

Validation of the Swiss-Finnish Bariatric Metabolic Outcome Score (SF-BARI Score) with combined registry data from Northern-Europe

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As the worldwide prevalence of obesity keeps increasing,¹ so does the amount of performed bariatric procedures, with already over 500,000 registered procedures each year.² As a result, the amount of research that is done within the bariatric field has taken off as well. For comparing outcomes after metabolic bariatric surgery (MBS), it is very desirable to have standardization of reporting, and a standard for defining a successful outcome such as a composite outcome measure encompassing all relevant aspects would aid in comparing results. A used criterium for successful short-term results is textbook outcome, which encompasses the occurrence of postoperative complications, length of stay, and potential readmission.³ Nevertheless, except for weight loss, there appears to be no widely used standard for defining a successful long-term outcome. Although the Bariatric Analysis and Reporting Outcome System (BAROS) score has been developed for this purpose,⁴ it was never really adapted into common practice, possibly due to its major shortcomings.⁵

Therefore, in 2023, a new composite end point including weight loss, comorbidity improvement, complications, with the potential of adding patient reported outcomes, was developed as the need for a standardized composite outcome persisted. This Swiss-Finnish Bariatric Metabolic Outcome Score (SF-BARI score) differs from the BAROS score in various ways, with the most important one that it considers weight loss as percentage total weight loss (%TWL) on a continuous scale, instead of percentage excess weight loss (%EWL) on a categorical scale using certain thresholds. Furthermore, it has clear definitions of the obesity-related comorbidities and when to speak of improvement or deterioration of the comorbidity in question. The SF-BARI score was developed during a secondary analysis of merged data⁶ from two large randomized controlled trials (SLEEVEPASS (Laparoscopic Gastric Bypass vs Sleeve Gastrectomy to Treat Morbid Obesity) and SM-BOSS (Swiss Multicenter Bypass or Sleeve Study)),^{7,8} by giving a score between -100 and 200 based on the aforementioned aspects. Based on the distribution of the score, certain percentiles were chosen to determine whether an outcome was considered suboptimal, fair, good, very good, or excellent. One of the most important benefits of the SF-BARI score compared to the BAROS score is its feasibility, and that it strongly correlates with the amount of perceived %TWL.

Before the SF-BARI score can be implemented in daily practice, it must be validated in an external cohort. Therefore, the aim of the current study is to assess whether the score is applicable to patient data from the Dutch Audit for Treatment of Obesity (DATO) and Scandinavian Obesity Surgery Registry (SOReg), and to explore whether modifications should be made to the SF-BARI score to make it more practicable for current practice.

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