Discussion

Consistent with the existing literature (Borowsky, Ireland & Resnick, 2001), the adolescents in our sample were about 15 years of age at the time of their attempts. As it has been characterized (Garfinkel et al., 1982), they attempted suicide using means that were available in their homes. While other studies have found drug overdoses to be the most common method to attempt suicide among adolescents (Spirito et al., 1989), cutting was the predominant attempting method in our sample. The majority of the adolescents in our sample chose low lethality methods (e.g., superficial cutting), although slightly more than half stated that they had intended to end their lives. Adding to this paradox, a few of the participants who stated not having any suicidal intent used highly lethal means (e.g., an overdose with more that 70 Tylenols and severe self-cutting). Many girls denied or minimized their suicidal intent, a finding that is consistent with the literature (Wagner et al., 2002). This leads us to wonder if cognitive distortions –that may be developmentally appropriate– affected the expectations that the girls had about their action's outcomes, or if they became confused while trying to disentangle the rationale for their self-harming behaviors.

These findings highlight the challenges encountered by clinicians when trying to distinguish suicidal behaviors of low lethality from other self-harming behaviors (Wagner et al., 2002). This is particularly significant for mental health providers serving adolescent females, because attempts of low lethality are very common among this population (Brent, 1987), and because adolescents often recant their statements of a suicide attempt to avoid hospitalization or the fallout within their families and social networks.

The adolescents described concerning behavioral profiles. Slightly over two-thirds of the participants were within this scale's internalizing and externalizing borderline clinical or clinical range. Interesting contrasts emerged when we compared these self-reported values with the psychiatric diagnosis given to the attempters. For instance, and consistent with the literature (Jacobson et al., 2008; Kelly, Cornelius, & Lynch, 2002), the clinicians diagnosed mood disorders for the majority of attempters. However, the number of mood disorders diagnosed by the clinicians almost doubles the internalizing behaviors that the adolescents reported in the research questionnaires. This may result from the fact that clinicians diagnose when criteria are fully met, which would exclude those subjects reporting borderline clinical ranges profiles. When the girls described their internalizing behaviors, somatic complaint scores were higher than those of withdrawn depressive and anxious depressive behaviors. The clinicians, however, did not seem to capture these somatic complaints as part of the girl's psychiatric diagnosis, as observed by the few medical concerns listed in the Axis III psychiatric diagnosis. Finally, clinicians and adolescents did agree when it came to the girls' anxiety levels.

There is even a greater contrast between the adolescents' reports of externalizing behaviors and the clinical appreciation of the girls' impulse-control issues. The adolescents saw themselves seven times more impulsive and oppositional than the clinicians assessed them to be. The girls' assessment of their impulsivity is in tune with the description of the impulse-control issues common to female suicide attempters whose suicide attempts are of low lethality (Baca–Garcia et al., 2005).

The clinicians did capture the family and environmental stressors associated with Latina

adolescents' suicide attempts (Zayas & Pilat, 2008). This may provide further evidence to the hypothesis that the girls' suicide attempts emerge from conflicts between Latino cultural values and developmentally appropriate autonomy and individuation issues (Zayas et al., 2005). Furthermore, even when almost one quarter of the study participants were born overseas, and all of them were of Latino background, none of the clinicians listed *acculturation problems* as a focus for treatment. In addition, the clinicians omitted including the adolescent's lifetime attempts in the medical records. This is particularly concerning because previous suicide attempts are common among Latina adolescents (CDC, 2010) and are one of the key predictors of completed suicide (Moscicki, 1999). Finally, the clinicians did not see the suicide attempt as a serious symptom or the adolescents as severely mentally ill, as they described the symptoms and clinical presentation of the vast majority of adolescents as "moderate" in the Axis V.

Although the YSR was designed to match behaviorally based clinical syndromes (Achenbach, 1991), previous research comparing self-reports and diagnostic formulations has been inconclusive (Rosenblatt & Rosenblatt, 2002). In our study, the discrepancies observed between the psychiatric diagnosis rates and the adolescents' self-reported behavioral profiles suggest that we need more studies about how Latina adolescent suicide attempters perceive their own behaviors and how these are perceived by mental health professionals. First, and on the adolescents' side, and drawing from the literature on suicide attempters (Boergers, Spirito, & Donaldson, 1998), research should focus on whether the girls' pessimistic overview tints the way in which they assess their behaviors. On the clinicians' side, research should assess if the differences between adolescents' self-reports and psychiatric diagnoses result, for instance, from mental health training biases that lead clinicians to see suicide attempts as emerging only from mood disorders and not from impulse-control problems. This is not an issue exclusive to clinical settings, but also seems to permeate measurement tools. For example, the Youth Risk Behavior Surveillance Survey (CDC, 2010) is structured in a manner such that only those subjects answering "yes" to questions related to mood symptoms are led to questions inquiring about suicide ideation and attempts. Lastly, more needs to be understood about the effect that the clinicians' gender and ethnicity may have on the quality of their psychiatric assessments of Latina adolescent suicide attempters. The literature has shown that the ethnic mismatch between mental health providers and clients has a negative effect on the quality of psychiatric services (Zayas, Cabassa, Perez, & Howard, 2005).

The relationship between suicide and substance-use disorders among young Latinas was of particular interest in this study, as it has been shown that Hispanic females are at significant risk of drug use (Luncheon, Bae, Lurie, & Singh, 2008). Furthermore, substance-use disorders place adolescents at risk of attempting suicide (Kelly et al., 2002). Surprisingly, only one participant in our sample had a substance-abuse related disorder diagnosis. This could be explained by the fact that the average onset of substance abuse-related disorders for Latinas is age 20 (Kessler et al., 2005). Thus, for Latina adolescents, the onset of substance abuse may be subsequent to the establishment of suicidal behavioral patterns.

Confirming what the CDC (2010) has described, the majority of the adolescents included in this study had a lifetime history of two to more than six previous suicide attempts. We do not know if the girls received any medical or mental health services following those earlier

attempts, when those attempts took place, or what their lethality was. This study collected cross-sectional data, and thus we do not know the suicidal trajectories of the enrolled girls after they completed their participation. The literature has described that adolescent suicide attempters commonly re-attempt within the 3–6 months following the first incidence, but also that a first attempt's predictive power of more attempts extends for at least 12 years (Bridge, Goldstein, & Brent, 2006). This finding highlights the need to conduct longitudinal research projects following Latina suicide attempters, as a means to test the suicidal trajectories of this population as well as the taxing effects of these behaviors on the health care system.

In tune with existing studies (Borowsky et al., 2001) the adolescents studied here attempted suicide at an early age. Combining these data with the lifetime history of attempts, and with the likelihood of future incidents, it becomes clear that this group of young females presents unique vulnerabilities. These vulnerabilities may be connected with unidentified developmental risks for Latina adolescents growing up in the US that need further exploration.

Limitations

We are mindful of several limitations to this study. First, our findings come from a small sample size and participants were not randomly selected. The purpose of the study, however, was not to make complex statistical comparisons, but to describe themes emerging from the adolescents' medical charts, their self-reported behavioral profiles in the questionnaires, and their stories as shared with us in the qualitative interviews. Second, not all subjects in the sample completed a qualitative interview, limiting our ability to analyze their intent even further. Third, the medical charts were the sole data source for the adolescents' psychiatric diagnostics. Psychiatric diagnoses obtained from medical charts have been shown to be unreliable (Gilbert, Lowenstein, Koziol-McLain, Barta, & Steiner, 1996). In addition, we lack information about the demographic profiles and training of the professionals that diagnosed the adolescents, or about the collateral data used to inform their diagnostic formulations. These two limitations make it difficult to determine if the discrepancies found between the teen's self reported behavioral profiles and their diagnosis would replicate in other settings. Fourth and finally, the label of "suicide attempter" given to each of the girls in this sample was based on clinical assessments recorded on medical charts. We know nothing about the rationale informing this labeling, or about other data that may have been accessed by clinicians to justify their professional judgments.

Recommendations and Implications

Latina adolescents carry a great risk for suicide attempts. Findings from this study indicate that mental health professionals should explore both internalizing and externalizing behaviors as pathways for suicide attempts among these patients. Further consideration needs to be given to the exploration of somatic complaints and to the assessment of acculturation problems and lifetime attempts when conducting psychiatric assessments of and defining treatment approaches for Latina adolescent suicide attempters. These findings

highlight the importance of future research on the self described behavioral profiles of Latina adolescent suicide attempters and on the clinical assessment of these patients.

Acknowledgments

Data collection and manuscript preparation was provided by a Research Grant from the National Institute of Mental Health to Luis H. Zayas, Ph.D. (NIMH grants R01 MH070689, and by a Training Grant from the National Institute of Mental Health of the U.S. Public Health Service (NIMH - T32 MH19960).

The authors wish to thank Melissa Jonson-Reid, Ph.D. and Andrea Campetella, Ph.D. for their insightful comments and suggestions.

References

Achenbach, TM. Manual for the Child Behavior Checklist/4–18. Burlington, VT: University of Vermont Department of Psychiatry; 1991.

American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 4. Washington, D.C: 2000.

Baca–Garcia E, Diaz–Sastre C, García Resa E, Blasco H, Braquehais Conesa D, Oquendo MA, Saiz-Ruiz J, de Leon J. Suicide attempts and impulsivity. European Archives of Psychiatry and Clinical Neuroscience. 2005; 255(2):152–156.10.1007/s00406-004-0549-3 [PubMed: 15549343]

Berman AL, Shepherd G, Silverman MM. The LSARS-II: Lethality of Suicide Attempt Rating Scale – updated. Suicide and Life-Threatening Behavior. 2003; 33(3):261–276. [PubMed: 14582837]

Blasco-Fontecilla H, Baca-Garcia E, Dervic K, Perez-Rodriguez MM, Saiz-Gonzalez MD, Saiz-Ruiz J, Oquendo MA, De Leon J. Severity of personality disorders and suicide attempt. Acta Psychiatrica Scandinavica. 2009; 119:149–155. [PubMed: 19016671]

Boergers J, Spirito A, Donaldson D. Reasons for adolescent suicide attempts: Associations with psychological functioning. Journal of the American Academy of Child and Adolescent Psychiatry. 1998; 37(12):1287–1293. [PubMed: 9847501]

Borowsky IW, Ireland M, Resnick MD. Adolescent suicide attempts: Risks and protectors. Pediatrics. 2001; 107(3):485–493. [PubMed: 11230587]

Brent DA. Correlates of the medical lethality of suicide attempts in children and adolescents. Journal of the American Academy of Child & Adolescent Psychiatry. 1987; 26(1):87–91. [PubMed: 3584004]

Bridge JA, Goldstein TR, Brent DA. Adolescent suicide and suicidal behavior. Journal of Child Psychology and Psychiatry, and Allied Disciplines. 2006; 47(3–4):372–394.

Brown GK, Henriques GR, Sosdjan D, Beck AT. Suicide intent and accurate expectations of lethality: Predictors of medical lethality of suicide attempts. Journal of Consulting and Clinical Psychology. 2004; 72 (6):1170–1174. [PubMed: 15612863]

Centers for Disease Control and Prevention. Youth risk behavior surveillance— United States, 2009. Surveillance Summaries, Morbidity and Mortality Weekly Report. 2010; 59(SS-5)

Garcia C, Skay C, Sieving R, Naughton S, Bearinger LH. Family and racial factors associated with suicide and emotional distress among Latino students. Journal of School Health. 2008; 78(4):487–495. [PubMed: 18786041]

Garfinkel BD, Froese A, Hood J. Suicide attempts in children and adolescents. American Journal of Psychiatry. 1982; 139(10):1257–1267. [PubMed: 7124975]

Gilbert EH, Lowenstein SR, Koziol-McLain J, Barta DC, Steiner J. Chart reviews in emergency medicine research: Where are the methods? Annals of Emergency Medicine. 1996; 27(3):305–308. [PubMed: 8599488]

Goldsmith, SK.; Pellmar, TC.; Kleinman, AM.; Bunney, WE. Reducing suicide: A national imperative. Washington, DC: National Academy Press; 2002.

Harris HE, Myers WC. Adolescents' misperceptions of the dangerousness of acetaminophen overdose. Suicide and Life- Threatening Behavior. 1997; 27:274–277. [PubMed: 9357082]

Jacobson CM, Muehlenkampb JJ, Millerc AL, Turner JB. Psychiatric impairment among adolescents engaging in different types of deliberate self-harm. Journal of Clinical Child & Adolescent Psychology. 2008; 37(12):363– 375. [PubMed: 18470773]

Kelly TM, Cornelius JR, Lynch KG. Psychiatric and substance use disorders as risk factors for attempted suicide among adolescents: A case control study. Suicide and Life-Threatening Behavior. 2002; 32(3):301–312. [PubMed: 12374475]

Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE. Lifetime prevalence and age-of-onset distributions' of DSM-IV disorders in the national comorbidity survey replication. Archives of General Psychiatry. 2005; 62(6):593–602. [PubMed: 15939837]

Luncheon C, Bae S, Gonzalez A, Lurie S, Singh KP. Hispanic female adolescents' use of illicit drugs and the risk of suicidal thoughts. American Journal of Health Behavior. 2008; 32(1):52–59. [PubMed: 18021033]

Maxwell JA. Understanding and validity in qualitative research. Harvard Educational Review. 1992; 62(3):2779–299.

Mazza JJ, Reynolds WM. An investigation of psychopathology in nonreferred suicidal and nonsuicidal adolescents. Suicide and Life-Threatening Behavior. 2001; 31(3):282–302. [PubMed: 11577913]

Moscicki, EK. Epidemiology of suicide. In: Jacobs, DJ., editor. The Harvard Medical School guide to suicide assessment and intervention. Hoboken, NJ: Jossey-Bass; 1999.

Muehlenkamp JJ, Gutierrez PM. An investigation of differences between self-injurious behavior and suicide attempts in a sample of adolescents. Suicide and Life-Threatening Behavior. 2004; 34(1): 12–23.10.1521/suli.34.1.12.27769 [PubMed: 15106884]

Nasser EH, Overholser JC. Assessing varying degrees of lethality in depressed adolescent suicide attempters. Acta Psychiatrica Scandinavica. 1999; 99:423–431. [PubMed: 10408264]

Overholser, JC.; Spririto, A. Precursors to adolescent suicide attempts. In: Spirito, A.; Overholser, JC., editors. Evaluating and treating adolescent suicide attempters. From research to practice. San Diego, CA: Elsevier Science; 2003. p. 19-40.

Pew Hispanic Center. Between Two Worlds: How Young Latinos Come of Age in America. Washington, D.C: 2009.

Range LM, Knott EC. Twenty suicide assessment instruments: Evaluation and recommendations. Death Studies. 1997; 21(1):25– 58. [PubMed: 10169713]

Rosenblatt A, Rosenblatt JA. Assessing the effectiveness of care for youth with severe emotional disturbances. Is there agreement between popular outcome measures? Journal of Behavioral Health Services and Research. 2002; 29(3):259–273. [PubMed: 12216371]

Silverman M, Berman A, Sandal N, O'Carroll PW, Joiner T. Rebuilding the Tower of Babel: A revised nomenclature for the study of suicide and suicidal behaviors Part I: Background, rationale. Suicide and Life-Threatening Behaviors. 2007; 37:245–247.

Smith K, Conroy R, Ehler B. Lethality of Suicide Attempt Rating Scale. Suicide and Life-Threatening Behavior. 1984; 14:215–242. [PubMed: 6528343]

Spirito A, Overholser JC. The suicidal child: Assessment and management of adolescents after a suicide attempt. Child and Adolescent Psychiatric Clinics of North America. 2003; 12:649–665. [PubMed: 14579644]

Spirito A, Overholser JC, Stark L. Common problems and coping strategies, II: Findings with adolescent suicide attempters. Journal of Personality Assessment. 1989; 67:90–101. [PubMed: 8683428]

Turner SG, Kaplan CP, Zayas LH, Ross RE. Suicide attempts by adolescent Latinas: An exploratory study of individual and family correlates. Child and Adolescent Social Work Journal. 2002; 19(5): 357–374.

Velting DM, Rathus JH, Asnis GM. Asking adolescents to explain discrepancies in self-reported suicidality. Suicide and Life-Threatening Behavior. 1998; 28:187–96. [PubMed: 9674078]

Wagner BM, Wong SA, Jobes DA. Mental health professionals' determinations of adolescent suicide attempts. Suicide and Life-Threatening Behavior. 2002; 32(3):284–300. [PubMed: 12374474]

Zayas LH, Cabassa LJ, Perez MC, Howard MO. Language and ethnicity are parts of the interpersonal process that converge during psychiatric diagnosis, affecting diagnostic accuracy and concordance among clinicians. Journal of Ethnic & Cultural Diversity in Social Work. 2005; 14(1/2):93–109.

Zayas LH, Gulbas LE, Fedoravicius N, Cabassa LJ. Patterns of distress, precipitating events, and reflections on suicide attempts by young Latinas. Social Science and Medicine. 2010; 70(11): 1773–1779. [PubMed: 20347199]

Zayas LH, Lester R, Cabassa LJ, Fortuna L. Why do so many Latina teens attempt suicide? A conceptual model for research. American Journal of Orthopsychiatry. 2005; 75(2):275–287. [PubMed: 15839764]

Zayas LH, Pilat AM. Suicidal behavior in Latinas: Explanatory cultural factors and implications for intervention. Suicide and Life Threatening Behaviors. 2008; 38(3):334–342.