Predictors of HPV Seropositivity in Appalachian Women age 18-26 Years

Mack T. Ruffin, IV, MD, MPH (1), Erinn M. Hade, PhD (2,6), Patrick Fahey, MD (3), Lisa M. Christian, PhD (4, 5), Electra D. Paskett Ph D (7), Diane M Harper (8), MD MPH MS

1The Department of Family and Community Medicine, Penn State Hershey Medical Center, Hershey, PA 17033 mruffin@pennstatehealth.psu.edu

2The Center for Biostatistics, Department of Biomedical Informatics, College of Medicine, The Ohio State University, 320G, 1800 Cannon Drive, Columbus, OH 43210 USA; erinn.hade@osumc.edu

3Department of Family Medicine, The Ohio State University Wexner Medical Center, Columbus, OH Pat.Fahey@osumc.edu

4The Institute for Behavioral Medicine Research, The Ohio State University Wexner Medical Center, Room 112, 460 Medical Center Drive, Columbus, OH, 43210 USA; christian.109@osu.edu

5Department of Psychiatry & Behavioral Health., College of Medicine. The Ohio State University, Columbus, OH

6Department of Obstetrics and Gynecology, The Ohio State University Wexner Medical Center, Columbus, OH

7Department of Internal Medicine, College of Medicine. The Ohio State University, Columbus Ohio electra.paskett@osumc.edu

8Department of Family Medicine, Obstetrics and Gynecology, Women’s Studies, Bioengineering, University of Michigan, Ann Arbor, MI harperdi@med.umich.edu
Corresponding author:
Diane M Harper MD MPH MS
1018 Fuller Street
Ann Arbor MI 48105
harperdi@med.umich.edu
734-998-7120-phone
734-998-7335- Fax

Grants
Supported by grants from the National Cancer Institute (P50 CA105632; P30 CA016058, P30CA046592) and the National Center for Advancing Translational Science (UL1TR001070).
Supported in part by a research grant from the Investigator-Initiated Studies Program of Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc. The opinions expressed in this paper are those of the authors and do not necessarily represent those of Merck Sharp & Dohme Corp., a subsidiary of Merck & co., Inc.

Acknowledgments:
Lori Hill, APRN-CNP, Clinical Research Specialist -Total Cancer Care, Comprehensive Cancer Center

The Ohio State University, 1590 N. High Street, Suite 525, Columbus, Ohio 43201
UL1 TR002240 Michigan Institute for Clinical and Health Research as an acknowledgement of funding sources.

This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially without permission from the journal.

**Short Summary**: Appalachian women 18-26 years old have high baseline seropositivity rates for at least one of the four HPV vaccine related types, but low vaccine relevant type infections.

Abbreviations:

HPV means human papillomavirus  
cLIA means Competitive Luminex Immunoassay  
EBV means Epstein Barr virus  
HSV2 means herpes simplex virus, type 2  
PSS means Perceived stress scale  
CES-D means Center for Epidemiologic Studies Depression Scale  
MPSS means Multidimensional Scale of Perceived Social Support  
SF 36 means Short Form -36 general health scale,  
ELISA means enzyme linked immunosorbent assay  
EBV VCA IgG means Epstein Barr Virus, Viral Capsid Immunoglobulin type G antibodies
Abstract

Background: Key informants of the Appalachian community questioned whether their unique environmental stressors would alter their immune response to HPV infections. The primary aim of this study is to determine predictors of HPV seroprevalence to at least one of the four vaccine related HPV types prior to vaccination using a psychoneuroimmunologic model in Appalachian women.

Method: Women ages 18-26 years old (n=185) who had not received HPV vaccination provided cervical HPV DNA and blood samples. HPV DNA was identified through Hybrid Capture 2 assay and then genotyped for HPV 6, 11, 16 and 18 by Roche Linear Array. Competitive Luminex Immunoassay (cLIA) measured the type specific antibodies to HPV 6, 11, 16, and 18 in mMerck/ml. Nine psychoneuroimmunology scales measuring attributes of stress were self-completed.

Results: HPV DNA was detected in 50% (92/183) of participants, with only 14% (26/183) positive for HPV 6/11/16/18 DNA. Seropositivity for at least one anti-HPV 6/11/16 or 18, on the other hand, was present in 35% (64/183) of women, with only 10 % (19/183) concomitantly infected and seropositive for the vaccine related types. Perceived stress scale was not a strong predictor of HPV seropositivity.

Conclusion: Both HPV infection and vaccine related HPV type seropositivity is common among Appalachian women aged 18-26 years. The anticipated effect of environmental stressors on HPV seropositivity was not seen when multiple predictors were considered.

Key words: Appalachia, HPV, vaccination, antibodies, stress
Introduction

Human papillomavirus (HPV) infection is estimated to be the most common sexually transmitted infection in the United States.\(^1\) Risk factors for HPV infection differ from risk factors for HPV seroconversion after natural infection as only 40-60% of those infected mount an immune response. In the immunocompetent, this immune response is limited to about five years.\(^2-5\) Lower seroconversion rates with shorter duration of response is seen in the immunocompromised.\(^6\) The risk factors for seropositivity that overlap with HPV infection include life-time numbers of sexual partners, age of sexual debut, tobacco use, prior herpes (HSV-2) infection, and prior use of oral contraceptives.\(^2,7-11\) Risk factors for seropositivity include persistent HPV infection and high viral load at infection.\(^12\)

Appalachia has the highest rate of cervical cancer mortality among white US women.\(^13-14\) In the Appalachian parts of Kentucky, Maryland, and Ohio, the annual age-adjusted incidence of cervical cancer was higher than for the non-Appalachian parts of each state.\(^13\) This could be due to increased number of HPV infections via increased numbers of sexual partners, increased viral load at time of infection due to viral load of one or many partners, or due to lack of HPV clearance as a result of immunosuppression from stressors, such as tobacco use and the environment. All of these may reduce the effectiveness of the quadrivalent vaccine against primary infection. In our conversations with key informants from Appalachian Ohio, there is the belief that young women will not benefit from the HPV vaccine due to high rates of existing or past infections and the environmental stressors on the immune system’s ability to respond to the vaccine.
The primary aim of this study was to measure the prevalent seropositivity of HPV 6/11/16/18 among women age 18-26 years in Appalachia. Secondarily, we estimated there would be associations between HPV seropositivity and risk factors of psychoneuroimmunologic suppression including the number of sexual partners, perceived stress, depression, and tobacco use. In addition, we explored the reactivation response of past Epstein Barr Virus (EBV) infections as an inverse response theory to perceived stress: higher perceived stress results in immune dysregulation; and immune dysregulation results in higher EBV titers and lower HPV seropositivity (Figure 1).

Methods

Between 2011 and 2013, women age 18-26 years were eligible to participate in the study if they resided in an Appalachian county, had an intact cervix, were able to read and understand English and able to provide informed consent. Women were excluded from the study if they had a history of cervical cancer, cervical lesion treated with cryotherapy or any forms of surgical removal of cervical lesions, pregnant or planning a pregnancy in the next year, taking immune suppressive medication, autoimmune disorder, prior exposure to an HPV vaccine of any type, or planning to move out of the study area in the next year. The product insert for the four-valent HPV vaccine (HPV4) required participant exclusion due to hypersensitivity to yeast or to a prior HPV4 dose.

Study participants were recruited from Appalachian areas of Ohio, West Virginia, and Kentucky to study sites along the borders of these three states, as the Appalachian identity does not have borders. The recruitment process was a multi-media marketing campaign including ads
(radio, billboards, Facebook, craigslist, newspaper, college sidewalk ads and dining room table
tents), interactive website, flyers in community sites frequented by the target population, in-
person promotions at community medical centers, direct mailing of previous study participants,
presentations at relevant community organizations, and community advisory committee
promotions.

Eligible women consenting to participate in the study completed a baseline visit. During
the baseline visit each participant completed a series of questionnaires (Supplemental Tables 1
and 2), provided a blood sample for HPV and EBV serology assays and underwent a pelvic
examination for collection of cervical cytology and HPV DNA testing. The questionnaire
information included demographics, health, sexual behaviors, Appalachian self-identity, and
healthcare access. The recognized psychological data collected included perceived stress scale
(PSS), the Center for Epidemiologic Studies Depression Scale (CES-D), the Loneliness
scale, the Brief Cope scale, the Multidimensional Scale of Perceived Social Support
(MPSS), the SF 36 general health scale, and the Daily Discrimination scale.

Within one hour of blood collection, the sera was separated for EBV and HPV antibody
analysis. EBV antibody analysis was performed on site by Euroimmun EBV ELISA plates
(Morris Plains, NJ). EBV VCA IgG antibody titers were assessed and repeated if the end point
did not fall within the expected linear range (±15%) per manufacturer’s instructions. The sera for
HPV antibody analyses were frozen at -80°C as 1-5 ml aliquots in four separate screw top
cryovials for evaluation by Merck using competitive Luminex Immunoassay (cLIA, Merck
Research Labs, Kenilworth NJ) for IgG antibodies to HPV 6, 11, 16 and 18 with cutoffs for seropositivity defined as 20, 16, 20, 24 milliMerck units/milliliter.\textsuperscript{21}

The cervix was visualized by speculum exam. Cervical sampling was performed with a brush and placed in ThinPrep; a separate brush provided HPV DNA sampling and was placed in a Digene transport tube. Cytology was read according to the Bethesda system.\textsuperscript{22} HPV DNA was first detected by Hybrid Capture® 2 which tests for a cocktail of 14 high risk HPV types. Of the positives, cervical DNA was purified by using the Qiagen Virus/Bacteria Midi Kit (Qiagen, Inc., Hilden, Germany) on the Qiasymphony SP instrument and Roche Linear Array HPV Genotyping (Roche Molecular Systems, Inc., Pleasanton, CA) identified HPV DNA 6/11/16/18 along with a positive control.

**Statistical Methods**

Demographic, psychological, behavioral and biological characteristics at baseline by HPV seropositivity status were summarized and univariable associations made by estimating the unadjusted relative risk. Unadjusted and multivariable adjusted relative risks were estimated through a modified Poisson regression approach.\textsuperscript{23} Multivariable models were developed to find the best predictors of HPV seropositivity. Potential predictors were informed by the psychoneuroimmunology model (Figure 1). Age was considered an a priori confounder and included in all multivariable models. Within each covariate domain, among variables with the strongest associations, the variable with the smallest variance was chosen to first enter the model (e.g. number of partners versus ever had a Pap smear). Interactions of interest were tested based on those of biologic interest and included: PSS by EBV level (categorical), Appalachian identity
by EBV level (categorical), self-rated health by EBV, self-rated health by number of partners, age by PSS, age by EBV, age by self-rated health, PSS by smoking status. In addition, squared terms of age and EBV level were also considered. All confidence intervals were two-sided and unadjusted for multiple comparisons. Analyses were performed in STATA (version 13, StataCorp, College Station, TX) and the SAS software (Version 9.3 of the SAS System for Windows, SAS Institute Inc., Cary, NC, USA).

Results

The STROBE diagram (Figure 2) outlines study recruitment. Of the 381 women who responded to advertising, 321 (84%) were eligible and 191 (60%) were finally consented and enrolled in the study. Six women were found to be ineligible following consent, leaving a final cohort of 185 women who responded to the survey questions. Cervical specimens and blood tests were valid in 183 women, of whom 92 were HPV DNA positive (50%) and 64 (35%) were seropositive for one or more of the four serotypes (6/11/16/18) (Table 1). Among HPV 16/18 DNA positives, seropositivity was 63% (7/11) and 75% (3/4), respectively. Of the 92 women with current HPV infections, only 28% (n=26) were infected with one or more of the four vaccine relevant types (HPV 6/11/16/18). Of the 64 women seropositive for HPV 6/11/16/18, the corresponding current HPV infections were low. For instance, among the 36 women seropositive for HPV 16, only 9 women were HPV 16 DNA positive (25%), with 14% having corresponding HPV 6 infections and antibodies and 8% having corresponding HPV 18 infections and antibodies. While 10 women were HPV 11 seropositive, no women in the study were HPV 11 DNA positive.
Table 2 describes the demographics and health characteristics of the study cohort by HPV serostatus at baseline. The majority of the cohort was white non-Hispanic (85%), with at least some college education (68%), never married (65%), with health insurance (80%), and self-reported good to excellent health (57%). Older age and ever being married were significantly positive predictors of seropositivity for at least one of the four HPV vaccine types at baseline (OR = 1.12, 95% CI: 1.03, 1.21) and 1.62 (1.11, 2.37), respectively). Having current health insurance and self-reporting good to excellent health were significantly negative predictors of HPV seropositivity (0.56 (0.38-0.81) and 0.56 (0.38-0.84) respectively). Specifically, women with health insurance had a low proportion of HPV seropositivity (29%), similar to the general population vs. 52% without (or unknown) health insurance. A low proportion of women with self-rated very good or excellent health were HPV seropositive with rates of 27% vs. 47% for those with poorer health.9, 24-25

For our sexual health indicators, the majority of the cohort had never had a Pap test (77%), had sexual intercourse (96%), with four or more partners (65%), had used condoms (82%), but never had been treated for an STI (91%). The average age of first intercourse was 16.6 years (2.3 SD) and the average number of years of sexual activity were 6.3 (3.4 SD). Of those having had a Pap test, 30% had an abnormal test. Significant predictors of HPV seropositivity included never having had a Pap test (2.97 (1.38-6.64)), having a prior abnormal Pap test (1.47 (1.00-2.16)), an increasing number of years of sexual activity (1.11 (1.05-1.17)), having four or more male sexual partners (2.78 (1.47-5.27)), being treated for an STI (2.38 (1.57-3.59)), having a partner treated for a STI (1.93 (1.25-2.99)) and having a sexual partner after the age of 18 who on average was more than 5.6 years older (1.04 (1.00-1.07)).
Self-reported substance use was predominantly alcohol use with 72% of the population using within the last week and 36% binge drinking in the last month. A history of tobacco smoking, and drug use were less common at 31% and 22% of the population, respectively. A history of tobacco use was the only predictor of HPV seropositivity with a significantly higher likelihood of baseline seropositivity for at least one of the four vaccine HPV types (2.00 (1.37-2.91)).

Surrogate immune dysregulation was measured by EBV antibody titers which reactivated at medium/high levels in 70% of the responders and was a significant predictor of HPV seropositivity with a relative risk at 1.92 (1.11-3.30).

The psychological scales used to characterize the study population are summarized in Table 3. The perceived stress scale mean was 23, with 46% of study population having a CES-D score of 16 or greater, the identifying threshold for depression.

The only psychological scale measure significantly associated with baseline HPV serology was behavioral disengagement (1.18 (1.06, 1.32) indicating that the more the woman was likely to give up trying as a coping strategy the more likely she had antibodies to at least one of the four vaccine HPV types.

Multivariable regression models investigated predictors of HPV seropositivity for types 6/11/16/18, based on the psychoneuroimmunology model (Table 4, Figure 1). The risk of HPV seropositivity for at least one of the four vaccine HPV types was significantly influenced by
smoking status (1.48 (1.00-2.18)), having four or more male sexual partners (1.96 (1.04-3.68)), and medium/high EBV titers (1.79 (1.00-3.21)) when modeled together. Those who self-rated their health as very good to excellent had a 43% significantly lower risk of being HPV seropositive at baseline (0.57 (0.38-0.86)) than those who rated themselves in worse health. The perceived stress scale was not a strong predictor of HPV seropositivity. No significant interactions were observed.

**Discussion**

Our study was driven by local community and primary care providers’ concerns that Appalachian women age 18-26 years have high rates of exposure to HPV and exposure to the Appalachian specific environmental factors that would impair the immune system’s ability to respond to HPV vaccination at a time when HPV vaccine rates were very low. We developed a psychoneuroimmunologic theoretical model incorporating these community beliefs about environmental stressors, common HPV exposure and impaired immune response. We have confirmed the community leaders’ belief that HPV exposure was common, but no more so than in other populations. We also showed that women continued to be infected with HPV, but with much less infectivity of the 6/11/16/18 types possibly due to the high natural seroconversion rates to these types earlier in life. The seroconversion may be providing women with short term natural immunity, as the incidence of cancers at a later age exceeds the general population. In addition, the local perception of high levels of perceived stress, depression, and loneliness was confirmed.
Despite these higher measures of stress, we showed that the significant positive predictors of seropositivity to at least one of the four HPV vaccine related types (having ever smoked, having four or more sexual partners, and having a resurgence in EBV titers) did not include stress markers. The reactivation of EBV titers indicates that there was immune dysregulation, but the effects of depression, perceived stress, and Appalachian self-identity, while potential minor contributors to the immune dysregulation, were not found to contribute to HPV seropositivity. We hypothesize that perhaps the reactivation of EBV titers is an indicator that HPV, which usually evades immune detection,\textsuperscript{27} is now detected and seropositivity ensues. In addition, the predictors for HPV seropositivity were independent of age in the final adjusted model, something that has not been reported in other less stressed populations.

The strength of this study is also the community- based input for the study design and their acceptance of the measures used to identify stress and other environmental modifiers hypothesized to suppress immune status. The community leaders supported the biological specimen collections and maintained enthusiasm for the study throughout the study period. While this study was conceived and implemented in 2011-2013, the conditions of Appalachia have not changed and the inferences from this work remain relevant to understanding vaccine seroconversion.

The limitations of the study include a sample size which may limit our ability to detect small differences that may still be clinically meaningful for HPV seroconversion and seropositivity as well as EBV titers. The study population is representative of the Appalachian population of women age 18-26 years. The results may not be the same if populations from other
Appalachian areas were examined. In addition, our study was cross sectional without the ability to follow EBV or HPV serostatus over time or with precise titers. We did not explore positive potential networks of family/friends/associates in this work.

**Conclusions.** Appalachian women have high baseline seropositivity rates for at least one of the four HPV vaccine related types, but low vaccine relevant type infections, indicating natural HPV 6/11/16/18 exposure has induced sufficient antibodies for short term protection. In addition, Appalachian women have elevated EBV titers indicating an immune dysregulation which we hypothesize assists in the high natural seroconversion rates.
References


Figure Legends.

Figure 1. Psychoneuroimmunology model linking psychological stressor to immune dysregulation and failure to develop HPV antibodies after exposure to HPV.

Figure 2. STROBE diagram of study population
Figure 1: Psychoneuroimmunology model linking psychological stressor to immune dysregulation and failure to develop HPV antibodies after exposure to HPV.
Figure 2. STROBE diagram of study population

Women Contacted About Study (n=381)

No Cervix or Prior Treatment (n=19)
  Not Appalachian Resident (n=10)
    Planning to Move (n=9)
    Had HPV Vaccine (n=7)
    Not in Age Range (n=6)
  Pregnant or Planning a Pregnancy (n=4)
  Immune Disorder (n=2)
  Taking Immune Suppressive Drugs (n=2)
  Yeast Allergy (n=1)

Eligible (n=321)

Did Not Attend baseline Visit (n=130)

Attended Baseline Visit (n=191)

Not eligible (n=3)
  No blood drawn (n=2)
  Declined to participate (n=1)

Eligible Women Consented (n=185)
Table 1. HPV Serology and DNA Status

<table>
<thead>
<tr>
<th></th>
<th>Total (n=183)</th>
<th>HPV 16 seropositive (n=36)</th>
<th>HPV 18 seropositive (n=16)</th>
<th>HPV 6 seropositive (n=48)</th>
<th>HPV 11 seropositive (n=10)</th>
<th>HPV 16, 18, 6, or 11 seropositive (n=64)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HPV DNA positive</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>92</td>
<td>50.3%</td>
<td>22 (61.1%)</td>
<td>10 (62.5%)</td>
<td>33 (68.8%)</td>
<td>5 (50.0%)</td>
<td>43 (67.2%)</td>
</tr>
<tr>
<td><strong>Single HPV infections</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HPV 6</td>
<td>6</td>
<td>3.3%</td>
<td>2 (5.6%)</td>
<td>1 (6.3%)</td>
<td>3 (6.3%)</td>
<td>0</td>
</tr>
<tr>
<td>HPV 11</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>HPV 16</td>
<td>11</td>
<td>6.0%</td>
<td>5 (13.9%)</td>
<td>2 (12.5%)</td>
<td>5 (10.4%)</td>
<td>0</td>
</tr>
<tr>
<td>HPV 18</td>
<td>4</td>
<td>2.2%</td>
<td>2 (5.6%)</td>
<td>1 (6.3%)</td>
<td>2 (4.2%)</td>
<td>0</td>
</tr>
<tr>
<td><strong>Multiple HPV infections</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HPV 6/16</td>
<td>3</td>
<td>1.6%</td>
<td>3 (8.3%)</td>
<td>1 (6.3%)</td>
<td>3 (6.3%)</td>
<td>0</td>
</tr>
<tr>
<td>HPV 6/18</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>HPV 16/18</td>
<td>2</td>
<td>1.1%</td>
<td>1 (2.8%)</td>
<td>0</td>
<td>1 (2.1%)</td>
<td>0</td>
</tr>
<tr>
<td>HPV 6/16/18</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>HPV 6/11/16/18</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 2: Demographic characteristics predicting baseline HPV seropositivity for HPV 6, 11, 16, and/or 18

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Total</th>
<th>HPV 6/11/16/18 seropositive</th>
<th>Relative Risk ** (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=185</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Age, mean (SD)</td>
<td></td>
<td>22.8 (2.4)</td>
<td>22.4 (2.5)</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White non-Hispanic</td>
<td>154 (83.2)</td>
<td>101 (65.6)</td>
<td>53 (34.4)</td>
</tr>
<tr>
<td>Non-white or Hispanic</td>
<td>31 (16.8)</td>
<td>19 (61.3)</td>
<td>12 (38.7)</td>
</tr>
<tr>
<td>Education*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school /GED or less</td>
<td>59 (32.1)</td>
<td>39 (66.1)</td>
<td>20 (33.9)</td>
</tr>
<tr>
<td>Some college or more</td>
<td>125 (67.9)</td>
<td>80 (64.0)</td>
<td>45 (36.0)</td>
</tr>
<tr>
<td>Marital status *</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never married</td>
<td>119 (65.4)</td>
<td>84 (70.6)</td>
<td>35 (29.4)</td>
</tr>
<tr>
<td>Ever married</td>
<td>63 (34.6)</td>
<td>33 (52.4)</td>
<td>30 (47.6)</td>
</tr>
<tr>
<td>Current Health Insurance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No/Don’t know/refused</td>
<td>50 (27.0)</td>
<td>24 (48.0)</td>
<td>26 (52.0)</td>
</tr>
<tr>
<td>Yes</td>
<td>135 (80.0)</td>
<td>96 (71.1)</td>
<td>39 (28.9)</td>
</tr>
<tr>
<td>Socioeconomic status Scale</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative to community *, mean (SD)</td>
<td>5.9 (1.8)</td>
<td>6.0 (1.8)</td>
<td>5.8 (2.0)</td>
</tr>
<tr>
<td>Relative to US *, mean (SD)</td>
<td>5.7 (1.9)</td>
<td>5.8 (1.8)</td>
<td>5.6 (2.1)</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
</tr>
<tr>
<td><strong>General Health</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; Very good</td>
<td>79 (42.7)</td>
<td>42 (53.2)</td>
<td>37 (46.8)</td>
</tr>
<tr>
<td>Very good or excellent</td>
<td>106 (57.3)</td>
<td>78 (73.6)</td>
<td>28 (26.7)*</td>
</tr>
<tr>
<td><strong>Sexual Health</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never had a Pap test</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>43 (23.2)</td>
<td>37 (86.1)</td>
<td>6 (14.0)</td>
</tr>
<tr>
<td>Yes</td>
<td>142 (76.8)</td>
<td>83 (58.5)</td>
<td>59 (41.6)</td>
</tr>
<tr>
<td>Prior Abnormal Pap ‡</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No/Don't Know</td>
<td>99 (69.7)</td>
<td>63 (63.6)</td>
<td>36 (36.4)</td>
</tr>
<tr>
<td>Yes</td>
<td>43 (30.3)</td>
<td>20 (46.5)</td>
<td>23 (53.5)</td>
</tr>
<tr>
<td>Ever had sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>8 (4.3)</td>
<td>6 (75.0)</td>
<td>2 (25.0)</td>
</tr>
<tr>
<td>Yes</td>
<td>177 (95.7)</td>
<td>114 (64.4)</td>
<td>63 (35.6)</td>
</tr>
<tr>
<td>Age of First Intercourse ‡*, mean (sd)</td>
<td>16.6 (2.3)</td>
<td>16.8 (2.4)</td>
<td>15.9 (2.1)</td>
</tr>
<tr>
<td>Years of sexual activity ‡*, mean (sd)</td>
<td>6.3 (3.4)</td>
<td>5.6 (3.4)</td>
<td>7.6 (3.0)</td>
</tr>
<tr>
<td>Number of Male Sexual Partners ‡*, mean (sd)</td>
<td>6.3 (5.8)</td>
<td>5.0 (5.0)</td>
<td>8.9 (6.4)</td>
</tr>
<tr>
<td>&lt;4</td>
<td>58 (34.7)</td>
<td>49 (84.5)</td>
<td>9 (15.5)</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------</td>
<td>-----------</td>
<td>----------</td>
</tr>
<tr>
<td>≥4</td>
<td>109 (65.3)</td>
<td>62 (56.9)</td>
<td>47 (43.1)</td>
</tr>
<tr>
<td><strong>First intercourse ≤18 yrs,</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>largest age difference among</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>older partners‡*, mean (sd)</td>
<td>3.4 (4.4)</td>
<td>3.0 (4.5)</td>
<td>4.2 (4.2)</td>
</tr>
<tr>
<td><strong>First intercourse &gt; 18 yrs,</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>largest age difference among</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>older partners‡*, mean (sd)</td>
<td>5.6 (5.2)</td>
<td>4.9 (5.4)</td>
<td>6.9 (4.8)</td>
</tr>
<tr>
<td><strong>Partners ever treated for STI‡</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don’t Know/Refused</td>
<td>37 (20.9)</td>
<td>23 (62.2)</td>
<td>14 (37.8)</td>
</tr>
<tr>
<td>No</td>
<td>114 (64.4)</td>
<td>80 (70.2)</td>
<td>34 (29.8)</td>
</tr>
<tr>
<td>Yes</td>
<td>26 (14.7)</td>
<td>11 (42.3)</td>
<td>15 (57.7)</td>
</tr>
<tr>
<td><strong>Self ever treated for STI</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don’t Know</td>
<td>8 (4.3)</td>
<td>5 (62.5)</td>
<td>3 (37.5)</td>
</tr>
<tr>
<td>No</td>
<td>168 (90.8)</td>
<td>113 (67.3)</td>
<td>55 (32.7)</td>
</tr>
<tr>
<td>Yes</td>
<td>9 (4.9)</td>
<td>2 (22.2)</td>
<td>7 (77.8)</td>
</tr>
<tr>
<td><strong>Ever use condoms</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>33 (17.8)</td>
<td>18 (54.6)</td>
<td>15 (45.6)</td>
</tr>
<tr>
<td>Yes</td>
<td>152 (82.2)</td>
<td>102 (67.1)</td>
<td>50 (32.9)</td>
</tr>
<tr>
<td><strong>Substance Abuse Behaviors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Smoking</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>127 (68.7)</td>
<td>93 (73.2)</td>
<td>34 (26.7)</td>
</tr>
<tr>
<td>Ever</td>
<td>58 (31.4)</td>
<td>27 (46.6)</td>
<td>31 (53.5)</td>
</tr>
<tr>
<td>Alcohol use in last week</td>
<td>Yes</td>
<td>No/Don't know</td>
<td>Ref</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----</td>
<td>---------------</td>
<td>-----</td>
</tr>
<tr>
<td></td>
<td>134 (72.4)</td>
<td>51 (27.6)</td>
<td>1.27 (0.79, 2.05)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Binge drinking in last month</th>
<th>Yes</th>
<th>No/Don't know</th>
<th>Ref</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>66 (35.7)</td>
<td>119 (64.3)</td>
<td>1.06 (0.70, 1.58)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Any drug use</th>
<th>Yes</th>
<th>No</th>
<th>Ref</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40 (21.6)</td>
<td>145 (78.4)</td>
<td>1.29 (0.84, 1.97)</td>
</tr>
</tbody>
</table>

**Surrogate of Immune Dysregulation**

**EBV (natural log scale)**

<table>
<thead>
<tr>
<th>Mean (SD)</th>
<th>Negative/Low, n (%)</th>
<th>Medium/High§ n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.8 (2.0)</td>
<td>56 (30.3)</td>
<td>120 (69.7)</td>
</tr>
<tr>
<td>5.6 (2.1)</td>
<td>44 (78.6)</td>
<td>76 (58.9)</td>
</tr>
<tr>
<td>6.2 (1.8)</td>
<td>12 (21.4)</td>
<td>53 (41.1)</td>
</tr>
</tbody>
</table>

1.92 (1.11, 3.30)

^ Only 5 women indicated Hispanic ethnicity

‡ For those who indicate a history of Pap testing (n=142) or a history of sexual activity (n=177)

* Participants are missing responses for: age (n=1), education (n=1), marital status (n=2), socioeconomic scale relative to the community (n=1), and to the US (n=1), age of first intercourse (n=6), years of sexual activity (n=7), number of sexual partners (n=10), largest difference in partner age ≤ 18 (n=12), largest difference in partner age >18 (n=15),

** Relative risk for a 1-unit increase.
Table 3: Psychological scale predictors of baseline HPV seropositivity for HPV 6, 11, 16, and/or 18

<table>
<thead>
<tr>
<th>Scale</th>
<th>Total</th>
<th>HPV 6/11/16/18 seropositive</th>
<th>Relative Risk ** (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=185</td>
<td>No n=120</td>
<td>Yes n=65</td>
</tr>
<tr>
<td><strong>Perceived stress scale,</strong> mean (SD)</td>
<td>23.5(8.1)</td>
<td>23.0 (7.5) 24.4 (9.1)</td>
<td>1.01 (0.99, 1.04)</td>
</tr>
<tr>
<td></td>
<td>23 (7, 52)</td>
<td>23 (5, 43) 25 (7, 52)</td>
<td></td>
</tr>
<tr>
<td>*<em>CES-D <em>, mean (SD)</em></em></td>
<td>11.8 (10.1)</td>
<td>11.2 (9.4) 11.2 (9.4)</td>
<td></td>
</tr>
<tr>
<td>&lt; 16</td>
<td>133 (72.3)</td>
<td>86 (64.7) 47 (35.3)</td>
<td>Ref</td>
</tr>
<tr>
<td>≥ 16</td>
<td>51 (27.7)</td>
<td>33 (64.7) 18 (35.3)</td>
<td>1.00 (0.64, 1.55)</td>
</tr>
<tr>
<td>*<em>Multidimensional Scale of Perceived Social Support <em>,</em></em> mean (SD)</td>
<td>5.7 (1.2)</td>
<td>5.7 (1.1) 5.8 (1.4)</td>
<td>1.01 (0.79, 1.28)</td>
</tr>
<tr>
<td></td>
<td>6.0 (1.7)</td>
<td>5.9 (1.7) 6.1 (1.7)</td>
<td></td>
</tr>
<tr>
<td><strong>Daily Discrimination Score,</strong> mean (SD)</td>
<td>9.6 (7.8)</td>
<td>9.6 (7.2) 9.8 (8.9)</td>
<td>1.00 (0.98, 1.03)</td>
</tr>
<tr>
<td></td>
<td>9 (0, 35)</td>
<td>9 (0, 31) 9 (0, 35)</td>
<td></td>
</tr>
<tr>
<td>*<em>Loneliness scale <em>,</em></em></td>
<td>4.7 (1.6)</td>
<td>4.6 (1.6) 4.8 (1.7)</td>
<td>1.04 (0.93, 1.17)</td>
</tr>
<tr>
<td></td>
<td>4 (3, 9)</td>
<td>4 (3, 9) 4.5 (3, 9)</td>
<td></td>
</tr>
<tr>
<td><strong>Active coping scale,</strong></td>
<td>5.5 (1.6)</td>
<td>5.4 (1.5) 5.7 (1.8)</td>
<td>1.09 (0.95, 1.25)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>mean (SD)</td>
<td>median (min, max)</td>
<td>median (min, max)</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-----------</td>
<td>-------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Use of Emotional Support scale, mean (SD)</td>
<td>5.2 (1.8)</td>
<td>5 (2, 8)</td>
<td>5 (2, 8)</td>
</tr>
<tr>
<td>Use of Instrumental Support, mean (SD)</td>
<td>4.7 (1.7)</td>
<td>4 (2, 8)</td>
<td>5 (2, 8)</td>
</tr>
<tr>
<td>Behavioral Disengagement, mean (SD)</td>
<td>2.5 (1.1)</td>
<td>2 (2, 8)</td>
<td>2 (2, 7)</td>
</tr>
<tr>
<td>* Participants are missing responses for: CES-D (n=1), MPSS (n=1), Loneliness scale (n=3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>** Relative risk for a 1-unit increase.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4: Multivariable model estimating associations of demographic, behavioral, psychosocial and EBV level with seropositivity for HPV 6, HPV 11, HPV 16, or HPV 18

<table>
<thead>
<tr>
<th></th>
<th>Adjusted Relative Risk (95% CI)</th>
<th>Model 1: PSS retained</th>
<th>Model 2: Final</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1-year increase)</td>
<td>1.07 (0.98, 1.18)</td>
<td>1.07 (0.98, 1.17)</td>
<td></td>
</tr>
<tr>
<td><strong>Smoking status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>Reference</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td>Ever</td>
<td>1.47 (1.00, 2.16)</td>
<td>1.48 (1.00, 2.18)</td>
<td></td>
</tr>
<tr>
<td><strong>Number of partners</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 4</td>
<td>Reference</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td>4 +</td>
<td>1.94 (1.03, 3.65)</td>
<td>1.96 (1.04, 3.68)</td>
<td></td>
</tr>
<tr>
<td><strong>EBV</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>negative/low</td>
<td>Reference</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td>moderate/high</td>
<td>1.80 (1.00, 3.23)</td>
<td>1.79 (1.00, 3.21)</td>
<td></td>
</tr>
<tr>
<td><strong>PSS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(10-unit increase)</td>
<td>1.06 (0.86, 1.31)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Self-rated Health</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good or worse</td>
<td>Reference</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td>Very good or better</td>
<td>0.58 (0.38, 0.89)</td>
<td>0.57 (0.38, 0.86)</td>
<td></td>
</tr>
</tbody>
</table>
Supplemental Information

Insert Self-administered questionnaires
The questions in this survey are to help us better understand you. Please fill in the circle next to the answer that best describes you.

The answers you give will be kept private. NO ONE other than the study staff will know how you answered the questions.

Completing the survey is voluntary. You do not have to answer any question that you do not want to. If you do not want to answer a question, please fill in the circle next to "I prefer not to answer."

Please give the completed survey to the research staff when finished.

MARKING INSTRUCTIONS

- Please use a black ink pen to complete the survey.
- Read the questions and answers carefully.
- Please mark only one answer unless a question asks you to "Mark all that apply."
- Please fill in the circles completely.
- If you mark a circle by mistake, place an "X" through it and fill in the correct circle.
- When asked to write down an answer, please print clearly and in CAPITAL LETTERS in the boxes provided.
The next few questions will help us describe you. For each question, please fill in the circle of the best answer. If you do not know the answer, please mark "Don't know."

1. Please tell us your birthdate.
   
   Month / Day / Year
   
   ○ Don't know
   ○ I prefer not to answer

2. Are you of Hispanic, Latino, or Spanish origin?
   
   ○ Yes
   ○ No
   ○ Don't know
   ○ I prefer not to answer

3. If you are of Hispanic, Latino, or Spanish origin, which of the following describes you?
   
   MARK ALL THAT APPLY
   ○ Mexican, Mexican American, or Chicano
   ○ Puerto Rican
   ○ Cuban
   ○ Other Spanish, Hispanic, or Latino
   ○ Don't know
   ○ I prefer not to answer

4. What is your race?
   
   MARK ALL THAT APPLY
   ○ White
   ○ Black or African American
   ○ American Indian or Alaskan Native
   ○ Asian or Asian American
   ○ Native Hawaiian/Other Pacific Islander
   ○ Other, please tell us:
   ○ Don't know
   ○ I prefer not to answer

Project ID:
5. Which **ONE** of the following **BEST** describes your current main daily activities and/or responsibilities?  

- Working full-time  
- Working part-time  
- Unemployed or laid off  
- Looking for work  
- Keeping house or raising children full time  
- Student  
- Do not work due to health reasons  
- Retired  
- Don't know  
- I prefer not to answer

6. What type of work do/did you do in your current or most recent job?  

- Management, business, and financial  
  *(e.g. chief executives, financial managers, etc.)*  
- Professional and related  
  *(e.g. engineer, architect, dentist, teacher, etc.)*  
- Service  
  *(e.g. homemaker, waitress, cook, maintenance, house or hotel cleaner etc.)*  
- Sales  
  *(e.g. cashier, counter clerk, telemarketing, etc.)*  
- Administrative support, clerical  
  *(e.g. file clerk, answering service, hotel clerk, etc.)*  
- Construction  
  *(e.g. carpentry, electrician, painter, plumber, etc.)*  
- Installation, maintenance, and repair  
  *(e.g. auto mechanic, building maintenance, electronic installation and repair, etc.)*  
- Production  
  *(e.g. farmer, assembly line, meat packing, factory worker, printing, etc.)*  
- Transportation and material moving  
  *(e.g. bus or truck driver, railroad, service station or parking lot attendant, garbage or recycling collector, etc.)*  
- Student  
- Other, please tell us:  
- Don't know  
- I prefer not to answer
7. Are you now...

PLEASE MARK ONLY ONE

- Married
- Divorced
- Widowed
- Separated
- Never been married
- Living with partner
- Don't know
- I prefer not to answer

8. What is the highest grade or year of regular school you have completed?

PLEASE MARK ONLY ONE

- None
- Preschool
- Kindergarten
- 1st grade
- 2nd grade
- 3rd grade
- 4th grade
- 5th grade
- 6th grade
- 7th grade
- 8th grade
- 9th grade
- 10th grade
- 11th grade
- High school diploma
- GED
- Some college or technical or trade school but less than 1 year and no degree
- 1 or more years of college or technical/trade school but no degree
- Technical or trade degree or certification
- Associate degree (for example: AA, AS)
- Bachelor's degree (for example: BA, AB, BS, BSN)
- Master's degree (for example: MA, MS, MPH, MPHA, MEng, Med, MSW, MBA)
- Professional degree (for example: MD, DDS, DVM, LLB, JD)
- Doctorate degree (for example: PhD, EdD)
- Don't know
- I prefer not to answer
1. Where did your family live when you were born?

[ ] City
[ ] State

OR I was born in another country:

[ ] Don't know
[ ] I prefer not to answer

2. Which of these categories best describes where you were living when you were 14?

[ ] In a town or city
[ ] In the country, but not on a farm
[ ] On a farm
[ ] Don't know
[ ] I prefer not to answer

3. Which of these categories best describes the type of dwelling unit in which you were living at age 14?

[ ] Owner occupied single family home
[ ] Rented single family home
[ ] Duplex
[ ] Condominium
[ ] Apartment
[ ] Mobile home
[ ] Other, specify: __________________________
[ ] Don't know
[ ] I prefer not to answer
4. With which of these adult women were you living when you were 14?

MARK ALL THAT APPLY

- Mother
- Stepmother
- Some other adult woman, please tell us: [ ]
- No adult woman
- Some other arrangement, please tell us: [ ]
- On my own
- Don't know
- I prefer not to answer

5. With which of these adult men were you living when you were 14?

MARK ALL THAT APPLY

- Father
- Stepmfather
- Some other adult man, please tell us: [ ]
- No adult man
- Some other arrangement, please tell us: [ ]
- On my own
- Don't know
- I prefer not to answer

6. When you were 14 years old, did you or anyone else living with you have a library card?

- Yes
- No
- Don't know
- I prefer not to answer

7. Some people live in the same place all of their lives, while others move from time to time. How about you? Have you lived here in this town all your life?

- Yes → GO TO QUESTION 10
- No
- Don't know
- I prefer not to answer
8. When did you move to this town- during what year and month?

Month / Year

○ Don't know
○ I prefer not to answer

9. In what city and state did you live just before moving to where you live now?

City / State

OR I lived in another country:

Country

○ Don't know
○ I prefer not to answer

10. Is the home where you live:

○ Owned or being bought by you (or someone in your household)
○ Rented for money
○ Occupied without payment of money or rent
○ Other, please tell us:

○ Don't know
○ I prefer not to answer
11. In what city and state was your mother born?

City

State

OR my mother was born in another country:

- Don't know
- I prefer not to answer

12. When you were 14, what was the highest grade of school that your mother completed?

- None
- Preschool
- Kindergarten
- 1st grade
- 2nd grade
- 3rd grade
- 4th grade
- 5th grade
- 6th grade
- 7th grade
- 8th grade
- 9th grade
- 10th grade
- 11th grade
- High school diploma
- GED
- Some college or technical or trade school but less than 1 year and no degree
- 1 or more years of college or technical/trade school but no degree
- Technical or trade degree or certification
- Associate degree (for example: AA, AS)
- Bachelor's degree (for example: BA, AB, BS, BSN)
- Master's degree (for example: MA, MS, MPH, MPHA, MEng, Med, MSW, MBA)
- Professional degree (for example: MD, DDS, DVM, LLB, JD)
- Doctorate degree (for example: PhD, EdD)
- Don't know
- I prefer not to answer
13. In what city and state was your mother’s mother born?

City

State

OR my grandmother was born in another country:

○ Don't know
○ I prefer not to answer

14. In what city and state was your mother’s father born?

City

State

OR my grandfather was born in another country:

Country

○ Don't know
○ I prefer not to answer
15. In what city and state was your father born?

City

State

OR my father was born in another country:

- Don't know
- I prefer not to answer

16. When you were 14, what was the highest grade of school that your father completed?

- None
- Preschool
- Kindergarten
- 1st grade
- 2nd grade
- 3rd grade
- 4th grade
- 5th grade
- 6th grade
- 7th grade
- 8th grade
- 9th grade
- 10th grade
- 11th grade
- High school diploma
- GED
- Some college or technical or trade school but less than 1 year and no degree
- 1 or more years of college or technical/trade school but no degree
- Technical or trade degree or certification
- Associate degree (for example: AA, AS)
- Bachelor's degree (for example: BA, AB, BS, BSN)
- Master's degree (for example: MA, MS, MPH, MPHA, MEng, Med, MSW, MBA)
- Professional degree (for example: MD, DDS, DVM, LLB, JD)
- Doctorate degree (for example: PhD, EdD)
- Don't know
- I prefer not to answer
17. In what city and state was your father's mother born?

City

State

OR my grandmother was born in another country:

- Don't know
- I prefer not to answer

18. In what city and state was your father's father born?

City

State

OR my grandfather was born in another country:

Country

- Don't know
- I prefer not to answer
These next questions ask about different kinds of health plans or health insurance, including those provided by the government, that you have.

1. Do you currently have health insurance coverage?
   - Yes
   - No________
   - Don't know
   - I prefer not to answer

   GO TO QUESTION 4

2. What kind(s) of health insurance or health care coverage do you have?
   MARK ALL THAT APPLY
   - Private health insurance
   - Medicare
   - Medi-Gap
   - Medicaid
   - Military health care (TRICARE/VA/CHAMP-VA)
   - State-sponsored health plan
   - Single service plan (for example, dental, vision, prescriptions)
   - Other, please tell us:________
   - Don't know
   - I prefer not to answer
3. During the past 12 months, was there any time when you had no health insurance at all?
   - Yes
   - No
   - Don't know
   - I prefer not to answer

4. For how many months of the past 12 months did you have no health insurance at all?
   - ______ months
   - Don't know
   - I prefer not to answer

5. What is the ONE MAIN reason why you did not have any health insurance during those months?
   - PLEASE MARK ONLY ONE
   - Couldn't afford/Too expensive
   - Not eligible due to working status/Changed employer/Lost job
   - Not eligible due to health or other problems
   - Not eligible due to citizenship/immigration status
   - Family situation changed
   - Don't believe in insurance
   - Switched insurance companies, delay between
   - Could get health care for free
   - Pay for own care
   - Other, please tell us: _______________________
   - Don't know
   - I prefer not to answer
These next few questions are about where you get your health care. Please fill in the circle of the best answer.

1. Is there a place you usually go when you are sick or you need advice about your health?
   - Yes
   - No
   - Don't know
   - I prefer not to answer

GO TO QUESTION 3

2. Is this place a...
   PLEASE MARK ONLY ONE
   - Doctor's office
   - Emergency room
   - Hospital outpatient department
   - Health department or free clinic
   - Other, please tell us: ...
   - Don't know
   - I prefer not to answer

3. Do you have a personal doctor or medical provider who is your main provider?
   - Yes
   - No
   - Don't know
   - I prefer not to answer
The next few questions are about your health. For each question, please fill in the circle of the best answer.

1. In general, would you say your health is:
   - Excellent
   - Very good
   - Good
   - Fair
   - Poor
   - Don't know
   - I prefer not to answer

How TRUE or FALSE is each of the following statements for you?

<table>
<thead>
<tr>
<th></th>
<th>Definitely true</th>
<th>Mostly true</th>
<th>Don't know</th>
<th>Mostly false</th>
<th>Definitely false</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. I seem to get sick a little easier than other people.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>3. I am as healthy as anybody I know.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>4. I expect my health to get worse.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>5. My health is excellent.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Think of this ladder as representing where people stand in their communities.

People define community in different ways; please define it in whatever way is most meaningful to you. At the **top** of the ladder are the people who have the highest standing in their community. At the **bottom** are the people who have the lowest standing in their community.

1. Where would you place yourself on this ladder?

Please place a large "X" on the rung where you think you stand at this time in your life, RELATIVE TO OTHER PEOPLE IN YOUR COMMUNITY.

**Example response:**

- **Highest standing in your community**
- **Lowest standing in your community**
- **HIGHEST**
- **LOWEST**
Think of this ladder as representing where people stand in the United States.

At the top of the ladder are the people who are the best off - those who have the most money, the most education and the most respected jobs. At the bottom are the people who are the worst off - who have the least money, least education, and the least respected jobs or no job. The higher up you are on this ladder, the closer you are to the people at the very top; the lower you are, the closer you are to the people at the very bottom.

2. Where would you place yourself on this ladder?

Please place a large "X" on the rung where you think you stand at this time in your life, RELATIVE TO OTHER PEOPLE IN THE UNITED STATES.
We are interested in how people are getting along financially these days. Please fill in the circle of the best answer.

3. So far as you and your family are concerned, would you say that you are:
   - [ ] Pretty well satisfied with your present financial situation
   - [ ] More or less satisfied
   - [ ] Not at all satisfied
   - [ ] Don't know
   - [ ] I prefer not to answer

4. During the last few years, has your financial situation been:
   - [ ] Getting better
   - [ ] Getting worse
   - [ ] About the same
   - [ ] Don't know
   - [ ] I prefer not to answer

5. Compared with your parents when they were your current age, are you:
   - [ ] Better off
   - [ ] Worse off
   - [ ] About the same
   - [ ] Don't know
   - [ ] I prefer not to answer

6. Compared with American families in general, would you say your family income is:
   - [ ] Far below average
   - [ ] Below average
   - [ ] Average
   - [ ] Above average
   - [ ] Far above average
   - [ ] Don't know
   - [ ] I prefer not to answer
7. What was the total combined income of your household in the past year, including income from all sources such as wages, salaries, Social Security or retirement benefits, help from relatives and so forth? Please tell us the total income before taxes.

- Less than $5,000
- $5,000 to $9,999
- $10,000 to $14,999
- $15,000 to $19,999
- $20,000 to $29,999
- $30,000 to $39,999
- $40,000 to $49,999
- $50,000 to $59,999
- $60,000 to $69,999
- $70,000 to $79,999
- $80,000 to $89,999
- $90,000 to $99,999
- $100,000 or above
- Don't know
- I prefer not to answer

8. How many people are supported by this income right now? Count yourself and everyone supported by this income, even if they do not live in the same household as you. Please enter the number of people, including yourself.

- Don't know
- I prefer not to answer

9. Altogether, what is the present value of your total family/household savings, assets, and property (including home)?

- Less than $500
- $500 to $4,999
- $5,000 to $9,999
- $10,000 to $24,999
- $25,000 to $49,999
- $50,000 to $99,999
- $100,000 to $199,999
- $200,000 to $299,999
- $300,000 to $499,999
- $500,000 or more
- Don't know
- I prefer not to answer
10. Not counting your mortgage or car loans, what is the total amount of debt held by you and other family members living with you, including student loans, credit card charges, medical or legal bills, or loans from relatives?
   - Less than $2,000
   - $2,000 to $4,999
   - $5,000 to $9,999
   - $10,000 to $19,999
   - $20,000 to $49,999
   - $50,000 to $99,999
   - $100,000 or more
   - Don't know
   - I prefer not to answer

11. If you or anyone else living with you lost your current source of income (your paycheck, public assistance, or other forms of income), how long could you continue to live at your current address and standard of living?
   - Less than 1 month
   - 1 to 2 months
   - 3 to 6 months
   - 7 to 12 months
   - More than a year
   - Don't know
   - I prefer not to answer

12. Do you or anyone else living with you own a car, truck, or van?
   - Yes
   - No
   - Don't know
   - I prefer not to answer

13. In the past year, how often has this statement been true in your household? "The food that we bought ran out and we did not have money to get more."
   - Never true
   - Sometimes true
   - Often true
   - Don't know
   - I prefer not to answer
The questions in this section ask you about your community and where you live. In each case, please fill in the circle of the best answer.

1. **Do you consider yourself to be Appalachian?**
   - Yes  
   - No  
   - Don't know

---

**Please indicate how much each of the following statements describes you.**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not at all</th>
<th>Barely</th>
<th>A little</th>
<th>About half</th>
<th>Pretty much</th>
<th>Very much</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. How much do you see yourself belonging to a rural community?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. How much is being from a rural community a part of who you are?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. How much do you identify with people who live in rural communities?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. To what extent do you feel your general attitudes and opinions are similar to people who live in rural communities?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. To what extent do you feel that you are typical of people who live in rural communities?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. To what extent do you consider yourself a &quot;city&quot; person?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The following items ask your opinions about the place where you currently live. Please indicate how much you agree or disagree with each statement below by filling in ONE choice on each line.

<table>
<thead>
<tr>
<th>Item</th>
<th>Completely agree</th>
<th>Agree</th>
<th>Slightly agree</th>
<th>Neutral</th>
<th>Slightly disagree</th>
<th>Disagree</th>
<th>Completely disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. I want to live in my community for a long time.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>9. I feel at home in my community.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>10. I feel a sense of loyalty to my community.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>11. I know most of the people who live around me.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>12. Most of the people in my community know me.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>13. I feel a sense of connection with other people in my community.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>
Answer these questions thinking about YOUR neighborhood or community. Do you agree or disagree with these statements? Please fill in the circle of the best answer.

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Somewhat agree</th>
<th>Neither agree or disagree</th>
<th>Somewhat disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. People around here are willing to help their neighbors.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>2. This is a close-knit neighborhood or community.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>3. People in this neighborhood or community can be trusted.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>4. People in this neighborhood or community generally do not get along with each other.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>5. People in this neighborhood or community do not share the same values.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>
SMKSTAT

The next questions are about smoking. For each question, please fill in the circle of the best answer. If you do not know the answer, please mark "Don't know."

1. Have you smoked at least 100 cigarettes in your entire life?
   - Yes
   - No
   - Don't know
   - I prefer not to answer
   GO TO QUESTION 22

2. How old were you when you first started to smoke fairly regularly?
   - [ ] years
   - Don't know
   - I prefer not to answer

3. On average, for the ENTIRE TIME you smoked, how many cigarettes did you smoke per day?
   - [ ] cigarettes per day
   - Don't know
   - I prefer not to answer
   IF LESS THAN "1" ENTER "01"

4. Do you now smoke cigarettes...
   - Every day
   - Some days
   - Not at all
   - Don't know
   - I prefer not to answer
   GO TO QUESTION 6
   GO TO QUESTION 17

5. On average, how many cigarettes do you now smoke a day?
   - [ ] cigarettes per day
   - Don't know
   - I prefer not to answer
   GO TO QUESTION 8

Project ID: [ ] [ ] [ ] [ ]
6. During the PAST 30 DAYS, on how many days did you smoke a cigarette?

- [ ] days
- Don't know
- I prefer not to answer

IF NONE, ENTER "00" AND GO TO QUESTION 8

7. During the PAST 30 DAYS, on the days that you smoked, how many cigarettes did you smoke per day?

- [ ] cigarettes per day
- Don't know
- I prefer not to answer

IF LESS THAN "1" ENTER "01"

8. What type of cigarette do you smoke most of the time?

- Menthol
- Non-menthol
- Don't know
- I prefer not to answer

9. Have you ever quit smoking for at least 24 hours?

- Yes
- No
- Don't know
- I prefer not to answer

GO TO QUESTION 13

10. Since you started smoking regularly, what is the longest time you have ever gone without smoking a cigarette?

- [ ] Days
- [ ] Weeks
- [ ] Months
- [ ] Years

OR

- Don't know
- I prefer not to answer

Project ID: [ ] [ ] [ ] [ ]
11. When was the most recent time that you went without smoking for more than 24 hours (not counting being in the hospital)?
   ○ Within the past month
   ○ 1-6 months
   ○ 7-12 months
   ○ More than 12 months
   ○ Don't know
   ○ I prefer not to answer

12. In the past 12 months, how many times have you quit smoking for at least 24 hours?
   [ ] times
   ○ Don't know
   ○ I prefer not to answer

13. Has your doctor ever told you that you should quit smoking?
   ○ Yes
   ○ No
   ○ Don't know
   ○ I prefer not to answer

14. If you decided to quit smoking within the next three months, how would the people who are important to you feel?
   ○ Strongly disapprove
   ○ Disapprove
   ○ Neither approve nor disapprove
   ○ Approve
   ○ Strongly approve
   ○ Don't know
   ○ I prefer not to answer

15. Are you contemplating quitting smoking in the next 6 months?
   ○ Yes
   ○ No
   ○ Don't know
   ○ I prefer not to answer
   "GO TO QUESTION 22"
16. Are you planning to quit smoking in the next 30 days?
   - Yes
   - No
   - Don't know
   - I prefer not to answer
   
   **GO TO QUESTION 22**

If you are a former smoker, answer questions 17 through 24.

17. How long has it been since you quit smoking cigarettes?
   - Days
   - Weeks
   - Months
   - Years
   OR
   - Don't know
   - I prefer not to answer

18. Do you ever think about smoking and whether you might go back?
   - Yes
   - No
   - Don't know
   - I prefer not to answer

19. Do you think that there is any possible situation in which you might start smoking again?
   - Yes
   - No
   - Don't know
   - I prefer not to answer
   
   **GO TO QUESTION 21**

20. In what situation(s) might you start smoking again?

   
   

Project ID: [ ] [ ] [ ] [ ]
21. In your entire life, how many times did you quit smoking for at least 24 hours in an attempt to quit smoking for good?
   - 1 time
   - 2 times
   - 3 times
   - 4 times
   - 5 times
   - More than 5 times
   - Don't know
   - I prefer not to answer

22. In a usual week, does ANYONE who lives with you, including yourself, smoke cigarettes, cigars, or pipes anywhere inside your home?
   - Yes
   - No
   - Don't know
   - I prefer not to answer

23. In a usual week, how many people WHO LIVE with you, including yourself, smoke cigarettes, cigars, or pipes anywhere INSIDE your home?
   - [ ] persons
   - Don't know
   - I prefer not to answer

24. Usually, about how many days per week do people WHO LIVE with you smoke anywhere INSIDE your home?
   - Less than 1 day per week/Rarely/None
   - 1 day per week
   - 2 days per week
   - 3 days per week
   - 4 days per week
   - 5 days per week
   - 6 days per week
   - 7 days per week
   - Don't know
   - I prefer not to answer
The next few questions ask about when and how often you have had a Pap test. A Pap test is a test to look for cancer of the cervix (the opening to a woman's womb). A small sample of cells is taken from a woman's cervix and is tested in a laboratory for signs of cancer.

1. When did you have your last Pap test?
   ○ My last Pap test was on ______ / ______ .
   GO TO QUESTION 2
   ○ Today is my first Pap test.
   GO TO QUESTION 5
   ○ I have never had one and I am not getting one today.
   ○ I don't know the date of my last Pap test.
   ○ I prefer not to answer.
   GO TO QUESTION 3

2. When did you have a Pap test before this one?
   ○ Less than 1 year before
   ○ 1 - 2 years before
   ○ 3 - 4 years before
   ○ 5 or more years before
   ○ Don't know
   ○ I prefer not to answer

3. Have any of your Pap tests ever been abnormal?
   ○ Yes
   ○ No
   ○ Don't know
   ○ I prefer not to answer
   GO TO QUESTION 5
4. How many of your prior Pap tests have ever been abnormal?
   - 1
   - 2 or 3
   - 4 or more
   - Don't know
   - I prefer not to answer

5. How much do you think a Pap test costs? (Please include all costs: the cost of the test to you, the cost your insurance pays, etc.)
   PLEASE MARK ONLY ONE
   - Not more than $10
   - $11 - $25
   - $26 - $50
   - $51 - $75
   - $76 - $100
   - $101 - $150
   - More than $150
   - Don't know
   - I prefer not to answer

6. What percentage does your insurance/Medicare/Medicaid pay toward a Pap test?
   □ □ □ %
   - Does not apply/Do not have insurance
   - Don't know
   - I prefer not to answer

7. How much would you have to pay out of pocket for a Pap test? Please include your co-pay.
   $ □ □ □ □ □
   - Don't know
   - I prefer not to answer
8. Does the cost of a Pap test make it hard for you to get one?
   ○ Yes
   ○ No
   ○ Don't know
   ○ I prefer not to answer

9. How important is it to you to get a regular Pap test?
   ○ Very important
   ○ Important
   ○ Moderately important
   ○ Of little importance
   ○ Unimportant
   ○ Don't know
   ○ I prefer not to answer

10. If the cost of your Pap test was fully covered, how often would you get one?
    ○ Once a year
    ○ Every 2 years
    ○ Every 3 years
    ○ Every 4 to 5 years
    ○ More than every 5 years
    ○ Never
    ○ Don't know
    ○ I prefer not to answer
11. What is the MOST IMPORTANT reason why you might not get a Pap test at least every 3 years? [PLEASE MARK ONLY ONE]

- Embarrassment
- Transportation
- My doctor never recommended it
- Someone recommended not to have it
- Too much bother or inconvenience
- Not necessary, no problems
- Never thought about it
- Not having more children so not necessary
- Not sexually active
- Cost
- Other, please tell us: ____________

12. Have you heard of and/or used a program that covers the cost of a Pap test for you? [PLEASE MARK ONLY ONE]

- Yes, I have heard of it and used it.
- Yes, I have heard of it, but I have not used it.
- No, I have not heard of that program.
- Don't know
- I prefer not to answer

13. What do you think your risk is of getting cervical cancer, compared to other women like you?

- Much lower
- Somewhat lower
- About the same
- Somewhat higher
- Much higher
- Don’t know
- I prefer not to answer
We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement. Please fill in the circle of the best answer.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Very strongly disagree</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Very strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There is a special person who is around when I am in need.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. There is a special person with whom I can share my joys and sorrows.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. My family really tries to help me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I get the emotional help and support I need from my family.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I have a special person who is a real source of comfort to me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. My friends really try to help me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. I can count on my friends when things go wrong.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. I can talk about my problems with my family.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. I have friends with whom I can share my joys and sorrows.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. There is a special person in my life who cares about my feelings.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. My family is willing to help me make decisions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. I can talk about my problems with my friends.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The questions in this section ask you about your feelings and thoughts during the last month. In each case, please fill in the circle of the best answer.

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Almost never</th>
<th>Sometimes</th>
<th>Fairly often</th>
<th>Very often</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In the last month, how often have you been upset because of something that happened unexpectedly?</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>2. In the last month, how often have you felt that you were unable to control the important things in your life?</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>3. In the last month, how often have you felt nervous and &quot;stressed&quot;?</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>4. In the last month, how often have you dealt successfully with irritating life hassles?</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>5. In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>6. In the last month, how often have you felt confident about your ability to handle your personal problems?</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>7. In the last month, how often have you felt that things were going your way?</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>8. In the last month, how often have you found that you could not cope with all the things that you had to do?</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>9. In the last month, how often have you been able to control irritations in your life?</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>10. In the last month, how often have you felt that you were on top of things?</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td></td>
<td>Never</td>
<td>Almost never</td>
<td>Sometimes</td>
<td>Fairly often</td>
<td>Very often</td>
</tr>
<tr>
<td>---</td>
<td>-------</td>
<td>--------------</td>
<td>-----------</td>
<td>--------------</td>
<td>------------</td>
</tr>
<tr>
<td>11. In the <strong>last month</strong>, how often have you been angered because of things that happened that were outside of your control?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>12. In the <strong>last month</strong>, how often have you found yourself thinking about things that you have to accomplish?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>13. In the <strong>last month</strong>, how often have you been able to control the way you spend your time?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>14. In the <strong>last month</strong>, how often have you felt difficulties were piling up so high that you could not overcome them?</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Below is a list of the ways you might have felt or behaved. Please indicate how often you have felt this way DURING THE PAST WEEK. Please fill in the circle of the best answer.

<table>
<thead>
<tr>
<th></th>
<th>Rarely or none of the time (less than 1 day)</th>
<th>Some or a little of the time (1-2 days)</th>
<th>Occasionally or a moderate amount of time (3-4 days)</th>
<th>Most or all of the time (5-7 days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I was bothered by things that usually don't bother me.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>2. I did not feel like eating; my appetite was poor.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>3. I felt that I could not shake off the blues, even with help from my family or friends.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>4. I felt that I was just as good as other people.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>5. I had trouble keeping my mind on what I was doing.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>6. I felt depressed.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>7. I felt that everything I did was an effort.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>8. I felt hopeful about the future.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>9. I thought my life had been a failure.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>10. I felt fearful.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>11. My sleep was restless.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>12. I was happy.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>13. I talked less than usual.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>15. People were unfriendly.</td>
<td>Rarely or none of the time (less than 1 day)</td>
<td>Some or a little of the time (1-2 days)</td>
<td>Occasionally or a moderate amount of time (3-4 days)</td>
<td>Most or all of the time (5-7 days)</td>
</tr>
<tr>
<td>----------------------------</td>
<td>---------------------------------------------</td>
<td>-----------------------------------------</td>
<td>----------------------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>16. I enjoyed life.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>17. I had crying spells.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>18. I felt sad.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>19. I felt that people dislike me.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>20. I could not get going.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

The next questions are about how you feel about different aspects of your life. For each one, please indicate how often you feel that way.

1. **How often do you feel that you lack companionship?**
   - Hardly ever (or never)
   - Some of the time
   - Often
   - Don’t know
   - I prefer not to answer

2. **How often do you feel left out?**
   - Hardly ever (or never)
   - Some of the time
   - Often
   - Don’t know
   - I prefer not to answer

3. **How often do you feel isolated from others?**
   - Hardly ever (or never)
   - Some of the time
   - Often
   - Don’t know
   - I prefer not to answer
These questions deal with ways you've been coping with the stress in your life. There are many ways to try to deal with problems. We ask what you've been doing to cope with problems in your life. Obviously, different people deal with things in different ways, but we are interested in how you've tried to deal with it.

Each item says something about a particular way of coping. We want to know to what extent you've been doing what the item says. How much or how frequently. Don't answer on the basis of whether it seems to be working or not just whether or not you're doing it. Use these response choices.

I haven't been doing this at all
I've been doing this a little bit
I've been doing this a medium amount
I've been doing this a lot

Try to rate each item separately in your mind from the others. Make your answers as true FOR YOU as you can.

<table>
<thead>
<tr>
<th></th>
<th>I haven't been doing this at all</th>
<th>I've been doing this a little bit</th>
<th>I've been doing this a medium amount</th>
<th>I've been doing this a lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I've been turning to work or other activities to take my mind off things.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>2. I've been concentrating my efforts on doing something about the situation I'm in.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>3. I've been saying to myself &quot;this isn't real&quot;.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>4. I've been using alcohol or other drugs to make myself better.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>5. I've been getting emotional support from others.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>6. I've been giving up trying to deal with it.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>I've been taking action to try to make the situation better.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>I've been refusing to believe that it has happened.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>I've been saying things to let my unpleasant feelings escape.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>I've been getting help and advice from other people.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>I've been using alcohol or other drugs to help me get through it.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>I've been trying to see it in a different light, to make it seem more positive.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>I've been criticizing myself.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>I've been trying to come up with a strategy about what to do.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>I've been getting comfort and understanding from someone.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>I've been giving up the attempt to cope.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>I've been looking for something good in what is happening.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>I've been making jokes about it.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>I've been doing something to think about it less, such as going to movies.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>I've been accepting the reality of the fact that it has happened.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statement</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>----------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>21. I've been expressing my negative feelings.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. I've been trying to find comfort in my religion or spiritual beliefs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. I've been trying to get advice or help from other people about what to do.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. I've been learning to live with it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. I've been thinking hard about what steps to take.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. I've been blaming myself for things that happened.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. I've been praying or meditating.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. I've been making fun of the situation.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Do you think you have ever been unfairly fired or denied a promotion?

○ Yes
○ No

If Yes:

What was the MAIN reason? Please choose one.

○ Ethnicity
○ Gender
○ Race
○ Age
○ Religion
○ Physical ability
○ Physical appearance
○ Sexual orientation
○ Income level/Social class
○ Where I live
○ Other, please tell us:
○ Don’t know
○ I prefer not to answer

Did that happen in the last 12 months?

○ Yes  ○ No
2. For unfair reasons, do you think you have ever not been hired for a job?

- Yes
- No

GO TO NEXT PAGE

IF YES:

What was the MAIN reason? Please choose one.

- Ethnicity
- Gender
- Race
- Age
- Religion
- Physical ability
- Physical appearance
- Sexual orientation
- Income level/Social class
- Where I live

Other, please tell us:

Don't know
I prefer not to answer

Did that happen in the last 12 months?

- Yes
- No
3. Have you ever been unfairly stopped, searched, questioned, physically threatened, or abused by the police?
   ○ Yes
   ○ No

   **IF YES:**
   What was the MAIN reason? Please choose one.
   ○ Ethnicity
   ○ Gender
   ○ Race
   ○ Age
   ○ Religion
   ○ Physical ability
   ○ Physical appearance
   ○ Sexual orientation
   ○ Income level/Social class
   ○ Where I live
   ○ Other, please tell us:
   ○ Don't know
   ○ I prefer not to answer

   Did that happen in the last 12 months?
   ○ Yes  ○ No
4. Have you ever been unfairly discouraged by a teacher or advisor from continuing your education?

- Yes
- No

GO TO NEXT PAGE

IF YES:

What was the MAIN reason? Please choose one.
- Ethnicity
- Gender
- Race
- Age
- Religion
- Physical ability
- Physical appearance
- Sexual orientation
- Income level/Social class
- Where I live
- Other, please tell us:
- Don't know
- I prefer not to answer

Did that happen in the last 12 months?
- Yes
- No
5. Have you ever been unfairly prevented from moving into a neighborhood because the landlord or realtor refused to sell or rent you a house or apartment?

○ Yes
○ No → GO TO NEXT PAGE

IF YES:

What was the MAIN reason? Please choose one.

○ Ethnicity
○ Gender
○ Race
○ Age
○ Religion
○ Physical ability
○ Physical appearance
○ Sexual orientation
○ Income level/Social class
○ Where I live
○ Other, please tell us: [ ]
○ Don't know
○ I prefer not to answer

Did that happen in the last 12 months?

○ Yes   ○ No
6. Have you ever moved into a neighborhood where the neighbors made life difficult for you or your family?
   ○ Yes
   ○ No

IF YES:

What was the MAIN reason? Please choose one.
   ○ Ethnicity
   ○ Gender
   ○ Race
   ○ Age
   ○ Religion
   ○ Physical ability
   ○ Physical appearance
   ○ Sexual orientation
   ○ Income level/Social class
   ○ Where I live
   ○ Other, please tell us: 
   ○ Don't know
   ○ I prefer not to answer

Did that happen in the last 12 months?
   ○ Yes  ○ No
In your day-to-day life how often have any of the following things happened to you? Please fill in the circle of the best answer.

<table>
<thead>
<tr>
<th>Event</th>
<th>Never</th>
<th>Less than once a year</th>
<th>A few times a year</th>
<th>A few times a month</th>
<th>At least once a week</th>
<th>Almost everyday</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. You are treated with less courtesy than other people.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. You are treated with less respect than other people.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. You receive poorer service than other people at restaurants or stores.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. People act as if they think you are not smart.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. People act as if they are afraid of you.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. People act as if they think you are dishonest.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. People act as if they are better than you are.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. You are called names or insulted.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. You are threatened or harassed.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Following is a list of experiences which many people have at some time or other. Please indicate for each experience how much it has been a part of your life over the past month by filling in ONE choice on each line.

### Intensity of Experience over Past Month

<table>
<thead>
<tr>
<th>Experience</th>
<th>Not at all part of my life</th>
<th>Only slightly part of my life</th>
<th>Distinctly part of my life</th>
<th>Very much part of my life</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Disliking your daily activities</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>2. Disliking your work</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>3. Ethnic or racial conflict</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>4. Conflicts with in-laws or boyfriend's / girlfriend's family</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>5. Being let down or disappointed by friends</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>6. Conflict with supervisor(s) at work</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>7. Social rejection</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>8. Too many things to do at once</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>9. Being taken for granted</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>10. Financial conflicts with family members</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>11. Having your trust betrayed by a friend</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>12. Having your contributions overlooked</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>13. Struggling to meet your own standards of performance and accomplishment</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>14. Being taken advantage of</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>15. Not enough leisure time</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>16. Cash-flow difficulties</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>17. A lot of responsibilities</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>18. Dissatisfaction with work</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td>Not at all part of my life</td>
<td>Only slightly part of my life</td>
<td>Distinctly part of my life</td>
<td>Very much part of my life</td>
</tr>
<tr>
<td>---</td>
<td>---------------------------</td>
<td>-------------------------------</td>
<td>---------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>19. Decisions about intimate relationship(s)</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>20. Not enough time to meet your obligations</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>21. Financial burdens</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>22. Lower evaluation of your work than you think you deserve</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>23. Experiencing high levels of noise</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>24. Lower evaluation of your work than you hoped for</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>25. Conflicts with family member(s)</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>26. Finding your work too demanding</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>27. Conflicts with friend(s)</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>28. Trying to secure loan(s)</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>29. Getting &quot;ripped off&quot; or cheated in the purchase of goods</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>30. Unwanted interruptions of your work</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>31. Social isolation</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>32. Being ignored</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>33. Dissatisfaction with your physical appearance</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>34. Unsatisfactory housing conditions</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>35. Finding work uninteresting</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>36. Failing to get money you expected</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>37. Gossip about someone you care about</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>38. Dissatisfaction with your physical fitness</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>
### Intensity of Experience over Past Month

<table>
<thead>
<tr>
<th></th>
<th>Not at all part of my life</th>
<th>Only slightly part of my life</th>
<th>Distinctly part of my life</th>
<th>Very much part of my life</th>
</tr>
</thead>
<tbody>
<tr>
<td>39. Gossip about yourself</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>40. Difficulty dealing with modern technology (e.g. computers)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>41. Hard work to look after and maintain home</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
INSTRUCTIONS: The following questions relate to your usual sleep habits during the past month only. Your answers should indicate the most accurate reply for the majority of days and nights in the past month. Please answer all questions.

During the past month,

1. When (what time) have you usually gone to bed at night?
   
   [: ] : [: ]  O AM  O PM

2. How long (in minutes) has it usually taken you to fall asleep at night?
   
   [: ] [: ] minutes

3. When (what time) have you usually gotten up in the morning?
   
   [: ] : [: ]  O AM  O PM

4. How many hours of actual sleep did you get at night? (This may be different than the number of hours you spent in bed)
   
   [: ] . [: ] hours

For each of the remaining questions, fill in the bubble for the one best response. Please answer all questions.

5. During the past month, how often have you had trouble sleeping because you:
   
<table>
<thead>
<tr>
<th></th>
<th>Not during the past month</th>
<th>Less than once a week</th>
<th>Once or twice a week</th>
<th>Three or more times a week</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Cannot get to sleep within 30 minutes</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>b) Wake up in the middle of the night or the early morning</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>c) Have to get up to use the bathroom</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>d) Cannot breathe comfortably</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>e) Cough or snore loudly</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>f) Feel too cold</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>
6. **During the past month, how would you rate your sleep quality overall?**
   - ○ Very good
   - ○ Fairly good
   - ○ Fairly bad
   - ○ Very bad

7. **During the past month, how often have you taken medicine (prescribed or "over the counter") to help you sleep?**
   - ○ Not during the past month
   - ○ Less than once a week
   - ○ Once or twice a week
   - ○ Three or more times a week

8. **During the past month, how often have you had trouble staying awake while driving, eating meals, or engaging in social activity?**
   - ○ Not during the past month
   - ○ Less than once a week
   - ○ Once or twice a week
   - ○ Three or more times a week
9. During the past month how much of a problem has it been for you to keep up enough enthusiasm to get things done?

- No problem at all
- Only a very slight problem
- Somewhat of a problem
- A very big problem
These questions ask about the people who live in your home. Please answer these questions only thinking about those people who have slept there most of the time over the past month.

1. How many people live in your household, including you?
   
   [ ] persons
   ○ Don't know
   ○ I prefer not to answer

2. Of the persons living in your household, including you, how many are HOUSEHOLD MEMBERS LESS THAN 14 YEARS OF AGE?
   
   [ ] persons
   ○ Don't know
   ○ I prefer not to answer

3. Of the persons living in your household, including you, how many are HOUSEHOLD MEMBERS 14 TO 18 YEARS OF AGE?
   
   [ ] persons
   ○ Don't know
   ○ I prefer not to answer

4. Of the persons living in your household, including you, how many are HOUSEHOLD MEMBERS OVER 18 YEARS OF AGE?
   
   [ ] persons
   ○ Don't know
   ○ I prefer not to answer

5. How many bedrooms are in your home?
   
   [ ] bedrooms
   ○ Don't know
   ○ I prefer not to answer
The next 28 questions are about sexual behaviors. For each question, please mark the best answer.

1. How old were you the first time you had sexual intercourse ("gone all the way," "made love")?

   IF YOU HAVE NEVER HAD SEXUAL INTERCOURSE, PLEASE ENTER 00 AND SKIP TO QUESTION 24 ON PAGE 6 OF THIS GROUP OF QUESTIONS.

2. How old was your first sexual partner?

3. Have your sexual partners all been men?

4. Have all your sexual partners been women?

5. If "YES", To the best of your knowledge, have any of your female sexual partners had sex with men?
6. What is the number of male partners (age 18 years or YOUNGER) with whom you have had sexual intercourse?
   - [ ] Number
   - ○ Don't know
   - ○ I prefer not to answer

   IF NONE WERE 18 OR YOUNGER, ENTER "00" AND GO TO QUESTION 8.

7. With how many of these male partners (age 18 years or YOUNGER) did you have a sexual relationship involving intercourse on a regular basis for 3 months or longer?
   - [ ] Number
   - ○ Don't know
   - ○ I prefer not to answer

8. What is the number of male partners (OVER 18 years of age) with whom you have had sexual intercourse?
   - [ ] Number
   - ○ Don't know
   - ○ I prefer not to answer

   IF NONE WERE OVER 18, ENTER "00" AND GO TO QUESTION 10.

9. With how many of these male partners (OVER 18 years of age) did you have a sexual relationship involving intercourse on a regular basis for 3 months or longer?
   - [ ] Number
   - ○ Don't know
   - ○ I prefer not to answer

10. Were any of your sexual partners older than you?
    - ○ Yes
    - ○ No
    - ○ Don't know
    - ○ I prefer not to answer

    IF "NO", "DON'T KNOW" OR "PREFER NOT TO ANSWER", GO TO QUESTION 13.
11. When YOU were 18 or YOUNGER, among the partners older than you, what was the largest difference in your ages?

<table>
<thead>
<tr>
<th>Years</th>
<th>ENTER &quot;00&quot; IF LESS THAN 12 MONTHS DIFFERENCE.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Does not apply</td>
</tr>
<tr>
<td></td>
<td>Don't know</td>
</tr>
<tr>
<td></td>
<td>I prefer not to answer</td>
</tr>
</tbody>
</table>

12. When YOU were OVER 18 years of age, among the partners older than you, what was the largest difference in your ages?

<table>
<thead>
<tr>
<th>Years</th>
<th>ENTER &quot;00&quot; IF LESS THAN 12 MONTHS DIFFERENCE.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Does not apply</td>
</tr>
<tr>
<td></td>
<td>Don't know</td>
</tr>
<tr>
<td></td>
<td>I prefer not to answer</td>
</tr>
</tbody>
</table>

13. Have you ever had sexual intercourse for money?

- Yes
- No
- Don't know
- I prefer not to answer

14. To the best of your knowledge, have any of your male sexual partners had sex with men?

- Yes
- No
- Don't know
- I prefer not to answer

15. To the best of your knowledge, have any of your male sexual partners used intra-venous (IV) drugs? ("shoot-up", "tie", "ping-n-wing", "bang", "back jack")

- Yes
- No
- Don't know
- I prefer not to answer
16. Please completely fill in the circle of all the birth control methods you have ever used.

○ Birth control pills (oral contraceptives)

○ Ortho Evra or birth control patch

○ Injected contraceptives or Depo-Provera

○ IUD

○ Condoms

○ Female Condoms

○ Spermicidal agents (film, foam, jelly)

○ Vaginal ring

○ Seasonale  (Or other birth control pill that lets you have a period only once every 3 months.)

○ Sponge

○ Diaphragm or cervical cap

○ Withdrawal

○ Rhythm method or natural family planning

○ None of these (Please tell us if you use something different.)

○ Don't know

○ I prefer not to answer
17. In your prior sexual relationship(s), when YOU were LESS THAN 18 years old, did you use condoms with your partner(s)/husband(s)?

- Yes, regularly
- Yes, sometimes
- Never
- No partner
- Don't know
- I prefer not to answer

18. Not including your current sexual relationship, did you use condoms with your partner(s)/husband(s) when YOU were 18 YEARS OR OLDER?

- Yes, regularly
- Yes, sometimes
- Never
- No partner
- Don't know
- I prefer not to answer

19. In your current sexual relationship, do you and your partner/husband currently use condoms?

- Yes, regularly
- Yes, sometimes
- Never
- No partner
- Don't know
- I prefer not to answer
20. During the past 12 months, what is the number of male partners with whom you have had sexual intercourse?

<table>
<thead>
<tr>
<th>Number</th>
<th>O Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>O I prefer not to answer</td>
</tr>
</tbody>
</table>

IF NONE, ENTER "00" AND GO TO QUESTION 22.

21. During the past 12 months, how many of those partners were new?

<table>
<thead>
<tr>
<th>Number</th>
<th>O Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>O I prefer not to answer</td>
</tr>
</tbody>
</table>

22. Have any of your present or previous sexual partners been treated for sexually transmitted diseases (STDs)? (These include diseases such as "clap", "drip", "gotten burned", "green pus").

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>O Don't know</td>
<td></td>
</tr>
<tr>
<td>O I prefer not to answer</td>
<td></td>
</tr>
</tbody>
</table>

23. To the best of your knowledge, how many partners have been treated for sexually transmitted disease?

<table>
<thead>
<tr>
<th>Number</th>
<th>O Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>O I prefer not to answer</td>
</tr>
</tbody>
</table>

24. Has a doctor ever told you that you had venereal warts, condylomas, or papilloma virus infections?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>O Don't know</td>
<td></td>
</tr>
<tr>
<td>O I prefer not to answer</td>
<td></td>
</tr>
</tbody>
</table>
25. How many times have you been pregnant?

☐ Number

☐ Don't know

☐ I prefer not to answer

26. How many live births have you had?

☐ Number

☐ Don't know

☐ I prefer not to answer

27. How many abortions have you had?

☐ Number

☐ Don't know

☐ I prefer not to answer

28. How many miscarriages or pregnancy losses have you had?

☐ Number

☐ Don't know

☐ I prefer not to answer
The next 5 questions are about alcohol use. For each question, please mark the best answer. If you do not know the answer, please mark "Don't know".

1. Have you had any beer, wine, wine coolers, mixed drinks, liquor or other alcoholic beverages during the past month?
   - Yes
   - No
   - Don't know
   - I prefer not to answer

2. During the past month, how many days did you drink any alcoholic beverages?
   - Days
   - Don't know
   - I prefer not to answer

3. On the days you drank, about how many drinks did you drink on average?
   - Drinks
   - Don't know
   - I prefer not to answer

4. Thinking about all types of alcoholic beverages (beer, wine, wine coolers, mixed drinks and liquor), did you have 5 or more drinks on one occasion during the past month?
   - Yes
   - No
   - Don't know
   - I prefer not to answer

5. How many times per month did you have 5 or more drinks on one occasion?
   - Number
   - Don't know
   - I prefer not to answer

Project ID:
The next set of questions are about whether you have used any of the following drugs in the last six months. Please choose yes, no, or I prefer not to answer.

<table>
<thead>
<tr>
<th>Drug*</th>
<th>Yes</th>
<th>No</th>
<th>I prefer not to answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Marijuana or hashish.</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Marijuana is also called pot or grass. Marijuana is usually smoked, either in cigarettes, called joints, or in a pipe. It is sometimes cooked in food. Hashish is a form of marijuana that is called &quot;hash&quot;. It is usually smoked in a pipe. Another form of hashish is hash oil.</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>2. Cocaine such as powder, 'crack', free base, and coca paste.</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>3. Heroin</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>4. Hallucinogens.</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>These drugs often cause people to see or experience things that are not real. A list of some common hallucinogens is shown below. These and many other substances that people use as hallucinogens are often known by street names, and we can't list them all...</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>LSD, also called 'acid'</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>PCP, also called 'angel dust'</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Peyote</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Mescaline</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Psilocybin</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>'Ecstasy', also called MDMA</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>5. Liquids, sprays, and gases that people sniff or inhale to get high or to make them feel good.</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>We are not interested in times when you inhale a substance accidentally - such as when painting, cleaning an oven, or filling a car with gasoline. This question uses the word 'inhalant' to include all the things listed below, as well as any other substances that people sniff or inhale for kicks or to get high.</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Amyl nitrite, 'poppers' or 'rush'</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Correction fluid, degreaser, or cleaning fluid</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Gasoline or lighter fluid</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Glue, shoe polish, or toluene</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Halothane, ether, or other anesthetics</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Lacquer thinner, or other paint solvents</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Lighter gases, such as butane or propane</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Nitrous oxide, or 'whippits'</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Spray paints</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Other aerosol sprays</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Drug*</td>
<td>Yes</td>
<td>No</td>
<td>I prefer not to answer</td>
</tr>
<tr>
<td>-------</td>
<td>-----</td>
<td>----</td>
<td>------------------------</td>
</tr>
</tbody>
</table>
| **6. Stimulants, 'uppers', or 'speed'.**  
People sometimes take these drugs to lose weight, to stay awake, or for attention deficit disorders. We are **not** interested in the use of "over-the-counter" stimulants such as Dexatrim or No-Doz that can be bought in drug stores or grocery stores without a doctor's prescription. | ○ | ○ | ○ |
| **7. Sedatives or barbiturates.**  
These drugs are also called "downers" or "sleeping pills". People take these drugs to help them relax or to help them sleep. We are **not** interested in the use of "over-the-counter" sedatives such as Sominex, Unisom, Nytol, or Benadryl that can be bought in drug stores or grocery stores without a doctor's prescription. | ○ | ○ | ○ |
| **8. Methamphetamine, Meth, or crystal crank or ice.** | ○ | ○ | ○ |
| **9. Prescription drugs (such as Ritalin, Adderall, or Xanax) to get high.** | ○ | ○ | ○ |
| **10. Prescription drugs (like OxyContin, Vicodin, or Percocet) to get high.** | ○ | ○ | ○ |
| **11. Over-the-counter drugs to get high.** | ○ | ○ | ○ |

*Descriptions taken from National Survey on Drug Use & Health and PRIDE Survey*
This completes your survey. Thank you for taking the time to participate.

Please return your survey to the research staff.