

2019-2020 North Carolina Central University Patient Engagement and Emerging Adults Institution Report

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Executive Summary

The *Patient Engagement and Emerging Adults Project* aims to identify and address health and wellness related issues that may occur during the emerging adulthood period of life (18 - 30 years old). This is done through collection of survey data from students at various academic institutions and then analyzed to help assist these institutions find opportunities to positively impact their students' health behaviors and outcomes. The current project is a partnership between the Duke Center for Personalized Health Care and the following academic institutions: Duke University (Duke), North Carolina Central University (NCCU), and Durham Technical Community College (Durham Tech).

In fall 2016, an electronic health survey questionnaire was administered to a sample of 1,943 individuals (18-30 years old) at all three institutions. The questionnaire assessed for information such as demographics, current health status, health related behaviors, chronic health conditions, BMI, mental health, social support, mindfulness, spirituality, healthcare service use, and discrimination. In fall 2017, the questionnaire was re-administered at all three institutions to students from the 2016 cohort, as well as to a new cohort of students. The re-administration included data from 615 students of the previous cohort and 2,601 new student.

Finally, in 2019, the questionnaire was re-administered again at all three institutions to a sample of 16,117. During this administration the questionnaire assessed for areas such as resiliency and trauma in addition to topics assessed in 2016 and 2017. There is now a large and unique dataset to conduct both cross-sectional and longitudinal analysis to answer a variety of research questions associated with student health behaviors, health care utilization, health outcomes, and institutional capacity for improving prevention efforts. Furthermore, through the use of health data and implementation of evidence-based interventions (EBIs), this project will evaluate and inform pathways in which institutions may more effectively improve the population level health outcomes of their unique student populations.

Out of 7,526 NCCU students that received a recruitment email, 727 students completed the survey (a response rate of 7.1%). The following document was created from self-report data of a sample of NCCU students who identified as emerging adults (ages 18-30 years old; $n=537$). It highlights key health-related behaviors, as well as means of communication, that could further inform potential opportunities to positively impact the health and wellness of NCCU students.

Highlights from NCCU Students Include:

- ◆ 46% of students self-reported that they have *excellent or very good* overall health
- ◆ 14% of students reported they were occasional or regular tobacco users
- ◆ 48% of students engaged in physical activity at least few times a week
- ◆ 83% of students received on average at least *6 or more hours* of sleep daily
- ◆ 48% of students consumed at least 2 cups of fruits, but only 17% consumed at least 3 cups of vegetables
- ◆ Of sexually active students, 58% used protection during the majority of intercourse or oral sex
- ◆ The average BMI for all students was 27.9, which is in the overweight BMI category
- ◆ Asthma and depression/anxiety were identified as the top two chronic conditions affecting students
- ◆ Discrimination based on biological sex was the most commonly reported form of discrimination
- ◆ More than half of students felt that college leadership viewed student health and wellbeing as a priority
- ◆ *Email* was the most preferred way to communicate with students regarding institutional health resources

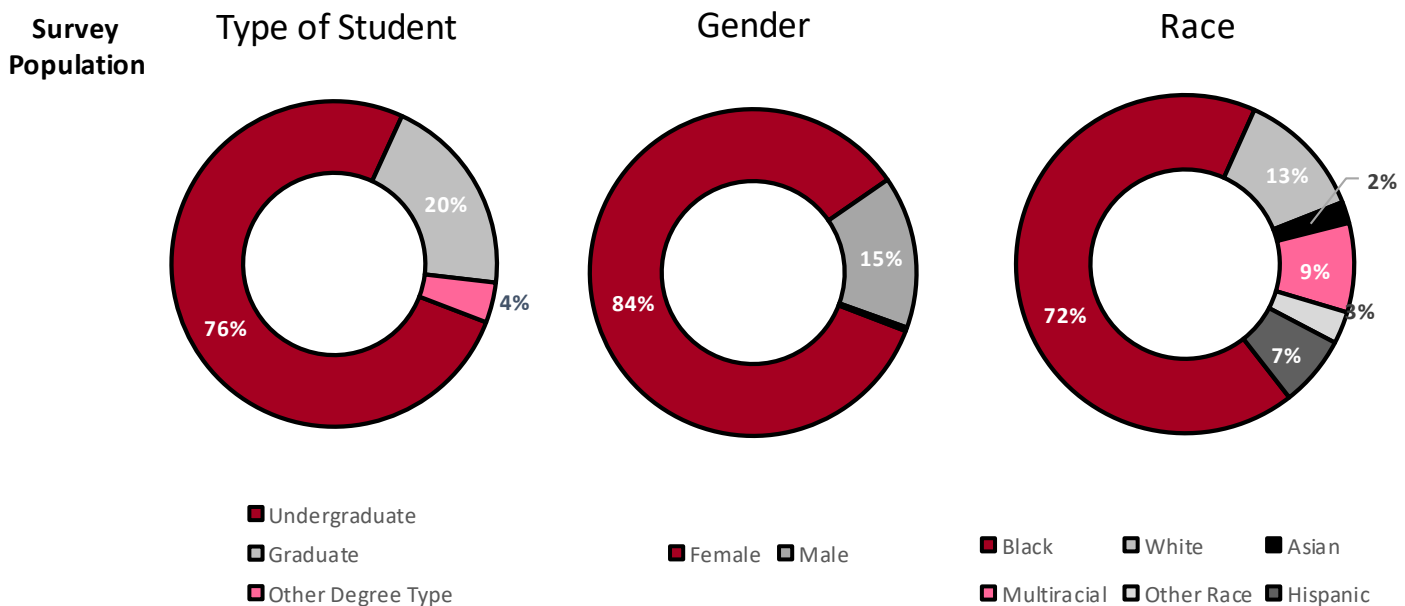
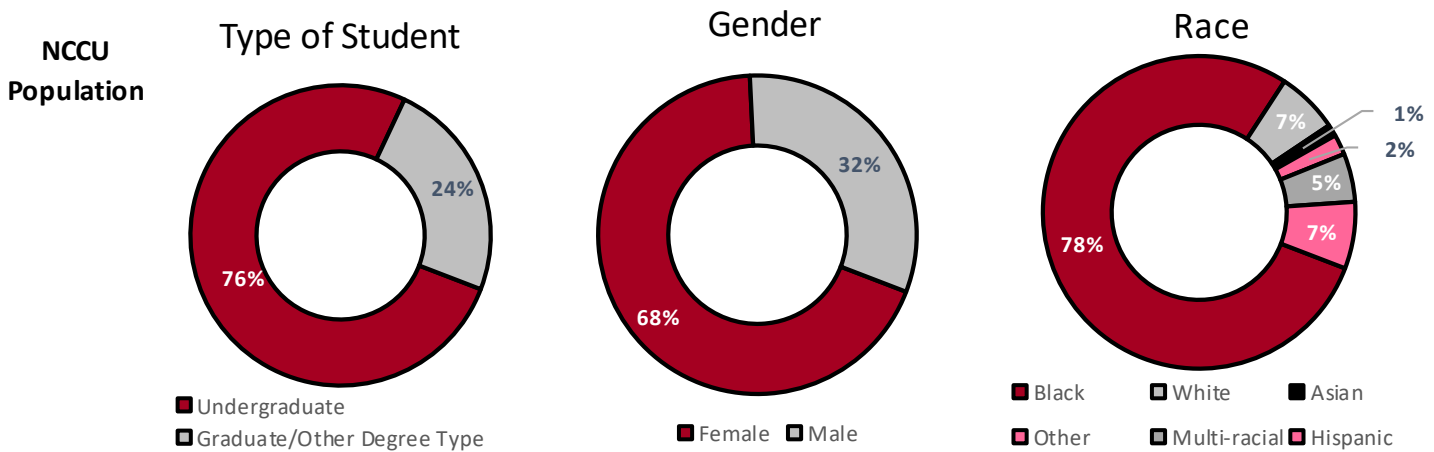
Student Population

North Carolina Central University (NCCU) has a total enrollment of 8,111 students, according to 2019-2020 enrollment data available from the National Center for Education Statistics.

NCCU is a Historically Black College, with 68% of its population identifying as female and 78% as African Americans, representing the largest racial demographic at the institution.

The majority of the student body is comprised of undergraduate students, with only 24% of the student population attending graduate programs.

Compared to the general NCCU population, the survey population had a similar proportion of undergraduate students (76%), but a larger proportion of female students (84%). It also had a slightly smaller proportion of black students (72%) and a slightly larger proportion of white students (13%).



Self-Rated Health

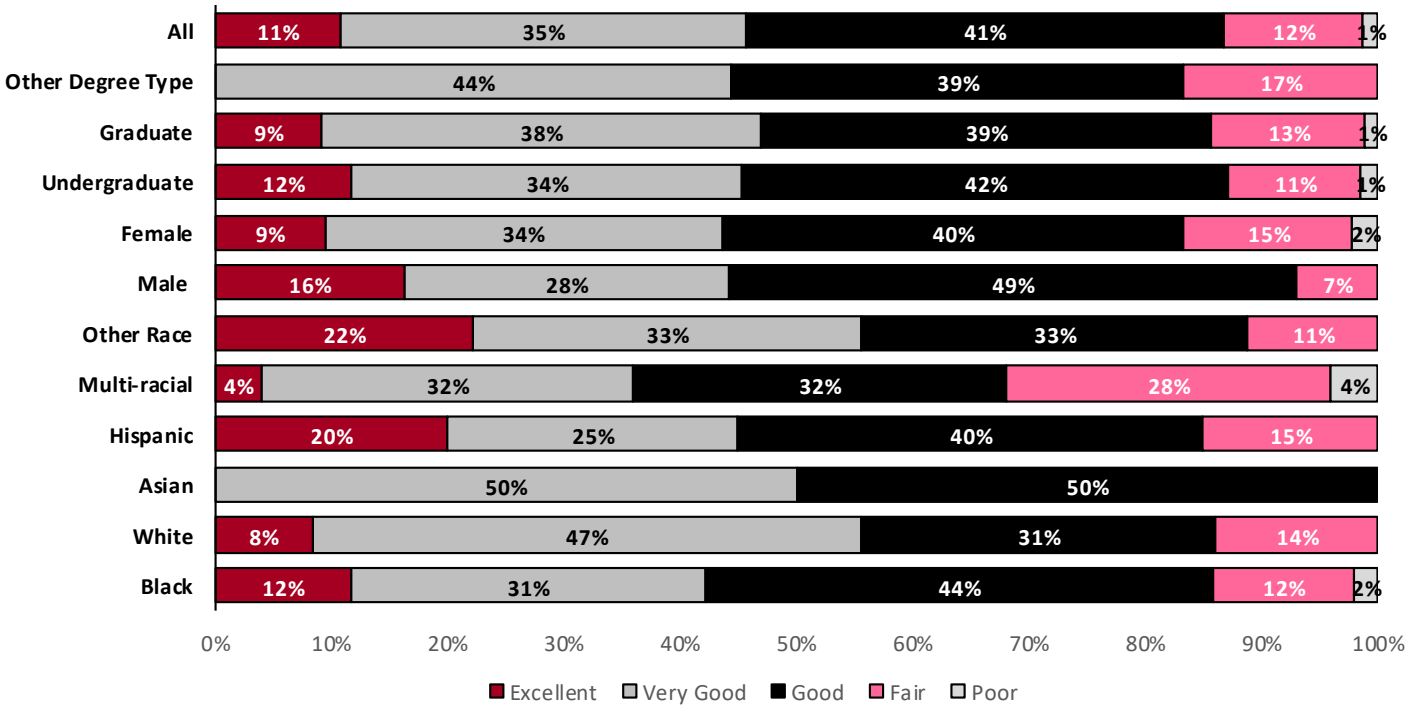
Students answered questions regarding their perception of their health. Their responses were used to determine their relative self-reported health status.

Forty-six percent of NCCU students self-reported having *excellent or very good* overall health, while 13% of respondents identified their overall health as *fair or poor*.

Nearly 46% of undergraduate students and 47% of graduate students self-reported having very good or excellent health. Conversely, approximately 14% of graduate and 12% of undergraduate students reported having fair or poor general health.

Slightly more male students (44%) compared to female students (43%) reported having very good or excellent health.

White students (55%) had the largest proportion of students reporting very good to excellent health compared to other racial groups. Nearly 32% of Multi-racial students, 15% of Hispanic students, 14% of Black, 14% of White, and 11% of students who identified as another race (“other”) reported having fair or poor health



Health Behaviors

NCCU students engage in several health related behaviors such as tobacco use, exercise, fruit and vegetable consumption, and sleep. Overall, the majority of NCCU students have never used tobacco, engaged in weekly physical activity, and slept six or more hours per night. Large proportions also consumed adequate amounts of fruit per day. However, the majority of students did not report eating the daily recommended amount of vegetables. In addition, a large proportion did not report utilizing protection during the majority of sexual experiences.

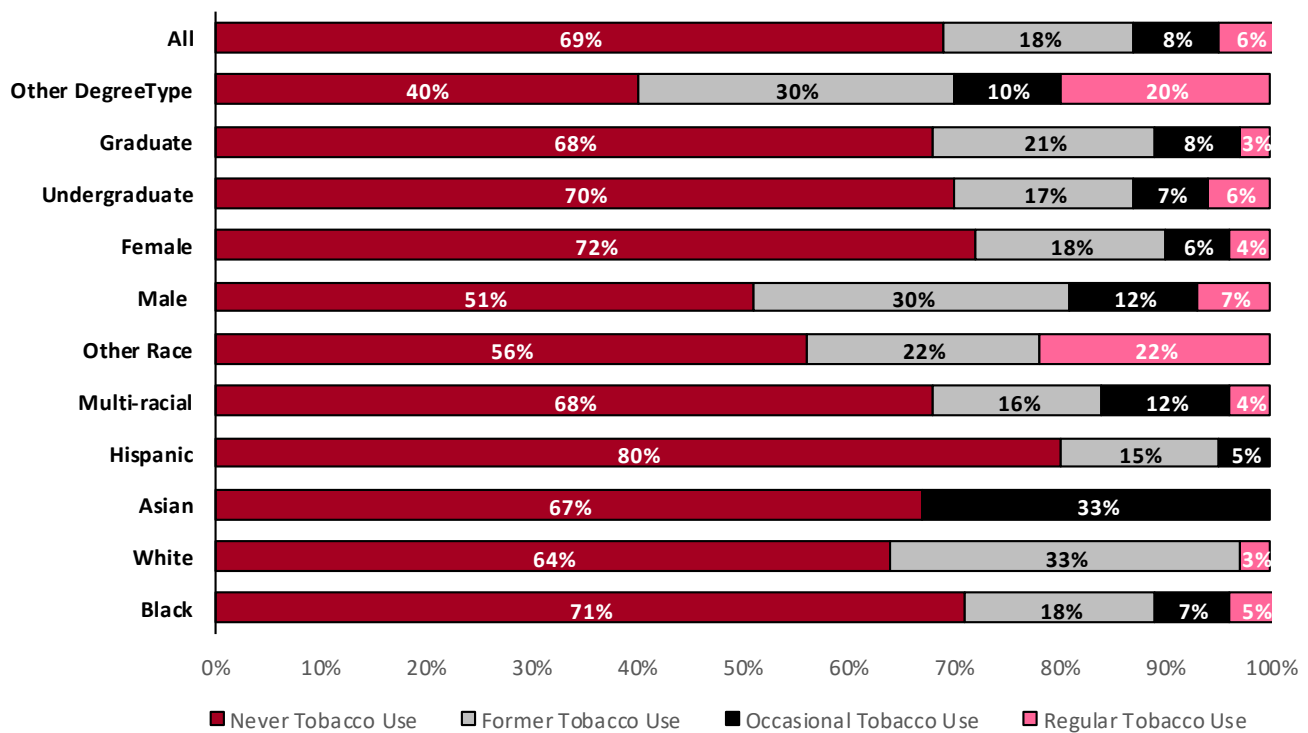
Tobacco Use

Overall, the majority of students have never used tobacco products. Eighteen percent of students identified as former tobacco users, and only 6% of students are regular tobacco users.

In total, slightly more undergraduate students (13%) used tobacco occasionally (7%) or regularly (6%), compared to 11% of graduate students (8%; 3%).

More male students (7%), compared to female students (4%), were regular tobacco users.

Students who identified as another race (“other race”) had the largest proportion of regular tobacco users (22%). However, the sample size for this racial category was relatively small (n=9), so this result should be interpreted with caution.



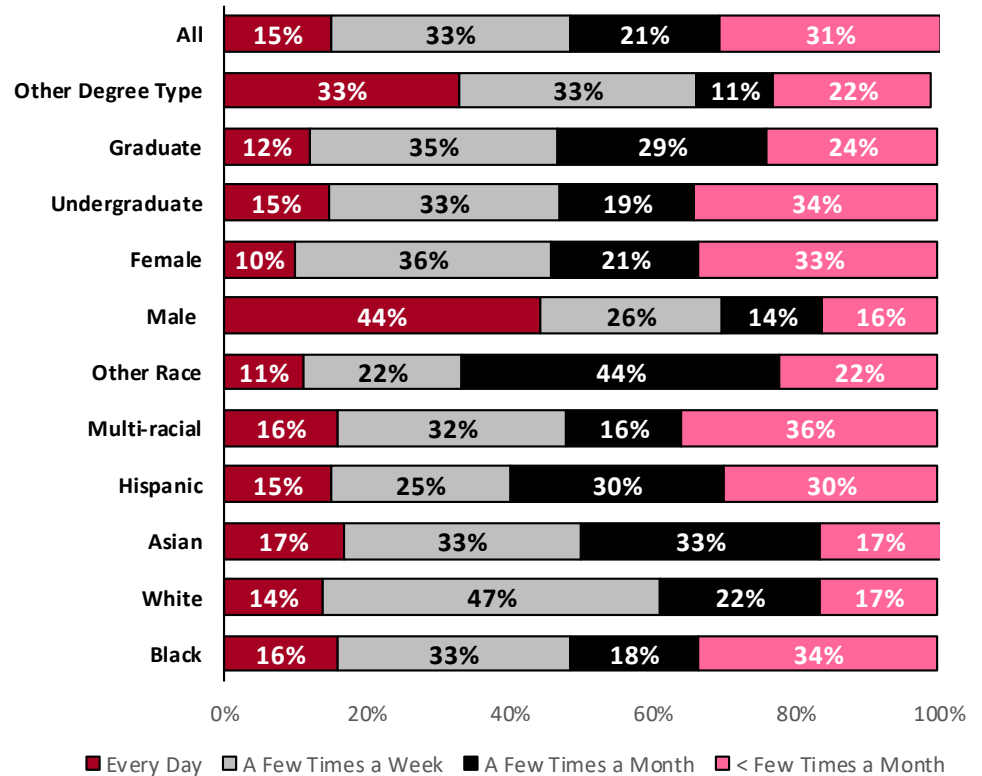
Physical Activity

About 48% of all students engaged in physical activity at least a few times of week (15% daily; 33% weekly).

Slightly more undergraduate students (38%) engaged in at least weekly physical active compared to graduate students (37%).

In general, male students tended to engage in exercise more than female students, with 70% of male students (44% daily; 26% weekly) engaging in at least some weekly exercise compared to only 46% (10% daily; 36% weekly) of female students.

More white students tended to engage in at least some weekly exercise (14% daily; 47% weekly), compared to other racial categories. Students of multiple-races (36%) and black students (34%) had the largest proportions of students reported exercising less than a few times a month.

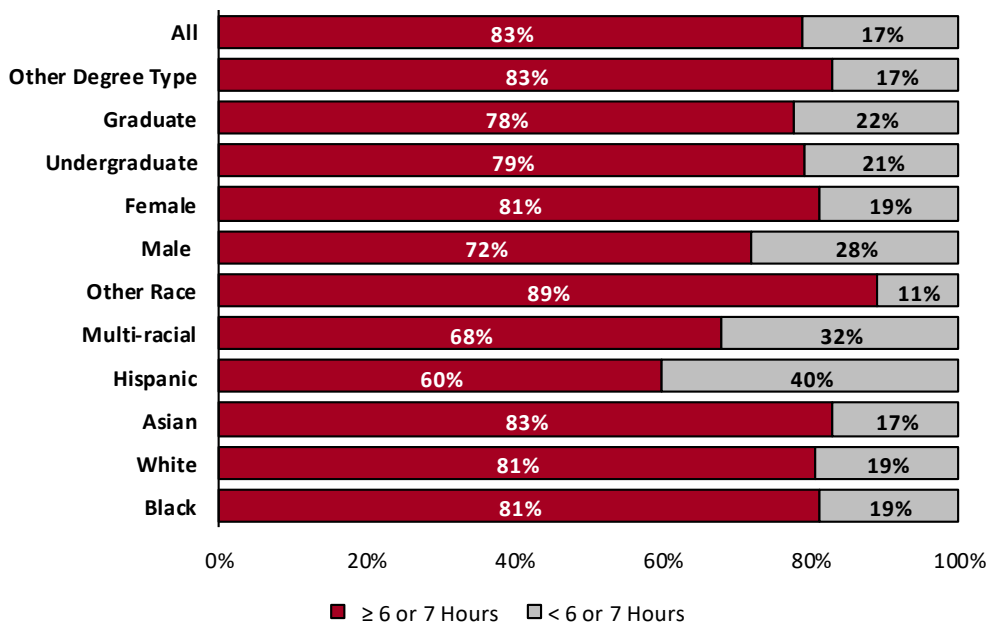


Average Hours of Sleep

The National Sleep Foundation recommends that adults receive *at least* 6 hours of sleep per night.

Approximately 83% of NCCU student received more than 6 hours of sleep over a 24-hour period. While only 17% of students receive less than 6 hours during a 24-hour periods.

Students pursuing other degree types had larger proportions of students receiving at least 6 hours of sleep per night (83%) compared to undergraduate (79%) and graduate students (78%).



A greater proportion of female students (81%) received 6+ hours of sleep per night, compared to male students (72%).

Forty percent of Hispanic students received less than 6 hours of sleep per day, the largest proportion of any student sub-group.

Fruits and Vegetable Consumption

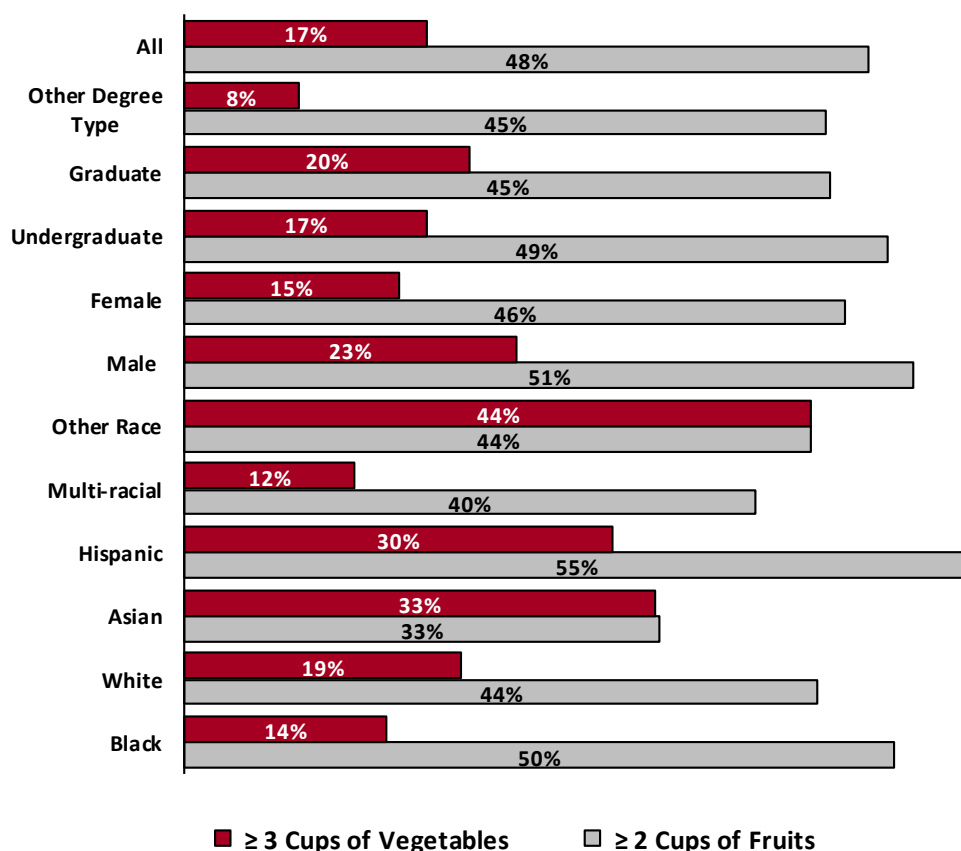
The USDA recommends that adults consume 3 or more cups of vegetables per day and 2 or more cups of fruit per day. In the survey, students were given examples of what 1 cup of vegetables and 1 cup of fruits looked like and asked to report on the number of cups of vegetables and fruits they consumed per day. **Of NCCU students, 48% of students consumed at least 2 cups of fruits; however only 17% consume at least 3 cups of vegetables.**

Similar proportions of graduate and undergraduate students consumed the recommended amounts of vegetables (20%; 17%) and fruits (45%; 49%). Forty-five percent of students pursuing other degree types consumed the recommended amount of fruits, but only 8% consumed the recommended amount of vegetables.

In general, more male students consumed the recommended amounts of vegetables and fruits (23%; 51%), compared to female students (15%; 46%).

Students identifying as another race (“Other”) had the largest proportion of students who reported consuming **the recommended amounts of vegetables (44%).**

Hispanic students had the largest proportion of students who reported they consumed **the recommended amounts of fruits (55%)**



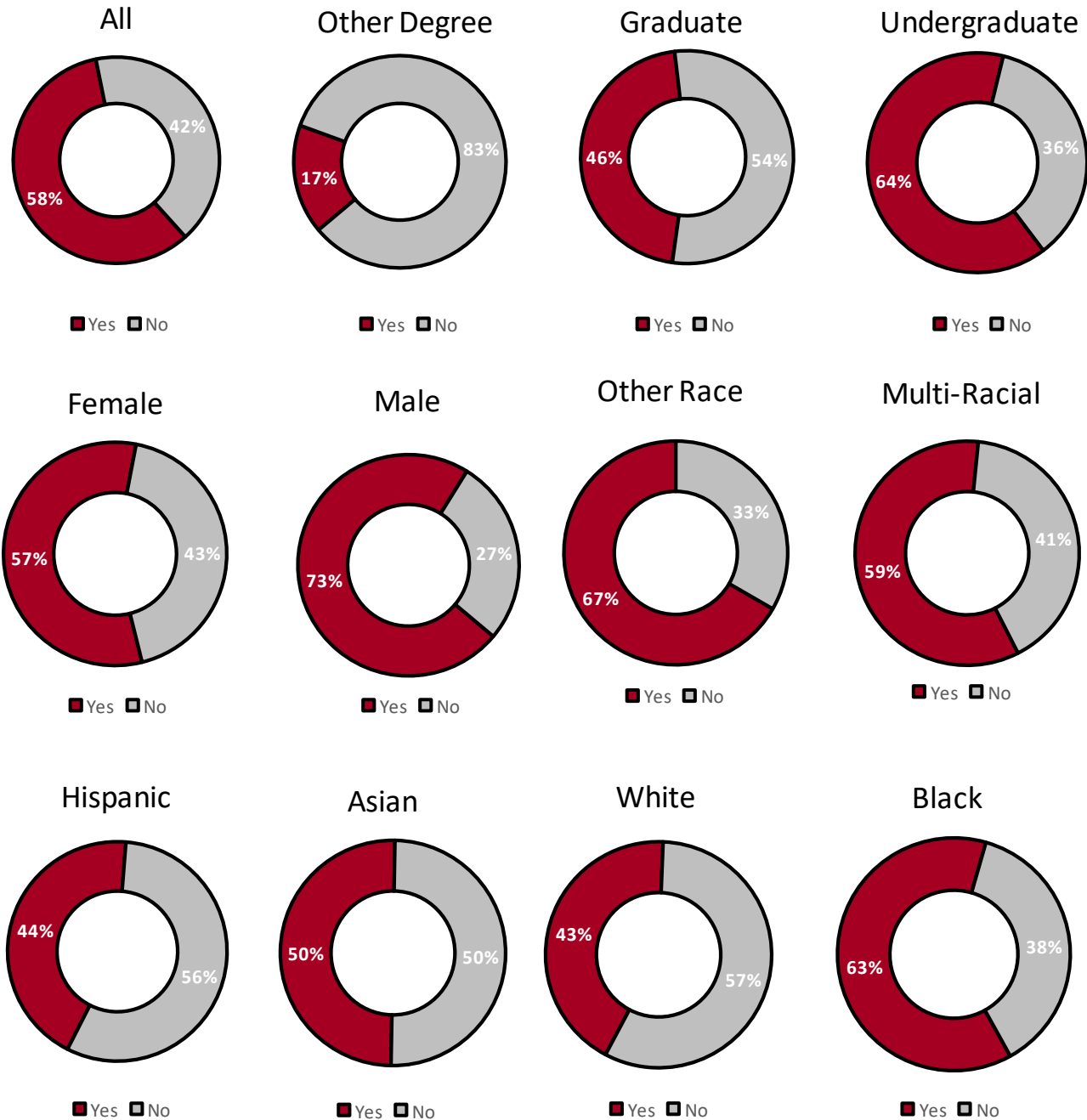
Sexual Health Behaviors

Students were asked to report on whether they were currently sexually active and on their sexual health behaviors. **Approximately, 77% of NCCU students reported they had been sexually active within the last 12 months (not reported below).** Of these sexually active students, **58% use a condom or dental dam during intercourse or oral sex at least most of the time.**

More undergraduate (64%) compared to graduate students (46%) or students pursuing other degree types (17%) used condoms or dental dams during the majority of sexual experiences.

A larger proportion of male students reported using condom or dental dams during the majority sexual experiences (73%), compared to 57% of female students.

Black students had the highest proportion of students who used condoms or dental dams during the majority of intercourse or oral sex experiences (63%). Hispanic students (44%) and White students (43%) had the lowest proportion of students who use a condom or dental dam during the majority of intercourse or oral sex experiences.



Health Outcomes

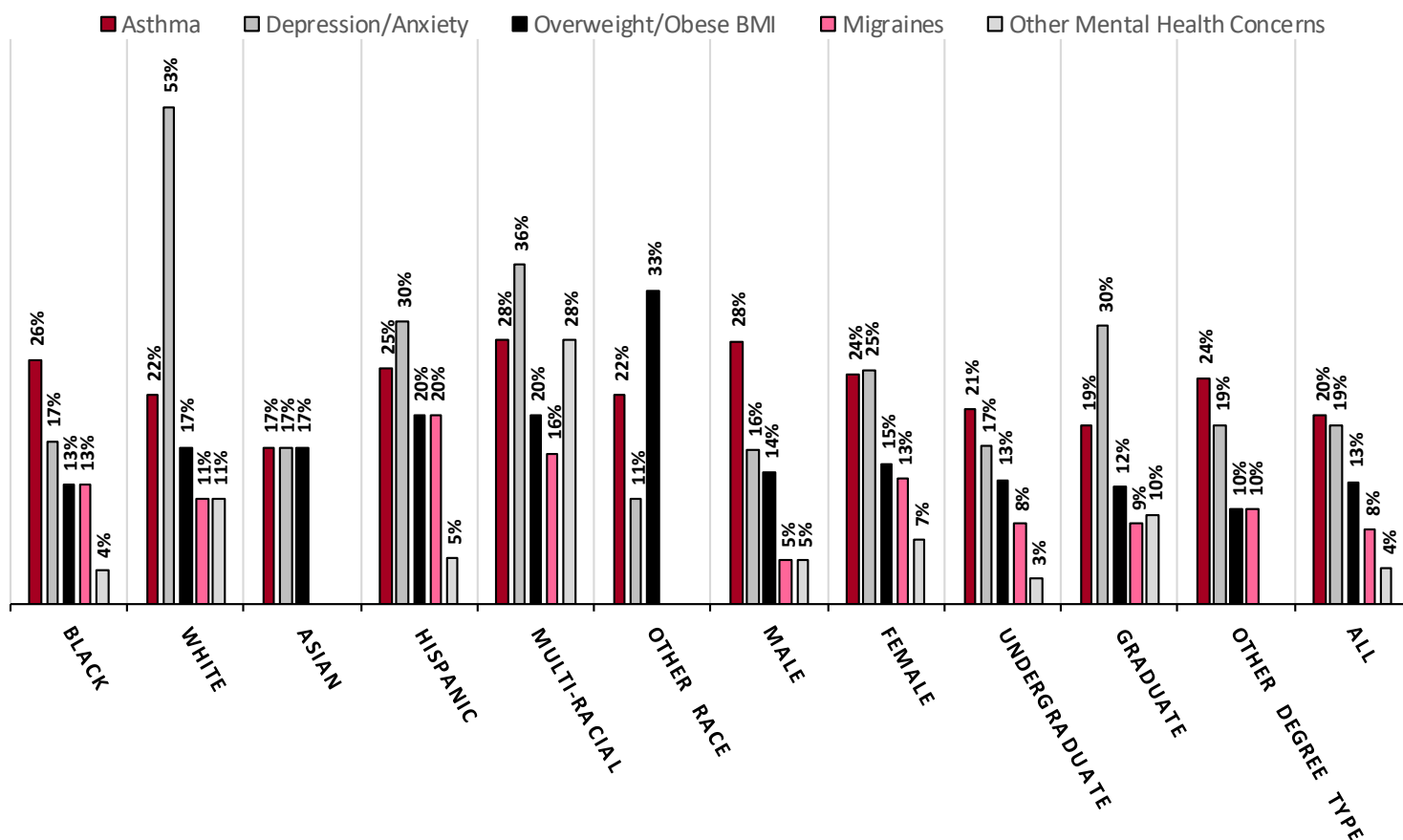
Two major health outcomes were evaluated—chronic illness and body mass index (kg/m²). These two measures were chosen, because they are each a clinically important health outcome.

Chronic Illness

NCCU students were asked to report on what chronic conditions they experienced. Out of 18 different conditions, **asthma and depression/anxiety were the most frequently reported conditions. Forty-three percent of all NCCU students reported that they previously or currently struggle with depression/anxiety or asthma.** Including these two, the top five most frequently experienced chronic conditions by NCCU students were overweight/obesity (13%), migraines (8%), and other mental health concerns (4%).

The top 5 most identified chronic conditions among students were:

1. Asthma
2. Depression and/or Anxiety
3. Overweight/Obesity
4. Migraines
5. Other Mental Health Concerns



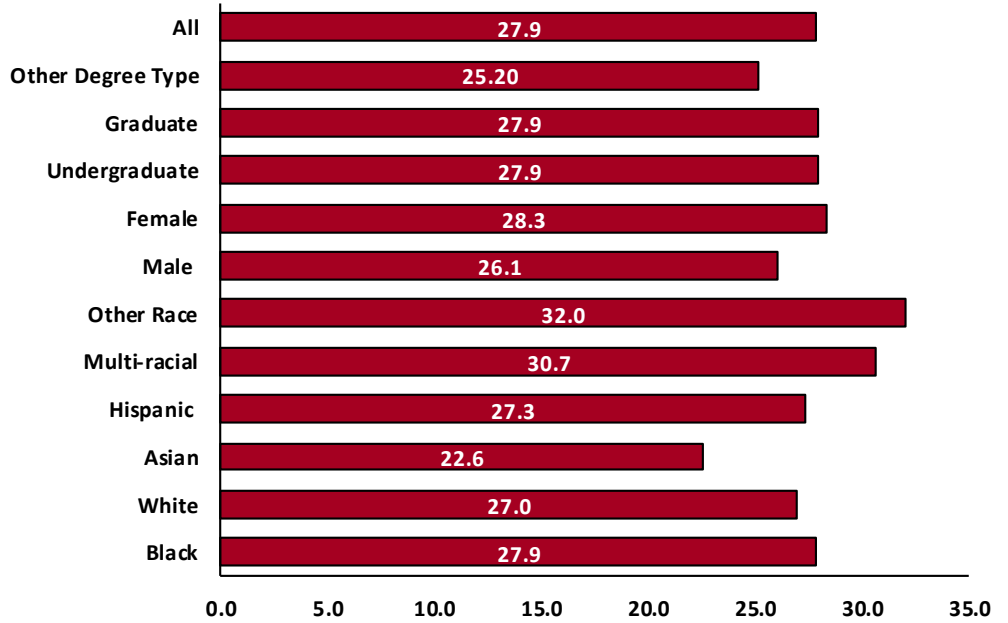
Body Mass Index (kg/m²)

Students were asked to report their height and weight to calculate BMIs for each student. An average BMI was then calculated for each student group. **Overall, the average BMI for NCCU students was 27.9.**

Graduate and Undergraduate students had equivalent average BMIs (27.9), with those seeking other degree types having a slightly lower BMI (25.2).

The average male student's BMI was 26.1, slightly less compared to the average BMI for female students (28.3).

Students who identified as another race ("Other") had the largest average BMI (32.0) and Asian students had the smallest average BMI (22.6) for any student group.



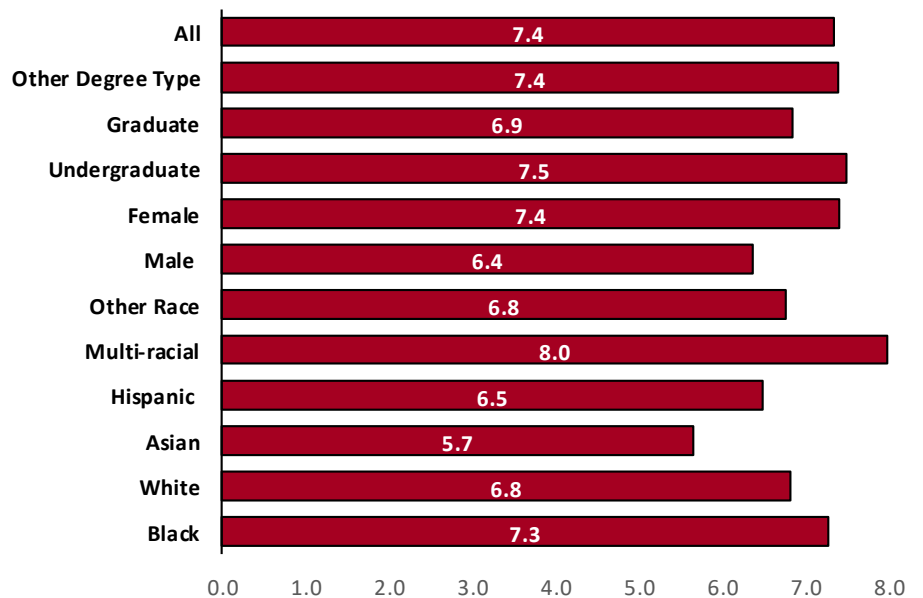
Mental Health

Students reported on several mental health concerns including perceived stress and depression risk. They also reported on their levels of resiliency and whether they had experiences of past trauma.

PSS-4, Perceived Stress

The Perceived Stress Scale-4 (PSS-4) measures an individual's perceived stress and was used to measure the frequency at which students experienced stress in the past month. The lowest possible score is 0 and the highest possible score is 16. Higher PSS-4 scores indicate higher levels of perceived stress in a student's life. The below scores are averages by student group.

The average PSS-4 score amongst NCCU students was 7.4, which is considered mild to moderate amounts of stress.



Undergraduate students had a higher average score (7.5), compared to other degree types (7.4) and graduate students (6.9).

Female students had a higher average score of 7.4, compared to male students (6.4).

Multi-racial students had a higher average score (8.0) compared to other racial groups. This was followed by Black students (7.3), then White (6.8), students who identified as “Other race” (6.8), Hispanic students (6.5), and Asian students (5.7).

PHQ-2, Depression Screener

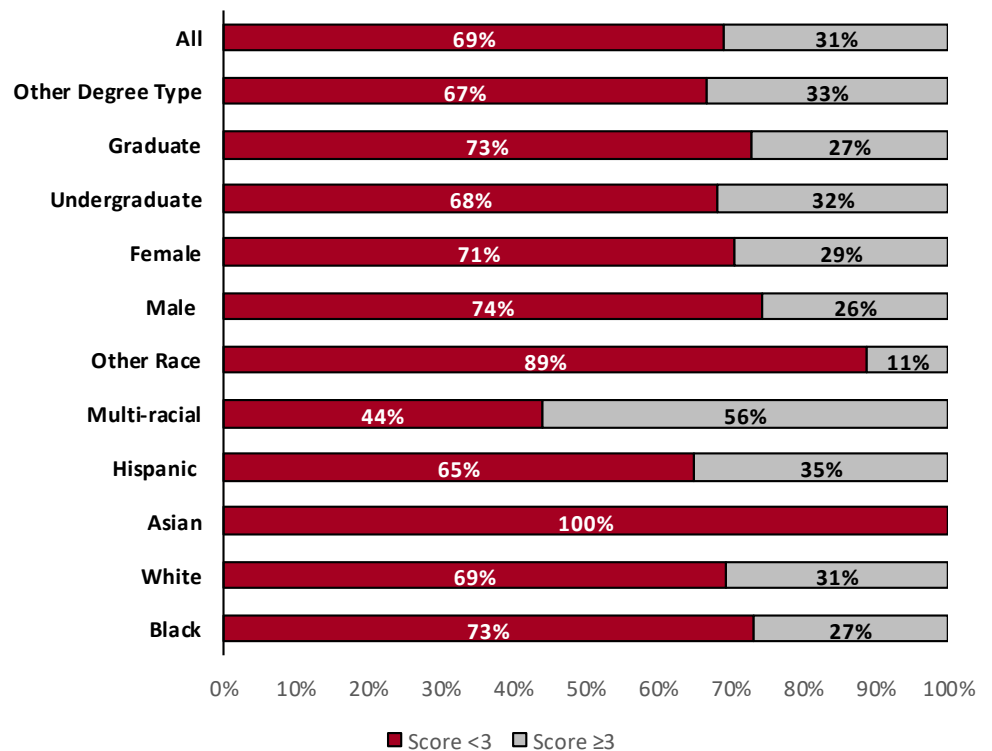
The Patient Health Questionnaire-2 (PHQ-2) is a clinical measure assessing the frequency of depressed mood. Students reported how frequently they experiences symptoms of depression over a two-week period. Individuals can score between a 0 and 6 on the PHQ-2. PHQ scores of 3 or higher indicate a risk for depression and suggests an individual should be further evaluated with other diagnostic tools.

Thirty-one percent of NCCU students have a score of 3 or more, indicating that they have a risk for depression.

Slightly more students seeking other degree types (33%) reported a score of 3 or higher, compared to 27% of graduate students and 32% of undergraduate students.

Slightly more female students reported scores of 3 or higher (29%), compared to 26% of male students.

Approximately 56% of Multi-racial students had scores of 3 or more, compared to 35% of Hispanic students, 31% of White students, and 27% of Black students. No students who described themselves as Asian reported a score of 3 or more.



CDC-RISC, Resiliency

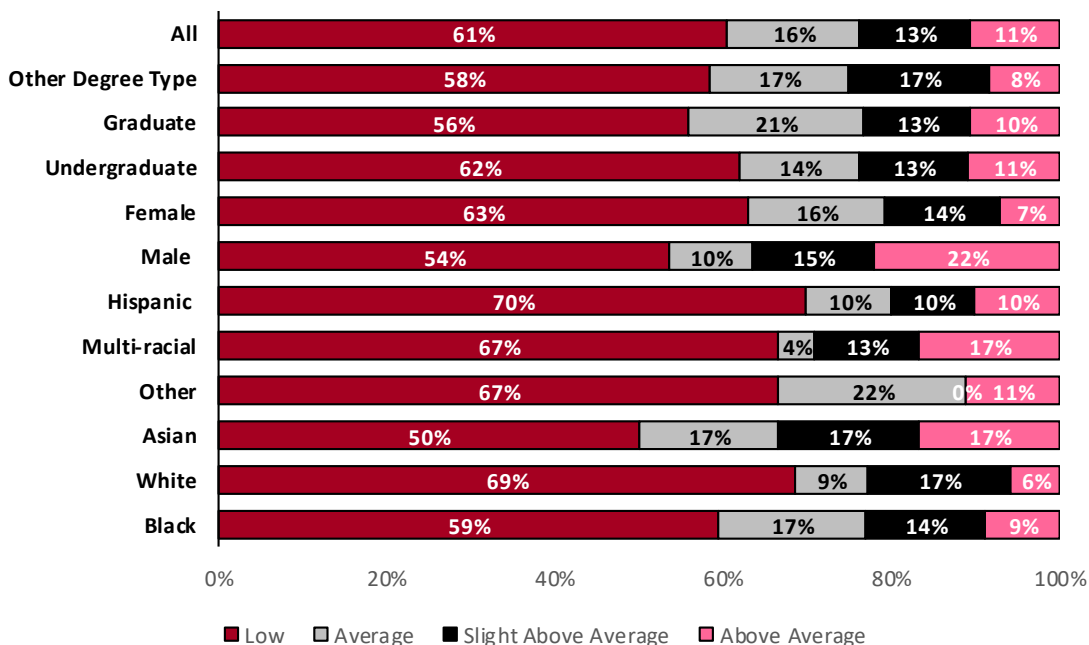
The Connor Davidson Resiliency Scale (CD-RISC) is a 10-item scale that assesses for levels of resiliency. Higher scores equal higher or above average levels of resiliency. Lower scores equal low or lower than average levels of resiliency.

Nearly 61% of students reported lower than average resiliency, and only 24% reported slightly above average or above average resiliency.

More undergraduate students (62%) reported lower than average resiliency, compared to 58% of students pursuing other degree types, and 56% of graduate students.

More female students (63%) reported lower than average resiliency compared to 54% of male students.

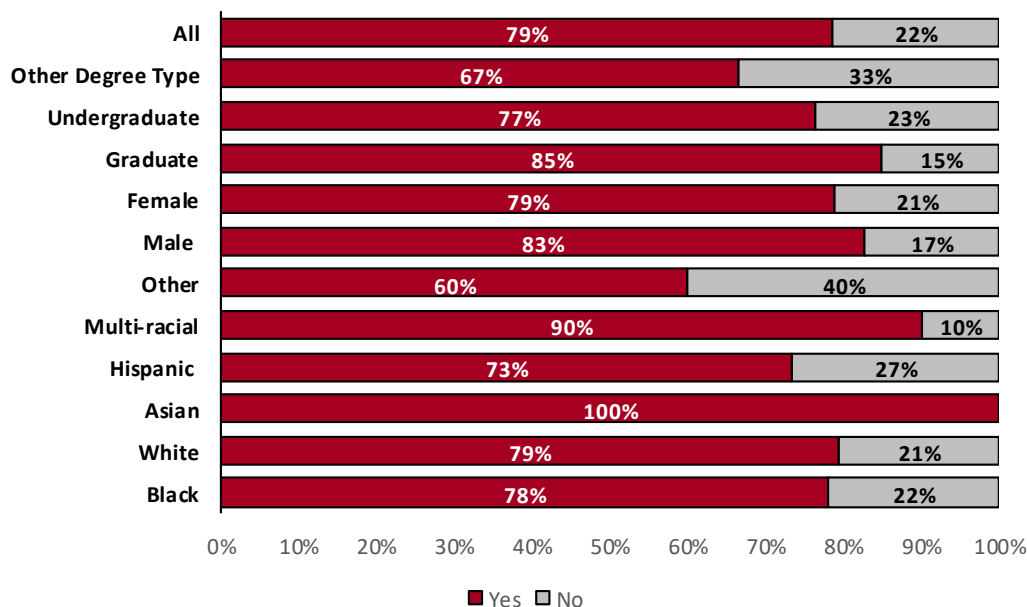
Approximately 70% of Hispanic students reported lower than average resiliency, followed by 69% of White students, 67% of Multi-racial students, 67% of students who identified as “other” races, 59% of Black students, and 50% of Asian students.



BTQ, Past Trauma

The Brief Trauma Questionnaire (BTQ) is a brief measurement to assess exposure to traumatic experiences and/or events. It is derived from the Brief Trauma Interview. Traumatic experiences can include things such as being in serious car accident, serving in a war zone, being assaulted, having a life threatening illness, or having a loved one die violently (such as in a serious car crash, mugging, or attack). Students were given the option to not answer these questions due to the sensitive nature of the topic.

Nearly 79% of NCCU students who answered these questions reported exposure to traumatic experiences/or events.



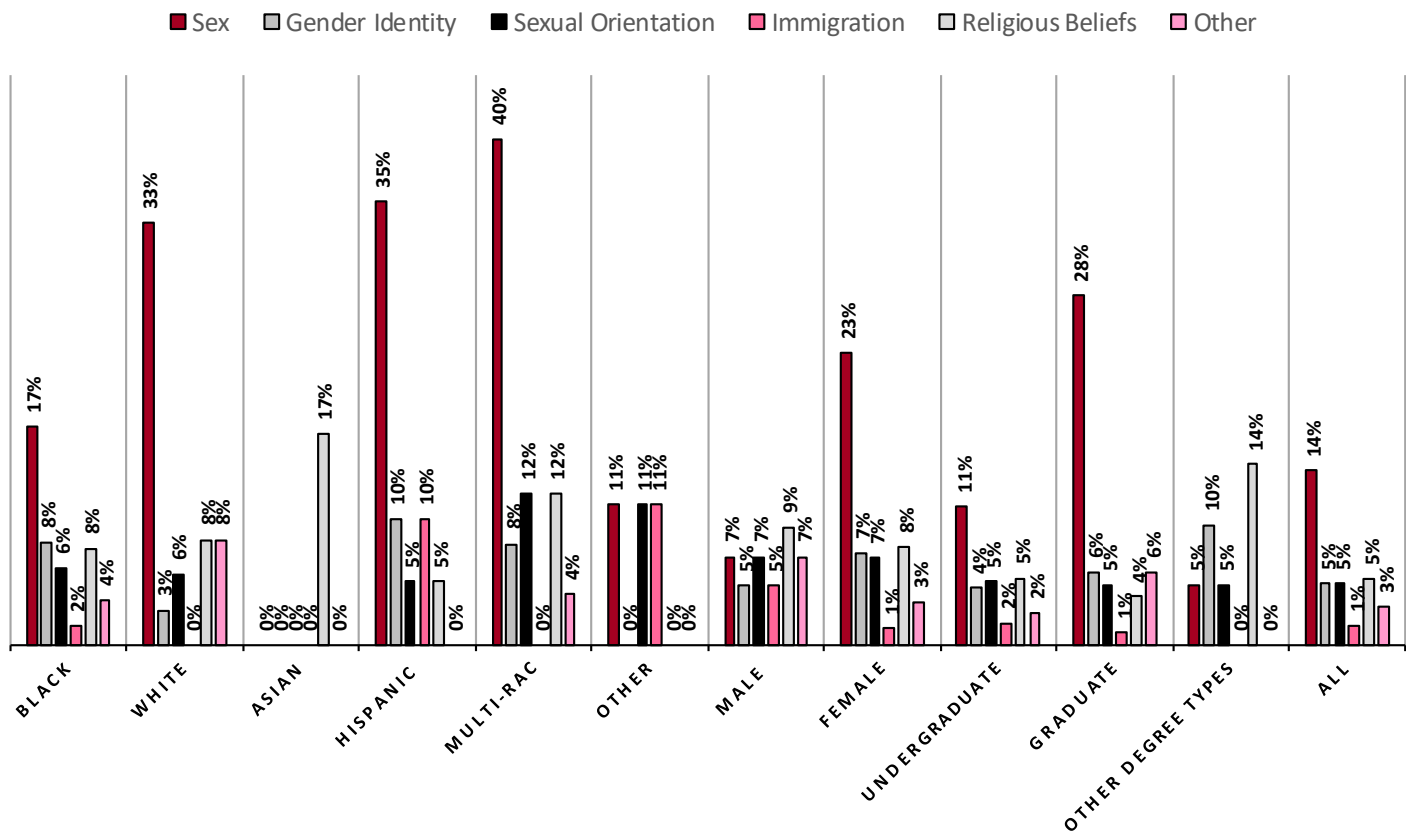
Approximately 85% of graduate students reported having experienced a traumatic event compared to 77% of undergraduate students and 67% of students pursuing other degree types.

A greater proportion of male students reported exposure to traumatic experiences/or events compared to female students – 83% and 79%, respectively.

Ninety percent of Multi-racial students reported past exposure to traumatic experiences, followed by 79% of White students, 78% of Black students, 73% of Hispanic students, and 60% of students who identified as another race (“Other”). Of note, all Asian students who answered these questions reported they experienced a traumatic event in the past. However, this sample included only 6 students who identified as Asian. Because of this, this result should be interpreted with caution.

Perceived Discrimination

NCCU students reported on the forms of discrimination they experience. **Out of 6 different categories for types of discrimination, discrimination based on biological sex was the most frequently reported category. Fourteen percent of NCCU students reported they had experienced discrimination based on their biological sex.** When reviewing male versus female students on this form of discrimination, **over three times more female students (23%) reported discrimination based on their sex, compared to 7% of male students.**



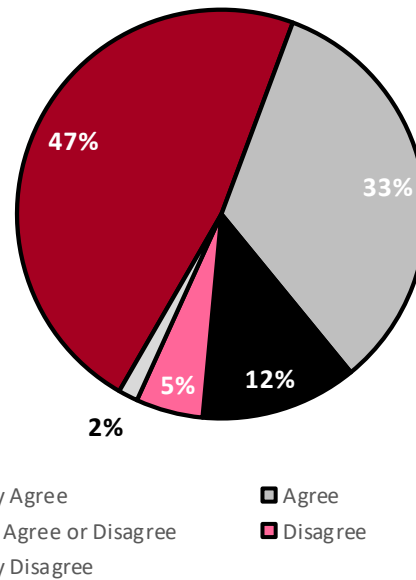
Leadership Engagement

Students reported on their perception of whether student health and well-being was a priority for NCCU leadership.

The majority of students either agreed or strongly agreed that student health was a priority to college leadership (80%).

Twelve percent of students were neutral (“neither agree or disagree”) over whether they felt NCCU leadership felt student health and well-being was a priority.

Seven percent of students reported they disagreed that NCCU leadership considered student health and well-being a priority.



Communication Preferences

Communication preferences were measured by asking students the best way to make them aware of available health and wellness resources on campus.

Email was the most preferred form of communication, with 65% of NCCU students selecting this option.

The second most preferred option was social media use (47%), followed by NCCU’s website (37%).

Apps continue to be the least preferred method (24%) for communication of health resources.

