Prevalence of Self-Medication in Students from 21 to 42 Years of Age from a University in Southern Puerto Rico

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Objectives: This study aimed to examine self-medication among university students by estimating its prevalence, identifying associated risk factors, and assessing its impact on health.

Methods: A cross-sectional design was employed with a study population of students aged 21 to 42 years from a university in southern Puerto Rico. A sample size calculation using Epi Info yielded 269 participants, based on an estimated 70.1% prevalence of self-medication, a 95% confidence level, and a 5% error rate. Data collection involved distributing a culturally tailored survey via email, and in-person recruitment. The survey covered demographic information, self-medication frequency, medication types, and related factors.

Results: The analysis of the data revealed a high prevalence of self-medication (95.60%) among surveyed students, predominantly with analgesics (e.g., acetaminophen) and anti-inflammatories. Notably, the use of antibiotics and antidepressants, both requiring prescriptions, was also reported. A significant proportion of the surveyed participants practiced frequent self-medication (34.87%), considering medication dosage (92.58%), potential interactions (70.31%), and adverse effects (70.93%). However, 14.79% were unaware that associated risks might exist.

Conclusion: This study provides insights into the prevalence of self-medication (95.60%) among a population of university students in southern Puerto Rico, as well as the motivations for this behavior and the associated risks. Its findings contribute to understanding self-medication patterns and suggest areas for intervention and education to promote responsible self-care practices.

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Key words: Self-medication, University students, Public health, Medication practices, Health education

Self-care is broadly defined as "any action or decision aimed at improving health or well-being, preventing or reducing the likelihood of a disease or injury . . . without the assistance of healthcare professionals" (translated from Spanish) (1). The Self-Medication Behavior Observatory defines self-medication as "an individual consumption behavior, consisting of the self-administration, or administration to others, of medications . . . (including natural products) without prescription, or by altering the prescription, with self-care or other intentions" (translated from Spanish) (2). It is common for individuals to take preventive measures to address health threats before seeking professional healthcare (3). According to ALBashtawy M et al. (2005), of students aged 18 years or older in their study, 95% reportedly practice self-medication (3). University students frequently use over-the-counter medications, as shown in various studies (4). A meta-analysis encompassing 89 studies and 60,938 students found an overall self-medication prevalence of 70.1% (5). For example, 27.6% of undergraduate male pharmacy and medical students at a tertiary educational institution in Saudi Arabia reported the non-medical use of prescription drugs within the past 6 months. Prevalence was significantly higher among those aged 21 to 30 years (93.4%) compared with those aged 31 to 53 years (6.6%) (6).

Factors that are commonly reported as leading to self-medication include previous experience, cost and time savings, the treatment of minor ailments, quick relief, suggestions from family or friends, and the ease of access to medications (7). Additionally, studies indicate that health insurance status may play a role in self-medication; for example, at The University of Karachi, Pakistan, self-medication was more common among students with health insurance, though the difference was not statistically significant (7). Conversely, some insured students may self-medicate because their health insurance policies cover only part of their medical expenses (8). To enhance concentration or alertness during exams, many students use over-the-counter substances (9). Stress is a prevalent driver of non-medical prescription drug use among university students, involving medications "without a prescription, in higher doses

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than prescribed, or for a longer period than recommended" (10,11). Students are particularly vulnerable to self-medication due to their social standing and academic pressures (12,13). Academic stress is a significant factor contributing to students' self-medication, as associated obligations may prevent them from seeking professional advice (6).

Self-medication, while sometimes perceived as convenient, often occurs without appropriate guidance, leaving many students unaware of the associated risks (14). Research conducted at a private university in Medellín, Colombia, highlighted this issue: 59% of the respondents did not understand responsible self-medication, and 90.1% regarded the practice as unsafe. However, 78.6% indicated they would continue self-medicating despite the risks (15), which include potentially harmful pharmacological interactions, side effects, and medication misuse (e.g., use for non-indicated conditions), particularly in high-risk groups such as children, pregnant individuals, and the elderly (16). While self-medication may reduce healthcare costs and allow healthcare workers to focus on emergency cases, the adverse effects of this behavior can precipitate emergencies and even death (17).

Students' self-medication practices frequently involve the use of stimulants, over-the-counter pain relievers, antihistamines, and conventional and alternative medicines, especially during exams and high stress periods (18). A study involving 277 students from 2 medical schools in Puerto Rico illustrates this pattern, showing frequent use of stimulants, namely caffeine (56.2%), energy drinks (27%), stimulant medications (8%), nicotine (6.9%), and other substances (1.8%) (19). Self-medication practices extend beyond medication intake to include lifestyle modifications (20). Studies in countries such as Brazil, Venezuela, Paraguay, and Chile consistently identify pain relievers, anti-inflammatories, and antipyretics as the most commonly used medications, followed by cold remedies and antacids (17).

Self-medication is sometimes seen as a means of maintaining independence and functional capacity, allowing individuals to manage daily activities without relying on health services (17). From a social point of view, self-medication reduces the burden on health services and offers cost savings to public institutions, as users bear the expenses themselves (16).

However, despite high rates of self-medication, gaps remain in understanding the full range of motivations, patterns, and potential risks associated with this behavior, particularly among specific demographics and in different cultural contexts. The global prevalence of self-medication among university students is high, and the health and social implications of the practice are significant. This study aimed, therefore, to assess not only the contributing factors to self-medication but also its prevalence and perceived risks in a sample of students from Puerto Rico. The findings are intended to provide context-specific insights into a globally relevant public health issue.

Materials and Methods

This cross-sectional descriptive study was conducted among university students aged 21 to 42 years from the university in southern Puerto Rico. The institution serves a diverse student body of different faiths, races, nationalities, and economic levels, offering programs in the Arts and Humanities, Business Administration, the Sciences, Architecture, and Education.

The data collection took place from January through February 2024. The sample size was calculated using Epi Info software, based on a 70.1% prevalence of self-medication (5), a 95% confidence level, and a 5% margin of error. The student population at the university consisted of 2,124 individuals, including 1,327 women and 797 men. Using the prevalence rate, confidence level, and margin of error described above, we obtained a sample size of 269 students. We excluded 44 records because they did not meet the inclusion criteria, which specified enrolled male and female students aged 21 to 42 years. This exclusion was necessary to ensure that the study findings reflected the enrolled students within the target age range. Pregnancy was not included as an exclusion criterion in this study and was not specifically asked about in the questionnaire. The prevalence was calculated by dividing the number of students who reported self-medication by the total number of respondents who completed the survey.

Data collection

Data were collected using a culturally tailored, IRB-approved questionnaire distributed through REDCap. The university distributed the survey weekly via email. Additionally, 3 times per week, in-person recruitment took place in the university lobby, where students could scan a QR code on a promotional flyer to access the survey directly. The IRB of the San Juan Bautista

Figure 1. Participant Recruitment and Exclusion Overview

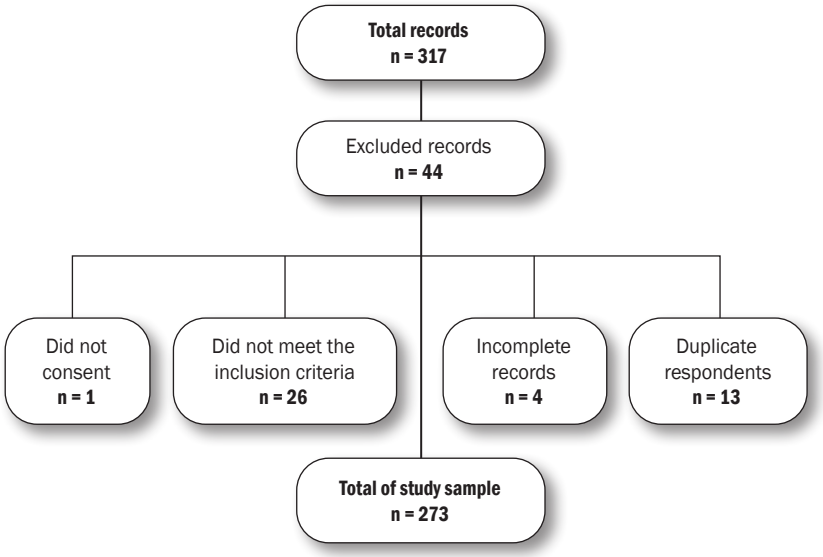

Figure legend: n = number of records

School of Medicine approved the study protocol in October 2023 (EMSJBIRB-16-2023), with additional approval (November 2023) from the IRB of the participating university in southern Puerto Rico (PROTOCOLO-JRI-23-24-03).

Questionnaire

The questionnaire comprised 42 items covering demographic information, self-medication frequency, types of medications used, medical history, and health-risk behaviors. The original instrument was culturally adapted for use in Puerto Rico through a process that included reviewing the language, modifying expressions to reflect regional language variation, and validating content appropriateness with public health experts. Permission was obtained from the original authors to modify the survey, which we administered in Spanish (the same language as the original) for accessibility (21). The survey items were designed to collect self-reported data on the frequency of, types of, and motivations for self-medication, using vocabulary and expressions familiar to the study population. The primary variables included the following: age (continuous; measured in years), biological sex (categorical; male or female), self-medication frequency (categorical; defined by frequency of over-the-counter medication use), types of medication (categorical; including analgesics, anti-inflammatories, and other common medications).

Data analysis

Each variable was assessed based on responses to the corresponding culturally adapted survey questions. Data collection focused on gathering responses for categorical variables (e.g., biological sex, medication types) and for continuous variables (e.g., age). To minimize potential bias, recruitment efforts were standardized and combined email and in-person approaches. Data collection emphasized anonymity, and the responses were monitored to ensure data completeness, reducing potential non-response and underreporting bias. As previously described, the sample size was determined using data on the prevalence of self-medication from prior research on university students. Doing so ensured a sufficient sample for estimating self-medication prevalence with the specified confidence and error margins.

Results

Response rate

Out of 317 participants, 273 completed the survey, yielding a 86% response rate (see Methods for details).

Sample characteristics

The prevalence of self-medication at the university in southern Puerto Rico was 95.60%. The sociodemographic data (Table 1) show that 65.20% of the participants were female, with a mean age of 26 years (SD = 6.30). The sample consisted of 40.29% undergraduate and 59.71% graduate students, predominantly from the schools of the Arts and Humanities (48.47%) and the Sciences (37.40%).

The analysis focused on 261 individuals who self-medicated and examined the frequency of (Table 2) and primary reasons for taking medication without a prescription. Among the students who self-medicated, the frequency of use varied: 34.87% reported self-medicating more than once a month ("frequently"), 27.20% every 1 to 3 months ("occasionally"), and 32.18% every 4 to 12 months ("rarely"). The main reasons for self-medication included having previous experience with similar ailments (47.63%), lacking time for medical visits (12.60%), and perceiving the condition to be urgent (12.20%). Most of the students reported using their own judgment (25.68%) when choosing a medication, followed by recommendations from family (24.12%) and healthcare professionals (23.35%). Furthermore, 92.58% of self-medicators monitored medication dosage, 70.31% were attentive to drug interactions, and 70.93% were aware of potential adverse effects. Notably, 85.21% recognized that self-medication could pose health risks. Regarding the types of medications (Table 3), analgesics and anti-inflammatories were the most common (71.65% and 36.78%, respectively), with acetaminophen being the most frequently used analgesic (44.06%). Other medications used included antihistamines (22.61%) and antacids (14.56%). Most of the participants reported self-medicating for more than 1

Table 1. Sociodemographic variables and academic background of the surveyed students (N = 273)

	n (%)
Biological sex	
Female	178 (65.20)
Male	95 (34.80)
Age (years)	
<26	134 (49.08)
≥26	139 (50.92)
Academic Level	
Undergraduate	110 (40.29)
Graduate	163 (59.71)
*Academic Faculty**	
Arts and Humanities	109 (41.92)
Sciences	97 (37.31)
Business Administration	29 (11.15)
Education	18 (6.92)
Architecture	7 (2.69)
Undergraduates	
1st year	15 (5.49)
2nd year	19 (6.96)
3rd year	33 (13.58)
4th year	27 (9.89)
5th year	15 (5.49)
6th year	1 (0.37)
Graduates	
1st year	30 (10.99)
2nd year	43 (15.75)
3rd year	47 (17.22)
4th year	27 (9.89)
5th year	12 (4.40)
6th year	4 (1.47)

*In English, "faculty" commonly refers to the teaching staff, but in Puerto Rico, academic divisions/units are referred to as facultades.
Note. The total sample consisted of 273 participants. However, the number of observations for some variables may vary due to missing data.

Table 2. Frequency and most relevant reasons for which the individuals surveyed took medications without a prescription (N = 273)

Question	Response option	n (%)
How often do you self-medicate?	1. Only once	7 (2.68)
	2. Rarely (every 4–12 months)	84 (32.18)
	3. Occasionally (every 1–3 months)	71 (27.20)
	4. Frequently (more than once a month)	91 (34.87)
	5. Always (more than once a week)	8 (3.07)
What is your main reason for self-medicating?	1. I don't have time to go to the doctor	32 (12.60)
	2. I don't have a medical plan	1 (0.40)
	3. I have previous experience with the same type of ailment	121 (47.64)
	4. I want to save the cost of a medical consultation	5 (1.97)
	5. Low motivation to seek medical care	28 (11.02)
	6. A particular problem or ailment is urgent and cannot wait for a consultation	31 (12.20)
	7. I self-medicate because information I find online suggests that a particular medication will safely treat my symptoms	2 (0.79)
	8. I know everything I need to know about the condition	30 (11.81)
	9. I have a different reason	4 (1.57)
Who or what recommended the OTC drug(s) that you used?	1. I was	66 (25.68)
	2. A health professional (nurse, doctor, or dentist)	60 (23.55)
	3. A pharmacist/ pharmacy technician	27 (10.51)
	4. A friend	35 (13.61)
	5. A family member	62 (24.12)
	6. An advertisement	5 (1.95)
	7. Some other source	2 (0.78)
Is the manufacturer that produces the drug important to you?	1. Yes	126 (48.84)
	2. No	132 (51.16)
Did the pharmacy staff provide product information?	1. Yes	89 (34.63)
	2. No	168 (65.37)
What do you do if your symptoms persist after self-medicating?	1. Consult a doctor	162 (62.80)
	2. Increase the dose	41 (15.89)
	3. Change the medication	51 (19.76)
	4. Other	4 (1.55)
When do you stop taking the OTC medication?	1. When symptoms disappear	179 (69.92)
	2. When indicated by the instructions of the medication	77 (30.08)
	3. Other	0 (0.0)
Do you read and follow the instructions on the label of OTC medication?	1. Always	149 (57.76)
	2. Sometimes	94 (36.43)
	3. Never	15 (5.81)
Do you recommend effective OTC medications to others?	1. Yes	231 (90.59)
	2. No	24 (9.41)
Do you consider dosage when taking OTC medications?	1. Yes	237 (92.58)
	2. No	19 (7.42)
Do you consider drug interactions when taking OTC medications?	1. Yes	180 (70.31)
	2. No	76 (29.69)
Do you consider adverse effects when taking OTC medications?	1. Yes	183 (70.93)
	2. No	75 (29.07)
Are you aware of the possible health risks associated with self-medicating?	1. Yes	219 (85.21)
	2. No	38 (14.79)

Abbreviation: OTC, over-the-counter. Note. The total sample consisted of 273 participants. However, the number of valid responses varies by question due to missing data. This and the following tables were adapted and translated from: Ortiz CP, Fúnez David OD, Rubiano Daza H, et al. Self-medication in the students from Neiva Campus of the Universidad Cooperativa de Colombia. Rev Colomb Cienc Quím Farm. 2019;48(1):128-144. doi:10.15446/rcciquifa.v48n1.80070.

condition, with an average of approximately 2.04 medications taken per person (246 individuals).

Through descriptive analysis, we explored the medical histories and health-risk behaviors of the participants. Notably, 24.03% did not seek any medical consultations in the past year; 16.02% used substances recreationally; and 15.95% combined alcohol with over-the-counter medications. Common health conditions included allergies (41.70%), menstrual cramps (29.34%), and migraines (22.78%).

Discussion

This research aimed to explore the prevalence and implications of self-medication among university students in southern Puerto Rico. Nevertheless, the prevalence found is still notably high and consistent with global trends (95.60%) (21). It is essential to clarify that the results reflect a convenience sample from the institution identified earlier and may not represent the broader university-student population in Puerto Rico.

The above-mentioned prevalence underscores the need for targeted interventions and educational campaigns to promote responsible self-care practices. Our results showed a prevalence rate that was higher than or similar to those reported in studies conducted at other universities, such as the Cooperative University of Colombia (86.8%) (21), the University of La Plata in Argentina (95%) (21), and the University of Rosario in Colombia (79.3%) (22), as well as among American university students in western Pennsylvania, 96% of whom reported using over-the-counter medications (23). Previous studies have documented the prevalence of this practice in Spanish universities. For instance, 73.8% of the students at the University of Salamanca, Salamanca, Spain, reported self-medicating relatively frequently, as did 72.7% of the students at the school of Educational Sciences, University of Málaga in Málaga, Spain. (24). These variations in prevalence may stem from differences in cultural practices, data collection methods, and sample demographics, and our findings should be interpreted in light of these factors.

One of the key findings of this study is the widespread use of over-the-counter medications among university students, reflecting a common trend reported in other studies. The accessibility and perceived

Table 3. Medical conditions commonly treated through self-medication by study participants (N = 273)

Condition/symptom	n (%)
Body ache	11 (4.47)
Back pain	8 (3.25)
Migraine	8 (3.25)
Nasal congestion	6 (2.43)
Insomnia	6 (2.43)
Stress	5 (2.03)
Anxiety	4 (1.62)
Sinusitis/rhinitis	3 (1.21)

Note. The medications most commonly used by self-medicating participants were analgesics (71.65%) and anti-inflammatories (36.78%). Among participants who used analgesics, 44.06% used acetaminophen, representing approximately 31.56% of all participants. Percentages may overlap because some participants used multiple types of medications. The number of responses per condition may vary due to missing data.

efficacy of these medications contribute to their popularity among students, especially for alleviating common symptoms such as pain, inflammation, and fever. Notably, the consumption of medications for menstrual pain was more pronounced in the literature reviewed than in our study (5). Overall, our findings closely align with those reported in the literature, especially concerning self-medication patterns among participants managing chronic conditions (25). It is concerning that some students also reported using prescription medications, such as antibiotics (2.30%) and antidepressants (1.15%), without proper medical guidance, indicating a potential gap in their understanding of the risks associated with such practices. The most common ailments treated through self-medication were headaches and allergies. The types of medications commonly used for self-medication align with global patterns, with analgesics, anti-inflammatories, and antipyretics being the most prevalent (17). The inclusion of antibiotics and antidepressants, which require prescriptions, in self-medication practices raises concerns about antibiotic resistance and potential mental health risks (21).

The motivations behind self-medication among students are multifaceted. Our results show that factors such as previous experience, time constraints, and personal convenience play significant roles in students' decisions to self-medicate. Moreover, the influence of family and friends in recommending medications highlights the social dynamics that contribute to self-care behaviors among young adults.

Our findings on the practices and motivations surrounding self-medication among university students highlight a critical need for accessible guidance from healthcare professionals, particularly pharmacists. The World Health Organization and previous studies, such as that of Ortiz et al. (2019), emphasize pharmacists as key players in promoting responsible self-medication practices by providing accurate information on medication use, potential side effects, and interactions (21). However, our results indicate that only 34.63% of pharmacy employees provide information about over-the-counter drugs at the time of purchase. This low rate underscores a missed opportunity for pharmacists to play a more active role in consumer education. Greater pharmacist involvement in university health education programs could help close these knowledge gaps, ultimately encouraging safer self-medication behaviors among students.

A noteworthy aspect of our findings is the awareness among students of medication dosage, potential interactions, and adverse effects. This knowledge indicates a level of responsibility and caution among self-medicating individuals. However, there is still a considerable proportion of students who may not fully grasp the risks associated with self-medication (14.79%), as evidenced by their continued practice of self-medicating despite acknowledging potential health risks. Regarding the health-risk behaviors of our participants, we observed a lower prevalence of concurrent alcohol consumption among participants who used over-the-counter medications compared to those who used over-the-counter medications without alcohol, as indicated by our study's results (26). Similarly, our findings align with the literature, showing that smoking was less common among university students who self-medicated (8.94%) compared to those who did not self-medicate (27). Our study also sheds light on the impact of self-medication on healthcare systems. While self-medication can reduce the burden on healthcare services and offer cost savings, it also poses challenges in terms of monitoring medication use, ensuring appropriate dosages, and preventing adverse reactions. Education and awareness programs targeting both students and healthcare providers are crucial in addressing these challenges and promoting safe self-care practices.

Limitations of this study include the reliance on self-reported data, which may introduce biases and inaccuracies, the use of a convenience sample of university students aged 21 to 42 years, the fact that the analyses remained at a descriptive level due to the small size of the comparison group (n = 12), and the absence of a pilot test to pretest the questionnaire. These limitations constrain the generalizability of the findings. Future research could benefit from longitudinal studies to track changes in self-medication behaviors over time and explore the long-term health outcomes associated with self-medication among university students. The key strengths of this study include its detailed data on self-medication practices, as well as both highlighting the relevance to public health and identifying areas for future research. Based on the findings of this study, we recommend the creation of education and awareness programs aimed at university students and health providers.

Overall, our findings contribute to the growing body of literature on self-medication among young adults and emphasize the importance of holistic approaches to healthcare that integrate responsible self-care practices with professional medical guidance and support.

Resumen

Objetivos: Este estudio tuvo como objetivo examinar la automedicación entre estudiantes universitarios mediante la estimación de su prevalencia, la identificación de factores de riesgo asociados y la evaluación de su impacto en la salud. Métodos: Se utilizó un diseño transversal con una población de estudio compuesta por estudiantes de entre 21 y 42 años de una universidad del sur de Puerto Rico. El tamaño de la muestra

se calculó utilizando Epi Info, resultando en 269 participantes, basado en una prevalencia estimada de automedicación del 70.1%, un nivel de confianza del 95% y un margen de error del 5%. La recolección de datos se llevó a cabo mediante la distribución de una encuesta culturalmente adaptada, enviada por correo electrónico y promovida en persona. La encuesta incluyó información demográfica, frecuencia de automedicación, tipos de medicamentos utilizados y factores relacionados. Resultados: El análisis de los datos reveló una alta prevalencia de automedicación (95.60%) entre los estudiantes encuestados, predominantemente con analgésicos (por ejemplo, acetaminofén) y antiinflamatorios. De manera notable, también se reportó el uso de antibióticos y antidepresivos, ambos medicamentos que requieren receta médica. Una proporción significativa de los participantes encuestados practicaba la automedicación con frecuencia (34.87%), considerando la dosis del medicamento (92.58%), posibles interacciones (70.31%) y efectos adversos (70.93%). Sin embargo, el 14.79% desconocía que podrían existir riesgos asociados. Conclusión: Este estudio ofrece una visión sobre la prevalencia de la automedicación (95.60%) en una población de estudiantes universitarios del sur de Puerto Rico, así como sobre las motivaciones para esta conducta y los riesgos asociados. Sus hallazgos contribuyen a comprender los patrones de automedicación y sugieren áreas para intervención y educación con el fin de promover prácticas responsables de autocuidado.

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Table 4. Results of the analysis of questions on pathological history and behaviors (N = 273)

Question	Self-medicate n (%)
In the past 12 months, have you seen a healthcare professional for any health-related reason?	Yes: 196 (75.96) No: 62 (24.03)
Have you smoked at least 100 cigarettes in your life?	Yes: 17 (6.58), No: 241 (93.41)
Are you currently a smoker?	Yes: 23 (8.94), No: 234 (91.05)
Do you consume energy drinks?	Yes: 89 (34.76), No: 167 (65.23)
Have you ever mixed energy drinks with alcohol?	Yes: 19 (7.42), No: 237 (92.58)
Have you ever used energy drinks with OTC medications?	Yes: 21 (8.17), No: 236 (91.82)
Have you ever combined alcohol with OTC medications?	Yes: 41 (15.95), No: 216 (84.04)
Has a healthcare professional ever informed you that you currently have or have had high blood pressure?	Yes: 53 (20.54) No: 205 (79.46)
Do you drink alcohol often?	Yes: 50 (19.45), No: 207 (80.54)
Have you ever wanted to reduce or stop your drinking?	Yes: 44 (17.25), No: 211 (82.74)
Have you ever been criticized for how much or how often you drink?	Yes: 14 (5.49) No: 241 (94.51)
Have you ever felt guilty about drinking alcohol?	Yes: 16 (6.29), No: 238 (93.70)
Have you ever needed a morning drink to relieve a hangover?	Yes: 18 (7.05) No: 237 (92.94)
Are you currently taking blood pressure medication?	Yes: 7 (2.72), No: 250 (97.28)
Has a healthcare professional ever informed you that your weight is higher than recommended?	Yes: 100 (39.06) No: 156 (60.94)
Has a doctor ever informed you that you have high blood cholesterol?	Yes: 44 (17.12) No: 213 (82.88)
Are you currently in a program or in treatment to manage your cholesterol?	Yes: 13 (5.06) No: 244 (94.94)
Has a healthcare professional ever informed you that you have diabetes or high blood sugar?	Yes: 17 (6.67) No: 238 (93.33)
Are you currently in treatment for diabetes or high blood sugar?	Yes: 7 (2.72) No: 250 (97.28)
Have you ever used medications or substances recreationally?	Yes: 41 (16.02) No: 215 (83.98)
Have you ever had or currently have any of the following medical conditions or health issues?	
Acute or chronic kidney failure	Yes: 4 (1.54), No: 255 (98.46)
Cancer, leukemia, lymphoma, or myeloma	Yes: 3 (1.16), No: 256 (98.84)
Vascular or heart conditions, including aneurysms, arrhythmia, angina, heart attacks, heart murmurs, or heart valve disorders	Yes: 5 (1.93) No: 254 (98.07)
Epilepsy, other diseases of the nervous system, or isolated seizures	Yes: 4 (1.54) No: 255 (98.46)
Mental illnesses	Yes: 34 (13.13), No: 225 (86.87)
A chronic respiratory disease, such as asthma	Yes: 32 (12.36), No: 227 (87.64)
Migraine	Yes: 59 (22.78), No: 200 (77.22)
Acne	Yes: 52 (20.08), No: 207 (79.92)
Irritable bowel syndrome	Yes: 11 (4.25), No: 248 (95.75)
Lupus	Yes: 2 (0.77), No: 257 (99.23)
Rheumatoid arthritis	Yes: 3 (1.16), No: 256 (98.84)
Allergies	Yes: 108 (41.70), No: 151 (58.30)
Menstrual cramps (only for individuals assigned female at birth)	Yes: 76 (43.93) No: 97 (56.07)
None of the above	Yes: 68 (100)
Have you ever had kidney dialysis?	Yes: 3 (1.17), No: 253 (98.83)
Are you currently receiving any of these treatments?	
Chemotherapy or radiation therapy	Yes: 4 (1.54), No: 255 (98.46)

Note. The total sample consisted of 273 participants. However, the number of valid responses varies by question due to missing data.

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