I feel utterly worthless.
15. Loss of Energy
    0. I have as much energy as ever.
    1. I have less energy than I used to have.
    2. I don't have enough energy to do very much.
    3. I don't have enough energy to do anything.
16. Changes in Sleep Pattern
    0. I have not experienced any change in my sleeping pattern.
    1a I sleep somewhat more than usual.
    1b I sleep somewhat less than usual.
    2a I sleep a lot more than usual.
    2b I sleep a lot less than usual.
    3a I sleep most of the day.
    3b I wake up 1-2 hours early and can't get back to sleep.
17. Irritability
    0. I am not more irritable than usual.
    1. I am more irritable than usual.
    2. I am much more irritable than usual.

3. I am irritable all the time.

18. Changes in Appetite
    0. I have not experienced any change in my appetite.
    1a My appetite is somewhat less than usual.
    1b My appetite is somewhat greater than usual.
    2a My appetite is much less than before.
    2b My appetite is much greater than usual.
    3a I have no appetite at all.
    3b I crave food all the time.
19. Concentration Difficulty
    0. I can concentrate as well as ever.
    1. I can't concentrate as well as usual.
    2. It's hard to keep my mind on anything for very long.
    3. I find I can't concentrate on anything.
20. Tiredness or Fatigue
    0. I am no more tired or fatigued than usual.
    1. I get more tired or fatigued more easily than usual.
    2. I am too tired or fatigued to do a lot of the things I used to do.
    3. I am too tired or fatigued to do most of the things I used to do.
21. Loss of Interest in Sex
    0. I have not noticed any recent change in my interest in sex.
    1. I am less interested in sex than I used to be.
    2. I am much less interested in sex now.
    3. I have lost interest in sex completely.

The Modified Scale for Suicidal Ideation (MSSI; Miller, Norman, Bishop, & Dow, 1986) is depicted below:

Modified Scale for Suicidal Ideation

Modified Scale for Suicidal Ideation

The purpose of this scale is to assess the presence or absence of suicide ideation and the degree of severity of suicidal ideas. The time frame is from the point of interview and the previous year.

1. WISH TO DIE
   Do you want to die now?
   Over the past year, have you thought about wanting to die?
   If yes:
   Over the past year, how often have you had the thought that you wanted to die? A little? Quite often? A lot? When you have wished for death, how strong has the desire been? Weak? Moderately strong? Very strong?

   0. NONE - No frequent wish to die, hasn't had any thought about wanting to die.
   1. WEAK - Unsure about whether he wants to die, seldom thinks about death, or intensity seems low.
   2. MODERATE - Frequent desire to die, may be preoccupied with ideas about death, or intensity seems greater than a rating of 1.
   3. STRONG – Frequent death wish, high frequency or high intensity during the past year.

2. WISH TO LIVE
   Do you care if you live or die?
   Over the past year, have you thought that you want to live?
   If yes:
   Over the past year, how often have you thought about wanting to live? A little? Quite often? A lot?
   How sure are you that you really want to live?

   0. STRONG – Frequent desire to live, high frequency or moderate intensity.
   1. MODERATE – Frequent desire to live, thinks about wanting to live quite often, and easily turn his thoughts away from death or intensity seems more than a rating of 2.
   2. WEAK – Unsure about whether he wants to live, occasional thoughts about living or intensity seems low.
   3. NONE – Student has no wish to live.

3. DESIRE TO MAKE AN ACTIVE ATTEMPT
   Do you want to kill yourself now?
   Over the past year when you have thought about suicide, did you want to kill yourself? How often? A little? Quite often? A lot?

   0. NONE – Student may have had thoughts but does not want to make an attempt.
   1. WEAK – student isn't sure whether he wants to make an attempt.
   2. MODERATE - Wanted to act on thoughts at least once in the past year.
   3. STRONG – Wanted to act thoughts several times and/or almost certain he wants to kill self.

4. PASSIVE SUICIDE ATTEMPT
   Right now would you deliberately ignore taking care of your health?
   Do you feel like trying to die by eating too much (too little), drinking too much (too little), or by not taking needed medications?
   Have you felt like doing any of these things over the past year?
   Over the past year, have you thought it might be good to leave life or death to chance, for example, carelessly crossing a busy street, driving recklessly, or even walking alone at night in a rough part of town?

   0. NONE – Would take precautions to maintain life.
   1. WEAK – Not sure whether he would leave life/death to chance, or has thought about gambling with fate at least once in the last year.
   2. MODERATE – Would leave life/death to chance, almost sure he would gamble.
   2. STRONG – Avoided steps necessary to maintain or save life, e.g., stopped taking needed medications.

5. DURATION OF THOUGHTS
   Over the past year when you have thought about suicide how long did the thoughts last?
   Were they fleeting, e.g. a few seconds?
   Did they occur for a while then stop, e.g. a few minutes?
   Did they occur for longer periods, e.g. an hour at a time?
   Is it to the point where you can't seem to get them out of your mind?

   0. BRIEF – Fleeting periods.
   1. SHORT DURATION – Several minutes.
   2. LONGER – An hour or more.
   3. ALMOST CONTINUOUS – Student finds it hard to turn attention away from suicidal thought, can't seem to get them out of his mind.

6. FREQUENCY OF IDEATION
   Over the last year, how often have you thought about suicide? Once a month? Once a week? More than that? All the time?

   0. RARE – Once in the past year.
   1. TWICE or more over the past year.
   2. OCCURS ALMOST MONTHLY
   3. SEVERAL TIMES A MONTH or more (Weekly; Daily; Hourly)

7. INTENSITY OF THOUGHTS
   Over the past year when you have thought about suicide, have they been intense (powerful)?
   How intense have they been? Weak? Somewhat strong? Moderately strong? Very strong?

   0. VERY WEAK
   1. WEAK
   2. MODERATE
   3. STRONG

8. DETERRENT TO ACTIVE ATTEMPT
   Can you think of anything that would keep you from killing yourself? (Your religion, consequences for your family, chance that you may injure yourself seriously if unsuccessful).

   0. DEFINITE DETERRENT – Wouldn't attempt suicide because of deterrents.
   1. PROBABLE DETERRENT – Can name at least one deterrent, but does not definitely rule our suicide.
   2. DETERRENT – Student has trouble naming any deterrents.
   3. NO DETERRENTS – No concern over consequences to self or others.

9. REASONS FOR LIVING AND DYING
   Right now can you think of any reason why you should stay alive?
   What about over the past year?
   Over the past year, have you thought that there are things happening in your life that make you want to die?
   Do you think that your reasons for dying are better than your reasons for living?
   Would you say that your reasons for living are better than your reasons for dying?
   Are your reasons for living and dying about equal in strength, 50-50?

   0. PATIENT HAS NO REASON FOR DYING, never occurred to him to weigh reasons.
   1. HAS REASONS FOR LIVING AND OCCASIONALLY REASONS FOR DYING.
   2. NOT SURE WHICH ARE MORE POWERFUL, living and dying are about equal, or those for dying slightly outweigh those for living.
   3. REASONS FOR DYING STRONGLY OUTWEIGH THOSE FOR LIVING, can't think of any reasons for living.

10. METHOD: DEGREE OF SPECIFICITY/PLANNING
    Over the last year, have you been thinking about a way to kill yourself, the method you might use?
    Do you know where to get these materials?
    Have you thought about using a car to kill yourself? Your own? Someone else's? What highway or road would you use?
    When would you try to kill yourself? Is that a special event (e.g., anniversary, birthday with which you would like to associate your suicide?)
    Have you thought of any other ways you might kill yourself?

    0. NOT CONSIDERED method nor thought about.
    1. MINIMAL CONSIDERATION.
    2. MODERATE CONSIDERATION.
    3. DETAILS WORK OUT, plans well formulated.

11. METHOD: AVAILABILITY/OPPORTUNITY
    Over the past year, have you thought methods were available to you to commit suicide?
    Would it take time/effort to create an opportunity to kill yourself?
    Do you foresee opportunities being available to you in the near future (e.g., leaving hospital)?

    0. METHOD NOT AVAILABLE, no opportunity.
    1. METHOD WOULD TAKE TIME/EFFORT, opportunity not readily available.
    2. FUTURE OPPORTUNITY OR AVAILABILITY ANTICIPATED – upon release, when student gets home, pills or gun available.
    3. METHOD/OPPORTUNITY AVAILABLE – pills, gun, car, available; student may have selected a specific time.

12. SENSE OF COURAGE TO CARRY OUT ATTEMPT
    Do you think you have the courage to commit suicide?

    0. NO COURAGE, too weak, afraid.
    1. UNSURE OF COURAGE.
    2. QUITE SURE.
    3. VERY SURE.

13. COMPETENCE
    Do you think you have the ability to carry out your suicide? Can you carry out the necessary steps to insure a successful suicide?
    How convinced are you that you would be effective in bringing an end to your life?

    0. NOT COMPETENT.
    1. UNSURE.
    2. SOMEWHAT SURE.
    3. CONVINCED THAT HE CAN DO IT.

14. EXPECTANCY OF ACTUAL ATTEMPT
    Over the last year, have you thought that suicide is something you really might do sometime?
    Right now what are the chances you would try to kill yourself if left alone to your own devices?
    Would you say the chances are less than 50%? About equal?

    0. Student says he definitely WOULD NOT MAKE AN ATTEMPT.
    1. UNSURE – Might make an attempt but chances are less than 50% or 50-50.
    2. ALMOST CERTAIN – Chances are greater than 50% that he would try to commit suicide.
    3. CERTAIN –Student will make an attempt if left by self (i.e., if not in hospital or not watched).

15. TALK ABOUT DEATH/SUICIDE
Over the last year, have you noticed yourself talking about death more than usually?
Can you recall whether or not you spoke to anybody, even jokingly, that you might welcome death or try to kill yourself?
Have you confided in a close friend, religious person, professional or any helper that you intend to commit suicide?

0. NO TALK of death/suicide.
1. PROBABLY TALKED about death more than usual but no specific mention of death wish. May have alluded to suicide using humor.
2. SPECIFICALLY SAID that he wants to die.
3. CONFIDED that he plans to commit suicide.

16. WRITING ABOUT DEATH/SUICIDE
Have you written down about death/suicide, e.g., poetry, in a personal diary?

0. NO WRITTEN MATERIAL.
1. GENERAL COMMENTS regarding death.
2. SPECIFIC REFERENCE to death WISH.
3. SPECIFIC REFERENCE to PLANS for suicide.

17. SUICIDE NOTE
Over the last year, have you thought about leaving a note or writing a letter to somebody about your suicide?
Do you know what you'd say?
Who would you leave it for?
Have you written it out yet?
Where did you leave it?

0. NONE – Hasn't thought about a suicide note.
1. "MENTAL NOTE" – Has thought about a suicide note, those he might give it to, possibly worked out general themes which would be put in the note (e.g., being a burden to others, etc.).
2. STARTED – Suicide note partially written, may have misplaced it.
3. COMPLETED NOTE - Written out, definite plans about content, addresses.

The Sociodemographic Questionnaire utilized is depicted below:

1. Today's Date (mm/dd/yy): _____ 3. Date of Birth (mm/dd/yy): _____

2. Sex: Female = 1 Male = 2 4. Current Age: _____

5. Race/Ethnicity:

African-American/Black (non Hispanic) = 1
Caucasian/White (non Hispanic) = 2
Hispanic/Latino(a) = 3
Middle Eastern = 4
Native American/Am Indian/Eskimo/Aleut = 5
Native Hawaiian/Pacific Islander = 6
South Asian/East Indian = 7
Southeast Asian = 8
Other (please describe) = 9:
Multiracial (please describe) = 10:

6. Country of Origin: _____

7a. If US: Including you, how many generations of your family have lived in the US? _____

7b. If not U.S., how long have your resided in the US? _____

7. Current Grade: _____ 8. Ever repeated a grade: 1 = Yes 2 = No

8a. Which grade(s): _____

9. Currently Has a Job: Yes = 1 No = 2

9a. If yes, how many hours per week:

1-5 = 1 6-10 = 2 10-15 = 3 16-20 = 4 >20 = 5

10. During your lifetime, how many times have you moved to a new place to live?

0 =0 1-3 =1 4-6 =2 7-9 =3 10 or more =4

10a.How many times in the past 5 years have you moved? _____

10b. Have you moved within the past year? __ Yes =1 __ No =0

10bb.If yes, how many times? _____

11. Are any family members receiving financial assistance from governmental/social services/charity programs? If so, specify whom/what they're receiving.

11a. The Food Stamp Program (Food Stamps)? __ Yes =1, __ No =0, Whom? _____
11b. TANF (Temporary Assistance for Needy Families)? __ Yes =1, __ No =0, Whom? _____
11c. Energy or Utility Assistance Program? __ Yes =1, __ No =0, Whom? _____
11d. Food Assistance Programs other than Food Stamps? __ Yes =1, __ No =0, Whom? _____
11e. Medical Assistance? __ Yes =1, __ No =0, Whom? _____
11f. Vocational Rehabilitation Services? __ Yes =1, __ No =0, Whom? _____
11g. Free/Reduced Lunch (Child Nutrition Programs)? __ Yes =1, No =0, Whom? _____
11h. Child Support? __ Yes =1, No =0, Whom? _____
11i. Benefits for Immigrants? __ Yes =1, No =0, Whom? _____
11j. Medicaid/Medicare? __ Yes =1, No =0, Whom? _____
11k. Other programs (specify what)? __ Yes =1, No =0, What program and whom receives? _____

References

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions.* Newbury Park, CA: Sage.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, *51*(6), 1173.

Baumann, A. A., Kuhlberg, J. A., & Zayas, L. H. (2010). Familism, mother-daughter mutuality, and suicide attempts of adolescent Latinas. *Journal of Family Psychology*, *24*(5), 616.

Beck, A. T., Steer, R. A., & Brown, G. K. (1996). Beck depression inventory-II. *San Antonio, TX*, 78204-2498.

Berkel, C., Knight, G. P., Zeiders, K. H., Tein, J. Y., Roosa, M. W., Gonzales, N. A., & Saenz, D. (2010). Discrimination and adjustment for Mexican American adolescents: A prospective examination of the benefits of culturally related values. *Journal of Research on Adolescence*, *20*(4), 893-915.

Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental psychology*, *22*(6), 723.

Brown, B. B., & Larson, J. (2009). Peer relationships in adolescence. *Handbook of adolescent psychology*.

Buitron, V., Hill, R. M., Pettit, J. W., Green, K. L., Hatkevich, C., & Sharp, C. (2016). Interpersonal stress and suicidal ideation in adolescence: An indirect association through perceived burdensomeness toward others. *Journal of affective disorders*, *190*, 143-149.

Burgess, E. W., & Locke, H. J. (1945). The family: from institution to companionship.

Burgess E. W., Locke H. J., & Thomas M.M. (1963). *The Family: From Institution to Companionship*, 3rd edition. New York, NY, American Book.

Castillo, L. G., Perez, F. V., Castillo, R., & Ghosheh, M. R. (2010). Construction and initial validation of the Marianismo Beliefs Scale. *Counselling Psychology Quarterly*, *23*(2), 163-175.

Castro, F. G., & Alarcón, E. H. (2002). Integrating cultural variables into drug abuse prevention and treatment with racial/ethnic minorities. *Journal of Drug Issues*, *32*(3), 783-810.

Cauce, A. M., & Domenech-Rodriguez, M. (2002). Latino families: Myths and realities.

Centers for Disease Control and Prevention. [2008] Youth Risk Behavior Survey Data. Available at: www.cdc.gov/yrbs. Accessed on [9/26/16].

Centers for Disease Control and Prevention. [2013] Youth Risk Behavior Survey Data. Available at: www.cdc.gov/yrbs. Accessed on [9/26/16].

Centers for Disease Control and Prevention. [2015] Youth Risk Behavior Survey Data. Available at: www.cdc.gov/yrbs. Accessed on [9/26/16].

Céspedes, Y. M., & Huey Jr, S. J. (2008). Depression in Latino adolescents: a cultural discrepancy perspective. *Cultural Diversity and Ethnic Minority Psychology*, *14*(2), 168.

Collins, W. A. (2003). More than myth: The developmental significance of romantic relationships during adolescence. *Journal of research on adolescence*, *13*(1), 1-24.

Cukrowicz, K. C., Cheavens, J. S., Van Orden, K. A., Ragain, R. M., & Cook, R. L. (2011). Perceived burdensomeness and suicide ideation in older adults. *Psychology and aging*, *26*(2), 331.

Czyz, E. K., Berona, J., & King, C. A. (2015). A Prospective Examination of the Interpersonal-Psychological Theory of Suicidal Behavior Among Psychiatric Adolescent Inpatients. *Suicide and life-threatening behavior*, *45*(2), 243-259.

Delgado, R. (1992). Generalist child welfare and Hispanic families. *Child welfare: A multicultural focus*, 130-156.

Esparza, P., & Sanchez, B. (2008). The role of attitudinal familism in academic outcomes: a study of urban, Latino high school seniors. *Cultural Diversity and Ethnic Minority Psychology*, *14*(3), 193.

Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G* Power 3.1: Tests for correlation and regression analyses. *Behavior research methods*, *41*(4), 1149-1160.

Friedrich, W., Reams, R., & Jacobs, J. (1982). Depression and suicidal ideation in early adolescents. *Journal of youth and adolescence*, *11*(5), 403-407.

Fuligni, A. J., Tseng, V., & Lam, M. (1999). Attitudes toward family obligations among American adolescents with Asian, Latin American, and European backgrounds. *Child development*, *70*(4), 1030-1044.

Garcia, C., Skay, C., Sieving, R., Naughton, S., & Bearinger, L. H. (2008). Family and racial factors associated with suicide and emotional distress among Latino students. *Journal of School Health*, *78*(9), 487-495.

Garza, M. J., & Pettit, J. W. (2010). Perceived burdensomeness, familism, and suicidal ideation among Mexican women: Enhancing understanding of risk and protective factors. *Suicide and Life-Threatening Behavior*, *40*(6), 561-573.

George, D., & Mallery, P. (2001). Spss For Windows Step By Step: A Simple Guide And Reference, 10.0 Update (3rd Edition), Allyn & Bacon.

Germán, M., Gonzales, N. A., & Dumka, L. (2009). Familism values as a protective factor for Mexican-origin adolescents exposed to deviant peers. *The Journal of early adolescence*, *29*(1), 16-42.

Gil, A. G., Vega, W. A., & Dimas, J. M. (1994). Acculturative stress and personal adjustment among Hispanic adolescent boys. *Journal of Community Psychology*, *22*(1), 43-54.

Goldston, D. B., Molock, S. D., Whitbeck, L. B., Murakami, J. L., Zayas, L. H., & Hall, G. C. N. (2008). Cultural considerations in adolescent suicide prevention and psychosocial treatment. *American Psychologist*, *63*(1), 14.

Grover, K. E., Green, K. L., Pettit, J. W., Monteith, L. L., Garza, M. J., & Venta, A. (2009). Problem solving moderates the effects of life event stress and chronic stress on suicidal behaviors in adolescence. *Journal of Clinical Psychology*, *65*(12), 1281-1290.

Guilamo-Ramos, V., Bouris, A., Jaccard, J., Lesesne, C., & Ballan, M. (2009). Familial and cultural influences on sexual risk behaviors among Mexican, Puerto Rican, and Dominican youth. *AIDS Education and Prevention*, *21*(Supplement B), 61.

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Press.

Hayes, A. F. (2016). PROCESS: a versatile computational tool for observed variable mediation, moderation, and conditional process modeling. 2012. *Acesso em*, *2*.

Hill, R. M., & Pettit, J. W. (2012). Suicidal ideation and sexual orientation in college students: The roles of perceived burdensomeness, thwarted belongingness, and perceived rejection due to sexual orientation. *Suicide and Life-Threatening Behavior*, *42*(5), 567-579.

Hill, R. M., & Pettit, J. W. (2014). Perceived burdensomeness and suicide-related behaviors in clinical samples: Current evidence and future directions. *Journal of clinical psychology*, *70*(7), 631-643.

Hill, R. M., Rey, Y., Marin, C. E., Sharp, C., Green, K. L., & Pettit, J. W. (2015). Evaluating the Interpersonal Needs Questionnaire: comparison of the reliability, factor structure, and predictive validity across five versions. *Suicide and life-threatening behavior*, *45*(3), 302-314.

Hill, R. M., & Pettit, J. W. (2016). Pilot Randomized Controlled Trial of LEAP: A Selective Preventive Intervention to Reduce Adolescents' Perceived Burdensomeness. *Journal of Clinical Child & Adolescent Psychology*, 1-12.

Hovey, J. D., & King, C. A. (1996). Acculturative stress, depression, and suicidal ideation among immigrant and second-generation Latino adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, *35*(9), 1183-1192.

Joiner, T. E., Jr. (2005). *Why people die by suicide.* Cambridge, MA: Harvard University Press.

Kataoka, S. H., Zhang, L., & Wells, K. B. (2002). Unmet need for mental health care among US children: Variation by ethnicity and insurance status. *American Journal of Psychiatry*, *159*(9), 1548-1555.

Kataoka, S. H., Stein, B. D., Lieberman, R., & Wong, M. (2003). Datapoints: suicide prevention in schools: are we reaching minority youths?. *Psychiatric services*.

Krefetz, D. G., Steer, R. A., Gulab, N. A., & Beck, A. T. (2002). Convergent validity of the Beck Depression Inventory-II with the Reynolds Adolescent Depression Scale in psychiatric inpatients. *Journal of Personality Assessment*, *78*(3), 451-460.

Kuhlberg, J. A., Peña, J. B., & Zayas, L. H. (2010). Familism, parent-adolescent conflict, self-esteem, internalizing behaviors and suicide attempts among adolescent Latinas. *Child Psychiatry & Human Development*, *41*(4), 425-440.

Lugo Steidel, A. G., & Contreras, J. M. (2003). A new familism scale for use with Latino populations. *Hispanic Journal of Behavioral Sciences*, *25*(3), 312-330.

Marsiglia, F. F., Parsai, M., & Kulis, S. (2009). Effects of familism and family cohesion on problem behaviors among adolescents in Mexican immigrant families in the southwest United States. *Journal of ethnic & cultural diversity in social work*, *18*(3), 203-220.

Miller, A. B., Esposito-Smythers, C., & Leichtweis, R. N. (2015). A Short-Term, Prospective Test of the Interpersonal–Psychological Theory of Suicidal Ideation in an Adolescent Clinical Sample. *Suicide and life-threatening behavior*.

Miller, I. W., Norman, W. H., Bishop, S. B., & Dow, M. G. (1986). The Modified Scale for Suicidal Ideation: reliability and validity. *Journal of consulting and clinical psychology*, *54*(5), 724.

Moore, J. W. (1970). *Mexican-American.* Englewood Cliffs, N. J. Prentice Hall.

Olvera, R. L. (2001). Suicidal Ideation in Hispanic and Mixed-Ancestry Adolescents. *Suicide and Life-Threatening Behavior*, *31*(4), 416-427.

Osman, A., Kopper, B. A., Barrios, F., Gutierrez, P. M., & Bagge, C. L. (2004). Reliability and validity of the Beck depression inventory--II with adolescent psychiatric inpatients. *Psychological assessment*, *16*(2), 120.

Peña, J. B., Kuhlberg, J. A., Zayas, L. H., Baumann, A. A., Gulbas, L., Hausmann-Stabile, C., & Nolle, A. P. (2011). Familism, family environment, and suicide attempts among Latina youth. *Suicide and Life-Threatening Behavior*, *41*(3), 330-341.

Pettit, J. W., Garza, M. J., Grover, K. E., Schatte, D. J., Morgan, S. T., Harper, A., & Saunders, A. E. (2009). Factor structure and psychometric properties of the Modified Scale for Suicidal Ideation among suicidal youth. *Depression and anxiety*, *26*(8), 769-774.

Piña-Watson, B., Castillo, L. G., Rodriguez, K. M., & Ray, S. (2014). Familial factors related to suicidal ideation of Latina adolescents in the United States. *Archives of suicide research*, *18*(2), 213-220.

Roberts, R. E., & Chen, Y. W. (1995). Depressive symptoms and suicidal ideation among Mexican-origin and Anglo adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, *34*(1), 81-90.

Rossi, J. S. (1990). Statistical power of psychological research: What have we gained in 20 years?. *Journal of consulting and clinical psychology*, *58*(5), 646.

Sabogal, F., Marín, G., Otero-Sabogal, R., Marín, B. V., & Perez-Stable, E. J. (1987). Hispanic familism and acculturation: What changes and what doesn't?. *Hispanic Journal of Behavioral Sciences*, *9*(4), 397-412.

Sanchez, D., Whittaker, T. A., Hamilton, E., & Zayas, L. H. (2015). Perceived Discrimination and Sexual Precursor Behaviors in Mexican American Preadolescent Girls: The Role of Psychological Distress, Sexual Attitudes, and Marianismo Beliefs.

Schwartz, S. H. (2006). A theory of cultural value orientations: Explication and applications. *Comparative sociology*, *5*(2), 137-182.

Stein, G. L., Cupito, A. M., Mendez, J. L., Prandoni, J., Huq, N., & Westerberg, D. (2014). Familism through a developmental lens. *Journal of Latina/o Psychology*, *2*(4), 224.

Stein, G. L., Gonzalez, L. M., Cupito, A. M., Kiang, L., & Supple, A. J. (2015). The protective role of familism in the lives of Latino adolescents. *Journal of Family Issues*, *36*(10), 1255-1273.

Stewart, S. M., Eaddy, M., Horton, S. E., Hughes, J., & Kennard, B. (2015). The validity of the interpersonal theory of suicide in adolescence: A review. *Journal of Clinical Child & Adolescent Psychology*, 1-13.

Torres, J. B., Solberg, V. S. H., & Carlstrom, A. H. (2002). The myth of sameness among Latino men and their machismo. *American Journal of Orthopsychiatry*, *72*(2), 163.

Valenzuela, A., & Dornbusch, S. M. (1994). Familism and social capital in the academic achievement of Mexican origin and Anglo adolescents. *Social Science Quarterly*.

Van Orden, K. A., Cukrowicz, K. C., Witte, T. K., & Joiner Jr, T. E. (2012). Thwarted belongingness and perceived burdensomeness: construct validity and psychometric properties of the Interpersonal Needs Questionnaire. *Psychological assessment*, *24*(1), 197.

Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner Jr, T. E. (2010). The interpersonal theory of suicide. *Psychological review*, *117*(2), 575.

Van Orden, K. A., Witte, T. K., Gordon, K. H., Bender, T. W., & Joiner, T. E. (2008). Suicidal desire and the capability for suicide: Tests of the interpersonal–psychological theory of suicidal behavior among adults. *Journal of Consulting and Clinical Psychology, 76,* 72–83.

Venta, A., Mellick, W., Schatte, D., & Sharp, C. (2014). Preliminary evidence that thoughts of thwarted belongingness mediate the relations between level of attachment insecurity and depression and suicide-related thoughts in inpatient adolescents. *Journal of Social and Clinical Psychology*, *33*(5), 428.

Vygotsky, L. (1978). Interaction between learning and development. *Readings on the development of children*, *23*(3), 34-41.

Wilkinson, G. S., & Robertson, G. J. (2006). Wide range achievement test (WRAT4). *Psychological Assessment Resources, Lutz.*

Zayas, L. H., Lester, R. J., Cabassa, L. J., & Fortuna, L. R. (2005). Why do so many Latina teens attempt suicide? A conceptual model for research. *American Journal of Orthopsychiatry*, *75*(2), 275-287.

Zinn, M. B. (1982). Familism among Chicanos: A theoretical review. *Humboldt Journal*

of Social Relations, 224-238.