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Reporting suicide attempts: consistency and its determinants in a large mental health study

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Abstract

A lifetime history (LTH) of suicide attempts (SAs) is frequently assessed in mental health surveys. However, little is known about the reliability of assessing a LTH of SA. This study examined the consistency and its determinants of reporting a LTH of SA in a large cohort of persons with a history of depression and/or anxiety. Data are from the baseline and two-year assessments of the Netherlands Study of Depression and Anxiety. Persons with a Composite International Diagnostic Interview (CIDI)-based lifetime depressive and/or anxiety disorder ($N = 1973$) constitute the study sample. A LTH of SAs was assessed at baseline and at two-year follow-up. Of the persons who reported at either interview a LTH of SAs, more than one-third did not report this consistent at both interviews. Moreover, indications were found for more consistent reporting among persons with a higher number of SAs and among persons with current (severe) psychopathology as compared to those with remitted or less severe current psychopathology. Our results showed that even a salient topic as a history of SAs is prone for reporting errors, and that current psychological state influences reporting of a LTH of SAs.

Introduction

Several psychiatric epidemiological studies have assessed lifetime history (LTH) of suicide attempts (SAs). Asking such retrospective information is a frequently used and an unavoidable research tool necessary to calculate e.g. first incidence rates of psychiatric disorders or symptoms. Furthermore lifetime information is useful etiologically, because it identifies a larger number of affected cases than does a point or period prevalence and its estimation is less biased by duration of the psychiatric disorder or symptom (Robins *et al.*, 1984).

A problem with retrospective information, especially when elicited over a long lifetime perspective, is that

responses may be accompanied by reporting errors (Bernard *et al.*, 1984). One of the important factors for reporting accuracy is the saliency of the event (Sudman and Bradburn, 1983). Research showed that saliency positively affects the accuracy of retrospective reports (Van der Vaart, 2004, 2007). Attempting to commit suicide is probably one of the most intensive and salient events a person can experience in life. Because of this saliency, one would expect such an event to be time-tagged in autobiographical memory, i.e. stored in memory with a specific date. However, there are several findings that suicide attempters have difficulties in retrieving specific autobiographical memories and produce more general memories (Leibetseder *et al.*, 2006; Williams and Broadbent, 1986; Williams and Dritschel, 1988).

To our best knowledge, however, there is not much known about the long-term reliability of reports of a LTH of SAs. One of the few studies examining the stability of self-reported SAs found that one-third of the baseline adolescent and young adult suicide attempters did not report their SA again at the four-year follow-up assessment (Christl *et al.*, 2006). Another study asked young adult children of depressed mothers to recall whether they had reported suicidal content (suicidal ideation or attempted suicide) six years earlier (Klimes-Dougan *et al.*, 2007). This study found a moderate level of agreement (kappa of 0.57), but 38% failed to recall their past suicidal content. Moreover some studies found evidence that current psychological state influenced the accuracy of reports concerning prior suicidal reports. More specifically persons with current psychopathological symptoms were more likely to report their previous reported suicidal ideation or attempts than persons with no or less current psychopathological symptoms (Goldney *et al.*, 2009; Klimes-Dougan *et al.*, 2007). These findings may be due to the working of one's episodic memory. As people tend to forget explicit memories they rely for retrieving them on their current interpretation of past events (Levine *et al.*, 2009) and this interpretation is affected by their current emotional state (Levine and Safer, 2002). So persons who are currently depressed or currently have suicidal thoughts may be more likely to report their previous SAs, because at the time of their actual SA they also felt bad. Other possible determinants for inconsistent reports of a LTH of attempted suicide are socio-demographic characteristics. In research examining the reliability of reporting of a LTH of depression, some socio-demographic characteristics emerged as factors influencing the reporting of a LTH of depression. These studies stated that women are more likely to report a LTH of depression episode than men (Thompson *et al.*, 2004; Warshaw *et al.*, 1991), reporting was less consistent among the lower educated (Aneshensel *et al.*, 1987) and among older persons (Kendler *et al.*, 2001). It would be interesting to examine whether socio-demographic characteristics influence the reliability of a LTH of attempted suicide.

All mentioned studies examining the reliability of reporting SAs/suicidal thoughts focussed on adolescents and young adults and included relatively few people who reported SAs/suicidal thoughts because they were community studies (Christl *et al.*, 2006; Goldney *et al.*, 2009) or the study sample was relatively small ($N = 78$) (Klimes-Dougan *et al.*, 2007). Given the fact that suicidality is one of the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) symptoms of a major depressive episode and depressive and anxiety disorders are strong predictors for attempted suicide (Beautrais *et al.*, 1996; Sareen *et al.*, 2005), it would be interesting to examine the reliability of a LTH of attempted suicide in a large prospective cohort of adults with a history of depression and/or anxiety.

This study firstly examines the consistency of reports of a LTH of attempted suicide within a large cohort of adults with a LTH of depression or anxiety disorder. Secondly, we examine whether characteristics of the reported SA and demographic characteristics are related to consistent reporting of a LTH of attempted suicide. Thirdly, we examine whether psychopathological characteristics are related to consistent reporting of a LTH of attempted suicide and hypothesize that persons with current (severe) psychopathology are more likely to report their previous SAs than those who had no or less current psychopathology.

Methods

Sample

The Netherlands Study of Depression and Anxiety (NESDA) is an ongoing longitudinal cohort study designed to examine the long-term course and consequences of depressive and anxiety disorders in adults (18–65 years). In the period between September 2004 and March 2007 NESDA included 2981 respondents from different health care settings and in different clinical developmental stages of illness in order to obtain a full understanding of the course of depressive and anxiety disorders. The respondents were recruited when newly enrolled at mental health care organizations (807 persons), through a screening approach conducted in primary care (1610 persons) and through the community (564 persons). Clinical exclusion criteria were a primary clinical diagnosis of other psychiatric disorders (e.g. psychotic disorder, obsessive compulsive disorder, bipolar disorder or a severe addiction disorder) and not being sufficiently fluent in Dutch. The study

protocol was approved by the ethical review board of the participating centers and all respondents signed a written informed consent. For more details about the rationale, objectives and methods of NESDA see Penninx *et al.* (2008).

After two years a face-to-face follow-up assessment was conducted. Of the 2981 respondents originally interviewed at baseline, 2596 respondents (87.1%) were interviewed again at the two-year follow-up interview. Non-response was significantly higher among those with younger age, lower educational level, non-North European ancestry, being recruited in Amsterdam, no previous participation in research and those with major depressive disorder, but was not associated with sex or the presence of an anxiety disorder (Lamers *et al.*, 2012). Of these 2596 respondents, 1995 had a lifetime depression or anxiety diagnosis at baseline interview. A LTH of attempted suicide was assessed at the baseline measurement as well as at the two-year follow-up interview. Because one of the main objectives of this study was to examine the consistency of reporting a LTH of attempted suicide, we excluded for the present study the persons with a reported first onset of SA between baseline interview and follow-up interview ($N = 15$), because these persons would otherwise unrealistically inflate the number of inconsistencies between the baseline and follow-up interview. Moreover, data on lifetime SAs at both waves were not complete for seven respondents because of item non-response, resulting in a sample size of 1973 respondents with a lifetime depression or anxiety diagnosis at baseline interview, which formed the sample for the present analysis.

Lifetime history (LTH) of suicide attempts (SAs)

A LTH of SAs was assessed in NESDA in the face-to-face baseline interview. The question is derived from the question asked in the World Health Organization (WHO)/Euro multicenter study on parasuicide (Platt *et al.*, 1992). To assess a LTH of SAs the following single retrospective question was asked:

> Have you ever made a serious attempt to end your life, for instance by harming or poisoning yourself or by getting into an accident? No/yes
>
> If yes
>
> How many times did you make such a serious attempt?
> When was the last time you made such an attempt (specific year)?

Defining consistent and inconsistent reporting of a LTH of SAs

The same question and sub-questions were literally asked at the two-year follow-up interview. There are four answer combinations possible. Two are consistent and two are inconsistent. The first consistent answer combination is that a respondent reported a LTH of SAs at baseline and at follow-up. The second consistent answer combination is that a respondent reported no LTH of SAs at baseline and at follow-up. The first inconsistent answer combination is that a respondent reported a LTH of SAs at baseline but did not do so at follow-up. The second inconsistent answer combination is that a person reported a LTH of SAs at follow-up but did not do so at baseline. Because the persons with a first onset of SA between baseline interview and follow-up interview were excluded, the year of the reported attempts of this second inconsistent group lies by definition before the year of baseline interview. It is important to bear in mind that it is unknown if the reported SA actually occurred. The term "inconsistent" in this paper refers to the discrepancy between reporting the SA at one wave and not reporting it at the other wave. This leaves the possibility open that for example no SA occurred but the respondent reported it at both waves.

Socio-demographics

Baseline socio-demographics that could possibly influence the reporting of a history of SAs are gender age and education. Age was measured in number of years and education was measured in number of years of education.

Psychopathological characteristics

Depressive disorders (major depressive disorder and dysthymia) and anxiety disorders (social phobia, generalized anxiety disorder, panic disorder and agoraphobia) were assessed with the Composite Interview Diagnostic Interview (CIDI), version 2.1, which classifies diagnoses according to DSM-IV criteria (American Psychiatric Association, 2001). In NESDA specially trained clinical staff conducted the CIDI. The CIDI is a reliable instrument in assessing depressive diagnoses (Wittchen, 1994). Depressive and anxiety disorders were assessed at different time frames at baseline (one month, six months, one year and lifetime) and at two-year follow-up (one month, six month, one year and since the baseline interview). Because we were interested in the impact of current psychopathology on the reporting of a LTH of SAs one-month depressive and anxiety disorders were chosen as indicators for current psychopathology. Out of these one-month disorders two variables were constructed

for both the baseline data and two-year follow-up data. The first (categorical) variable classified respondents as having 1 = remitted depressive and/or anxiety disorder, 2 = current depressive disorder only, 3 = current anxiety disorder only and 4 = current depressive and anxiety disorder (current comorbid-anxiety depression). The second constructed variable was a sum score of the number of current one-month depressive (major depressive disorder and dysthymia) and anxiety disorders (social phobia, generalized anxiety disorder and panic disorder/agoraphobia) with a possible range of zero to five. Furthermore, at the baseline and at two-year follow-up interview depression severity was measured with the 28-item Inventory of Depressive Symptomatology self-report version (IDS: Rush *et al.*, 1996) and anxiety severity was measured using the 21-item Beck Anxiety Inventory (BAI: Beck *et al.*, 1988). Finally, past week suicidal ideation was assessed in the face-to-face interview with the first five (screenings) items of the scale for suicidal ideation (SSI). For the measurement of suicidal ideation Beck and colleagues developed the SSI in the 1970s (Beck *et al.*, 1979). Each item had three answer categories in ascending order of severity (0–2). A positive score (one or two) on one of the five items meant that a respondent was categorized as a suicidal ideator (0 = no ideation, 1 = ideation). Suicidal ideation was assessed during the baseline interview as well as at the two-year follow-up interview.

To be able to examine also the influence of the course of psychopathology on reporting a LTH of SAs, course-variables were created. For the continuous variables (number of current disorders, depression severity and anxiety severity) the baseline scores were subtracted from the two-year follow-up scores. Out of the dichotomous suicidal ideation variables was a categorical course variable constructed. This variable classified respondents as having: 1 = no suicidal thoughts at both waves, 2 = suicidal thoughts at baseline only, 3 = suicidal thoughts at follow-up only and 4 = suicidal thoughts at both waves.

Statistical analyses

To examine our first objective, the consistency of reports of a LTH of SAs at baseline with those at two-year follow-up, we calculated the percentage of inconsistent reporters among respondents who reported a LTH of SAs at either baseline interview or two-year follow-up interview. In our second objective we examined whether characteristics of the reported SAs and baseline socio-demographics were associated with consistent versus inconsistent reporting of a LTH of SAs using χ^2 tests for categorical variables and *t*-tests for continuous variables. Because the overall aim of NESDA is to examine the long-term course and consequences of depressive and anxiety disorders, the majority of the included NESDA respondents had current psychopathology at baseline. Given the fact that at two-year follow-up the level of current psychopathology was much lower among the respondents we conducted two separate analyses to examine the association of current psychopathology with consistent reporting of a LTH of SAs. In the first analysis we examined whether those who reported a LTH of SAs consistent at both waves had more current psychopathology at baseline than those who reported a LTH of SAs at follow-up but not at baseline. In the second analysis we examined whether those who reported a LTH of SAs consistent at both waves had more current psychopathology at follow-up compared to those who reported a LTH of SAs at baseline but not at follow-up. In both analyses the associations were evaluated using χ^2 tests for categorical variables and *t*-tests for continuous variables. In addition, to examine the influence of the course of psychopathology on reporting a LTH of SAs we compared the consistent group and both groups who inconsistently reported a LTH of SAs in their increase/decrease of current psychopathology at follow up using χ^2 tests for categorical variables and analysis of variances (ANOVAs) and t-tests for continuous variables. All statistical analyses were performed using the Statistical Package for Social Sciences (SPSS), version 18.0 for Windows.

Results

The mean age of the study sample ($N = 1973$) was 42.4 years (standard deviation [SD] = 12.6), 67.8% was female and the mean years of education of the respondents was 12.1 years (SD = 3.3). Of the respondents, 274 (13.9%) reported a LTH of SAs at baseline. At two-year follow-up, 268 respondents (13.6%) reported a LTH of SAs. Table 1 shows the relationship between a LTH of SAs reported at baseline interview and at two-year follow-up interview. Of the 274 respondents who reported a LTH of SAs at baseline, 23.0% did not do so at follow-up. Moreover, of the 331 persons who reported at either interview a LTH of SAs, 36.3% did not report this consistently at both interviews. Because attrition in our sample was systematic, the consistency of reporting a LTH of SAs was also examined on the weighted data. When doing so a rather similar percentage of inconsistent reporters (36.0%) was found.

To examine whether characteristics of the reported SAs, demographic characteristics and psychopathological characteristics are related to inconsistent reporting of a

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Table 1. Consistency of reports of a lifetime history of attempted suicide in respondents with a lifetime depression and/or anxiety disorder at baseline ($N = 1973$)

	Lifetime suicide attempt reported at baseline	No lifetime suicide attempt reported at baseline	Total
Lifetime suicide attempt reported at two-year follow-up	211 (10.7%)	57 (2.9%)	268
No lifetime suicide attempt reported at two-year follow-up	63 (3.2%)	1642 (83.2%)	1705
Total	274	1699	1973

LTH of SAs we restricted our analyses to the 331 respondents who reported a LTH of SAs at either baseline interview or two-year follow-up interview. The rationale behind the following analyses is that false positive reporting of SAs (respondents reports to have committed a SA, while this did not in fact happen) is much less likely than false negative reporting (respondents reports no lifetime SA, while this has in fact taken place). Persons who report a LTH of SAs at both waves are assumed to be reporting correctly and persons who report a LTH of SAs at only one wave are assumed to be false negative reporters when they report no previous attempt.

Table 2 shows associations between the characteristics of the reported SAs, baseline socio-demographics and consistent reporting of a LTH of SAs. Compared to inconsistent reporters, persons who consistently reported a LTH of SAs at both waves had significantly more often a history of multiple (two or more) SAs. However, there was no significant relationship between the recency of the last SA and consistent reporting. No significant associations were found with consistent reporting of a LTH of SAs for sex, age and education although lower education demonstrated a trend approaching significance.

Table 3 shows the role of current psychopathology in reporting previous SAs. In the first univariate analysis we examined whether those who reported consistently a LTH of SAs at both waves ($N = 211$) had more current psychopathology at baseline than those who reported a LTH of SAs at follow-up but not at baseline ($N = 57$). Current baseline psychopathology was, as hypothesized, positively associated with consistent reporting of a LTH of SAs. Indeed, respondents who were consistent in reporting their LTH of SAs had more current depressive and/or anxiety disorders and also had more severe psychiatric symptoms and suicidal thoughts compared to those who reported a LTH of SAs at follow-up but not at baseline. However, only associations with number of disorders were significant. In the second univariate analysis we examined whether those who reported consistent a LTH of SAs at both waves ($N = 211$) had more current psychopathology at follow-up than those who reported a LTH at baseline but not at follow-up ($N = 63$). Current psychopathology

Table 2. Characteristics of the reported suicide attempts and baseline demographics associated with consistent reporting of a lifetime history of attempted suicide at baseline and two-year follow-up ($N = 331$)[a]

	Lifetime history of attempted suicide reported		
	Consistently at both waves ($n = 211$)[b]	Not consistent at both waves ($n = 120$)	*p*-Value
Characteristics of the reported suicide attempt			
Multiple suicide attempts (two or more) reported, %	42.4	24.1	0.001
Time between year of last suicide attempt and year of baseline interview, mean in years (SD)	12.6 (11.3)	14.2 (11.7)	0.23
Socio-demographics at baseline			
Age, mean in in years (SD)	43.6 (12.0)	41.6 (13.3)	0.16
Sex, % female	69.2	69.2	1.00
Education, mean in years (SD)	10.9 (3.2)	11.6 (3.0)	0.06

[a]Due to missings, *N* varies between 326–331.
[b]Characteristics of suicide attempt reported at baseline interview.

Table 3. Association of psychopathological characteristics with consistent reporting of a lifetime history of attempted suicide at baseline and two-year follow-up ($N = 331$)[a]

	Lifetime history of attempted suicide				
	Consistently reported at both waves ($n = 211$)	Only reported at follow-up not at baseline ($n = 57$)	*p*-Value	Only reported at baseline not at follow-up ($n = 63$)	*p*-Value
Type of disorder at baseline			0.17		
Remitted depressive or anxiety disorder, %	25.1	38.6			
Current depressive disorder only, %	13.7	12.3			
Current anxiety disorder only, %	19.9	21.1			
Current depressive and anxiety disorder, %	41.2	28.1			
Number of current disorders at baseline, mean (SD)	1.77 (1.45)	1.30 (1.34)	0.03		
Clinical characteristics at baseline					
Suicidal thoughts, %	28.0	19.3	0.19		
Severity of depression, mean (SD)	32.5 (13.4)	29.6 (12.1)	0.14		
Severity of anxiety, mean (SD)	18.7 (12.0)	17.8 (10.7)	0.61		
Type of disorder at follow-up					0.48
Remitted depressive or anxiety disorder, %	45.0			54.0	
Current depressive disorder only, %	12.8			7.9	
Current anxiety disorder only, %	19.4			20.6	
Current depressive and anxiety disorder, %	22.7			17.5	
Number of current disorders at follow-up, mean (SD)	1.12 (1.31)			0.86 (1.15)	0.15
Clinical characteristics at follow-up					
Suicidal thoughts, %	20.9			11.1	0.08
Severity of depression, mean (SD)	24.5 (14.4)			22.9 (13.3)	0.45
Severity of anxiety, mean (SD)	14.2 (11.1)			13.3 (10.6)	0.55

[a]Due to missings, total *N* varies between 318–331.

at follow-up was again as hypothesized positively associated with consistent reporting of a LTH of SAs. Indeed, respondents who were consistent in reporting their LTH of SAs had more current depressive and/or anxiety disorders and also had more severe psychiatric symptoms and suicidal thoughts compared to those who reported a LTH of SAs only baseline but not at follow-up. However, only associations with suicidal thoughts were borderline significant.

Table 4 shows the association between the course of psychopathology and reporting a LTH of SAs. Respondents reporting a LTH of SAs only at baseline had the biggest decrease in the level of psychopathology at follow-up. They had a significantly larger decrease of the number of current disorders at follow-up than respondents reporting a LTH of SAs only at follow-up ($p = 0.01$). Moreover, respondents reporting a LTH of SAs only at baseline had developed significantly less often suicidal thoughts at follow-up than respondents reporting a LTH of SAs consistently ($p = 0.04$) or only at follow-up ($p = 0.06$).

Discussion

To our best knowledge this is one of the first studies to examine the long-term reliability of reporting a LTH of SAs. Because we excluded the persons with a first onset of SA between baseline interview and follow-up interview one would expect to find the same number of persons at

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Table 4. Association of course of psychopathology with (in)consistent reporting of a lifetime history of attempted suicide at baseline and two-year follow up ($N = 331$)[a]

	Lifetime history of attempted suicide			
	Consistently reported at both waves ($n = 211$)	Reported only at follow-up not at baseline ($n = 57$)	Reported only at baseline not at follow-up ($n = 63$)	Overall p-value[d]
Change in number of current disorders, mean (SD)	–0.65 (1.43)[b]	–0.26 (1.55)[b,c]	–0.94 (1.34)[c]	0.04
Course of suicidal ideation				0.27
No Suicidal thoughts at both waves, %	60.2	68.4	63.5	
Suicidal thoughts at baseline only, %	19.0	15.8	25.4	
Suicidal thoughts at follow up only, %	11.8[b]	12.3[c]	3.2[b,c]	
Suicidal thoughts at both waves, %	9.0	3.5	7.9	
Course of depression/anxiety severity				
Change in depression severity between baseline and follow-up, mean (SD)	–7.9 (11.7)	–7.2 (13.2)	–9.9 (12.7)	0.43
Change in anxiety severity between baseline and follow-up, mean (SD)	–4.3 (9.6)	–4.2 (9.2)	–6.3 (10.6)	0.32

[a]Due to missings, total N varies between 318–331.
[b,c]Significant difference in symptoms change between two types of reporting a lifetime history of suicide attempts in univariate analysis, $p < 0.10$.
[d]Based on χ^2 tests and ANOVAs.

baseline interview and at follow-up interview who reported a LTH of SAs. On first sight the numbers were rather similar (274 versus 268). However, almost a quarter of the persons who reported a LTH of SAs at baseline did not do so at follow-up. Moreover, of the persons who reported at either interview a LTH of SAs, more than one-third did not report this consistently at both interviews. We found indications that persons with current (severe) psychopathological disorders/symptoms were more likely to report their history of SAs than those with similar histories who had remitted or less severe current psychopathological disorders/symptoms. Furthermore a history of multiple SAs was associated with consistent reporting.

The level of consistency of reporting a LTH of SAs was in our study in general higher than previous studies which examined the consistency of reporting a LTH of SAs (Christl *et al.*, 2006; Klimes-Dougan *et al.*, 2007). Possible explanations could be that these studies: were performed in cohorts of adolescents or young adults instead of adults; the follow-up time was two to four years longer than the two years in our study; suicidal content (suicidal ideation or SA) was assessed instead of only attempted suicide.

Our results showed that even reporting a salient event as a SA is prone to reporting errors. Several large (longitudinal) psychiatric epidemiological studies, like the National Comorbidity Survey (NCS), National Comorbidity Survey Replication (NCS-R) and the Netherlands Mental Health Survey and Incidence Study-2 (NEMESIS) studies assessed LTH of SAs in their baseline assessment (Kessler *et al.*, 1999; Ten Have *et al.*, 2009). These studies suggested that the reported prevalence rates will likely be an underestimation of the real lifetime prevalence of SAs, although direct proof was lacking. By assessing a LTH of SAs not only at baseline but also at follow-up, the number of persons with a LTH of SAs before baseline interview increased in this study by approximately 20%, assuming that a reported LTH of SAs at one of the waves is probably indicative that an actual SA has taken place. If true, this has obvious policy consequences.

Our results showed that the percentages of persons who reported inconsistently a LTH of SA at either baseline interview or at follow-up interview were rather similar (3.2% versus 2.9%). A rather similar result was found by Klimes-Dougan *et al.* (2007) where percentages of persons who reported inaccurate suicidal content at either wave 4 or wave 5 were alike (5% versus 6%). Studies examining another but related subject namely the consistency of reporting lifetime depressive episodes found that inconsistent reporting is largely due to not reporting earlier

reported episodes and much less likely to reflect overstating of episodes not earlier reported (Aneshensel *et al.*, 1987; Bromet *et al.*, 1986; Simon and VonKorff, 1995). A possible explanation for this difference could lie in the indistinctness of the meaning of the term SA. There is an ongoing debate about the terminology in the suicidology, especially about attempted suicide (O'Carroll *et al.*, 1996; Silverman *et al.*, 2007). The debate, which is mainly focussed about the question if "intention to die" is an essential part of the definition of attempted suicide, is still unresolved (De Leo *et al.*, 2006; Silverman *et al.*, 2007). As O'Carroll *et al.* (1996) put it, the danger is that: "because the term 'attempted suicide' potentially means so many different things, it runs the risk of meaning almost nothing at all" (p. 238). It is highly imaginable that when even experts differ about what a SA is, respondents and also trained research assistants are unlikely to have a clear idea as to which behaviors fall under the definition of a SA.

This study found also evidence that current psychological state influences the reporting of a LTH of SAs. Our results (in Tables 3 and 4) indicate that persons with current (severe) psychopathology were more likely to report their history of SAs than those with similar histories who had no or less current psychopathology. However, we only found statistically significant associations ($p < 0.05$) with the number of depressive and anxiety disorders, although associations with suicidal thoughts, severity of depression and anxiety symptom check-lists are in the same direction we anticipated but with less significance. So, overall these results all point toward more consistent SA reporting among those with the most severe psychopathology. Studies examining the report of suicidal content found rather similar results although they found somewhat stronger evidence that persons with current (severe) psychiatric symptoms were more likely to report their previous reported suicidal ideation or attempted suicide than persons with no or less current psychiatric symptoms (Goldney *et al.*, 2009; Klimes-Dougan *et al.*, 2007). A possible explanation for this slight difference could be that these studies were in less affected populations (young adults and young adult children of depressed mothers), while our sample existed of adults with a LTH of depression of anxiety. Apart from evidence that current psychological state was associated with reporting of LTH of SAs, a history of multiple SAs was associated with consistent reporting. Supporting a finding that past severity also plays a role in reporting a LTH of SAs (Christl *et al.*, 2006).

Although there are several findings suggesting that women are more likely to report past health events than men (Thompson *et al.*, 2004; Warshaw *et al.*, 1991), gender was in our study not associated with consistency of reporting a LTH of SAs. This finding contributes to the discussion about why gender is significantly associated with lifetime prevalence of SAs but not with incidence of SAs (Moscicki, 1997). Age was not associated with inconsistent reporting of LTH of SA. This finding does not confirm the idea that older age is associated with poorer reporting of mental health events because of increased age-related memory problems (Robins, 1985). A possible explanation for this finding could be that the NESDA study included adults between 18 and 65 years of age. So the persons with probably the most age-related memory problems were not present in our sample. Education was also not significantly associated with consistent reporting of a LTH of SAs, although lower education showed a trend approaching significance. However, most research into reporting of a history of health events found that inconsistent reporting was higher among the lower educated (Aneshensel *et al.*, 1987; Thompson *et al.*, 2004).

From a research perspective reporting errors could be problematic. However, for individuals reporting errors are maybe not that bad after all. Since, in our study respondents reporting a LTH of SAs only at baseline had the biggest decrease in their level of psychiatric symptom severity at two-year follow-up. This result is consistent with several other studies and indicates that respondents who did not report their earlier SA were functioning better in terms of mental health than persons who reported their earlier SA consistently over the two time periods (Goldney *et al.*, 2009; Klimes-Dougan *et al.*, 2007; Levine *et al.*, 2009). More specificly, persons who in terms of mental health feel bad at the time of interview linked this to the moment of the actual SA when they presumably also felt very bad and therefore recall a SA more often than persons who are feeling good at the time of interview. These results suggest that state dependent memory effects could play a role in the impaired recalling of a LTH of SA. Although it is important to emphasize that our study did not include specific tests of memory nor is there independent evidence that the remembered and reported SA actually occurred.

One of the implications of our study seems to be that single questions probing past SAs seem more reliable in patients with more symptoms. This is reassuring for clinical situations, where patients with more severe symptoms are seen. However, it suggests that single question probes may not be sufficient to reliably screen for past SAs in community surveys, and that for those purposes it should be examined whether reliability can be improved by more detailed question probing.

The strengths of our study were its large prospective sample, well diagnosed patients and rich data concerning clinical characteristics. In this sample of respondents with

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a lifetime depression or anxiety diagnosis a history of SAs was not uncommon, so meaningful analyses were possible. Moreover because the year of the last SA was asked, it was possible to exclude the persons with a first onset of SA between baseline and follow-up interview, so the number of inconsistencies would not unrealistically be inflated. However some limitations should also be mentioned. First, in this paper respondents were seen as consistent reporters of a LTH of SAs when they reported a LTH of SAs at both waves. This leads to the possibility that these respondents reported at both waves a LTH of SAs, but that the number of attempts or the year of attempt was not identically reported at both waves. Although not ideal and possibly making the group of consistent reporters more heterogeneously, we had drawn the line by reporting a LTH of SAs at both waves. Second, of the respondents who reported no SAs at baseline but reported a SA at follow-up we excluded 15 respondents who were most likely first onset reporters. Potentially it could be the case that these represent also reporting errors. However, of these 15 respondents most reported truly their last SA in the years after baseline ($n = 9$, of whom 2 reported multiple SAs for which we have not assessed the exact date of their first SA), and 6 persons reported a SA in the year of baseline interview. Third, it is possible that respondent's attitudes about SAs have changed because of social change. However the time frame between baseline and follow-up was only two years so this is not very likely. Fourth, no information was available about intent to die or the lethality of the SAs. Moreover, a gold standard measure of SAs providing external validity of both our measures was lacking. However, such a gold standard is not likely to exist in any study, as there will not be a full proof registration of SAs in the community.

In conclusion, our results showed that even a salient topic as a history of attempted suicide is prone to reporting errors. Moreover our data suggest that current psychological state influences the reporting of a LTH of SAs. These results are giving urgency to a more detailed assessment of SAs, despite the fact that time is always scarce in (epidemiological) research/clinical practice.

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