Tidsskriftet Tidsskrift for Den norske legeforening

Problematic alcohol use in post-bariatric patients – a qualitative study

ORIGINAL ARTICLE

HEGE TVEDT

hege.tvedt@sus.no
Centre for Alcohol and Drug Research
Stavanger University Hospital
Author contribution: planning, participating in and executing the research process, participant interviews, design, data collection, analysis, interpretation, literature searches and drafting of the manuscript.
Hege Tvedt, clinical social worker with a master's degree in substance use and mental health work. Conducts substance inspections on somatic wards.
The author has completed the ICMJE form and declares no conflicts of interest.

REIDAR STOKKE

Rogaland A-senter
Author contribution: concept, recruitment of participants, addiction medicine quality assurance, analysis and interpretation of data, literature searches, revision of the manuscript and approval of the submitted version.
Reidar Stokke, specialist in substance use and addiction medicine and in general medicine. Head of department.
The author has completed the ICMJE form and declares no conflicts of interest.

TORGEIR GILJE LID

Centre for Alcohol and Drug Research
Stavanger University Hospital and
Faculty of Health Sciences
University of Stavanger

Author contribution: concept, facilitation, literature searches, revision of the manuscript and approval of the submitted version.
Torgeir Gilje Lid PhD, specialist in general medicine, head of research and associate professor II.
The author has completed the ICMJE form and declares no conflicts of interest.

ANNE SCHANCHE SELBEKK

Faculty of Health Sciences
University of Stavanger
and
Rogaland A-senter
Author contribution: concept, design, method, analysis and interpretation, literature searches, drafting and revision of the manuscript as well as approval of the submitted version.
Anne Schanche Selbekk PhD, sociologist, associate professor and formerly employed as head of R&D at Rogaland A-senter.
The author has completed the ICMJE form and declares no conflicts of interest.

BACKGROUND

Research shows an increased risk of alcohol use disorders in post-bariatric patients. This study aims to gain insight into what post-bariatric patients receiving treatment for substance use think are the possible causes for developing problematic alcohol consumption after surgery.

MATERIAL AND METHOD

Ten in-depth interviews were held with post-bariatric patients receiving treatment for substance use in 2020 (six men and four women). The data material was transcribed and analysed using the stepwise deductive-inductive (SDI) method.

RESULTS

The participants first started to experience problematic alcohol consumption after bariatric surgery. They described new, intense feelings of intoxication and how their body responded differently to alcohol. Alcohol now functioned as an appetite stimulant, pain reliever and food replacement. Most participants had positive experiences during the initial post-operative period, but they described an ambivalence towards their bodily changes and an increased mental vulnerability in the years following the surgery.

INTERPRETATION

The new effect and function of alcohol after the procedure may have made the participants more vulnerable to problematic alcohol consumption.

Main findings

A problematic relationship to alcohol developed in post-bariatric patients.

Study participants described new and intense feelings of intoxication when consuming alcohol post-operatively.

Alcohol had new effects in relation to appetite, pain, food replacement and mental health challenges.

Over the past 40–50 years, obesity and overweight have become a growing public health challenge in Norway (1). Bariatric surgery can be a suitable treatment for people with morbid obesity whose attempts at conservative treatment have failed and who have a BMI ≥ 35 kg/m2 with comorbidities or BMI < 40 kg/m2 (2). Gastric bypass is roughly as common as sleeve gastrectomy, and these two procedures accounted for nine out of ten operations in 2021 (3).

Several literature reviews show an increased risk of alcohol use disorders (AUDs) and problematic alcohol consumption following bariatric surgery (4–6). However, these studies are difficult to summarise due to differences in follow-up times, surgical methods and samples (4). A Norwegian registry study of the incidence of post-operative AUDs found that after a gastric bypass and sleeve gastrectomy, 6.36 % and 4.54 % of patients respectively developed AUD per 1000 person-years (7). The risk of developing alcohol dependence after bariatric surgery is higher for gastric bypass, and for men, smokers, those with a pre-operative regular alcohol intake and younger people, as well as with the use of illegal drugs and a lower sense of belonging (4, 8).

Enhancement processes related to the consumption of alcohol change after bariatric surgery and can increase the likelihood of developing AUDs (4, 9). Post-operative anatomical changes intensify and accelerate the effect of alcohol due to the reduced breakdown of alcohol and faster gastric emptying, particularly in the case of gastric bypass (10, 11). A recently published study by Engel et al. (12) with measurements pre-operatively and one year post-operatively identified changes in the rewarding effects and pharmacokinetic effects of alcohol as possible causes of increased risk of AUD after gastric bypass. Enhanced reward reactions to alcohol can occur independently of altered pharmacokinetics, possibly mediated by changes in appetite-regulating peptides in the stomach (11).

Other proposed explanatory models are symptom substitution and addiction transfer, where alcohol triggers the same reward responses in the brain that food did previously (10, 11). Several studies have investigated possible

connections between pre-operative food addiction and the development of post-operative AUD. The results show that food addiction among bariatric surgery candidates is relatively common, but the theory of addiction transferral has not been verified (13). In summary, several qualitative studies show increased post-operative sensitivity to alcohol, with faster intoxication, which in turn can lead to less control over alcohol intake (10, 14–16). Other qualitative studies show how problematic alcohol consumption after bariatric surgery is related to unresolved mental health challenges, negative self-image, challenges in dealing with food restrictions, little social support and lack of preparation for the effects of alcohol post-operatively (10, 15). The lifetime prevalence of mental disorders and psychosocial problems among both bariatric and non-bariatric patients with obesity is higher than in the general population (9).

Bariatric surgery involves major lifestyle changes in the form of food restrictions (15) and a change in identity that requires an adjustment to the new post-operative body (17). Following bariatric surgery, where the body is changed, the experience of being accepted in public can also change (18). One hypothesis is that increased social participation can mean easier access to alcohol for some patients, which in turn can boost consumption (9).

Few studies have focused on patients' own experiences with developing alcohol problems. As far as we know, no studies have been conducted in a Norwegian context. In this study, we wanted to examine how post-bariatric patients receiving interdisciplinary specialised treatment for substance use disorders (referred to here as SUD treatment) describe their experiences with developing alcohol problems. We wanted to explore this based on a biopsychosocial understanding of the phenomenon (19, p. 120), starting from a critical realist scientific position, where the complexity of the phenomenon and the interplay between biological, psychological and social mechanisms are highlighted (20).

The following research question was formulated: What are the experiences of post-bariatric patients who received a referral for SUD treatment for alcohol consumption pre- and post-operatively, and why do they think that their alcohol consumption became problematic?

Material and method

The participants were recruited from an SUD treatment unit in the period January to September 2020. The inclusion criteria were bariatric surgery, age over 30 and AUD with a minimum of two completed outpatient treatment sessions or admission to residential treatment. Thirty-five people met the inclusion criteria, and ten of these were selected based on the ranges in age, gender and scope of treatment.

In the first round, a secretary at the SUD treatment unit contacted ten patients, seven of whom agreed to participate, two declined and one did not answer the phone. In the second round, a total of six new people were contacted, two of whom declined and four wanted to participate. However, one of these was excluded due to their use of illegal drugs.

Six men and four women aged 30–69 years were included in the study. Eight patients had undergone gastric bypass surgery and two a sleeve gastrectomy. The level of treatment varied between residential treatment, outpatient treatment or both.

The method used was individual in-depth interviews, and a semi-structured interview guide was drawn up (21). Topics in the interview guide included reasons for choosing bariatric surgery, relationship with food, pre- and post-operative alcohol use, state of health and experiences with support services. The participants' experiences with the support services are not analysed in this article. Following receipt of written consent, the interviews were conducted by the first author in autumn 2020, either at the participants' home, in a treatment institution or at the interviewer's place of work. The participants were allowed to choose the interview location, with the exception of those receiving inpatient treatment at the time of the interview. The interviews lasted 32–90 minutes, with an average of 64 minutes. Some participants had more on their minds than others, and the semi-structured interview guide facilitated the use of in-depth follow-up questions. The interviews were recorded and transcribed verbatim.

The interviews were analysed by the first author in collaboration with the second and fourth authors, using a stepwise deductive-inductive (SDI) method (21). The aim of this method is to develop generalisable concepts or findings that support, challenge and expand existing theory. The method starts with inductive empirical coding of the transcribed material, from which code groups are generated and concepts developed. Although the method is inductive, it is also deductive, because subsequent steps entail seeking support in theory and checking the material with empirical evidence. In the analysis, we checked the empirical evidence against existing theories for the development of AUD in post-bariatric patients.

NVivo 12 Plus was used in the analysis work. The data material consisted of 237 transcribed pages (108,172 words), which were transformed into 412 empirical codes (nodes) in NVivo, then grouped into 26 code groups. The data were then synthesised and reduced to five code groups representing the findings.

To ensure the quality of the reporting from the study, we used COREQ, a 32-point checklist for qualitative interview studies (22).

The study was approved by the Regional Committee for Medical and Health Research Ethics Western Norway (case number 108872) and the Norwegian Centre for Research Data (case number 279680).

Results

Problematic alcohol consumption developed post-operatively

Pre-operative alcohol consumption varied among the participants, but none of them had previously considered their alcohol consumption to be problematic or been referred for SUD treatment. 'Despite easy access to alcohol, I didn't drink much' said Participant 1 (herein called P1, Participant 2 is P2, etc.). Several

considered their pre-operative alcohol consumption to be higher than average in the population, but that it 'never caused any problems' (P2). The participants described how their alcohol use became problematic between three months and five years after surgery. Those who felt they had a high pre-operative alcohol consumption developed problems with their alcohol intake shortly after surgery. Most felt that the bariatric surgery and the development of alcohol problems were linked. Two of the participants believed that the operation was the sole cause of their problem with alcohol.

The new, intense feeling of intoxication

All participants described how their experiences of drinking alcohol drastically changed post-operatively. They all found that the alcohol was quicker to take effect, and after 2–3 units of alcohol they felt intoxicated. Participant 3 explained how he could tolerate no more than half of what he was able to tolerate before. Most also described how they sobered up just as quickly as they had become intoxicated, and consequently experienced bouts of strong intoxication throughout the course of an evening: 'I have actually got drunk and sobered up three times in one evening' (P4). Participant 1 found the intoxication to be intense, and compared it to taking a shot of heroin: 'I imagine it's comparable to shooting up, because the hit comes so quickly.' The rapid intoxication gave many of the participants a good, warm and relaxing feeling in their body:

'I didn't need much before I felt it, it was so easy to get that good feeling, over and over again, throughout an evening. It was that feeling that I became addicted to.' (P5)

Participants 3 and 4 felt a craving for alcohol that they had not experienced before.

Several described how their hangovers changed. Participant 6 no longer had hangovers, and the threshold for drinking was thus lower. Participants 7 and 8 found that their hangovers were worse than before, and felt the need to 'repair'. All three considered their new hangover experiences to be a contributing factor to their problem with alcohol. The participants felt that their bodies now 'talked' to them in a way that they did not understand, and that they had to learn to 'communicate' with their bodies again:

'My body has always been good at telling me, "you should have a cup of coffee now", but that changed after surgery.' (P1)

Alcohol as an appetite stimulant, pain reliever and food replacement

The participants described how alcohol took on new functions post-operatively. Several found the post-operative food restrictions challenging, and had a poor appetite, reduced sense of taste and stomach pains after eating. They described how alcohol could help to normalise or recreate their previous relationship with food, either as an appetite stimulant, pain reliever or food replacement.

Participant 8 had a passionate love affair with food: 'When I was drunk, it was easier to eat, because I had a better appetite, so I could eat more.' Several of the participants missed eating without feeling discomfort, and some found their

stomach pains disappeared when they drank alcohol: 'I had a lot of stomach pain in the first few years, and I noticed that when I drank wine, it went away' (P2). After surgery, Participant 7 had so-called dumping syndrome (associated with unpleasant symptoms due to rapid gastric emptying) if she ate chocolate, but not when she drank alcohol.

Two of the participants' pre-operative food intake was closely linked to the regulation of emotions, where food either gave pleasure or subdued difficult emotions: 'Food was a comfort for me, then it was suddenly taken away from me and alcohol became a substitute for food' (P9). Prior to the interview, Participant 5 had not reflected on whether her own relationship with food was linked to the regulation of emotions, but during the interview she rationalised her way to a possible connection. However, the majority did not feel that food had been a coping strategy linked to the regulation of emotions. They explained their weight gain through their above average liking for food and the fact that they ate irregular meals, usually consisting of a few large portions at the wrong time of day. Their explanations also included inactivity and genes.

Ambivalence towards bodily changes

Most had positive experiences during the initial post-operative period. Overall, the participants were satisfied with their weight loss. Their lighter body and ability to do more made them feel good, and some were satisfied with their body and appearance for the first time in their life. Participant 5 expressed that she felt like a new person. The extent to which the participants' previous weight had affected their life situation, self-image and social life varied. Several had struggled with being overweight since childhood.

Three of the participants expressed a poor pre-operative self-image in relation to their body and appearance.

Following weight loss, some of the participants participated in society to a greater extent. Before surgery, Participant 1 did not have a social life outside of work, but this changed post-operatively:

'I was pretty confident, socially, I owned every room I entered and hit on women, which I hadn't done in years.' (P1)

Although the initial post-operative period was a happy time for many, some of the participants regretted the surgery and would not recommend it to others. Participants 1 and 7 had more social and personal challenges post-operatively. Participant 1's depression worsened, while Participant 7 felt that their body was not absorbing nutrients, making them exhausted and depressed. Both found that alcohol served as medication.

While feeling joy over their slim body, it was difficult for Participant 5 to accept the change. They developed a strong fear of putting on weight, and their relationship with their body was even more strained than before.

In addition to the positive consequences of surgery that the participants experienced, they also felt that they received positive attention and were less stigmatised by those around them. The new attention from others was appreciated, but they found the adjustment to life as a slim person to be a long process in which 'the head doesn't manage to keep up' (P5). One participant

commented that 'after 10 years I still buy size Large clothes, even though I know I'm a Small' (P9). These experiences were not directly linked to problematic alcohol consumption.

Increased mental vulnerability

The participants described how personal challenges in life also had a bearing on the development of problematic alcohol use, where alcohol was used to reduce mental pain: 'I didn't drink alcohol to get drunk, but to switch off' (P9).

Almost half of the participants had suffered from depression for several years pre-operatively. Among the participants who had not previously had mental health challenges, several developed such problems post-operatively. They described feeling more vulnerable and heavy-hearted. One expressed it as follows:

'I was outgoing before, now I've become antisocial and just drink, I'm alone, watch TV, lock myself in (...) it's probably related to alcohol, but there are other factors involved...' (P8)

Discussion

Changes in the body's reactions to alcohol after bariatric surgery have been described in qualitative and quantitative studies, particularly in relation to gastric bypass (4, 7, 14, 15, 23). In this study, we obtain rich descriptions of the participants' specific experiences with this. Experiencing a reward reaction that is much stronger than previously can serve as a strong motivator for repetition (24). The description that 'it's like shooting up' highlights the potential addictive power of an intensive experience. These experiences are comparable to what a study by Yoder et al. describes as 'a new buzz', which reinforces the trend towards problematic alcohol consumption (10). However, we are less certain of how this may relate to pre-operative expectations of alcohol.

Many of the participants found that they sobered up just as quickly as they had become intoxicated, but we have not identified any studies that can directly confirm this. On the contrary, studies show that it takes longer to sober up (11). Other research shows that post-bariatric patients describe better intoxication as well as no hangovers (25), as in the case of some of our participants. We have insufficient knowledge about hangovers within addiction research, but a large intake would normally indicate a worse hangover (26, p. 116).

Post-operative quality of life improved for most of the participants in this study, with weight loss, higher activity levels, less stigmatisation and increased socialising. This led them to participate more often in situations where alcohol was part of the social life. This is also confirmed in other qualitative studies, where the initial post-operative period is described as a 'honeymoon period' (10). However, the participants did not mention whether greater participation in social arenas where alcohol was consumed contributed to the development of alcohol problems.

Alcohol as a medicine or replacement

Alcohol took on a new function as an appetite stimulant (when the appetite disappeared) and pain relief (when the pain started) for several participants. We have not found any other research that addresses these aspects. An experimental study on alcohol and appetite in the general population found that moderate alcohol consumption can stimulate the appetite, particularly for fatty, rich food, because this type of food affects the reward mechanisms in the brain, which in turn release dopamine and give a sense of pleasure (27). Alcohol also has pain-relieving properties, which means that self-medication to treat pain is relatively common (28). However, alcohol has a dampening effect, which can reduce the attention being paid to the pain (26). Consequently, the pain will be perceived as less severe.

Two of the participants in the study described how eating gave them a sense of comfort and helped regulate their emotions, and how alcohol replaced food as a comfort mechanism post-operatively. This can be understood in light of theories of food addiction and filling the void. However, this only applies to two of the participants in this study, in contrast to the study by Yoder et al. in which psychological drivers were viewed as fundamental to the development of an alcohol problem for most of the participants (10). It is nevertheless worth noting that roughly half of the participants in this study struggled with depression pre-operatively.

Theories about addiction transfer (11, 24), where one addiction is replaced by another, have not been verified or well explored (13). Scientifically, it is difficult to give an exact definition of food addiction, and no clear link has been established between pre-operative food addiction and post-operative alcohol addiction. Post-operative alcohol problems are related to the type of intervention, and AUDs normally develop several years later as opposed to immediately after surgery (4). However, physiological and psychological theories are not mutually exclusive. Combined with social factors, both can play a role in the development of AUDs (23). Although the 'filling the void' theory only applies to two of our participants, it can help us understand what lies behind the development of AUDs after bariatric surgery.

Negative reinforcement

Almost half of the participants had suffered from depression for several years pre-operatively, and several of those who had not previously done so developed mental health problems post-operatively. After bariatric surgery, patients can experience chronic adverse effects (29) and the onset or worsening of depression (30). A qualitative Norwegian study among people with morbid obesity showed that trauma and other stressful life experiences are associated with obesity (31). Although the participants did not necessarily link alcohol consumption directly to psychosocial challenges, it is natural to think that these phenomena combined serve as negative reinforcements (23).

For a minority of the participants in this study, the adjustment to the new life was a challenging process for which they were ill prepared. Two of the women struggled with the fact that they still felt big, even though they had smaller bodies, which is consistent with the literature (17). Some were worried about

weight gain and still had a strained relationship with their body, which is common after bariatric surgery (32). The participants did not link these challenges directly to the development of alcohol problems. It is nevertheless relevant to point out a possible connection between an ambivalent body adjustment process and increased mental vulnerability, which in turn can result in increasing alcohol consumption as a coping strategy (24).

One study found that those who developed alcohol problems post-operatively were more likely to have a poorer self-image linked to an inability to control alcohol use and weight gain (15). Some participants in our study were anxious about weight gain, while some had put on a little weight, although this was not directly linked to a poor self-image. Most, however, struggled with a bad conscience and the stigma related to being unable to control their alcohol use, which can be interpreted as a form of failure in their ability to take control. For those who were most dissatisfied with their appearance pre-operatively and who had a poor self-image, the stigma surrounding alcohol problems can be a double stigma.

Strengths and weaknesses of the study

Although the number of participants could have been higher, we would argue that the material has good information power, in line with Malterud's model (33). Participants who were not inpatients at the time of the interview were allowed to choose whether they wanted to be interviewed at home or at the interviewer's office. The varying physical surroundings of the interviews may have impacted on the dialogue, but it is reasonable to assume that participants chose their preferred location.

The participants were in different phases of the SUD treatment process, which may have led to varying responses. The population and the problems were specific, the dialogue in the interviews was of high quality and the study had a clear analysis strategy.

The purpose of the study was to collect patient experiences on a fairly specific topic. The interviewer had extensive experience in talking to patients about alcohol consumption and health, and this helped to strengthen the quality of the dialogue. However, the interviewer also worked in a somatic hospital and may have been influenced by the large number of post-bariatric patients she met that had alcohol problems. Conversely, the interviewer's professional interest may have served as a quality assurance of the quality of the dialogue.

No pilot interviews or repeat interviews were conducted, and the participants were not given the opportunity to read through the interviews or comment on the findings. Doing so would have strengthened the quality of the study.

The retrospective design may have impacted on the level of detail in the descriptions of processes. The interviews were conducted 6–8 months into the COVID-19 pandemic, which may have been a factor in the participants' mental health and alcohol consumption. However, many of the participants' experiences dated back to an earlier period, and several had been abstaining from alcohol even before the pandemic.

Conclusion

The study helps shed light on post-bariatric patients' experiences with the development of problematic alcohol consumption post-operatively in a Norwegian context and provides insight into this. The experiences demonstrate how various mechanisms linked to biological changes act in combination with psychological and social conditions in the development of AUDs after bariatric surgery. The findings show that more knowledge is needed about risk factors for developing AUD after bariatric surgery. We also recognise the importance of identifying high-risk post-operative alcohol consumption and providing the necessary help. In addition, our findings show that it is important to discuss any bariatric surgery that patients receiving SUD treatment may have undergone.

The article is based on Hege Tvedt's master's thesis and project under the auspices of Rogaland A-senter. Anne Schanche Selbekk was the main supervisor and Reidar Stokke was a co-supervisor.

The article has been peer-reviewed.

REFERENCES

1. Folkehelseinstituttet. Helsetilstanden i Norge 2018. Folkehelserapporten – kortversjon. https://www.fhi.no/publ/2018/fhr-2018/ Accessed 14.5.2020.

2. Helsedirektoratet. Overvekt og fedme. https://www.helsedirektoratet.no/tema/overvekt-og-fedme Accessed 18.4.2021.

3. Norsk kvalitetsregister for fedmekirurgi (SOReg-N). Årsrapport for 2021 med plan for forbetringstiltak. https://www.kvalitetsregistre.no/sites/default/files/2022-06/Årsrapport%202021%20SOReg-N.pdf Accessed 24.11.2022.

4. Ivezaj V, Benoit SC, Davis J et al. Changes in Alcohol Use after Metabolic and Bariatric Surgery: Predictors and Mechanisms. Curr Psychiatry Rep 2019; 21: 85. [PubMed][CrossRef]

5. Azam H, Shahrestani S, Phan K. Alcohol use disorders before and after bariatric surgery: a systematic review and meta-analysis. Ann Transl Med 2018; 6: 148. [PubMed][CrossRef]

6. Cerón-Solano G, Zepeda RC, Romero Lozano JG et al. Bariatric surgery and alcohol and substance abuse disorder: A systematic review. Cir Esp (Engl Ed) 2021; 99: 635–47. [PubMed][CrossRef]

7. Strømmen M, Bakken IJ, Klöckner C et al. Diagnoses related to abuse of alcohol and addictive substances after gastric bypass and sleeve gastrectomy:

a nation-wide registry study from Norway. Surg Obes Relat Dis 2020; 16: 464–70. [PubMed][CrossRef]

8. King WC, Chen JY, Mitchell JE et al. Prevalence of alcohol use disorders before and after bariatric surgery. JAMA 2012; 307: 2516–25. [PubMed] [CrossRef]

9. Sarwer DB, Heinberg LJ. A review of the psychosocial aspects of clinically severe obesity and bariatric surgery. https://psycnetapa-org.ezproxy.uis.no/fulltext/2020-09435-010.html Accessed 9.3.2021.

10. Yoder R, MacNeela P, Conway R et al. How Do Individuals Develop Alcohol Use Disorder After Bariatric Surgery? A Grounded Theory Exploration. Obes Surg 2018; 28: 717–24. [PubMed][CrossRef]

11. Blackburn AN, Hajnal A, Leggio L. The gut in the brain: the effects of bariatric surgery on alcohol consumption. Addict Biol 2017; 22: 1540–53. [PubMed][CrossRef]

12. Engel SG, Schaefer LM, Kerver GA et al. The rewarding effects of alcohol after bariatric surgery: do they change and are they associated with pharmacokinetic changes? Surg Obes Relat Dis 2022; 18: 190–5. [PubMed] [CrossRef]

13. Ivezaj V, Wiedemann AA, Grilo CM. Food addiction and bariatric surgery: a systematic review of the literature. Obes Rev 2017; 18: 1386–97. [PubMed] [CrossRef]

14. Ivezaj V, Kalebjian R, Grilo CM et al. Comparing weight gain in the year prior to treatment for overweight and obese patients with and without binge eating disorder in primary care. J Psychosom Res 2014; 77: 151–4. [PubMed] [CrossRef]

15. Reaves DL, Dickson JM, Halford JCG et al. A Qualitative Analysis of Problematic and Non-problematic Alcohol Use After Bariatric Surgery. Obes Surg 2019; 29: 2200–9. [PubMed][CrossRef]

16. Spadola CE, Wagner EF, Varga LM et al. A Qualitative Examination of Increased Alcohol Use after Bariatric Surgery among Racially/Ethnically Diverse Young Adults. Obes Surg 2018; 28: 1492–7. [PubMed][CrossRef]

17. Perdue TO, Schreier A, Swanson M et al. Majority of female bariatric patients retain an obese identity 18-30 months after surgery. Eat Weight Disord 2020; 25: 357–64. [PubMed][CrossRef]

18. Grønning I. Fedmefortellinger: Om vektnedgang og biografiske opprykk. Sosiologisk Tidsskr 2014; 22: 227–48. [CrossRef]

19. Biong S, Ytrehus S. Helsehjelp til personer med rusproblemer. Oslo: Cappelen Damm akademisk, 2018.

20. Jakobsen TG. Vitenskapsfilosofi og kritisk realisme - et ikke-antroposentrisk alternativ. 1. utg. Bergen: Fagbokforlaget, 2021: 228– 30.

21. Tjora A. Kvalitative forskningsmetoder i praksis. Oslo: Gyldendal akademisk, 2017.

22. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. Int J Qual Health Care 2007; 19: 349–57. [PubMed][CrossRef]

23. Saules KK, Wiedemann A, Ivezaj V et al. Bariatric surgery history among substance abuse treatment patients: prevalence and associated features. Surg Obes Relat Dis 2010; 6: 615–21. [PubMed][CrossRef]

24. Engel SG, Schaefer LM, Davis J et al. Review of Changes in the Reinforcing Effects of Alcohol in Weight Loss Surgery Patients. Curr Psychiatry Rep 2021; 23: 69. [PubMed][CrossRef]

25. Ivezaj V, Saules KK, Wiedemann AA. "I didn't see this coming.": why are postbariatric patients in substance abuse treatment? Patients' perceptions of etiology and future recommendations. Obes Surg 2012; 22: 1308–14. [PubMed][CrossRef]

26. Mørland J, Waal H. Rus og avhengighet. Oslo: Universitetsforlaget, 2016.

27. Schrieks IC, Stafleu A, Griffioen-Roose S et al. Moderate alcohol consumption stimulates food intake and food reward of savoury foods. Appetite 2015; 89: 77–83. [PubMed][CrossRef]

28. Alford DP, German JS, Samet JH et al. Primary Care Patients with Drug Use Report Chronic Pain and Self-Medicate with Alcohol and Other Drugs. J Gen Intern Med 2016; 31: 486–91. [PubMed][CrossRef]

29. Gribsholt SB, Svensson E, Richelsen B et al. Rate of Acute Hospital Admissions Before and After Roux-en-Y Gastric Bypass Surgery: A Population-based Cohort Study. Ann Surg 2018; 267: 319–25. [PubMed][CrossRef]

30. Green DD, Engel SG, Mitchell JE. Psychological aspects of bariatric surgery. Curr Opin Psychiatry 2014; 27: 448–52. [PubMed][CrossRef]

31. Stranden E, Gundersen IF, Getz L et al. Belastende livserfaringer blant pasienter med sykelig overvekt. Tidsskr Nor Legeforen 2020; 140: 1640–5. [CrossRef]

32. Lier HØ, Aastrom S, Rørtveit K. Patients' daily life experiences five years after gastric bypass surgery–a qualitative study. J Clin Nurs 2016; 25: 322–31. [PubMed][CrossRef]

33. Malterud K, Siersma VD, Guassora AD. Sample Size in Qualitative Interview Studies: Guided by Information Power. Qual Health Res 2016; 26: 1753–60. [PubMed][CrossRef]

Publisert: 6 January 2023. Tidsskr Nor Legeforen. DOI: 10.4045/tidsskr.22.0449
Received 26.6.2022, first revision submitted 2.11.2022, accepted 24.11.2022.