Mania, Hypomania, and Suicidality: Findings from a Prospective Community Study

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We examined prospectively whether mania and hypomania are associated with an elevated risk for suicidality in a community sample of adolescents and young adults. Baseline and four-year follow-up data were used from the Early-Developmental- Stages-of-Psychopathology (EDSP) Study, a prospective longitudinal study of adolescents and young adults in Munich. Suicidal tendencies (ideation/attempts), mania, and hypomania were assessed using the standardized Munich-Composite-International- Diagnostic-Interview. At baseline, mania/hypomania was associated to a different degree with suicidality (Odds ratios [OR] range from 1.9 to 13.7). In the prospective analyses, the risk for subsequent incident suicidal ideation was increased in the presence of prior mania (38.0% vs. 14.1%; OR = 4.4; 95% CI = 1.4–13.5). No associations could be found between prior mania/hypomania and incident suicide attempts. The prospective analyses revealed a remarkable relationship between preexisting mania and increased risk for subsequent suicidal ideation.

Keywords Mania, hypomania, suicidality, community sample, adolescents, elevated risk

In community studies, both mania and hypomania in adolescents and young adults have been described as relatively unstable and impairing conditions with substantial comorbidity and relatively high rates of health service utilization (Angst, 1998; Wittchen, Mühlig & Pezawas, 2003). According to M-CIDI DSM-IV criteria and algorithms the lifetime prevalence was 1.5% for hypomania and 0.1% for single episode of mania (Wittchen, Nelson & Lachner, 1998). Similar rates have been reported by Lewinsohn, Klein and Seeley (2000): 1% for bipolar I during adolescence and 2% during young adulthood as well as 5% for sub-threshold bipolar disorders.

In comparison to fairly consistent findings with regard to associations between MDE and suicidal behavior in community samples of adolescents and young adults (Andrews & Lewinsohn, 1992; Brent, Perper, Goldstein et al., 1988; Breslau, Davis & Andreski, 1991; Fergusson, Beutrais & Horwood, 2003; Garnefski & Diekstra, 1995; Garrison, McKeown, Valois et al. 1993; Friedman, Asnis et al. 1987; Joffe, Offord & Boyle, 1988; Levy & Deykin, 1989; Lewinsohn, Rohde & Seeley, 1995; Lewis, Johnson, Cohen et al. 1988; Velez & Cohen, 1988) relatively few epidemiological studies have examined the relationship between suicidality and bipolar disorder in adolescent samples. Discrepant results have been reported in psychological autopsy studies. Brent, Perper, Mortiz et al. (1993), found the bipolar spectrum disorder among 17.9% of the investigated sample of adolescent suicide victims. However, Apter, Bleich, King et al. (1993), Marttunen, Aro, Henriksson et al.(1991), Rich, Young, Fowler et al. (1990), Runeson (1989), Shaffer, Gould and Hicks (1994) reported no or few bipolar cases. All these studies, however, are restricted to adolescent suicide victims.

The only two large-scale epidemiological suicide attempts and bipolar disorder that have addressed the issue of suicidality in detail are the Oregon study (Lewinsohn, Klein & Seeley,

1995b; Lewinsohn, Seeley & Klein, 2003) and the Zurich Study (Angst, Gamma, Benazzi et al., 2003). In the Oregon study structured interviews were administered to a representative community sample of 1709 older adolescents (aged 14 through 18 years). The lifetime prevalence of bipolar disorders (primarily bipolar II disorder and cyclothymia) was approximately 1%. An additional 5.7% of the sample reported having experienced a distinct period of abnormality and persistently elevated, expansive or irritable mood even though they had never met criteria for bipolar disorder („core positive subjects“). The bipolar and core positive subjects exhibited a dramatically higher rate of suicide attempts than the control group (never mentally ill) (44.4% versus 1.2%). There was also a significantly elevated rate of suicide attempts of the bipolar group as compared to the group with a major depressive disorder (44.4% versus 22.2%). In the Zurich Study 4547 subjects (2201 males 19 years of age, 2346 females 20 years of age) representative of the canton Zurich in Switzerland were screened in 1978 with the Symptom Checklist 90-R (Derogatis, 1977). In order to increase the probability of psychiatric syndromes, a sub-sample of 591 subjects (292 males, 299 females) was selected for interview with two-thirds consisting of high scorers (defined by the 85th percentile or more of the SCL-90) and a random sample of those with scores below the 85th percentile. Six interview waves have been conducted so far: 1979, 1981, 1986, 1988, 1993, and 1999. Including the data of all six waves, Angst, Gamma, Benazzi et al. (2003) found in cross-sectional studies similar rates of suicide attempts among subjects with major depressive disorder (MDD), bipolar II disorder, and hypomania.

In this report we examined data from the Early Developmental Stages of Psychopathology Study (EDSP) (Lieb, Isensee, von Sydow et al., 2000; Wittchen, Nelson & Lachner, 1998), focusing on the longitudinal relationship between prior mania/hypomania and secondary suicidality. We hypothesized that mania as well as hypomania at baseline would predict the onset of secondary suicidality.

METHOD

Design

Data were collected as part of the Early Developmental Stages of Psychopathology Study (EDSP), a prospective longitudinal study designed to collect data on the prevalence and incidence, familial and other risk factors, comorbidity and course of substance use and other mental disorders in a representative sample of 3021 subjects aged 14–24 at baseline. The study consists of a baseline survey, two follow-up surveys, and a family history component including direct parent interviews. Detailed descriptions of the EDSP-design and field procedures are reported elsewhere (Lieb, Isensee, von Sydow et al., 2000; Wittchen, Nelson & Lachner, 1998).

Sample

The EDSP sample was drawn randomly from the 1994 government population registers of residents in metropolitan Munich and the surrounding counties with an expected age range for the sampled subjects between 14 and 24 at the time of the baseline interview in 1995. Details about the sampling and representatives of the entire EDSP-sample along with its sociodemographic characteristics have been presented (Lieb, Isensee, von Sydow et al., 2000; Wittchen, Nelson & Lachner, 1998). A total of 3021 interviews were completed at baseline (T0, response rate: 71%). The first follow-up study (T1) was conducted only for subjects aged 14–17 at baseline, whereas the second follow-up study (T2) was conducted for all subjects. In

the first follow-up, an average of 20 months after baseline, a total of 1228 interviews were completed (response rate: 88%). From the 3021 subjects of the baseline-study, a total of 2548 interviews were completed at the second follow-up (T2), an average of 42 months after baseline (response rate: 84%).

The baseline results reported in this article are based on 3021 respondents while prospective analyses were done using respondents who completed the second (T2) follow-up and had not reported a suicide attempt (N = 2503) or suicidal ideation (N = 2020) respectively at T0.

Diagnostic Assessment

Diagnostic assessments were based on the computer-assisted version of the Munich-Composite International Diagnostic Interview (DIA-X/M-CIDI; Wittchen & Pfister, 1997), an updated version of the World Health Organizations CIDI version 1.2 (WHO-CIDI; World Health Organization, 1990). Reliability and validity of the M-CIDI have been reported (Reed, Gander, Pfister et al., 1998; Wittchen, Nelson & Lachner, 1998).

Diagnostic findings were obtained by using the M-CIDI/DSM-IV diagnostic algorithms. In all assessments, highly trained clinical interviewers administered the interviews, mostly graduate psychologists. Most interviews were carried out in the home of the respondents.

At baseline, the lifetime version of the interview was used. At each of the follow-up assessments, the M-CIDI interval version, which refers to the time period of assessment from the last interview until the present, was applied. For those respondents aged 14–17 at baseline, the complete follow-up status is assessed from the aggregation of information obtained from T1 and T2 interviews. For respondents aged >17 at baseline, the follow-up status was solely assessed from the second follow-up questions which refer to the time between T0 and T2. Hence, both assessments cover together the entire 4-years follow-up period for each individual (T0–T2).

Definition of Mania and Hypomania

According to DSM-IV criteria (American Psychiatric Association, 1994), hypomania has been defined as having experienced a distinct period of abnormally and persistently elevated, expansive, or irritable mood lasting throughout at least 4 days, in addition to having three or more of the following manic symptoms: 1) inflated self-esteem or grandiosity, 2) decreased need for sleep (e.g., feeling rested after only 3 hours of sleep) 3) more talkative than usual or pressure to keep talking, 4) flight of ideas or subjective experience that thoughts are racing, 5) distractibility (i.e., attention too easily drawn to unimportant or irrelevant external stimuli), 6) increase in goal-directed activity (at work, at school, or sexually) or psychomotor agitation, 7) excessive involvement in pleasurable activities that have a high potential for painful consequences (e.g., engaging in unrestrained buying sprees, sexual indiscretions, or foolish business investments). DSM-IV Mania has been defined as a distinct period of abnormally and persistently elevated, expansive or irritable mood, lasting at least 1 week (or any duration if hospitalization is necessary) in addition to having three or more (four if the mood is only irritable) of the manic symptoms listed above.

Based on the information provided by the subject for the M-CIDI affective disorder section, this paper divides the sample into three mutually exclusive groups: (A) no mania/hypomania: neither the criteria for mania nor hypomania were fulfilled; (B) mania: the subject fulfilled

diagnostic criteria according to DSM-IV criteria; (C) hypomania: the subject fulfilled diagnostic criteria for hypomania but never for mania.

Definition of Suicidality

Suicidal ideation was assessed in the depression section of the M-CIDI with the identical following questions: (1) „Has there ever been a period of 2 weeks or more when you thought a lot about death—either your own, someone else’s, or death in general?“ (2) „Has there ever been a period of 2 weeks or more when you felt like you wanted to die?“ (3) „Have you ever felt so low that you thought about committing suicide?“ and (4) „Have you ever made a plan as to how you might do it?“ Suicide attempts were defined with the question „Have you ever attempted suicide?“

Furthermore, it has to be mentioned that in the M-CIDI depression section only those subjects who acknowledged having had a period of at least 2 weeks duration with continuously depressed mood, low energy or loss of interest (the stem questions for major depression) are asked these questions. At T2, a modification was introduced into the depression section to ensure that all adolescents were asked additional questions regarding suicidality in their whole lifetime period, by introducing a skip to these questions, whenever the stem question for major depression was denied. All subjects who reported at T2 that they ever had attempted suicide in their life were additionally asked for age of occurrence of the attempt. In case of several attempts, age was assessed for first, second and last suicide attempt.

Statistical Analyses

Data were weighted to adjust for different sampling probabilities at baseline depending on age as well as to account for selective participation at baseline according to age, sex, and location. No selective drop-out due to these factors was observed during the follow-up (Lieb, Isensee, von Sydow et al., 2000). Whereas the mania/hypomania status at baseline (no mania/hypomania, mania, hypomania) was not found to be related to the probability of drop-out during follow-up (Wald $\chi^2 = 0.45$, p -value = 0.799) the suicidality status (no suicidality, suicidal ideation, suicide attempts) was (Wald- $\chi^2(2) = 14.1$, $p = 0.001$): Those with suicide attempts had a strongly elevated rate of drop-out as compared to those without suicidality (weighted 33.8% vs. 15.2%, OR = 3.0, 95% CI = 1.8–5.0). This difference, however, was considered to be of minor importance here since this article only analyzes the association between baseline mania/hypomania status and later incidence of suicidality. Analyses were performed using Stata 8 (Stata Corporation, 2003) while applying the information sandwich estimator for accurate assessment of statistical precision of estimates in the case of weighted data (Royall, 1986). Associations were quantified with odds ratios from binomial or multinomial logistic regressions respectively while adjusting at least for sex and age (if other controls were used this is explicitly stated). In each case we further assessed interactions between bipolar status and sex on suicidality status and age response to assess potential heterogeneity in associations according to these factors.

RESULTS

Table 1 shows the EDSP baseline prevalence findings for lifetime mania (1.5%) and hypomania (2.0%). The baseline prevalence findings for lifetime suicidal ideation were 20.5%, for suicide attempts 2.3%. Hence, 22.8% of the sample never fulfilled criteria for the assessed suicidal tendencies.

Both suicide ideation (23.8% vs. 17.1%; OR = 1:6, 95% CI = 1.2–2.0) and suicide attempts (3.1% vs. 1.5; OR = 2:3, 95% CI = 1.3–4.1) were more frequent in women than in men. No gender differences were found for mania and hypomania.

Table 2 reports the lifetime associations between mania, hypomania and suicidality status, based on the retrospective data collected at the baseline assessment. As can be clearly seen, mania was significantly and strongly associated with the occurrence of both suicidal ideation (46.9% vs. 19.9%; OR = 4:5; 95% CI = 2.0–9.9) and suicide attempts (14.6% vs. 2.0%; OR = 13:7; 95% CI = 4.9–38.1) as compared to subjects without any manic or hypomanic episodes. Likewise, but to a weaker extent hypomania was associated with the occurrence of both suicidal ideation (31.3% vs. 19.9%; OR = 1:9; 95% CI = 1.01–3.8) and suicide attempts (7.3% vs. 2.0%; OR = 4:2; 95% CI = 1.4–12.2). The differences between mania and hypomania, although noteworthy in the magnitude of point estimates, did not reach statistical significance (OR for suicidal ideation = 2.4, 95% CI = 0.8–6.4, OR for suicide attempt = 3.3, 95% CI = 0.7–13.2).

In accordance to these results, the occurrence of either mania or hypomania was significantly associated with the occurrence of any suicidality compared to subjects without mania/hypomanic episodes (50.0% vs. 21.9%; OR = 3:2; 95% CI=1.9–5.3).

In our sample, 21 out of the 41 cases (non-weighted) with mania (52.3% weighted) and 11 out of the 55 cases (non-weighted) with hypomania (21.7% weighted) fulfilled DSM-IV criteria for any lifetime MDE. In order to exclude the possibility that these findings were due to the fact that both mania/hypomania status and suicidal status were related to the presence of MDE we re-ran these analyses and controlled for lifetime major depression episodes at baseline. The association between hypomania and suicidal ideation now no longer reached significance although the point estimate decreased only marginally (OR = 1:8, 95% CI = 0.8–3.6). The other associations remained significant and decreased to a different degree (mania with suicidal ideation: OR = 2:5, 95% CI = 1.0–6.2, hypomania with suicide attempts: OR = 3:7, 95% CI = 1.3–10.4, mania with suicide attempts: OR = 6:8, 95% CI = 1.8–24.5).

The examination of interactions with gender revealed no statistically significant results. Regarding interactions with age we found that with increasing age the association between mania and suicide attempts decreased strongly (OR for interaction mania/suicide attempt OR = 0:7; 95% CI = 0.5–0.9 per year of age).

Table 3 examines whether respondents with lifetime mania or hypomania have an increased risk for the first onset of suicide attempts during the four-year follow-up period, therefore we omitted the cases with a suicide attempt at baseline. Since there were only 3 cases with mania or hypomania at baseline among a total of 60 incident suicide attempt cases and each of them reported suicidal ideation at baseline we were not able to also omit the cases with suicidal ideation at baseline. Instead, we adjusted for the presence of suicidal ideation at baseline.

No significant associations could be found between mania and suicide attempts as well as between hypomania and suicide attempts during follow-up. The difference between mania (1.4%) and hypomania (8.4%) did not reach statistical significance (OR = 0:13, 95% CI = 0.01–1.7).

Interactions with gender could not be determined because of empty cells. As in the baseline associations, the odds ratio between mania and incident suicide attempts decreased with

higher age (OR for interaction OR = 0.4; 95% CI = 0.1–0.9 per year of age). In contrast, the odds ratio between hypomania and incident suicide attempts increased with higher age (OR for interaction OR = 2.1; 95% CI = 1.2–3.7).

Table 4 examines whether respondents with lifetime mania and hypomania have an increased risk for the first onset of suicidal ideation during the four-year follow-up period. In these analyses the cases that reported suicidal ideation already at baseline were excluded. It can be seen that mania is associated with subsequent suicidal ideation compared to subjects without manic or hypomanic episodes (38.0% vs. 14.1%; OR = 4.4; 95% CI = 1.4–13.6). No association was found between hypomania and subsequent suicidal ideation (23.0% vs. 14.1%; OR = 1.9; 95% CI = 0.7–4.8) nor did the difference between mania and hypomania reach significance (OR = 2.3, 95% CI = 0.5–9.6). After controlling for major depressive episode at baseline the association between mania and later suicidal ideation essentially remained (OR = 3.9, 95% CI = 1.3–11.3).

Interactions with gender and age were not significant.

DISCUSSION

The goal of this study was to examine whether subjects with mania or hypomania have an increased risk for subsequent suicidality. Specifically, we investigated whether prior mania and hypomania were related to an increased risk for the development of suicidal ideation and suicide attempts.

Notable features of the EDSP study of relevance to this study are: a) surveying of a large representative community sample aged 14–24 at baseline; b) inclusion of a sample of adolescents who were young enough at baseline that the majority had not yet developed the outcomes under consideration, thereby permitting a strict prospective investigation of the associations between mania/hypomania and suicidality; c) standardized symptom and diagnostic assessments of DSM-IV mania/hypomania and suicidality; d) availability of two follow-up assessments after baseline covering a period of about four years, allowing a strict prospective-longitudinal evaluation of the temporal ordering between mania/hypomania status and suicidality.

Limitations of our study include: (1) Not all respondents had passed through the entire risk period for onset of suicidal behavior, thus the results cannot be considered robust, yet. (2) The study focused on suicidal ideation and suicidal attempt; the extent to which the results will generalize to completed suicide remains to be explored.

In accordance with the study of Lewinsohn, Klein & Seeley (1995) we found a considerable percentage of subjects with hypomania (2.0%) and mania (1.5%). Unfortunately, the groups of Lewinsohn, Klein, and Seeley (1995) and Lewinsohn, Seeley, and Klein (2003) and ours are not comparable: Lewinsohn, Klein, and Seeley (1995b) included in their mania group bipolar I disorder and cyclothymia according to the DSM-III-R criteria, whereas our mania group consists of all subjects with a DSM-IV bipolar I disorder. The core positive group of Lewinsohn, Klein, and Seeley (1995) and Lewinsohn, Seeley, and Klein (2003) consisted of subjects who reported having experienced a distinct period of abnormally and persistently elevated, expansive, or irritable mood, but never met criteria for bipolar disorder. However, in our study the hypomania group includes subjects fulfilling the diagnostic criteria for hypomania but never for mania according to DSM-IV, with or without a major depressive

episode (MDE). Although rates of mania and hypomania were 40–50% higher among females, this difference was not statistically significant as in the study reported by Lewinsohn, Klein, and Seeley (1995) and Lewinsohn, Seeley, and Klein (2003).

The Zurich study (Angst, Gamma, Benazzi et al., 2003) reported data of a representative community sample of young adults (males 20, females 21 years of age) in a prospective design over 20 years and found no differences between subjects with bipolar II disorder and major depressive disorder (MDD) in regard to suicide attempts.

In accordance to the literature and our results, the occurrence of either mania or hypomania is cross-sectionally associated with the occurrence of any suicidality compared to subjects without manic/hypomahypomanic episodes. At baseline, 35 out of 96 of our subjects with mania or hypomania had reported suicidal ideation (34%), and 13 had reported any suicide attempt (16.1%). This result indicates that the diagnosis of mania or hypomania can be regarded as a stronger correlate for suicide ideas and suicide attempts than a MDE in adolescents and young adults (Wunderlich, Bronisch & Wittchen, 1998). The frequency of suicide attempts and ideas was higher in mania (suicide attempts: 14.6%; suicidal ideation: 46.9%) as compared to hypomania (suicide attempts: 7.3%; suicidal ideation: 31.3%). Summarizing the results of the six independent studies with adult patients, in which unipolar, bipolar I, and bipolar II patients were analyzed separately, the rates of prior suicide attempts in unipolar, bipolar I and bipolar II patients were 12%, 17%, and 24%, respectively (Rihmer & Kiss, 2002). Analyzing the ECA database, the lifetime rate of suicide attempt(s) was substantially higher in bipolar II (34%) than in bipolar I (24%) patients, while the corresponding figure for unipolar major depressives in the same population was 16% (Chen & Dilsaver, 1996; Judd & Akiskal, 2003). Our results are in contrast to the results in the epidemiological adult samples mentioned above with a preponderance of suicide attempts in the mania group. Controlling for comorbid MDE in subjects with mania or hypomania, the association between mania/hypomania and suicide attempts persisted in our sample.

Only one clinical study analyzed the specific diagnostic subtypes of affective disorder, that is bipolar I and II as well as unipolar disorder of 69 consecutive suicide attempters with current DSM-IV major depressive episode. The authors found that 45 (65%) had first episode or recurrent unipolar major depression, 19 (28%) had bipolar II depression and 5 (7%) had bipolar I depression (Balázs, Lecrubier, Csiszár et al., 2003).

As far as we know our study is the first using a strong prospective approach, looking prospectively at the development of suicidal behavior during the four-year follow-up of 14 to 24 year old subjects. Subjects with mania at baseline had an elevated risk for subsequent suicidal ideation, which could not be explained by the co-occurrence of a MDE whereas no association could be proved for hypomania cases and with the onset of suicide attempts. However, the lower statistical power for onset of suicide attempts due to the low number of incident cases has to be considered here. There were no sex-related differences in the associations in terms of odds ratios between suicide attempts and mania/hypomania. Incident suicide attempts were less strongly related to mania with increasing age, but more strongly related to hypomania with increasing age.

Impulsivity might possibly be regarded as a link between bipolar disorder and suicidal behavior. Increased impulsivity plays an important role in suicide attempt and suicide execution (Crumley, 1981; Kashden, Fremouw, Callahan et al., 1993), and also in individuals with bipolar disorder (Pössl & von Zerssen, 1990). Lewinsohn, Klein, and Seeley (2000), observed in their prospective community study that adolescents with bipolar disorder and sub-

threshold bipolar disorder have elevated rates of antisocial symptoms and borderline personality symptoms.

Both mood and conduct disorders have been reported to be related to an increased risk of suicidality among adolescents (Brent, Perper, Moritz et al., 1993; Lewinsohn, Rohde & Seeley, 1995). Mania and hypomania may therefore contribute considerably to the risk of suicide attempts and may be of great diagnostic value looking at the results of Lewinsohn, Klein, and Seeley (1995) and our study. Treatment would most likely include pharmacotherapy targeted at reducing the number and severity of mood swings. Mood stabilizers currently used include lithium, valproate, and carbamazepine. Results of open and controlled trials give hints that lithium may be most efficacious in the treatment of child and adolescent bipolar disorder (Benton, Weller & Weller, 2000). In the scientific literature there are no empirically validated or otherwise described psychosocial treatments for children and adolescents with bipolar disorder. There exist some treatment approaches with partly supported but not yet empirically validated programs (Goldberg-Arnold & Fristad, 2003).

TABLE 1. Lifetime Prevalence of Mania/Hypomania and Suicide Ideation/Attempts at baseline (N = 3021)

	Lifetime prevalence at baseline		
	N	%w	95% CI
<i>Total</i>			
Mania/Hypomania			
Mania	41	1.5	1.0–2.1
Hypomania	55	2.0	1.4–2.6
Any	96	3.5	2.7–4.3
Suicidality			
Suicide ideation	573	20.5	18.9–22.2
Suicide attempts	69	2.3	1.8–3.0
Any	642	22.8	21.1–24.6
<i>Men</i>			
Mania/Hypomania			
Mania	14	1.2	0.7–2.2
Hypomania	22	1.6	0.9–2.5
Any	36	2.8	1.9–4.0
Suicidality			
Suicide ideation	229	17.1	14.9–19.5
Suicide attempts	20	1.5	0.9–2.4
Any	249	18.6	16.4–20.1
<i>Women</i>			
Mania/Hypomania			
Mania	27	1.8	1.1–2.7
Hypomania	33	2.3	1.6–3.4
Any	60	4.1	3.1–5.4
Suicidality			
Suicide ideation	344	23.8*	21.4–26.3
Suicide attempts	49	3.1*	2.3–4.3
Any	393	27.0*	24.5–29.6

*Indicates the group with the higher rate for those with a significant sex difference ($p < .05$). For female vs male subjects, ORs are 1.6 (95% CI = 1.2–2.0) for suicide ideation, 2.3 (95% CI = 1.3–4.1) for suicide attempts, 1.6 (95% CI = 1.3–2.0) for any suicidality, 1.5 (95% CI = 0.7–3.0) for Mania, 1.5 (95% CI = 0.8–2.8) for hypomania and 1.5 (95% CI = 0.9–2.4) for any mania or hypomania.

TABLE 3. Association between Hypomania/Mania at Baseline and Suicidal Attempts During Follow-up

Mania/Hypomania at baseline	Onset of suicidality during follow-up					
	No suicide attempt (N = 2443)		Suicide attempt (N = 60)			
	N	w%	N	w%	OR ¹	95% CI
No Hypomania/Mania	2375	97.9	57	2.1	ref.	
Mania	29	98.7	1	1.4	0.5	0.06–3.4
Hypomania	39	91.6	2	8.4	3.5	0.7–15.8

¹OR = odds ratio from logistic regression; adjusted for sex, age, and suicidal ideation at baseline.

*p < .05.

TABLE 4. Association between Mania/Hypomania at Baseline and Suicidal Ideation During Follow-up

Mania/Hypomania baseline	Onset of suicidality during follow-up					
	No suicidal ideation (N = 1697)		Suicidal ideation (N = 323)			
	N	w%	N	w%	OR ¹	95% CI
No Mania/Hypomania	1670	85.9	309	14.1	ref.	
Mania	7	62.0	7	38.0	4.4*	1.4–13.6
Hypomania	20	77.0	7	23.0	1.9	0.7–4.8

¹OR = odds ratio from logistic regression; adjusted for sex and age.

*p < .05.

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