

PERCEIVED BURDENSOMENESS AMONG ADOLESCENTS: A MIXED-METHODS ANALYSIS OF THE CONTEXTS IN WHICH PERCEPTIONS OF BURDENSOMENESS OCCUR

RYAN M. HILL

Baylor College of Medicine

QUINTIN A. HUNT

University of Wisconsin-Superior

BENJAMIN OOSTERHOFF

Montana State University

CARLOS E. YEGUEZ AND JEREMY W. PETTIT

Florida International University

Introduction: This study explored the contexts in which adolescents report perceptions of being a burden on others, via a mixed-methods approach, to inform the development of interventions targeting perceived burdensomeness as a risk factor for suicide ideation. **Method:** Participants were 41 adolescents, 13–19 years of age ($M = 16.95$, $SD = 1.61$), with elevated perceived burdensomeness on the Interpersonal Needs Questionnaire. Adolescents were predominantly female (70.7%) and Hispanic (73.2%). Adolescents provided up to three examples of times they experienced perceived burdensomeness. Examples ($N = 102$) were qualitatively coded to identify common themes, followed by quantitative analyses of demographic factors associated with identified themes. **Results:** Seven main

This work was funded by an American Psychological Foundation Visionary Funds Grant and by a Dissertation Evidence Acquisition Award from Florida International University.

Disclosure Statement: The authors do not have any financial conflicts of interest to report.

Address correspondence to Ryan M. Hill, Ph.D., Assistant Professor, Department of Pediatrics, Baylor College of Medicine, 1102 Bates Ave., C.0235.05, Houston, TX 77030; E-mail: Ryan.Hill@bcm.edu

categories emerged from the qualitative analyses of examples: Drain on Resources, Perceptions of Failure and Brokenness, Relationship Conflict/Withdrawal, Misbehavior, Emotional Distress, Academic Problems, and Lack of Belongingness. Adolescent boys reported a greater proportion of burdensomeness attributions related to Misbehavior and a lower proportion related to Emotional Distress, relative to girls. **Discussion:** Major themes aligned with theorized components of perceived burdensomeness. Adolescent examples focused predominantly on normative experiences, supporting the notion that perceived burdensomeness may represent a distorted cognition. The results may inform the development of interventions targeting perceived burdensomeness.

Keywords: perceived burdensomeness, adolescence, mixed methods, interpersonal theory of suicide

The interpersonal-psychological theory of suicide (IPT; Joiner, 2005; Van Orden et al., 2010) offers a framework for conceptualizing and organizing predictors of suicide risk. The IPTS proposes that suicide ideation arises from the interplay between two proximal risk factors: perceived burdensomeness and thwarted belongingness. Thwarted belongingness is comprised of a sense of loneliness and perceived lack of reciprocal care, including social isolation, low connectedness, and poor social support (Joiner, 2005; Van Orden et al., 2010). Perceived burdensomeness is the belief that others would benefit from one's death or that one's death is worth more than one's life (e.g., My family would be happier or better off without me; Joiner, 2005). The IPTS has received considerable empirical support among adolescent samples (for a review, see Stewart, Eaddy, Horton, Hughes, & Kennard, 2017).

The association between thwarted belongingness and suicide ideation is supported by decades of literature examining associations between different elements of belongingness and suicide ideation, including family and peer support and social isolation (e.g., King & Merchant, 2008). Thwarted belongingness and its component factors, such as loneliness and poor social support, have frequently been utilized as mechanistic targets for suicide prevention programs (e.g., Carter, Clover, White, Dawson, & D'Este, 2007; King et al., 2006, 2009). More recently, perceived burdensomeness has become an area of intense research focus. Substantial evidence now supports the association between perceived burdensomeness and suicide ideation among adolescents (e.g., Hill, del Busto, Buitron, & Pettit, 2018; Stewart, Eaddy, Hor-

ton, Hughes, & Kennard, 2017), adults (e.g., O'Keefe et al., 2014) and older adults (e.g., Jahn & Cukrowicz, 2011; for a review, see Hill & Pettit, 2014). Even so, perceived burdensomeness is still an emerging area of research and there are substantial gaps in our understanding of the causes, correlates, and consequences of burdensome cognitions.

Given the documented association between perceived burdensomeness and suicide ideation, interventions to alleviate perceptions of burdensomeness as a means for reducing suicide ideation and preventing suicide are in development (Hill & Pettit, 2016; King et al., 2018). To inform treatment development, it is necessary for researchers to have an accurate understanding of the types of events and circumstances within which adolescents perceive themselves to be a burden. Yet, to date, little research has investigated the contexts in which adolescent perceptions of burdensomeness occur. The identification of common contextual elements in perceived burdensomeness may allow intervention developers to tailor interventions to more precisely address perceived burdensomeness among youth. Identification of common themes may also advance theory and inform case identification strategies (e.g., if burdensomeness in some contexts confers greater risk of suicide ideation than other contexts). Further, interventions that utilize realistic and relatable examples of perceived burdensomeness may increase youth engagement and willingness to complete interventions.

This study sought to explore the circumstances within which adolescents report perceptions of burdensomeness, by soliciting examples of the contexts in which youth perceived themselves to be a burden on others. A mixed-methods approach was selected: First, qualitative analyses were used to identify common elements or themes of adolescents' perceptions of burdensomeness. This was followed by quantitative analysis of demographic factors that may be associated with themes derived from the qualitative analysis. Additional quantitative analyses examined associations between themes derived from the qualitative analyses and measures of psychopathology, including depressive symptoms, anxiety symptoms, and suicidal ideation.

METHOD

PARTICIPANTS

Participants were 41 adolescents, 13–19 years of age, recruited as part of a randomized controlled trial of a computer-based intervention addressing cognitions of perceived burdensomeness (Hill & Pettit, 2016). Flyers were distributed at schools and public gathering places frequented by adolescents. Inclusion criteria were: 13 to 19 years of age, endorsing a perceived burdensomeness score of 17 or greater on the Interpersonal Needs Questionnaire Perceived Burdensomeness subscale ($n = 593$ did not meet this criterion), and having available Internet access for completion of the intervention modules (all participants met this criterion). A score of 17 or greater on the Perceived Burdensomeness subscale was selected to ensure participants were elevated on the intervention target. Based on data obtained in a similar sample of adolescents (Hill & Pettit, 2014), a score of 17 represented approximately 1 standard deviation above the mean on this measure. The exclusion criterion was current psychosocial treatment or use of psychoactive medications (unless on a stable dose for 8 weeks or more, e.g., long-term stimulant use; $n = 15$ excluded). As the perceived burdensomeness examples were derived from the intervention, only the intervention group is included in this analysis.

Adolescent participants had a mean age of 16.95 years ($SD = 1.61$ years) and were predominantly female (70.7%, $n = 29$). The majority self-identified their ethnicity as Hispanic (73.2%, $n = 30$) and their race as: White (67.5%, $n = 27$), African American or Black (12.5%, $n = 5$), Asian American (10.0%, $n = 4$), Native American or Alaskan Native (2.5%, $n = 1$), and 'other' (10.0%, $n = 4$). Percentages sum to greater than 100% as adolescents were allowed to select multiple responses. Half (50.0%) of adolescents reported being eligible for free lunch at school. One adolescent did not provide data regarding their race or free lunch status.

MEASURES

As part of the web-based intervention, adolescents were asked to identify "the person that you feel like a burden on the most."

After selecting their target person, adolescents were asked to identify examples of situations in which they perceived themselves to be a burden on the target. Adolescents were provided the following prompt: "OK, so let's discuss your [person]. First, can you think of any times when you have felt like a burden on your [person]? What was going on? What made you think that person would be better off without you?" Adolescents were then asked to rate each situation on a severity scale ranging from 1 to 10, where "a 1 or 2 is one where you only felt like a burden for a moment and it went away quickly" and "a 9 or 10 is one where your feeling of being a burden was very strong or lasted for a long time." In total, 102 examples were provided ($n = 32$ provided three examples, $n = 2$ provided two examples, $n = 2$ provided one example, $n = 4$ individuals did not provide any examples). Of the 102 responses, 2 were deemed unable to be coded (uncoded responses were "I do not know" and "In general"), resulting in 100 coded responses across 36 individuals.

Perceived Burdensomeness. The Interpersonal Needs Questionnaire-15 (INQ-15; Van Orden, Cukrowicz, Witte, & Joiner, 2012) is a 15-item self-report questionnaire assessing perceived burdensomeness (6 items) and thwarted belongingness (9 items). Items are rated on a 7-point Likert scale ranging from Not at all true for me to Very true for me, with total scores ranging from 6–42 for perceived burdensomeness and 9–63 for thwarted belongingness. It has demonstrated excellent internal consistency and concurrent validity in an adolescent sample (Hill et al., 2015).

Depressive Symptoms. The Reynolds Adolescent Depression Scale-2: Short Form (RADS-2:SF; Reynolds, 2002) was used to assess depressive symptoms. The RADS-2:SF is a 10-item self-report questionnaire designed for use with adolescents. Items are rated on a 1–4 scale, ranging from Almost never to Most of the time, with total scores ranging from 10–40. It has demonstrated excellent reliability and validity in adolescent samples (e.g., King, Hill, Wynne, & Cunningham, 2012).

Anxiety Symptoms. The trait anxiety scale of the State Trait Anxiety Inventory for Children (STAIC; Spielberger, 1973) was used to assess symptoms of anxiety. The STAIC trait anxiety scale is a 20-item self-report questionnaire designed for use with chil-

dren and adolescents that evaluates individuals' tendency to experience anxiety. Items on the trait anxiety subscale measure frequency of anxiety symptoms on a 0–2 scale, ranging from Hardly ever to Often, with total scores ranging from 0–40. It has reported good reliability and validity estimates with child and adolescent samples (e.g., Flannery-Schroeder & Kendall, 2000).

Suicidal Ideation. The Beck Scale for Suicide Ideation (BSS; Beck, Kovacs, & Weissman, 1979) was used to assess suicidal thoughts occurring in the previous week. The BSS is a 19-item self-report questionnaire that asks participants to select the sentence that best describes their thoughts in the past week from a group of three related sentences. Scores range from 0–2 for each item, with total scores ranging from 0–38. The BSS has demonstrated excellent reliability and validity in previous work, including studies of adolescents (e.g., Kumar & Steer, 1995).

DATA ANALYSIS

The qualitative analytic methodology followed the process for Qualitative Content Analysis (Schreier, 2012) and was rooted in Grounded Theory (Strauss & Corbin, 1990) to answer the question, "What do adolescents identify as the causes of their perceived burdensomeness?" The first two authors completed the first stage of analysis in four steps: first, reading the data for comprehension; second, reducing data into essential categories or concepts through open coding; third, combining and differentiating emergent themes (assisted through the creation of a codebook); and fourth, selective coding to ensure themes and data were appropriately matched and saturated (i.e., that each code was assigned to only one category and each category was used at least once). Research team meetings were held to discuss and agree upon each step of this process; the codebook was refined and applied to the data several times until there was no disagreement between the first two authors.

At this point, the fourth author was given the codebook and an introduction to the data and the emergent themes and tasked with applying the themes according to the codebook, without having seen or been party to previous discussions. We found

high interrater reliability between the two coding groups: (1) the first two authors and (2) the fourth author. Cohen's kappas (k) for each theme were as follows: Drain on Resources ($k = .93$), with subthemes of Drain on Time ($k = .87$) and Drain on Finances ($k = .84$), Perceptions of Failure and Brokenness ($k = .73$), Relationship Conflict/Withdrawal ($k = .76$), with subthemes of Arguments and Disagreements ($k = .70$), Withdrawal ($k = .71$), and Other ($k = .49$), Misbehavior ($k = .94$), Emotional Distress ($k = .82$), Academic Problems ($k = .56$), and Lack of Belongingness ($k = 0.53$). Generally scores are viewed acceptable for inclusion in the results if the kappa is at least .60 or higher (Landis & Koch, 1977; Strijbos, Martens, Prins, & Jochems, 2006). In certain circumstances, even smaller agreements may be deemed acceptable when categories have few items as small differences (one or two disagreements) will result in low kappa scores (Thompson, McCaughan, Cullum, Sheldon, & Raynor, 2004).

RESULTS

TARGET INDIVIDUALS AND BURDENSOMENESS RATINGS

Of the 36 adolescents who completed the treatment module, 44.4% ($n = 16$) identified their mother as the target individual upon whom they felt like a burden, 22.2% selected a friend ($n = 5$) or best friend ($n = 3$), 11.1% ($n = 4$) selected their father, 8.3% selected a boyfriend ($n = 2$) or girlfriend ($n = 1$), 5.6% selected a brother ($n = 1$) or sister ($n = 1$), 2.8% ($n = 1$) selected a coach, and 5.6% selected other (one selected a cousin, one selected guardian/aunt). On average, adolescents provided 2.83 examples (range 1–3), with an average burdensomeness severity rating of 6.97 ($SD = 2.24$, range 3 to 10).

Average burdensomeness severity ratings were calculated for each individual. Average burdensomeness severity ratings were significantly correlated with overall perceived burdensomeness ($r = .45$, $p = .006$), depressive symptoms ($r = .40$, $p = .02$), and anxiety symptoms ($r = .46$, $p = .006$), but not thwarted belongingness ($r = .20$, $p = .26$) or suicide ideation ($r = .28$, $p = .11$).

QUALITATIVE ANALYSIS OF EXAMPLES OF BURDENSOMENESS

Seven main categories with five additional sub-categories emerged from the qualitative analyses of burdensomeness examples as displayed in Table 1.

Category 1—Drain on Resources. Participants described examples of burdensomeness in which their needs or demands on others primarily impacted the available resources of that person. Overall, 50.0% ($n = 18$) of respondents provided at least one example in this category with 32% of overall coded responses falling into this category. Responses referring to a drain on resources fell into two sub-categories: Drain on Time and Drain on Finances.

Drain on Time. Participants who perceived themselves to be a burden when they required others' time provided examples such as, "Having to pick me up", "When I needed rides for a week", and "She has to cancel plans to take me to appointments." Responses indicating a drain on others' time frequently involved themes around transportation, such as requiring rides to and from activities, asking to be taken places, or being picked up. Other examples of being a drain on others' time included "Asking for help (homework, other things I'm not sure of)" and "Having him wait for me at school."

Drain on Finances. Participants who perceived themselves to be a burden due to monetary or financial concerns provided examples such as "Paying for my braces" and "When I got into a car accident and my father had to pay for everything and the insurance required higher payments." Responses indicating a drain on others' money included basic necessities, such as "Him paying for my food" and "Just generally providing for me." In other cases, adolescents perceived themselves to be a burden for other financial reasons, such as "Paying for college." One adolescent reported a series of examples indicating serious financial difficulties, for which this person perceived themselves as a source of burden. This adolescent noted, "While I was on vacation in another country, my mom had to come up with money to send me and then we struggled to find money for me to come back"

TABLE 1. Emergent Themes of Adolescents' Perceptions of Burdensomeness

Theme (Subtheme)	Percent of Responses (%)	Interrater Reliability	Examples
Drain on Resources	32	.93	
(Drain on Time)	17	.87	Having to pick me up; When I needed rides for a week
(Drain on Finances)	15	.84	Paying for my braces; Just generally providing for me
Perceptions of Failure and Brokenness	23	.73	When I miss a layup, I feel like someone else might have made it and then I feel down and that I shouldn't be on the team
Relationship Conflict/ Withdrawal	22	.76	
(Arguments and Disagreements)	16	.70	Wouldn't lend him money and he got mad at me for a long time
(Withdrawal)	4	.71	I don't go out as much; I almost never talk to her
(Other)	2	.49	I hurt her; Hanging out (their house, or school).
Misbehavior	8	.94	When I got caught smoking weed [sic]; Coming home late and When I lied about school work.
Emotional Distress	6	.82	Getting her mad and annoyed by being upset about something
Academic Problems	5	.56	Getting bad grades; Causing her to worry about my grades.
Lack of Belongingness	4	.59	I sometimes feel like I don't belong; When I talk to her she isn't interested.

Note. Examples separated by semi-colons

and "My mom had to start her third job because after those vacations we had several economic problems and still needed money because of the beginning of the school year." This adolescent concluded, "Every time I see my mom struggling with money, lack of sleeping, and so much work."

Category 2—Perceptions of Failure and Brokenness. Participants described examples of burdensomeness in which they perceived themselves to be a failure or fundamentally flawed in some way, frequently resulting in the disappointment of others. Overall, 38.9% ($n = 14$) of respondents provided at least one example in this category with 23% of overall coded responses falling into this category. Examples included perceptions of worthlessness, "Feeling worthless, she doesn't really need me" and "She said

that I was worthless because I did not run well." Other examples highlighted experiences in which the adolescent disappointed others, "When I miss a layup, I feel like someone else might have made it and then I feel down and that I shouldn't be on the team" and "When I leave my room dirty he's sort of disappointed in me." Still other examples identified common mistakes or failures as indicative of a larger failure of the self, "When I don't understand something she's explaining" and "When I accidentally messed up when doing laundry."

Category 3—Relationship Conflict/Withdrawal. Participants described examples of burdensomeness in which the source was a disruption of, or issue within, social relationships. Overall, 33.3% ($n = 12$) of respondents provided at least one example in this category with 22% of coded responses falling into this category. Responses referring to relationship conflict/withdrawal issues fell into three sub-categories: Arguments and disagreements, Withdrawal, and Other. Participants who perceived themselves to be a burden as a result of arguments and disagreements gave examples such as, "Wouldn't lend him money and he got mad at me for a long time" and "When my mom and I got into an argument and I didn't agree with the way she treated others and the relationship she has with my dad." Other examples were indicative of withdrawal from social relationships, such as "I don't go out as much and I almost never talk to her." Examples categorized as Other did not fall cleanly into either of the previous categories, but seemed to indicate a relationship difficulty of some sort, such as "I hurt her" and "Hanging out (their house, or school)."

Category 4—Misbehavior. Participants described examples of burdensomeness in which personal misbehavior or conduct issues were identified. Overall, 11.1% ($n = 4$) of respondents provided at least one example in this category with 8% of coded responses falling into this category. Examples include "When I got caught smoking weed" and "Coming home late" and "When I lied about school work."

Category 5—Emotional Distress. Participants described examples of burdensomeness in which their own emotional distress was identified as the source of the burdensomeness. Overall, 13.9% ($n = 4$) of respondents provided at least one example in this category with 6% of coded responses falling into this category. Ex-

amples include, “Wanting to vent about feelings” and “Getting her mad and annoyed by being upset about something.”

Category 6—Academic Problems. Participants described examples of burdensomeness in which stress about academic issues were the source of their burdensomeness. Overall, 11.1% ($n = 4$) of respondents provided at least one example in this category with 5% of coded responses falling into this category. Examples include, “Getting bad grades” and “Causing her to worry about my grades.” While the school category captured only 5% of responses, the topic of school featured in several other categories, in which school-related issues themselves were not the source of burdensomeness, per se. For example, “Lied about school” (coded as Misbehavior) and “Having him wait for me at school” (coded as Drain on Resources—Time).

Category 7—Lack of Belongingness. Participants described examples of burdensomeness in which they perceived they did not belong. Overall, 8.3% ($n = 3$) of respondents provided at least one example in this category with 4% of coded responses falling into this category. Examples include “I sometimes feel like I don’t belong” and “When I talk to her she isn’t interested.”

QUANTITATIVE ANALYSES OF THEMATIC CATEGORIES

Quantitative analyses were performed to examine demographic covariates of the thematic classification of burdensomeness examples. Each of the seven main categories were utilized. To create a continuous indicator of burdensomeness categories and to account for youth who provided a different number of responses, proportion scores were calculated for all burdensomeness variables (Oosterhoff & Metzger, 2016). For each participant, proportion scores represented the frequency of specific codes divided by the total number of coded statements. Table 2 displays the means and standard deviations for the proportion scores across categories. Bivariate correlations and independent-samples t-tests were then used to examine whether the proportion of youths’ responses that were represented in each category varied by age, gender, and race/ethnicity.

Demographic Characteristics. Bivariate correlations were used to examine whether age was associated with the proportion of bur-

TABLE 2. Descriptive Statistics for Burdensomeness Reasons, Rating, and Proportion Scores

	Burdensomeness Rating			Proportion Scores		
	Range	<i>M</i>	<i>SD</i>	Range	<i>M</i>	<i>SD</i>
Drain on Resources	1–10	7.13	2.01	0–1	.31	.38
Perceptions of Failure and Brokenness	1–10	6.50	2.31	0–1	.22	.35
Relationship Conflict/Withdrawal	1–10	6.74	2.56	0–1	.20	.34
Misbehavior	1–10	7.75	2.55	0–1	.07	.21
Emotional Distress	1–10	8.00	1.53	0–1	.06	.15
Academic Problems	1–10	5.33	3.22	0–1	.06	.19
Lack of Belongingness	1–10	6.50	1.92	0–1	.06	.21

densomeness attribution categories. Adolescent age was not correlated with the proportion of burdensomeness attributions for any category. Independent samples *t*-tests were used to examine whether coding categories varied by gender. Adolescent boys reported a greater proportion of burdensomeness attributions related to Misbehavior ($M = .18$, $SE = .09$) relative to girls, $M = .02$, $SE = .03$; $t(34) = -2.16$, $p = .04$, and adolescent girls reported a greater proportion of burdensomeness attributions related to Emotional Distress ($M = .09$, $SE = .08$) relative to boys, $M = .00$, $SE = .00$; $t(24) = 2.58$, $p = .02$.

Independent samples *t*-tests were also used to examine racial and ethnic differences in youths' burdensomeness categories. Given the small number of youth who identified as Black ($n = 4$), Asian ($n = 4$), or Other ($n = 3$), we primarily examined differences between White youth and Non-White youth as well as differences between Hispanic ($n = 26$) youth and Non-Hispanic ($n = 10$) youth. We did not find evidence that the proportion of burdensomeness attributions varied by race. Youth who identified as Hispanic reported a proportion of burdensomeness due to Emotional Distress ($M = .09$, $SE = .03$) relative to non-Hispanic youth, $M = .00$, $SE = .00$; $t(25) = -2.57$, $p = .02$. Post-hoc analyses indicate that these findings remain statistically significant after controlling for participant gender.

Clinical Characteristics. Descriptive statistics of clinical characteristics of the sample are provided in Table 3. Bivariate correlations were used to examine whether clinical symptoms measures were associated with the proportion of burdensomeness attribution categories. There were no significant correlations between

TABLE 3. Descriptive Statistics for Clinical Symptom Measures and Correlations with Burdensomeness Reason Proportion Scores

	Anxiety Symptoms	Depressive Symptoms	Suicide Ideation
Mean	25.10	25.83	4.17
Standard Deviation	6.28	4.01	4.60
Drain on Resources	.24	-.33*	-.16
Perceptions of Failure and Brokenness	-.32	.02	.20
Relationship Conflict/Withdrawal	-.03	.25	.03
Misbehavior	-.08	.22	.08
Emotional Distress	-.10	.17	-.02
Academic Problems	.27	.11	-.05
Lack of Belongingness	.05	-.29	-.12

Note. Correlations reported as *r* values; * indicates $p < .05$

proportion of burdensomeness attributions and suicide ideation or anxiety symptoms. Depressive symptoms were negatively correlated with perceived burdensomeness attributions due to Drain on Resources ($r = -.33, p = .049$).

DISCUSSION

This study utilized a mixed-methods approach to identify common themes within adolescents' perceptions of burdensomeness and demographic correlates of these themes, by soliciting examples of the times and events when adolescents perceived themselves to be a burden on others. Qualitative analyses indicated that adolescents' responses contained seven major themes: Drain on Resources, Perceptions of Failure and Brokenness, Relationship Conflict/Withdrawal, Misbehavior, Emotional Distress, Academic Problems, and Lack of Belongingness. Quantitative analyses indicate that thematic examples of burdensomeness varied by gender and ethnicity.

The three most frequently raised themes were those of Drain on Resources, Perceptions of Failure and Brokenness, and Relationship Conflict/Withdrawal, with 77% of total responses falling into these themes. The Drain on Resources theme aligns closely with the Interpersonal Psychological Theory of Suicide as outlined by Joiner (2005) and with the liability aspect of perceived burdensomeness as outlined by Van Orden and col-

leagues (2010). The liability aspect of perceived burdensomeness is characterized by a belief that "my death is worth more than my life" (Van Orden et al., 2010). The Drain on Resources theme highlights the adolescents' perceptions of their cost to others. The two subcategories of the Drain on Resources theme were money/financial concerns and being a burden on others' time. Adolescents' financial concerns often hinted at an awareness of family financial difficulties (e.g., knowing money is tight, seeing parents work multiple jobs) in conflict with common expenses (e.g., car insurance, dental work, preparing for college, meeting basic needs).

Adolescents' perceptions of being a drain on others' time frequently focused on transportation needs. This may highlight a conflict between adolescent desires to be engaged in social and school activities versus their lack of autonomy with regard to driving and transportation, which aligns with previous findings that lower autonomy is associated with greater perceived burdensomeness (Hill & Pettit, 2013; Tucker & Wingate, 2014). This particular subcategory is notable because it represents an experience common to many adolescents and demonstrates that some youth who report perceptions of burdensomeness do so in response to normative adolescent experiences. This finding also highlights perceived burdensomeness as a distorted cognitive interpretation of these normative experiences.

The category of Perceptions of Failure and Brokenness may align with what Van Orden and colleagues (2010) labeled "affectively laden cognitions of self-hatred." Adolescents' perceptions of being a failure or a disappointment to others may indicate an underlying core belief in the self as flawed, broken, or worthless. While explicit endorsement of self-hatred did not appear in the examples provided, it is possible that the low self-esteem and sense of worthlessness depicted in these examples could develop into, or be representative of, cognitions of self-hatred.

The third most common theme was Relationship Conflict/Withdrawal, in which adolescents perceived arguments and relational discord as a source of burden on others. The examples provided by adolescents frequently noted disagreements with family as a source of burden. Research on adolescent development indicates that the frequency and intensity of parent-child conflict peaks around middle adolescence and is often driven by the process autonomy development (Smetana, Campione-Barr,

& Metzger, 2006). While this finding is novel (specifically as it relates to family communication and perceived burdensomeness), it aligns with prior research that has identified family conflict and communication difficulties with family members as risk factors for suicide in adolescence (Arango et al., 2018; Connor & Reuter, 2006; Halstead, Pavkov, Hecker, & Seliner, 2014).

One common element across themes is the presentation of perceived burdensomeness as a disproportionate response to a (typically) minor source of actual burden. That is, many of the situations and experiences reported by the adolescents included a perceived element of inconvenience or temporary disruption in the lives of others. This is consistent with a generally depressogenic cognitive style, in which even minor negative events are perceived as having internal causes (Abela & Hankin, 2008). The data provide some support for this, as the quantitative analyses revealed that average burdensomeness ratings for the individual examples were significantly correlated with overall depressive symptoms and anxiety symptoms. Given the extent to which perceptions of burdensomeness appear to reflect maladaptive distortions of relatively normative experiences, interventions to address perceived burdensomeness may benefit from the inclusion of cognitive therapy approaches for managing cognitive distortions. Additionally, given that burdensomeness most often occurred within the parent-adolescent relationship, interventions with adolescents may benefit from inclusion of some family-based treatment (for review, see Frey & Hunt, 2018). Family-based therapy would provide an opportunity for adolescents to express their perceptions of burdensomeness while allowing families to reassure adolescents that the value of the continued relationship outweighs the costs of maintaining it.

The quantitative analyses revealed that the average burdensomeness severity ratings of adolescents' examples were significantly correlated with overall perceived burdensomeness, depressive symptoms, and anxiety symptoms. Though it did not reach statistical significance, the correlation between average burdensomeness ratings and suicide ideation was in the expected direction. The quantitative analyses also revealed that boys were more likely than girls to report perceived burdensomeness due to misbehavior, whereas girls were more likely to report perceived burdensomeness due to emotional distress. These find-

ings parallel established gender differences in emotional distress and reactivity (Charbonneau, Mezalis, & Hyde, 2009). Additionally, Hispanic youth reported greater burdensomeness due to being highly emotional relative to non-Hispanic youth. Of note, these categories were indicated with relatively low frequencies, suggesting that while there may be some gender and ethnic differences in perceived burdensomeness among adolescents, the major sources of perceived burdensomeness may be shared across gender and ethnic identities. Similarly, the frequency of endorsement of burdensomeness due to being a drain on others' resources was negatively correlated with depressive symptoms. This finding should be interpreted with caution, given the small sample size and statistical p -value of 0.498. While unexpected, one possible interpretation is that youth who are highly engaged in extracurricular activities may perceive themselves to be a burden on others while also experiencing the anti-depressant effect of high activation and social engagement. Further research is needed to replicate and better examine this statistical effect.

CLINICAL IMPLICATIONS

The results from this study may inform the development of interventions targeting perceived burdensomeness as a proximal risk factor for suicide ideation. An improved understanding of the life experiences that adolescents perceive as burdensome can assist intervention developers to better address perceived burdensomeness among adolescent samples. For example, using examples or vignettes that more accurately depict adolescent experiences may increase adolescent engagement within an intervention. Additionally, clinicians working with adolescents experiencing or at risk for suicide ideation may benefit from exploring and addressing perceived burdensomeness with clients. When the themes identified here are raised in a therapeutic setting, providers should assess for perceived burdensomeness and take appropriate steps to challenge cognitive distortions that may increase the risk of suicide ideation. In addition, based upon these preliminary findings, research may wish to explore the association between perceived burdensomeness themes and suicide risk. Perceived burdensomeness in different contexts

may be differentially associated with suicide ideation. If so, intervention and case identification approaches might be tailored to better address those most salient contexts.

LIMITATIONS AND FUTURE DIRECTIONS

The results of this study should be considered within the context of the study limitations. The present study utilized a relatively small sample of predominantly Hispanic youth from a major metropolitan area in the United States. However, the sample size is large for qualitative research and homogeneity of the sample assists in the achievement of saturation of the data (Guest, Brunce, & Johnson, 2006). An additional limitation of the qualitative analysis is the short responses provided by the study participants, which limited our ability to extract a high degree of context from surrounding discussion. This is a consequence of many qualitative secondary data analyses (Cheng & Phillips, 2014). Additionally, it is not clear how well these results would generalize to other adolescent samples, from different racial/ethnic, socioeconomic, or regional/cultural backgrounds. The relatively small sample size also resulted in limited statistical power for detecting effects across respondents within the quantitative analyses. However, this is the first study to our knowledge that examines situations in which adolescents report perceptions of burdensomeness and thus addresses an important gap in our understanding of perceived burdensomeness and its association with suicide ideation. Future research should examine differences in burdensome cognitions across adolescents as well as in a variety of other samples, to determine how perceived burdensomeness manifests at various development levels and in a variety of contexts.

REFERENCES

- Abela, J.R.Z., & Hankin, B. L. (2008). Cognitive vulnerability to depression in children and adolescents: A developmental psychopathology perspective. In J. R. Z. Abela and B. L. Hankin (Eds.), *Handbook of depression in children and adolescents*. New York: Guilford Press.
- Arango, A., Cole-Lewis, Y., Lindsay, R., Yeguez, C. E., Clark, M., & King, C. (2018). The protective role of connectedness on depression and suicidal ideation among bully victimized youth. *Journal of Clinical Child and Adolescent Psychology*, 1–12. <https://doi.org/10.1080/15374416.2018.1443456>
- Beck, A. T., Kovacs, M., & Weissman, A. (1979). Assessment of suicidal ideation: The Scale for Suicide Ideation. *Journal of Consulting and Clinical Psychology*, 47, 343–352.
- Carter, G., Clover, K., Whyte, I., Dawson, A., & D'Este, C. (2007). Postcards from the edge: 24-month outcomes of a randomised controlled trial for hospital-treated self-poisoning. *British Journal of Psychiatry*, 191, 548–553. <https://doi.org/10.1192/bjp.bp.107.038406>
- Charbonneau, A. M., Mezalis, A. H., & Hyde, J. S. (2009). Stress and emotional reactivity as explanations for gender differences in adolescents' depressive symptoms. *Journal of Youth and Adolescence*, 38(3), 1050–1058. <https://doi.org/10.1007/s10964-009-9398-8>
- Cheng, H. G., & Phillips, M. R. (2014). Secondary analysis of existing data: Opportunities and implementation. *Shanghai Archives of Psychiatry*, 26, 371–375. <https://doi.org/10.11919/j.issn.1002-0829.214171>
- Connor, J. J., & Rueter, M. A. (2006). Parent-child relationships as systems of support or risk for adolescent suicidality. *Journal of Family Psychology*, 20, 143–155. <https://doi.org/10.1037/0893-3200.20.1.143>
- Flannery-Schroeder, E. & Kendall, P. C. (2000). Group and individual cognitive-behavioral treatments for youth with anxiety disorders: A randomized clinical trial. *Cognitive Therapy and Research*, 29, 251–278. <https://doi.org/10.1023/A:10055002192786>
- Frey, L. M., & Hunt, Q. A. (2018). Treatment for suicidal thoughts and behavior: A review of family-based interventions. *Journal of Marital and Family Therapy*, 44, 107–124. <https://doi.org/10.1111/jmft.12234>
- Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods*, 18, 59–82. <https://doi.org/10.1177/1525822X05279903>
- Halstead, R. O., Pavkov, T. W., Hecker, L. L., & Seliner, M. M. (2014). Family dynamics and self-injury behaviors: A correlation analysis. *Journal of Marital and Family Therapy*, 40, 246–259. <https://doi.org/10.1111/j.1752-0606.2012.00336.x>
- Hill, R. M., del Busto, C. T., Buitron, V., & Pettit, J. W. (2018). Depressive symptoms and perceived burdensomeness mediate the association between anxiety and suicidal ideation in adolescents. *Archives of Suicide Research*, 22, 555–568. <https://doi.org/10.1080/13811118.2018.1427163>
- Hill, R. M., & Pettit, J. W. (2013). The role of autonomy needs in suicidal ideation: Integrating the interpersonal-psychological theory of suicide and self-determination theory. *Archives of Suicide Research*, 17, 288–301

- 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*, 631–643. <https://doi.org/10.1002/jclp.22071>
- Hill, R. M., & Pettit, J. W. (2016). Pilot randomized controlled trial of LEAP: A program to reduce adolescent perceived burdensomeness. *Journal of Clinical Child and Adolescent Psychology, 48*, S45–S56. <https://doi.org/10.1080/15374416.2016.1188705>
- 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*, 302–314. <https://doi.org/10.1111/sltb.12129>
- Jahn, D. R., & Cukrowicz, K. C. (2011). The impact of the nature of relationships on perceived burdensomeness and suicide ideation in a community sample of older adolescents. *Suicide and Life-Threatening Behavior, 41*, 635–649. <https://doi.org/10.1111/j.1943-278X.2011.00060.x>
- Joiner, T. E., Jr. (2005). *Why people die by suicide*. Cambridge, MA: Harvard University Press.
- King, C. A., Hill, R. M., Wynne, H., & Cunningham, R. (2012). Adolescent suicide risk screening: The effect of communication about type of follow-up on adolescents' responses. *Journal of Clinical Child and Adolescent Psychology, 41*, 508–515. <https://doi.org/10.1080/15374416.2012.680188>
- King, J. D., Horton, S. E., Hughes, J. L., Eaddy, M., Kennard, B. D., Emslie, G. J., & Stewart, S. M. (2018). The interpersonal-psychological theory of suicide in adolescents: A preliminary report of changes following treatment. *Suicide and Life-Threatening Behavior, 48*, 294–304. <https://doi.org/10.1111/sltb.12352>
- King, C. A., Klaus, N., Kramer, A., Venkataraman, S., Quinlan, P., & Gillespie, B. (2009). The youth-nominated support team—version II for suicidal adolescents: A randomized controlled intervention trial. *Journal of Consulting and Clinical Psychology, 77*, 880–893. <https://doi.org/10.1037/a0016552>
- King, C. A., Kramer, A., Preuss, L., Kerr, D.C.R., Weisse, L., & Venkataraman, S. (2006). Youth-nominated support team for suicidal adolescents (version 1): A randomized controlled trial. *Journal of Consulting and Clinical Psychology, 74*, 199–206. <https://doi.org/10.1037/0022-006X.74.1.199>
- King, C. A., & Merchant, C. R. (2008). Social and interpersonal factors relating to adolescent suicidality: A review of the literature. *Archives of Suicide Research, 12*, 181–196. <https://doi.org/10.1080/13811110802101203>
- Kumar, G., & Steer, R. A. (1995). Psychosocial correlates of suicidal ideation in adolescent psychiatric inpatients. *Suicide and Life-Threatening Behavior, 25*, 339–346. <https://doi.org/10.1111/j.1943-278X.1995.tb00956.x>
- Landis, J., & Koch, G. (1977). The measurement of observer agreement for categorical data. *Biometrics, 33*, 159–174. <https://doi.org/10.2307/2529310>
- O'Keefe, V. M., Wingate, L. R., Tucker, R. P., Rhoades-Kerswill, S., Shlish, M. L., & Davidson, C. L. (2014). Interpersonal suicide risk for American Indians: Investigating thwarted belongingness and perceived burdensomeness. *Cultural Diversity and Ethnic Minority Psychology, 20*, 61–67. <https://doi.org/10.1037/a0033540>

- Oosterhoff, B., & Metzger, A. (2016). Mother–adolescent civic messages: Associations with adolescent civic behavior and civic judgments. *Journal of Applied Developmental Psychology, 43*, 62–70. <https://doi.org/10.1016/j.appdev.2016.01.001>
- Reynolds, W. M. (2002). *RADS-2: Reynolds Adolescent Depression Scale: Professional Manual*. Lutz, FL: PAR, Psychological Assessment Resources.
- Schreier, M. (2012). *Qualitative content analysis in practice*. Thousand Oaks, CA: Sage Publications.
- Smetana, J. G., Campione-Barr, N., & Metzger, A. (2006). Adolescent development in interpersonal and societal contexts. *Annual Review of Psychology, 57*, 255–284. <https://doi.org/10.1146/annurev.psych.57.102904.190124>
- Spielberger, C. D. (1973). *Manual for the State-Trait Anxiety Inventory for Children*. Palo Alto, CA: Consulting Psychologists Press
- Stewart, S. M., Eaddy, M., Horton, S. E., Hughes, J., & Kennard, B. (2017). The validity of the interpersonal theory of suicide in adolescence: A review. *Journal of Clinical Child & Adolescent Psychology, 46*, 437–449. <https://doi.org/10.1080/15374416.2015.1020542>
- Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage Publications.
- Strijbos, J. W., Martens, R. L., Prins, F. J., & Jochems, W. M. (2006). Content analysis: What are they talking about? *Computers & Education, 46*, 29–48. <https://doi.org/10.1016/j.compedu.2005.04.002>
- Thompson, C., McCaughan, D., Cullum, N., Sheldon, T. A., & Raynor, P. (2004). Increasing the visibility of coding decisions in team-based qualitative research in nursing. *International Journal of Nursing Studies, 41*, 15–20. <https://doi.org/10.1016/j.ijnurstu.2003.03.001>
- Tucker, R. P., & Wingate, L. R. (2014). Basic need satisfaction and suicidal ideation: A self-determination perspective on interpersonal suicide risk and suicidal thinking. *Archives of Suicide Research, 18*, 282–294. <https://doi.org/10.1080/13811118.2013.824839>
- Van Orden, K. A., Cukrowicz, K. C., Witte, T. K., & Joiner, T. E. (2012). Thwarted belongingness and perceived burdensomeness: Construct validity and psychometric properties of the Interpersonal Needs Questionnaire. *Psychological Assessment, 24*, 197–215. <https://doi.org/10.1037/a0025358>
- Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner, T. E. (2010). The interpersonal theory of suicide. *Psychological Review, 117*, 575–600. <https://doi.org/10.1037/a0018697>