The purpose of the Sexual Health Survey (SHS) is to assess the Sexual Health Knowledge (SHK), Sexual Health Attitudes (SHA), and Sexual Health Behaviors (SHB) of students enrolled in institutes of higher education. The SHS was designed to assess a comprehensive range of five sexual health topics, including (a) contraception, (b) pregnancy prevention, (c) sexual health communication, (d) sexual behavior, and (e) sexually transmitted infections (STI) and barriers to obtaining STI testing.

Description

Items generated for this survey were based on an extensive literature review and focus group construct explication performed on priority areas. Content validity was assessed for quality, clarity, and sensitivity to culture and gender by a panel review of five experts from a variety of backgrounds, including a counseling psychologist, a registered nurse, a statistician, an expert on human sexuality, and an expert on sexual violence and lesbian, gay, bisexual, transgender, and queer (LGBTQ) issues.

A pilot test study was administered online to 600 randomly sampled university students to further refine the survey instrument. Item analysis reduced the initial number of items from 200 to 127. Items eliminated were based on failure to meet appropriate item discrimination, item difficulty/endorsement, and reliability measures.
Response Mode and Timing

Sexual Health Knowledge (SHK) is assessed using a 6-point Likert-type scale (0 = Strongly Disagree/Very Effective, 5 = Strongly Agree/Very Ineffective) for 24 items that assess basic knowledge of sexually transmitted infection (STI) and pregnancy prevention, effects of alcohol on sexuality, and the impact of STIs among this population.

Sexual Health Attitudes (SHA) were assessed using a 6-point Likert-type scale (0 = Very Uncomfortable/Very Unconcerned/Strongly Agree, 5 = Very Comfortable/Very Concerned/Strongly Disagree) across 48 items measuring comfort level in communication with a partner about past sexual history or contraceptive methods. Other questions examine level of concern seeking STI testing, perceptions of peer’s sexual activity, belief in rape myths, and communication associated with condom/dental dam procurement.

Sexual Health Behavior (SHB) was assessed using 17 multiple-choice and 16 dichotomous items requesting age at sexual debut, and sexual activity in last 30 days and across the lifespan. Other items concerned contraceptive and alcohol use, number of sexual partners, frequency of barrier protection use, unintentional pregnancy, and sexual assault.

Demographic information included age, year in school, sexual orientation, relationship status, ethnicity, residential arrangements, and membership within a Greek (fraternity/sorority) community. The survey takes approximately 20 minutes to complete.

Scoring

The scale can be scored by construct and/or by factor. To obtain a knowledge score, add all knowledge items, 1–24, for a possible maximum score of 120. To obtain an attitude score, sum Items 1 through 10, 17 through 19, 21, 25, and 27 for a maximum score of 80.

When scoring factors independently, larger scores represent a more favorable attitude toward safer-sex practices and/or abstinence, increased comfort level with sexual health communication and barrier methods, and belief in rape myths. For Factor 4, the smaller the score, the less knowledge about latex barrier effectiveness.

### TABLE 1

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loading</th>
<th>$h^2$</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor 1: Perceived Sexual Readiness (5 items)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex should be reserved for a long-term relationship.</td>
<td>.68</td>
<td>.43</td>
<td>1.38</td>
<td>1.52</td>
</tr>
<tr>
<td>People should wait until they are married to have sex.</td>
<td>.73</td>
<td>.56</td>
<td>2.84</td>
<td>1.73</td>
</tr>
<tr>
<td>Sexual intercourse is acceptable in a relationship no matter how long the couple has been dating.</td>
<td>.80</td>
<td>.63</td>
<td>2.06</td>
<td>1.67</td>
</tr>
<tr>
<td>Engaging in sexual activity immediately after beginning a relationship is ok.</td>
<td>.83</td>
<td>.70</td>
<td>1.77</td>
<td>1.62</td>
</tr>
<tr>
<td>More students on this campus should practice being sexually abstinent.</td>
<td>.69</td>
<td>.53</td>
<td>2.39</td>
<td>1.62</td>
</tr>
<tr>
<td><strong>Factor 2: Comfort Sexual Communication (3 items)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comfort level of asking a partner about their past sexual history.</td>
<td>.71</td>
<td>.52</td>
<td>3.56</td>
<td>1.46</td>
</tr>
<tr>
<td>Comfort level asking a partner if she/he has had an HIV test.</td>
<td>.94</td>
<td>.86</td>
<td>3.12</td>
<td>1.66</td>
</tr>
<tr>
<td>Comfort level asking a partner if he/she has been tested for an STD (excluding HIV).</td>
<td>.92</td>
<td>.85</td>
<td>3.17</td>
<td>1.62</td>
</tr>
<tr>
<td><strong>Factor 3: Comfort with Barrier Methods (3 items)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comfort level buying a condom or a dental dam.</td>
<td>.60</td>
<td>.42</td>
<td>3.48</td>
<td>1.58</td>
</tr>
<tr>
<td>Comfort level providing a condom/dental dam if a partner did not have one available.</td>
<td>.96</td>
<td>.58</td>
<td>4.15</td>
<td>1.32</td>
</tr>
<tr>
<td>Comfort level of using/asking partner to use a condom or dental dam.</td>
<td>.60</td>
<td>.46</td>
<td>4.30</td>
<td>1.18</td>
</tr>
<tr>
<td><strong>Factor 4: Latex Barrier Effectiveness (3 items)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effectiveness in preventing STDS . . .</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>. . . wearing (or having a partner wear) a condom.</td>
<td>.83</td>
<td>.49</td>
<td>3.92</td>
<td>1.08</td>
</tr>
<tr>
<td>. . . wearing a condom containing spermicidal cream.</td>
<td>.77</td>
<td>.46</td>
<td>3.76</td>
<td>1.27</td>
</tr>
<tr>
<td>. . . using a dental dam during oral sex.</td>
<td>.62</td>
<td>.34</td>
<td>3.80</td>
<td>1.14</td>
</tr>
<tr>
<td><strong>Factor 5: Belief in Rape Myths (3 items)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A person is more likely to be raped if he/she . . .</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>. . . feels that he/she owes the person something.</td>
<td>.68</td>
<td>.47</td>
<td>1.88</td>
<td>1.43</td>
</tr>
<tr>
<td>. . . has sex with multiple partners.</td>
<td>.65</td>
<td>.46</td>
<td>2.33</td>
<td>1.57</td>
</tr>
<tr>
<td>. . . is in a passive role in a relationship.</td>
<td>.71</td>
<td>.52</td>
<td>1.94</td>
<td>1.39</td>
</tr>
</tbody>
</table>
Reliability
To test the internal consistency, a reliability analysis was performed on each subscale and the factor model as a whole. For Factor 1, the subscale named “perceived sexual readiness,” the Cronbach’s alpha was .88 (k = 5), with all positive corrected item-total correlations of .63 and above. For Factor 2, the subscale named “comfort sexual communication,” the Cronbach’s alpha was .91 (k = 3), with all positive corrected item-total correlations .71 and above. For Factor 3, the subscale named “comfort with barrier methods” had a Cronbach’s alpha of .79 (k = 3); all positive corrected item-total correlations were .58 and above. For Factor 4, the subscale named “latex barrier effectiveness” (k = 3), the Cronbach’s alpha was .79; all positive corrected item-total correlations were .56 and above. For Factor 5, the subscale named “belief in rape myths” (k = 3), the Cronbach’s alpha was .74; all positive corrected item-total correlations were .55 and above. Finally, for all subscales combined (k = 17), the Cronbach’s alpha was .79, with corrected item-total correlations ranging from .23 to .54.

Validity
Principal axis factoring was performed to detect structure and determine dimensionality of the set of variables. The factorability indices were .784 for the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett’s test of sphericity (p < .001), indicating good factorability. A varimax rotation was performed because the majority of the variables were uncorrelated (i.e., below .32; Tabachnick & Fidell, 2001, p. 622). Following the varimax rotation, the analysis yielded a five-factor solution with eigenvalues greater than 1.0, cumulatively accounting for 71.46% of the variance. According to Heck (2000, p.188), when used alone the rule of retaining eigenvalues greater than 1.0 may over- or underestimate the number of factors; a scree plot should be used as secondary criterion for factor verification. The scree plot confirmed the five-factor solution. All of the items had loadings of .30 or greater, falling within acceptable parameters (Table 1).

Other Information
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References

Exhibit

**Sexual Health Survey (Sample Items)**

**Knowledge Section**
The following questions are intended to access your sexual health knowledge. Please answer each question to the best of your ability by indicating to what extent you agree or disagree with the following statements. If you feel uncomfortable answering any of the questions you may skip them.

K10) Women can become pregnant the first time they engage in vaginal-penile intercourse.
   - Strongly Disagree
   - Moderately Disagree
   - Mildly Disagree
   - Mildly Agree
   - Moderately Agree
   - Strongly Agree

K13) Giving and receiving oral sex without any form of barrier protection (condom or dental dam).
   - Very Effective
   - Moderately Effective
   - Slightly Effective
   - Slightly Ineffective
   - Moderately Ineffective
   - Strongly Ineffective

K15) Wearing (or having a partner wear) a condom that contains spermicidal cream.
K.16) Using (or having a partner use) a dental dam or any latex barrier used to help prevent the exchange of fluids, during oral sex.

**Attitude Section**

The following questions are intended to access your attitudes towards sexual health topics. Please answer each question to the best of your ability by selecting one of the following options. If you feel uncomfortable answering any of the questions you may skip them.

To what extent do you feel comfortable or uncomfortable when engaging in the following behaviors? Please indicate your answer for each behavior by selecting the corresponding option.

A6) Speaking with a partner about using birth control (any method).

- Very Comfortable
- Moderately Comfortable
- Slightly Comfortable
- Slightly Uncomfortable
- Moderately Uncomfortable
- Strongly Uncomfortable

A7) Asking a partner about their past sexual history.

A10) Engaging in unprotected (no condom or dental dam) sexual activity with a partner.

For the following statements, please indicate your level of concern if you were trying to decide whether or not to get tested for a sexually transmitted disease, including HIV (the virus that causes AIDS).

A19) Having unprotected sex (sex without a condom or dental dam) is not worth the risk of contracting a sexually transmitted disease.

**Behavior Section**

In this survey, the definition of sexual activity refers to oral, anal, and vaginal sex. This does not include massage, touching, or mutual masturbation.

B1) Have you ever had consensual sex (oral, anal, or vaginal)?

- Yes
- No

B8) In the last 30 DAYS, what type of sex did you have? Check all that apply.

- Oral
- Anal
- Vaginal
- Other

B10) If you did NOT use a form of barrier protection such as a condom/dental dam (a latex covering used to prevent the exchange of bodily fluids) in the last 30 DAYS you had sex please indicate the reason. Check all that apply.

- I just knew my partner was safe.
- It was a spontaneous, unplanned event.
- I was under the influence of alcohol or drugs.
- I did not feel comfortable discussing the matter with my partner.
- I did not feel I needed to because I was involved in a long-term relationship at the time.
- I was using another form of birth control.
- There was not any form of protection method available.
- The sex was nonconsensual (sex against my will).
- Other ____________ (Must fill in the blank)

B15) Which of the following barrier and/or birth control methods do you use most often? Check all that apply.
Condom/dental dams (latex covering used to prevent the exchange of bodily fluids)
Combination hormonal methods (such as birth control pills, Ortho Evra—the Patch, NUVA—intravaginal ring—the Ring).
Depo-Provera (the Shot)
Calendar method (rhythm or having sex only during the "safe" times of the month)
Withdrawal or “pulling out”
Diaphragm
Nothing
Other __________________ (Must fill in the blank)

Demographics

D2) Which of the following do you consider yourself?
   Male
   Female
   Transgender

D5) What is your current relationship status?
   Single (not in a relationship)
   Committed relationship (only dating one person)
   Non-committed relationship (casual)
   Cohabitating (living together)
   Married or partnered

D6) Which of the following commonly used terms best describes you?
   Heterosexual
   Gay or lesbian
   Bisexual
   Transgender
   Questioning

D7) Where do you currently live?
   Campus residence halls
   Greek housing
   Other university housing
   Off-campus housing
   Parent’s or guardian’s house

*The responses are repeated for Questions K1 through K11.
*The responses are repeated for Questions K12 through K24.
*The responses are repeated for Questions A1 through A10.