Smoking, Sociodemographic Characteristics, and Health History among Adults with Mental Illness in Puerto Rico

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Objective: In Puerto Rico, two in ten adults aged 18 to 64 (18.7%) are diagnosed with a mental illness (MI), such as schizophrenia, bipolar disorder, and major depressive disorder. People with MI diagnosis report higher frequencies of chronic diseases (e.g., diabetes, cancer, heart diseases) and cigarette smoking than the general population. This study explores associations between smoking, sociodemographic characteristics and health history (i.e. chronic diseases and MI diagnosis) among adults with a MI diagnosis in Puerto Rico.

Methods: This cross-sectional study includes data from 285 Puerto Rican adults (> 21 years) with a MI diagnosis receiving psychiatric or psychological treatment in a community healthcare facility between May 2017 to May 2020. Chi-square tests evaluated the associations between smoking and sociodemographic characteristics, chronic diseases and MI diagnosis. Multiple logistic regression explained the relationship between smoking, sociodemographic characteristics, and MI diagnosis.

Results: A total of 25.3% (n=72) of participants reported current smoking. Significant associations were found between smoking with sociodemographic characteristics and MI diagnosis among Puerto Ricans diagnosed with MI. The logistic regression model explained 18.9% of the variance in smoking and classified 76.1% of cases.

Conclusion: Results confirm high prevalence rates of current smoking and the potential impact on health among Puerto Ricans with MI diagnosis. Tailored treatments for smoking cessation for Puerto Ricans living with MI are needed.

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Key words: Puerto Ricans, Health, Smoking, Mental Illness, Chronic Diseases

Puerto Rico is an archipelago located in the Caribbean Sea, a non-incorporated territory of the United States (US), where 3.2 million US citizens who mainly speak the Spanish language reside (1). In Puerto Rico, two in ten adults aged 18 to 64 (18.7%) are diagnosed with a mental illness (MI), such as schizophrenia, bipolar disorder, and major depressive disorder (2). This prevalence of MI is similar among Latino/Hispanic individuals in the US, where 20.7% of adults (18 years or older) report any MI (3). However, Puerto Rico faces increasing mental health and healthcare services disparities compared to the continental US (4). Puerto Ricans in the archipelago have experienced some of the worse public health emergencies in recent history, such as hurricanes, earthquakes, financial crises, and physician migration (5-6). The compounding disasters have caused significant psychological distress, physical health problems, and deterioration of the healthcare system infrastructure (7). Within this context, healthcare access has decreased, and a widening disparity in Medicaid and Medicare funding benefits for Puerto Ricans between the mainland and the archipelago has increased (5). In light of this, examining the health of people with the MI living in Puerto Rico is imperative.

People with MI are a well-known group who experience poorer access to quality healthcare services and health outcomes than the rest of the population. For example, people with a MI diagnosis report higher frequencies of chronic diseases (e.g., diabetes, heart disease) than the general population (8-9). The elevated rates of chronic diseases among people with MI diagnosis are associated with multiple factors, including long-term side effects of psychiatric treatment medications (10-12). In addition, the development of chronic diseases among people with MI diagnosis has been associated with significant behavioral risk factors such as physical inactivity and tobacco use (e.g., smoking) (11, 13-16). Smoking remains one of the most significant modifiable risk factors for preventing chronic diseases both in Puerto Rico and globally (17-19).

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Worldwide, including in the US, people diagnosed with MI report about twice of cigarette smoking prevalence (27.9%) than those without MI diagnosis (20-23). It is estimated that people with MI consume nearly half of all cigarettes sold in the US (24). Up-to-date data regarding smoking among Puerto Ricans with MI living in PR is limited. In a cross-sectional study estimating the prevalence of chronic diseases and associated risk factors (e.g., current smoking) among adults in PR receiving primary care services before and after Hurricane Maria higher prevalence of unhealthy behaviors and chronic diseases was identified (25). Smoking rates were not significantly different between 2015 and 2019 (17.9% vs. 14.5%, p=0.16; 16.1% vs 19.5%, p=0.55). Even when the differences in smoking are not statistically significant, these numbers are alarming compared to Puerto Rico's general population, where one in ten adults report smoking (9.6% to 15.0%) (26), and heart diseases, cancer, and diabetes represent three of the six principal death cause in the archipelago (26). Considering the high rates of smoking and chronic diseases among people with MI diagnosis, it is essential to characterize and describe this group in Puerto Rico, where health disparities and barriers to healthcare services continue increasing. Research on tobacco use among Latino populations has revealed significant variations in smoking prevalence across different sociodemographic characteristics including country of birth (27). A study conducted in New York City (NYC) analyzed smoking trends from 2003 to 2016 across these groups and found that, while smoking prevalence decreased among most Latino groups, Puerto Ricans continued to have the highest rates of smoking. Factors such as sex, acculturation, and education were strongly associated with smoking behaviors. Specifically, lower educational attainment was a key determinant of smoking among Puerto Ricans. Additionally, in multivariable-adjusted models, Puerto Ricans did not show a significant association with current smoking compared to non-Hispanic/Latino Whites, whereas other Hispanic/Latino groups exhibited lower odds of smoking. This study highlights the concerning trend of persistent high smoking prevalence among Puerto Ricans, particularly in the context of their sociodemographic characteristics, including gender and educational level. Similarly, studies in Puerto Rico have demonstrated the high prevalence of smoking (approximately 20%) among adults and have identified significant lifestyle risk factors, including sedentary behavior and poor dietary habits, which contribute to chronic diseases like hypertension, diabetes, and obesity (28). These chronic conditions, coupled with the elevated rates of mental illness (e.g., depression and anxiety), present a complex challenge to public health in Puerto Rico.

Despite these alarming trends, there remains a significant gap in understanding the intersection of smoking behaviors, mental illness, and chronic diseases specifically among people living with mental illness in Puerto Rico. There is a clear need for comprehensive, culturally tailored public health initiatives that address smoking cessation, promote healthier lifestyles, and integrate mental health services in Puerto Rico to mitigate these interconnected health challenges. Further research focused on this population is essential to inform effective public health interventions and reduce health disparities.

Our study aims to contribute valuable insights into the factors influencing smoking behaviors among Puerto Rican adults with MI. Understanding how sociodemographic characteristics, health history, and MI diagnosis interact with tobacco use is crucial for developing tailored interventions. Such interventions can help reduce smoking and improve overall health outcomes for this vulnerable group. To address this gap, this study aimed to 1) report the smoking prevalence among a sample of Puerto Ricans with MI in Puerto Rico and; 2) examine associations between smoking and sociodemographic characteristics and health history (i.e., chronic diseases and MI diagnoses) among adults with MI in Puerto Rico.

Materials and Methods

Participants

This is a cross-sectional study design in which 285 Puerto Rican adults (> 21 years) with MI diagnoses and receiving psychiatric or psychological treatment in a community healthcare facility participated. Participant recruitment started in May 2017 at the Wellness Center (a community healthcare center) in Ponce, Puerto Rico. Due to Hurricane María's impact in Puerto Rico on September 2017 (30), recruitment was halted, restarting in January 2019 and ending in January 2020 due to the significant effects of the earthquakes with an epicenter in the southern area of Puerto Rico where the study site is located (31). Trained research assistants invited individuals to participate in the study through flyers and educational sessions at the site. Inclusion criteria included: 1) self-identification as Puerto Rican, 2) being 21 years or older, 3) having a lifetime diagnosis of mental illness, and 4) currently residing in Puerto Rico. Once an individual reported being interested in participating in the study, an in-person meeting was scheduled. During the meeting, the informed consent was completed. If the participant consented to participate, the questionnaire was completed. Study procedures were approved and monitored by the Ponce Health Sciences University Institutional Review Board (Protocol No. 161130-ER).

Measures and Data Collection

Participants completed a self-administered pen-to-paper questionnaire in Spanish, including measures designed to assess sociodemographic characteristics, mental and physical health conditions, and behavioral risk factors associated with their general health. For this study, the outcomes of interest were key sociodemographic characteristics (i.e., age, gender, sexual orientation, academic level, employment status, and marital status), self-reported questions (Yes or No) including smoking (i.e., Do you smoke?), MI diagnosis (depression, bipolar disorder, anxiety, schizophrenia, borderline personality disorder, other MI, and multiple [two or more] MI diagnosis), and chronic disease history (asthma, diabetes, hypertension, cardiovascular diseases, other chronic disease and multiple [two or more] chronic disease diagnosis). Additionally, participants' self-reported weight (lb.) and height (ft or in), and overweight and obesity were defined based on body mass index (BMI; kg/m^2). Weight was converted to kg. and height to m^2 to calculate the BMI. Overweight was defined as a BMI of 25.0 to 29.9 kg/m^2, and obesity was described as a

BMI of 30.0 kg/m^2 and above (32). Participants with BMI 18.5 to 24.9 kg/m^2 were identified as healthy-weight and below 18.5 kg/m^2 as underweight (32).

Statistical Analysis

Descriptive statistics were performed to characterize the data (frequencies, percentages, mean, and standard deviation values). Listwise deletion was used to attend to individuals with missing data on any variable in the analysis. A median split was used to categorize the age variable (Mdn = 51.0, IQR = 38.5-58.0). Pearson Chi-square was used to measure the association between self-reported smoking (smoking vs. non-smoking) with self-reported sociodemographic characteristics, MI diagnosis (depression, bipolar disorder, anxiety, schizophrenia, borderline personality disorder, other MI diagnoses, and multiple [two or more] MI), and chronic disease history (asthma, diabetes, hypertension, cardiovascular diseases, and other chronic disease and multiple [two or more] chronic disease diagnosis) among Puerto Rican adults with MI. We used Fisher's Exact test for the association in variables with small sample sizes (10 or fewer). Multiple logistic regression was performed to explain the relationship between smoking, gender, sexual orientation, and multiple [two or more] MI diagnoses. Considering the small sample size, underweight and healthy-weight participants were regrouped into one group for analysis purposes. For the multiple regression analysis, the gender variable was regrouped into two categories considering the number of participants (men and women & others). The authors used the Statistical Package for the Social Sciences (SPSS) version 27.0 to perform the statistical analyses.

Results

Associations between smoking, sociodemographic characteristics and health history

A total of 285 Puerto Ricans with MI diagnosis participated in the study. The majority of participants were 52 to 82 years old (52.7%), identified as women (62.1%), and heterosexual (89.1%). The 32.6% of the sample reported having a high school degree, 78.1% were unemployed, and 61.6% were single. From the total sample, 25.3% reported current smoking. More than half (65.3%) reported multiple MI diagnoses, with depression (79.3%), anxiety (70.9%), and bipolar disorder (15.4%) being the most frequent diagnosis. Most participants reported a history of multiple chronic diseases (48.4%) and hypertension (41.6%). The calculated average BMI was 30.25 kg/m2, with most participants identified with overweight (27.4%) or obesity (46.3%).

There was a significant association between smoking and gender [$X^2(2) = 19.2, p < .001$]. Men showed higher smoking frequencies (51.4%) compared to other genders (38.8% of men, 62.1% of women, and 1.1% identifying as transgender & other). A significant association was found between smoking and sexual orientation [$X^2(2) = 10.9, p = .005$]. Participants identifying as heterosexual reported a higher smoking frequency (77.8%) compared to the rest of the sample. However, individuals identifying as homosexual (11.1%) and bisexual or other sexual orientations (11.1%) showed higher smoking rates compared to their heterosexual counterparts (3.6% for both bisexual and other orientations, and 92.7% of heterosexuals). The academic level was significantly associated with smoking [$X^2(1) = 7.8, p = .020$]. Participants with less than a high school and high school degree reported higher frequencies of smoking (22.5% and 38.0%, respectively). No other significant association was observed between other sociodemographic characteristics and smoking.

Another significant association was identified between multiple MI diagnoses and smoking [$X^2(1) = 8.2, p = .004$]. Participants with multiple MI diagnoses reported significantly higher frequencies of smoking rates (79.2%). Non-significant associations were found between chronic diseases and smoking ($p>.05$). However, participants who reported smoking reported a higher frequency of hypertension (40.3%), asthma (31.9%), and diabetes (30.6%) diagnoses. No significant associations were identified between smoking and BMI classifications ($p>.05$). Table 1 describes participants' sociodemographic characteristics and health conditions frequencies and associations with smoking and the significance level of Pearson Chi-square and Fisher's Exact test results.

Logistic Regression

Multiple logistic regression was performed to create a model of the relationship between smoking and multiple MI diagnoses, controlling for gender, sexual orientation, and academic level (Table 2). The .05 criterion of statistical significance was employed for all tests. The fit between the model containing only the intercept and data improved with adding the variables [$\chi^2(6, n=285) = 35.3, p < .001$]. The model explained 18.9% (Nagelkerke R^2) of the variance in smoking and correctly classified 76.1% of cases. A statistically significant association ($p<.05$) was found between gender, sexual orientation, academic level, multiple MI diagnosis (2 or >), and smoking. The Goodness of fit was explored by conducting Hosmer-Lemeshow, and the test was not significant ($p=.845$).

Discussion

Our results identified significant associations between smoking and sociodemographic characteristics and mental illness. among Puerto Ricans diagnosed with MI. This was confirmed by the logistic regression analysis, where gender, sexual orientation, academic level, and reporting multiple MI diagnoses were significantly associated with smoking. According to the analysis, Puerto Rican men reported a significantly higher smoking prevalence than any other gender. Similarly, participants who identified as homosexual, bisexual, or had different sexual orientations had a higher smoking proportion of smoking than heterosexual individuals. Findings specific to smoking by gender are consistent with earlier reports suggesting that men have a higher smoking prevalence than women in Puerto Rico (12.9% vs. 6.7%) (26). Likely, regarding academic level, our results reflected educational disparities previously identified among Hispanic minorities, where participants with lower academic levels reported significantly higher frequencies of smoking (33).

The results observed regarding sexual orientation and smoking proportion could be explained by the minority stress resulting from processes due to minority sexual identities, such

Table 1. Smoking (smoking and non-smoking) associations with sociodemographic characteristics, mental illness and chronic diseases

Characteristic	Total Sample (n=285) n (%)	Smoking (n=72; 25.3%) n (%)	Non-Smoking (n=213; 74.7%) n (%)	p-value
Age (years)				
21 to 51	151 (53.0)	45 (62.5)	106 (49.8)	.061
52 to 82	134 (47.0)	27 (37.5)	107 (50.2)	
*Gender**				
Man	105 (38.8)	37 (51.4)	68 (31.9)	<.001
Woman	177 (62.1)	32 (44.4)	145 (68.1)	
Transgender & Other	3 (1.1)	3 (4.2)	0 (0)	
*Sexual Orientation**				
Heterosexual	228 (89.1)	49 (77.8)	179 (92.7)	.005
Homosexual	14 (5.5)	7 (11.1)	7 (3.6)	
Bisexual & Other	14 (5.5)	7 (11.1)	7 (3.6)	
*Academic Level**				
Less than High School	41 (14.9)	16 (22.5)	25 (12.0)	.020
High School	90 (32.6)	27 (38.0)	66 (31.6)	
Associate degree or Higher	145 (52.5)	28 (39.4)	118 (56.5)	
*Employment Status**				
Employed	61 (21.9)	17 (24.6)	44 (21.1)	.615
Unemployed	217 (78.1)	52 (75.4)	165 (78.9)	
*Marital Status**				
Married/Partner	107 (38.4)	24 (33.8)	83 (39.9)	.398
Single	172 (61.6)	47 (66.2)	125 (60.1)	
*Mental Illness**				
Depression	226 (79.3)	62 (86.1)	164 (77.0)	099
Bipolar Disorder	44 (15.4)	16 (22.2)	28 (13.1)	.065
Anxiety	202 (70.9)	57 (79.2)	145 (68.1)	.073
Schizophrenia	28 (9.8)	10 (13.9)	18 (8.5)	.180
Borderline Personality	13 (4.6)	6 (8.3)	7 (3.3)	.100
Other	39 (13.7)	12 (16.7)	27 (12.7)	.394
Multiple MI (2 or >)	186 (65.3)	57 (79.2)	129 (60.6)	.004
*Chronic Diseases**				
Asthma	66 (23.7)	22 (31.4)	44 (21.1)	.077
Diabetes	74 (26.5)	22 (31.4)	52 (24.9)	.283
Hypertension	116 (41.6)	28 (40.0)	88 (42.1)	.757
Cardiovascular diseases	42 (15.1)	9 (12.9)	33 (15.8)	.700
Other	78 (28.0)	19 (27.1)	59 (28.2)	.861
Multiple Chronic Diseases (2 or >)	135 (48.4)	35 (50.0)	100 (47.8)	.755
*BMI**				
Under/Healthy-Weight (<18.5-24.9)	75 (26.3)	23 (31.9)	52 (24.4)	.387
Overweight (25-29.9)	78 (27.4)	20 (27.8)	58 (27.2)	
Obesity (>29.9)	132 (46.3)	29 (40.3)	103 (48.4)	

The sample size in some variables could vary due to small amounts of missing data.*

as discrimination and stigma associated with health risk behaviors (e.g., smoking) (34-35). Our findings seem to align with the literature that suggests the stress experienced by sexually diverse individuals could explain the increased prevalence of cigarette use and tobacco inequalities among this population (36). Within the social context, it is necessary to understand that environmental factors, such as stigma, could represent a driver to observed tobacco-related inequalities among sexually diverse individuals (37). However, the present results must be interpreted cautiously and are not generalizable because the number of participants in our study does not represent sexual minorities in the general population.

In addition to sociodemographic characteristics, associations were observed between MI diagnoses and smoking. In our sample, participants who smoke reported higher rates of multiple (two or more) MI diagnoses (79.2%), and the association was significant according to the logistic regression analysis. This is consistent with current literature suggesting that the prevalence of cigarette use increases with various MI diagnoses or vice versa (38). Likewise, it is essential to consider the high frequency of people who smoke and report depression diagnoses (86.1%). Depressive symptoms during an initial period of abstinence are associated with a return to smoking (38). Effective pharmacotherapy treatments for depressive symptoms, such as Bupropion, an antidepressant used for smoking cessation, or the combination of behavioral interventions and Varenicline, could improve adherence and diminish the impact of cessation in patients with MI [39=40]. Although, it is important to continue promoting Nicotine Replacement Therapy as a first-line treatment for smoking cessation for people with MI.

No significant associations were observed in multiple chronic diseases by smoking. Nevertheless, results reflect a higher frequency of self-reported diabetes and asthma in the smoking group. Our results are similar to literature that reports higher frequencies of self-report chronic diseases (i.e., diabetes and asthma) among Latino/Hispanic people who smoke compared to non-Latino/Hispanics diagnosed with MI in the US (41). However, it is inconsistent with the literature that established higher rates of presenting chronic diseases diagnosis among people who smoke (e.g., cardiovascular disease) in the general population and other ethnic subgroups (18). A possible explanation is the impact of other health-related factors, such as reporting overweight and obesity for people with MI, potentially representing a major risk factor for chronic diseases in Puerto Ricans with a diagnosis of MI (19).

Table 2. Multiple logistic regression results evaluating the smoking, gender, sexual orientation, academic level, and multiple MI diagnoses.

	Smoking	Non-Smoking	Adjusted OR[1] (95% CI)	p-value
Gender				
Man	37	68	2.6 (1.2, 5.2)	.011
Woman & other	35	145		
Sexual Orientation				
Heterosexual	49	179	0.5 (0.2, 0.8)	.013
Homosexual	7	7		
Bisexual & other	7	7		
Academic Level				
Less than High School	16	26	1.6 (1.0, 2.6)	.046
High School	27	66		
More than High School	28	118		
Multiple MI diagnosis (2 or >)	57	129	0.3 (0.1, 0.6)	.003

Moreover, the absence of associations between smoking among Puerto Ricans with MI and chronic disease diagnosis in our sample could be explained due to the limitations in gathering other health-related risk factors documented in the health needs assessment literature (i.e., psychiatric treatments and mental health stigma) [15, 42=43]. In addition, despite being recruited in a healthcare facility offering primary care services, participants were only included in the study if they received mental health services. That means they could or could not be receiving primary care services. This, in turn, could signify that participants could be unaware of any chronic disease if there were not receiving primary care services at the time. This is consistent with some of the literature in Puerto Rico, which emphasized that people with MI receive substandard primary care services and, in some instances, avoid it altogether due to the MI stigma encountered in medical settings (44-45). This highlights the involvement and interaction of multiple risk factors and confirms the relevance and need for preventive medicine services in different subgroups, such as Puerto Ricans with MI diagnoses.

There is a lack of evidence supporting effective long-term interventions to promote smoking cessation among people who smoke and have MI, including racial/ethnic minorities such as Latinos/Hispanics, having an MI diagnosis as a reason for exclusion from smoking cessation clinical trials (46). For example, in nine US-based smoking cessation studies for people with MI, only 4.31% (n=39) of participants were Latino/Hispanic (46). In addition, to the best of our knowledge, only two smoking cessation studies have been conducted in Puerto Rico (47-48). However, only one was a randomized control trial (33), and none were representative of the Puerto Rican population. Furthermore, no smoking cessation study in the US has included Puerto Ricans with MI living in the archipelago.

The present study has several limitations. First, smoking and participants characteristics are self-reported and dichotomous, limiting the interpretation of the results and analyses. Second, only information regarding whether the person smoked during the interview was collected in the study. The type of product used when smoking (i.e., cigarettes, e-cigarettes) and the frequency of patient consumption were not collected. Third, we did not assess the severity of the mental health disease and did not include psychiatric and psychological treatment and the age of diagnosis. This limitation could have underestimated the association of MI with other chronic diseases (e.g., co-morbidity, smoking, obesity), as reported in other studies (45). Fourth, this was a self-report health needs assessment with a modest sample size, which decreased the power to detect associations. Furthermore, the number of participants in the smoking subgroup limits the identification of confounding variables associated with smoking behavior among patients with MI. Fifth considering the impact of natural disasters on the recruitment process, the differences in recruitment years could represent a limitation when evaluating the relationship between participant characteristics and smoking. Sixth, while differences in smoking rates across sexual orientations were observed, further analysis of the statistical significance of these differences within each sexual orientation group would be warranted for more robust conclusions. Finally, the sample was recruited from a community healthcare center in the southern region of Puerto Rico, and thus it is not representative of the broader population of Puerto Rico or all individuals with mental health conditions. However, this approach is an important and valuable effort to include participants from outside the metropolitan area of Puerto Rico, where most research efforts tend to be concentrated.

Despite the limitations, this study moves forward to address a gap in the literature on smoking behavior among patients with MI diagnosis in Puerto Rico, where mortality, frequency of chronic diseases, and barriers to access health services have seldom been documented. Results confirm high prevalence rates of current smoking and the potential impact on health history among Puerto Ricans with MI diagnosis. Our study suggests that smoking cessation treatments for people living with MI in Puerto Rico must consider critical sociodemographic and health factors such as gender, sexual orientation, academic level, and multiple MI diagnosis. Evidence demonstrates that most people with MI who smoke want to quit smoking and that available pharmacotherapeutic cessation aids combined with behavioral support are effective, well tolerated and can result in the improvement of their overall health (49,50). Although the literature on smoking cessation interventions recommendations for Puerto Ricans with MI is limited, promising alternatives are cultural and linguistic adaptations (47, 49) and the use of mobile intervention (48). In addition, including Spanish speakers with MI in smoking cessation clinical trials is crucial (46, 51).

Resumen

Objetivo: En Puerto Rico, dos de cada diez adultos de 18 a 64 años (18.7%) tienen un diagnóstico de enfermedad mental (EM), como esquizofrenia, trastorno bipolar y trastorno depresivo mayor. Las personas con diagnóstico de EM reportan frecuencias más altas de enfermedades crónicas (por ejemplo, diabetes, cáncer, enfermedades cardíacas) y consumo de cigarrillos en comparación con la población general. Este estudio explora las asociaciones entre el consumo de tabaco, las características sociodemográficas y el historial de salud (es decir, enfermedades crónicas y diagnóstico de EM) en adultos con diagnóstico de EM en Puerto Rico. Métodos: Este estudio transversal incluye datos de 285 adultos puertorriqueños (> 21 años) con diagnóstico de EM que recibieron tratamiento psiquiátrico o psicológico en una instalación de salud comunitaria entre mayo de 2017 y mayo de 2020. Se utilizaron pruebas de chi-cuadrado para evaluar las asociaciones entre el consumo de tabaco y las características sociodemográficas, las enfermedades crónicas y el diagnóstico de EM. La regresión logística múltiple explicó la relación entre el consumo de tabaco, las características sociodemográficas y el diagnóstico de EM. Resultados: Un total de 25.3% (n=72) de los participantes reportaron fumar actualmente. Se encontraron asociaciones significativas entre el consumo de tabaco y las características sociodemográficas y el diagnóstico de EM en puertorriqueños diagnosticados con EM. El modelo de regresión logística explicó el 18.9% de la varianza en el consumo de tabaco y clasificó el 76.1% de los casos. Conclusión: Los resultados confirman las altas tasas de prevalencia de consumo de tabaco actual y el impacto potencial en la salud de los puertorriqueños con diagnóstico de EM. Se necesitan tratamientos personalizados para la cesación del tabaquismo en los puertorriqueños que viven con EM.

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