Suicide is becoming a worldwide public health issue. Although there is a wealth of research literature on suicide and non-fatal suicidal behaviour in high-income countries, information on the prevalence and trends of suicide and non-fatal suicidal behaviour in less affluent countries is often scarce. In South Africa there is no single primary data source for nationally representative information on non-fatal suicide behaviour. National estimates of the lifetime prevalence and correlates of suicide ideation, planning and attempts among the people of South Africa, including specific cultural groups, are reported here for the first time, using data recently collected for the World Health Organization (WHO) World Mental Health Survey.

Method

The South Africa Stress and Health Study (SASH), which collected data between January 2002 and June 2004, was a national probability sample of 4351 persons aged 18 years and older. Respondents were selected to represent the household probability sample of 4351 persons aged 18 years and older: 9.1% of respondents reported lifetime suicide ideation, 3.8% a plan and 2.9% an attempt. Among four ethnic groups, the Coloured* group had the highest lifetime prevalence for attempts (7.1%). Those at higher risk of suicide attempts had one or more DSM–IV disorders.

Results

The estimated lifetime prevalence rates of suicide ideation, plans and attempts were 9.1% (s.e.=0.7), 3.8% (s.e.=0.4) and 2.9% (s.e.=0.3) respectively. There were noticeable gender differences, with women reporting twice as many attempts as men: 3.8% (s.e.=0.5) v. 1.8% (s.e.=0.3). The rate of attempted suicide varied significantly by ethnic group, with the Coloured group (of mixed racial origin) reporting levels (7.1%, s.e.=1.3) that were markedly higher than that of the White (2.4%, s.e.=0.7), Black (2.4%, s.e.=0.3) and Indian groups (2.5%, s.e.=1.6). There were also ethnic differences in the conditional probability of making an attempt among respondents with suicidal ideation but no plan. People classified as Black (5.6%, s.e.=1.5) were less likely than those in the White (10.0%, s.e.=3.7) and Indian (27.0%, s.e.=29.0) groups to engage in impulsive suicide attempts, whereas those classified as Coloured (33.4%, s.e.=9.6) reported the highest level of impulsive suicide attempts.

All of the DSM–IV disorders assessed in SASH were significant risk factors for a lifetime suicide attempt (Table DS1). Respondents with at least one DSM–IV disorder were four times (95% CI 2.6–6.2) more likely to attempt suicide than those with no disorder. However, this result does not control for the main effects of individual disorders. All four summary variables for the diagnostic classes (e.g., any mood disorder, any anxiety disorder) were significantly associated with elevated risks of attempting suicide (ORs 3.0–4.1). The odds ratios for a substance use disorder (OR=4.1) increased the risk of a suicide attempt more than for any other disorder category (ORs 3.0–3.6). Among individual disorders the odds ratios for panic disorder (OR=8.9), alcohol use with dependence (OR=5.9) and drug use (OR=5.0) were substantially higher than for other disorders, including depression or post-traumatic stress disorder (ORs 2.9–4.7).

The effects of comorbidity are presented in the final section of the data supplement table. Respondents with three or more disorders were eight times more likely to attempt suicide (OR=8.3, 95% CI 4.8–14.2) and to develop suicidal ideation (OR=8.3, 95% CI 4.3–15.8) than were respondents with no psychiatric disorder. Having three or more disorders was strongly associated with a higher risk of suicide attempts through the pathway of planned attempts (OR=2.9). The risks of attempts and of ideation were greater for respondents with two or more disorders than for those

*a. Since the institutions in South Africa were once controlled along legally defined racial categories which separated ‘Blacks’ into ‘Indians’, ‘Coloureds’ and ‘Africans’, their daily experience and consequent psychiatric or physical health patterns could not be described without recourse to such racial terminology.

The use of these terms in this paper does not imply their legitimacy.
Suicidal behaviour in South Africa

with no disorder, and substantially greater than the risks for those with only one disorder.

**Discussion**

The results reported here are limited by the fact that we do not know the extent to which mental health status or ethnic, cultural and generational factors affected the willingness of our respondents to admit or recall the presence of symptoms of suicide over their lifetime. There may also be bias associated with differential validity of the CIDI for the various ethnic groups in South Africa. Finally, the SASH is retrospective and cross-sectional; thus the prevalence estimates are likely to be lower-bound. However, the effect of most of these limitations would be to make our estimates of suicide behaviour more conservative than might be the case.

The 2.9% lifetime prevalence estimate of attempted suicide among the South African population is close to the rates of 4.6% and 4.1% reported for general and Black populations respectively in the USA. In addition, the 9.1% estimated prevalence of suicide ideation is comparable with previous estimates from studies using South African clinical samples. Reported for the first time are important ethnic differences among South Africans in the lifetime prevalence of suicide ideation, planning and attempts. Reasons for the substantially higher risk of attempted suicide and impulsive attempts among the Coloured group are unclear. ‘Coloured’ identity, historically and currently, has been fraught with conflict and contradictions. However, the effect of most of these limitations would be to make our estimates of suicide behaviour more conservative than might be the case.

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**Acknowledgements**

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**References**

### Table DS1  DSM-IV disorders as risk factors for first onset of suicide-related outcomes

<table>
<thead>
<tr>
<th>Anxiety disorder</th>
<th>Total sample (n=4274)</th>
<th>Ideation</th>
<th>Plan</th>
<th>Attempt</th>
<th>Plan among ideators (n=353)</th>
<th>Attempt among ideators (n=363)</th>
<th>Attempt among ideators without a lifetime plan (n=199)</th>
<th>Attempt among ideators with a lifetime plan (n=154)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>OR (95% CI)</td>
<td>OR (95% CI)</td>
<td>OR (95% CI)</td>
<td>OR (95% CI)</td>
<td>OR (95% CI)</td>
<td>OR (95% CI)</td>
<td>OR (95% CI)</td>
</tr>
<tr>
<td>Panic disorder</td>
<td>6.0* (2.5–14.3)</td>
<td>9.3* (3.4–25.9)</td>
<td>8.9* (2.9–27.1)</td>
<td>2.6 (0.8–8.8)</td>
<td>1.1 (0.5–2.2)</td>
<td>0.0* (0.0–0.0)</td>
<td>1.5 (0.6–3.5)</td>
<td></td>
</tr>
<tr>
<td>Generalised anxiety disorder</td>
<td>5.1 (2.3–11.3)</td>
<td>5.7* (2.3–14.0)</td>
<td>4.7* (2.0–11.2)</td>
<td>2.1 (0.7–5.9)</td>
<td>0.8 (0.3–2.3)</td>
<td>1.5 (0.3–6.8)</td>
<td>1 (0.3–3.9)</td>
<td></td>
</tr>
<tr>
<td>Social phobia</td>
<td>3.3* (2.0–5.3)</td>
<td>2.8* (1.2–6.2)</td>
<td>3.8* (1.6–9.0)</td>
<td>0.9 (0.3–2.4)</td>
<td>1.2 (0.6–2.3)</td>
<td>0.4 (0.1–3.1)</td>
<td>2.2 (0.8–5.8)</td>
<td></td>
</tr>
<tr>
<td>Post-traumatic stress disorder</td>
<td>3.8* (1.0–13.9)</td>
<td>3.6* (1.3–9.8)</td>
<td>4.6* (1.6–13.3)</td>
<td>1.9 (0.6–6.7)</td>
<td>1.8 (0.5–6.6)</td>
<td>1.9 (0.4–8.3)</td>
<td>3.0 (0.5–16.8)</td>
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<tr>
<td>Any anxiety disorder</td>
<td>2.9* (1.7–3.6)</td>
<td>2.6* (1.5–4.7)</td>
<td>3.0* (1.8–4.9)</td>
<td>1.3 (0.7–2.4)</td>
<td>1.3 (0.8–2.2)</td>
<td>1.1 (0.4–3.0)</td>
<td>2.3* (1.1–4.6)</td>
<td></td>
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<tr>
<td>Mood disorder</td>
<td></td>
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<tr>
<td>Major depressive episode</td>
<td>3.3* (2.2–5.2)</td>
<td>3.3* (2.0–5.6)</td>
<td>3.1* (1.7–5.4)</td>
<td>1.0 (0.4–2.3)</td>
<td>0.8 (0.4–1.6)</td>
<td>0.4 (0.1–1.7)</td>
<td>1.4 (0.6–3.3)</td>
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<tr>
<td>Impulse-control disorder</td>
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<tr>
<td>Intermittent explosive disorder</td>
<td>6.4* (4.3–9.5)</td>
<td>5.3* (2.4–11.6)</td>
<td>3.1* (1.2–8.0)</td>
<td>1.1 (0.4–2.8)</td>
<td>0.9 (0.3–2.5)</td>
<td>0.0* (0.0–0.0)</td>
<td>1.5 (0.3–7.3)</td>
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<tr>
<td>Substance use disorder</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Alcohol abuse</td>
<td>2.9* (1.9–4.6)</td>
<td>3.7* (2.0–6.8)</td>
<td>2.9* (1.6–5.3)</td>
<td>1.8 (0.7–4.3)</td>
<td>0.9 (0.5–1.8)</td>
<td>0.1 (0.0–1.4)</td>
<td>0.9 (0.3–2.5)</td>
<td></td>
</tr>
<tr>
<td>Alcohol abuse with dependencea</td>
<td>4.5* (1.8–11.2)</td>
<td>10.0* (4.3–23.3)</td>
<td>5.9* (2.4–14.6)</td>
<td>6.1* (3.3–11.4)</td>
<td>1.0 (0.4–2.9)</td>
<td>1.5 (0.0–66.9)</td>
<td>0.7 (0.1–3.5)</td>
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<tr>
<td>Drug abuse</td>
<td>2.4* (1.2–4.6)</td>
<td>5.3 (2.4–12.0)</td>
<td>5.0* (2.6–9.7)</td>
<td>6.9* (1.7–27.3)</td>
<td>1.8 (0.7–4.3)</td>
<td>0.0* (0.0–0.0)</td>
<td>1.9 (0.6–6.3)</td>
<td></td>
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<tr>
<td>Drug abuse with dependenceb</td>
<td>3.1* (2.0–4.8)</td>
<td>4.2* (2.2–7.8)</td>
<td>4.1* (2.4–7.1)</td>
<td>1.9 (0.8–4.3)</td>
<td>1.5 (0.8–2.8)</td>
<td>0.1 (0.0–1.3)</td>
<td>1.7 (0.6–4.5)</td>
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<tr>
<td>Any disorder</td>
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<td></td>
</tr>
<tr>
<td>Any disorder</td>
<td>3.5* (2.7–4.6)</td>
<td>4.0* (2.6–6.2)</td>
<td>4.0* (2.6–6.2)</td>
<td>1.3 (0.7–2.4)</td>
<td>1.3 (0.8–2.3)</td>
<td>0.6 (0.2–1.8)</td>
<td>2.0 (0.9–4.3)</td>
<td></td>
</tr>
<tr>
<td>Exactly one disorder</td>
<td>1.3 (0.9–2.0)</td>
<td>0.8 (0.5–1.4)</td>
<td>1.4 (0.8–2.2)</td>
<td>0.5 (0.2–1.1)</td>
<td>1.7 (0.9–3.1)</td>
<td>1.9 (0.6–6.1)</td>
<td>1.5 (0.5–5.1)</td>
<td></td>
</tr>
<tr>
<td>Exactly two disorders</td>
<td>3.2* (2.1–5.0)</td>
<td>4.3* (2.7–6.9)</td>
<td>2.9* (1.5–5.3)</td>
<td>1.9 (1.0–3.6)</td>
<td>0.7 (0.4–1.3)</td>
<td>0.0* (0.0–0.0)</td>
<td>0.8 (0.4–1.8)</td>
<td></td>
</tr>
<tr>
<td>Three disorders or more</td>
<td>6.9* (4.2–11.5)</td>
<td>8.3* (4.3–15.8)</td>
<td>8.3* (4.8–14.2)</td>
<td>1.8 (0.9–3.5)</td>
<td>1.5 (0.8–2.8)</td>
<td>0.3 (0.1–1.8)</td>
<td>2.9 (1.1–7.8)</td>
<td></td>
</tr>
</tbody>
</table>

*P=0.05, two-sided test.

a. Assessed within age range 18–39 years.

b. Disorder was omitted owing to insufficient lifetime cases (n<30), but is included as one of the disorders in the ‘any disorder’ category.
Prevalence and correlates of non-fatal suicidal behaviour among South Africans
Sean Joe, Dan J. Stein, Soraya Seedat, Allen Herman and David R. Williams
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