Relations between sexually transmitted infection diagnosis and sexual compulsivity in a community-based sample of men who have sex with men

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ABSTRACT
Objective: To assess relations between sexual compulsivity and a history of sexually transmitted infection (STI) diagnosis and testing among a community-based sample of men who have sex with men (MSM) in a mid-size urban area of the midwestern United States.

Methods: Sexual health data were collected from 504 MSM in the metropolitan area of Indianapolis, Indiana, using a community-based participatory research approach. Sexual compulsivity scores were assessed using the Sexual Compulsivity Scale (SCS).

Results: The reliability and construct validity of the SCS were determined to be high in the total study sample. Men who scored high on the SCS reported higher levels of sexual risk behaviour with both male and female partners and were significantly more likely to have been diagnosed with STI (including chlamydia, gonorrhoea, both hepatitis A and B, and syphilis) than other men. Men who scored high on the SCS were not more likely than other men to have been tested for STI, despite higher levels of sexual risk.

Conclusions: The SCS may be useful as a supplemental instrument in public health programmes and healthcare settings that encourage men to assess their sexual behaviours and make decisions to pursue STI or HIV screening. For those already diagnosed with an STI, the SCS may help providers to identify the cognitive and affective components of sexual behaviours that increase the likelihood that an STI will be transmitted to a sexual partner.

Relations between sexual compulsivity and participation in behaviours that have a high risk of HIV infection have been well documented.\(^1\) Sexual compulsivity has been defined as “an insistent, repetitive, intrusive, and unwanted urge to perform specific acts often in ritualised or routinised fashions.\(^6\) Sexual compulsivity has been studied and measured across a range of disciplines,\(^12\) frequently using the Sexual Compulsivity Scale (SCS)\(^6\) (see table 1). The SCS has demonstrated reliability and construct validity, and is predictive of HIV-related risk behaviours.\(^1\) Sexual compulsivity has been classified as low in sexual compulsivity; those falling at or below one standard deviation above the mean were classified as high in sexual compulsivity; those falling at or below one standard deviation above the mean were classified as low in sexual compulsivity.

Statistical analyses
Using version 14.0 of the Statistical Package for the Social Sciences (SPSS Inc, Chicago, Illinois, USA), univariate and bivariate analyses were conducted to describe the sample and characterise relations between SCS scores and participant characteristics.

RESULTS
Participant characteristics
Participants included 504 men, 80% of whom (n = 400) identified as homosexual, with an
additional 16% (n = 80) identifying as bisexual. The mean age of the sample was 34.7 years (SD 10.6). Seventy-nine per cent of the sample identified as white (n = 400), 14% as black (n = 68), and the remainder as other ethnicities (7%, n = 56). The majority of participants (52%) identified themselves as single (n = 268). Twenty-eight per cent were in a partnered relationship (n = 147), 10% were divorced (n = 51), 5% were married (n = 28), 2% were widowers (n = 11), and the remaining 5% indicated they were in other types of relationships (n = 13). In terms of education, 82% had at least attended college (n = 409), 49% had at least earned a bachelor’s degree (n = 245), and 19% reported achieving a postgraduate degree (n = 95).

SCS reliability
The reliability of the SCS was determined to be high in the total study sample. All item-total correlations were 0.50 or higher (see table 1).

SCS and participant characteristics
Participants with higher compulsivity scores were more likely than those with lower scores to report that they were in a sexual relationship with more than one person, or were sexually active outside the context of a relationship, \( \chi^2(3, N = 504) = 22.382, p<0.001 \). No other demographic variables including ethnicity, education, or income, were related to sexual compulsivity scores.

SCS and venue use
Mean SCS scores did not differ according to the venue in which participants were recruited. Logistic regression analyses were conducted to assess whether a participant’s use of specific venues for meeting sexual partners was predictive of a high sexual compulsivity classification (table 2). Men who reported meeting sexual partners on phone chat lines and cruising spots had significantly higher odds of scoring highly on the SCS measure, although these scores were elevated for men across all venues.

SCS and sexual risk
The SCS demonstrated construct validity in this sample in relation to numbers of sexual risk behaviours and sexual encounters. Men who scored high on the SCS were more likely to have engaged in unprotected insertive anal sex with other men than those with low SCS scores (\( \chi^2(1, 503) = 9.522; p = 0.002 \)). In addition, these men were also more likely to have engaged in unprotected insertive vaginal sex with female partners than those with low SCS scores (\( \chi^2(1, 502) = 4.808; p = 0.028 \)).

SCS and HIV diagnosis
Of the total sample, 9.5% (n = 48) reported having been diagnosed with HIV. There were no significant differences in the mean scores of SCS in relation to HIV diagnosis.

SCS and STI diagnosis
Men who scored high on the SCS were significantly more likely to have been diagnosed with STI than other men (see table 3). These infections included chlamydia, gonorrhoea, both hepatitis A and B, and (marginally) syphilis.

SCS and previous STI testing
In terms of testing in the overall sample, a total of 154 men reported being tested in the past year. The majority of these (n = 66, 43%) were in a hospital setting, followed by private doctor (n = 32, 21%), clinic (n = 10, 15%), and other sites (including health department, MSM venues, and jail).

Of note is the fact that men who scored high on the SCS were no more likely than other men to have been tested. Of those who scored low on the SCS, 55% (n = 243) had been tested for STI in the past year, whereas 50% (n = 31) of those who scored high had been tested for STI in the past year.

**DISCUSSION**
This study offers unique contributions to the sexual health literature as it documents strong associations between sexual compulsivity and the likelihood that one has received an actual STI diagnosis. The vast majority of previous research in this area has only considered relations between sexual compulsivity and sexual behaviours, most often among HIV-related clinical samples, without the benefit of data related to STI diagnosis and screening.

### Table 1 The SCS:α reliability in the sample

<table>
<thead>
<tr>
<th>Item</th>
<th>Item-total correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My sexual appetite has gotten in the way of my relationships</td>
<td>0.61</td>
</tr>
<tr>
<td>2. My sexual thoughts and behaviours are causing problems in my life</td>
<td>0.71</td>
</tr>
<tr>
<td>3. My desires to have sex have disrupted my daily life</td>
<td>0.75</td>
</tr>
<tr>
<td>4. I sometimes fail to meet my commitments and responsibilities because of my sexual behaviours</td>
<td>0.63</td>
</tr>
<tr>
<td>5. I sometimes get so horny I could lose control</td>
<td>0.68</td>
</tr>
<tr>
<td>6. I find myself thinking about sex while at work</td>
<td>0.50</td>
</tr>
<tr>
<td>7. I feel that sexual thoughts and feelings are stronger than I am</td>
<td>0.76</td>
</tr>
<tr>
<td>8. I have to struggle to control my sexual thoughts and behaviour</td>
<td>0.75</td>
</tr>
<tr>
<td>9. I think about sex more than I would like to</td>
<td>0.68</td>
</tr>
<tr>
<td>10. It has been difficult for me to find sex partners who desire having sex as much as I want to</td>
<td>0.59</td>
</tr>
</tbody>
</table>

SCS, Sexual Compulsivity Scale.
α = 0.90.

### Table 2 Odds ratio of high sexual compulsivity by venue

<table>
<thead>
<tr>
<th>Use of venue</th>
<th>Odds ratio</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone chat line</td>
<td>4.51</td>
<td>0.003</td>
</tr>
<tr>
<td>Cruising spot</td>
<td>4.46</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Bath house or sex club</td>
<td>2.81</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Internet</td>
<td>2.5</td>
<td>0.001</td>
</tr>
<tr>
<td>Gay bar</td>
<td>1.25</td>
<td>0.003</td>
</tr>
</tbody>
</table>

Sex Transm Infect 2008;84:324–327. doi:10.1136/sti.2007.028696
Consistent with previous studies, men in this sample who scored high on the measure of sexual compulsivity were also those whose behaviours posed the highest potential for STI exposure or transmission. In addition, men with high sexual compulsivity scores were also those with actual reports of a previous STI diagnosis.

Several study limitations must be acknowledged. Venue-based convenience sampling was used to recruit the participants and, as the choices of venues for meeting sexual partners in this community were limited, may have affected the compulsivity scores observed. This study was also conducted in order to assess these issues within the context of a specific and understudied geographical area; generalisability to other MSM communities may therefore be limited. A cross-sectional survey method also limits the capture of complex associations between sexual behaviour and actual risk. In addition, we did not assess behaviours that included the use of condoms or other barrier devices. Future studies should include such measures of protective as well as risk behaviours.

Although our findings indicate that those with high sexual compulsivity scores were those with a higher likelihood of diagnoses of some STI, it is important to note that sexual compulsivity was not associated with the likelihood that one had previous STI diagnosis. Participants who scored high on the measure of sexual compulsivity were also those whose behaviours posed the highest potential for STI exposure or transmission. In addition, men with high sexual compulsivity scores were also those with actual reports of a previous STI diagnosis.

The findings of this study also suggest that the SCS might be useful as a supplemental tool in healthcare settings and public health programmes that encourage men to assure their sexual behaviours and make decisions to pursue STI or HIV screening. Practitioners in clinics in which men have already received a diagnosis of an STI may also find the SCS helpful as a tool for the identification of the cognitive and affective components of sexual behaviours that increase the likelihood of STI transmission.

Competing interests: None declared.

Contributions: BD led the writing of the paper and conducted the statistical analyses presented. MR and DH designed the study, managed all study protocols and contributed to the writing of the paper. CF, SS, and NS served as study coordinators during the project, supervised data management, and contributed to the paper.

REFERENCES


Abstracts from the BASHH–ASTDA 3rd Joint Conference 2008

The abstracts from the BASHH–ASTDA 3rd Joint Conference 2008 held in New York in May are available as ePages in this issue of the journal at http://sti.bmj.com/content/vol84/issue4/#ELECTRONIC_PAGES.