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Predictors of health service utilization rates among

patients with eating disorders: a meta-analysis

ABSTRACT

Eating disorders are psychologically, physically, financially, and socially devastating psychiatric illnesses that are widely prevalent across the United States and the rest of the world (Keel et al. 2017). However, common perception dictates that eating disorders primarily affect younger, thinner, affluent, Caucasian women (Sonneville et. al 2018). This creates a reluctance to seek eating disorder treatment among those who do not fit the societal stereotype (Ali et al. 2016). This study explores the relationship between demographic variables and rates of treatment-utilization behavior. We hypothesize certain characteristics will predict a lower rate of treatment-utilization behavior among those diagnosed with eating disorders.

INTRODUCTION

Eating disorders (EDs) are among society’s most debilitating & fatal psychiatric diagnoses characterized by detrimental physical effects, financial impacts, comorbidity rates, and psychological isolation (Keel et al. 2017). Despite their prevalence and severity across all demographics in society, eating disorders are perceived to only affect younger, thinner, more affluent, Caucasian women. This is known as the “SWAG” (Skinny White Affluent Girl) stereotype (Sonneville et. al 2018). However, this societal construct holds grave implications––in those who fall outside of the stereotype, eating disorders tend to be underdiagnosed and undertreated at higher rates (Gordon et al. 2002).

A propelling factor behind the diagnosis and treatment gap is that often, those who don’t fit the “SWAG stereotype” seek help for eating disorders at lower rates (Ali et al. 2016). Often, people of color, men, and other such demographics tend to under-utilize health services when grappling with an eating disorder. This happens for a variety of reasons; various qualitative studies have identified reduced treatment-seeking may be the result of financial constraints, lack of insurance coverage, sociocultural barriers, lack of trust in healthcare providers, failure to perceive severity of the ED, stigma, and shame (Ali et al. 2020, Robergeau et al. 2006).

This study explores the relationship between demographic variables and rates of treatment-utilization behavior. We hypothesized that race, gender, type of ED, age, & BMI affect the likelihood of an individual with an eating disorder to utilize treatment services.

METHODS

The data for this study was obtained from previously published peer reviewed studies listed in PubMed’s archives and the Brown University Library’s database. The criteria for inclusion were studies written in English; published from 1990-2020; used the keywords “treatment-seeking”, “help-seeking”, or “service utilization”; used the DSM-IV, DSM-V, and/or EDE-Q to diagnose participants; and either compared rates of treatment-seeking within a sample (quantitative), barriers to treatment-seeking (typically qualitative), or both. A total of ten studies consisting of 11398 patients met the criteria for inclusion.

Sources were organized by eliminating any data that fell outside of the set parameters, leaving out extra variables such as marital status, rates of diagnosis or referral for further care, subthreshold eating disorders, OSFED/EDNOS diagnoses, degree of participant acculturation, various comorbidities, etc.

Multiple rounds of two-sample T testing were chosen to compare two groups within each variable. The variables compared were participant race (Caucasian vs. people of color), gender (female vs. male), BMI/weight status (mean BMI of treatment-seekers vs. non-seekers), age (mean age of treatment-seekers vs. non-seekers), and type of eating disorder. The rate of treatment utilization was compared within these individual groups using one round of two-sample t-testing per category. In the case of the “type of eating disorder” variable, multiple rounds of t-testing were conducted in order to establish the relationship between anorexia nervosa & bulimia nervosa, binge eating disorder & bulimia nervosa, and anorexia nervosa & binge eating disorder.

RESULTS

*Relationship between race/ethnicity and service-utilization rates*

The participant pool analyzing ethnicity and rate of treatment-seeking was n = 10685. Among this sample, 10.1%of Caucasian participants sought treatment compared to only 2.5%of participants of color. The disparity in service-utilization behavior was found to be statistically significant (p = .02645). It should be noted that among Caucasian participants and participants of color alike, treatment-seeking behavior is rare, and low rates of service utilization must be addressed regardless of ethnicity.

*Relationship between gender and service-utilization rates*

The sample size analyzing the relationship between gender and service utilization rates was n = 1409. In this sample, 27.3% of women sought treatment vs. 4.8% of men. The disparity in treatment-seeking behavior was significant (p = .0087651). Again, a common theme shared among variables of race and gender was that treatment utilization rates across the board remain low in both the groups being compared.

*Relationship between BMI and service-utilization rates*

The number of participants in which BMI was recorded was n = 463. The mean BMI of those who sought treatment was 27.88, while the mean BMI of those who did not seek treatment was 26.2. There was no statistically significant difference between BMI of treatment-seekers and non-seekers (p = .36462).

*Relationship between age and service-utilization rates*

The sample of participants whose ages were recorded was n = 568. The mean age of treatment-seeking participants was 37.5 yrs, and the mean age of participants who did not seek treatment was 31.9 yrs. There was no statistically significant difference between the age of treatment-seeking participants and participants who did not seek treatment (p = .257256).

*Relationship between type of eating disorder and service-utilization rates*

The sample of participants in which type of eating disorder was specified was n = 958. In participants diagnosed with anorexia nervosa: 33.8% sought help for their eating disorder. In participants diagnosed with bulimia nervosa: 84.8% sought help. In participants with binge eating disorder, 38.4% sought help. While disparities between rates of help-seeking in AN & BN and BED & BN are stark, only participants with binge eating disorder were significantly less likely to seek help than those with bulimia nervosa (p = .043118).

DISCUSSION

*Implications*

This meta-analysis concluded that people of color and participants diagnosed with binge eating disorder were *significantly* less likely to seek treatment themselves than their Caucasian counterparts and those diagnosed with bulimia nervosa. However, disparities in rates of treatment-seeking within these variables still remained apparent and must be eliminated. In addition, rates of help-seeking behavior in even “SWAG stereotyped” groups were problematic, with rates of treatment-seeking behavior as low as 10.1%, proving that steps must be taken to eliminate service-utilization barriers universally. The results of this study allow individuals to take this information into account within clinical settings and use it to bridge gaps not only in service utilization between these groups (and boost service utilization rates across the board), but to also begin eliminating issues of underdiagnosis and undertreatment of EDs in at-risk groups.

*Limitations*

The primary limitation of this study was the variations among the studies and their respective samples. Not every study we used for analysis explored all the variables stated in the hypothesis. This led to larger sample sizes for some variables, and smaller sample sizes for others, and inconsistencies when it came available data. Considering the variable of gender in particular––although the sample size was fairly robust compared to others studied, and the difference between rate of female help-seeking and male help-seeking was stark, a smaller sample size of men compared to women may have skewed the findings.

*Future directions*

There are many variables whose relationship with service-utilization can be explored in the future, including socioeconomic status and various comorbidities, two factors that greatly influence the course and outcome of eating disorder pathology. In addition, statistical significance of current variables can be re-tested after gathering more robust data points for every category. If both of these steps are taken, then the study can be extended to creating a regression model or risk-assessment using these factors, and creating a model that takes a set of demographic factors and flag someone as significantly less likely to seek help for an eating disorder. All of these tools and future directions will allow clinicians to identify those at risk for lowered service utilization rates and potentially reach out and provide any necessary help.

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