EXTENDED REALITY AND BINGE EATING BEHAVIORS AMONG DIVERSE RACIAL AND ETHNIC GROUPS

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Background: Binge eating disorder research lacks diversity and is primarily focused on the health of young, white women. Speed eating is a risk factor for obesity and eating disorder research has recently implemented sensor technology to monitor eating behaviors. Extended reality is an innovative approach to possibly monitor eating behaviors like fast chewing to reduce the risk of obesity among binge eaters. Binge eating treatment can benefit from extended reality methods to improve health outcomes in diverse racial and ethnic groups.

Objectives: We aim to explore the application of extended reality technology to monitor binge eating behaviors and dietary control to reduce racial and ethnic disparities in binge eating disorder research.

Methods: A literature review was conducted to understand the application of extended reality-related research on binge eating, chewing rates, and dietary measurements with a focus on diverse racial and ethnic populations.

Results: There is limited research on using extended reality to improve binge eating among racial and ethnic minority groups. Food and beverage consumption, cravings, weight loss, and portion size estimation are some of the focuses of extended reality studies. Augmented reality and virtual reality have improved participant outcomes, but there is a gap in augmented reality research to improve binge eating behaviors. Overall, there is a lack of literature focused on using extended reality to improve BED outcomes in diverse populations.

Conclusions: Extended reality methods can be used to understand binge eating behaviors and reduce the risk for related poor health outcomes but are currently underutilized. The innovative use of extended reality, such as augmented reality glasses, can provide an objective measure of chewing rates to understand how dietary behaviors impact the health of minority populations that binge eat.

Recommendations: Future research using extended reality can improve dietary interventions for populations at risk for binge eating.