

Abstract

As a major mental and psychological disorder, schizophrenia can cause disrupted thought patterns due to psychosis. While the mechanisms behind schizophrenia are unclear, the treatment methods often include antipsychotics which can influence patient health and serve as a risk factor for obesity. Researchers have sought schizophrenia treatment methods with a less noticeable impact on weight gain. To investigate the progress of schizophrenia treatment methods with fewer weight-related side effects, this study investigated the inclusion and exclusion frequencies of obesity-related terms in schizophrenia clinical trials. Collectively, obesity-related terms were found within the exclusion criteria of schizophrenia clinical trials 73.6% of the time compared to a 26.4% rate within inclusion criteria. Interestingly, most of the available terms were actually related to weight loss, although 93.75% of weight loss terms were found within the exclusion criteria of schizophrenia clinical trials. Considering the impact of schizophrenia treatments on health and weight management, further clinical trials should continue to investigate the effects of schizophrenia treatment methods on obesity and/or weight loss.

Background

Schizophrenia is a well-known mental and psychological condition that causes psychotic thoughts and a distorted perception of reality. While the causes of schizophrenia continue to be investigated, the current standard for treatment includes antipsychotic medications which can be responsible for abnormal increases in the risk and magnitude of obesity among schizophrenic populations (Wirshing, 2004, 13-26). Research has concluded that the risk for obesity is significantly higher in those being treated for schizophrenia, including adolescent patients (Chao et al., 2019, 1-11; Tian et al., 2020, 270-276).

Despite the effects of antipsychotic medications on weight gain in schizophrenia populations, many clinicians continue to rely on these medications as the primary treatment method for this disease. Some studies have found alternative treatment options such as betahistine in place of antipsychotics to modulate weight management while simultaneously improving schizophrenic symptoms (Naguy et al., 2019, 790-792). The development of new medicinal treatments could help improve the quality of life while reducing morbidity in schizophrenic populations without using invasive treatments such as gastric sleeves (Archid et al., 2019, 506-510). To date, updated treatment methods that simultaneously manage schizophrenia and obesity remain relatively understudied in schizophrenia clinical trials.

Methods

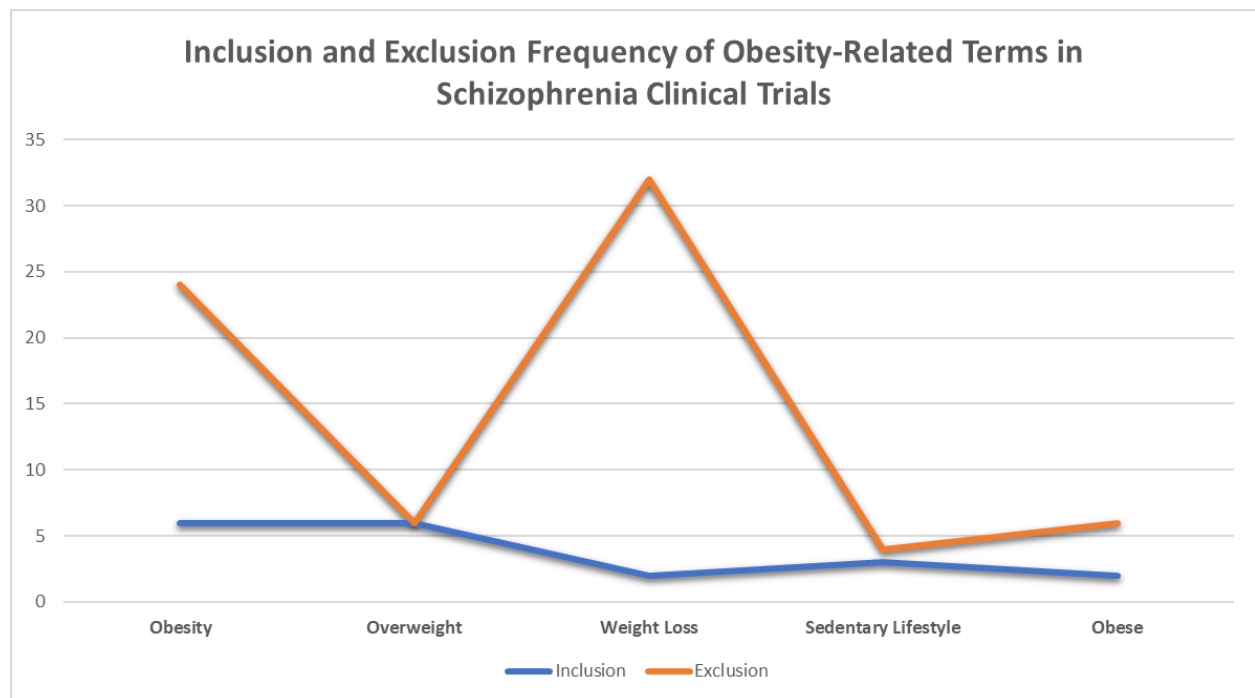
This study investigated the occurrence of obesity-related terms within schizophrenia clinical trials using extrapolated data from clinicaltrials.gov. Schizophrenia clinical trials were isolated using MeSHID D000012559 and scanned for obesity-related terms such as “obese”, “weight loss”, and “overweight”. All terms were recorded and organized by the inclusion and exclusion frequencies for further analysis using Python 3.9.10. All available obesity-related terms and their

respective frequencies are found in Figure 1 which is further illustrated to compare inclusion and exclusion frequencies in Figure 2.

Figure 1. Inclusion and exclusion frequencies of obesity-related terms found in schizophrenia clinical trials.

	Inclusion	Exclusion
Obesity	6	18
Overweight	6	0
Weight Loss	2	30
Sedentary Lifestyle	3	1
Obese	2	4
<u>Totals</u>	19	53

Figure 2. The proportion of inclusion and exclusion frequencies of obesity terms in schizophrenia clinical trials.



Results and Conclusion

Schizophrenia clinical trials are widely available although obesity-related terms are not considered voluminous in such studies. This study found a total of 72 obesity-related terms in schizophrenia clinical trials with 53 terms (73.6%) found within the exclusion criteria. "Weight loss" accounted for 30 of the 53 (56.6%) excluded terms. Collectively, obesity-related terms were 2.79 times more likely to be excluded than included in schizophrenia clinical trials. "Weight loss" yielded the highest exclusion rate at 93.75% and was 15 times more likely to be found in the exclusion criteria.

Antipsychotic schizophrenia treatments have been proven to increase the prevalence of obesity in treated populations. Even so, many schizophrenia clinical trials have failed to investigate the efficacy of treatments on obesity or weight loss and schizophrenia simultaneously. Researchers continue to speculate whether schizophrenia treatments should prioritize weight maintenance or weight gain in schizophrenic populations, however, neither was found to be studied regularly in schizophrenia clinical trials. To improve the quality of life and reduce morbidity in schizophrenic populations, clinical trials should continue to investigate the effects of schizophrenia treatments on weight management and obesity.

References

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