

Obesity and skin problems in persons with a lower limb amputation



Background

A lower limb amputation (LLA) can lead to weight gain and obesity (body mass index (BMI) ≥ 30 kg/m²).^{1,2} Data regarding the prevalence of obesity in the Dutch population with a LLA are lacking.

Aims

1. To determine the prevalence of obesity in Dutch persons with a LLA.
2. To explore associations between body weight, BMI and skin problems of the residual limb and the frequency of prosthetic repairs.

Methods

Study design: Survey.

Patients: Adults, unilateral LLA ≥ 1 year before inclusion, due to any cause, and prosthesis user.

Data collection: Body height and weight, self-reported skin problems (previous month) and factors potentially associated with skin problems, and assessment of visit frequency to orthopedic workshops.

Results

- 413 persons enrolled (mean age \pm SD 62.3 \pm 14.9 years, 30% female, 39% amputation due to trauma, 57% TTA (Fig 1a,b), 39% was overweight and 28% was obese (Fig 1c).
- 77% reported skin problems in the previous month.
- Skin problems were associated with a younger age (Fig 2a,b).
- Severe skin problems were associated with a lower BMI (Fig 2c).
- Body weight and BMI were not associated with prosthetic repairs.

References

1. Rosenberg D.E. et al. Body mass index patterns following dysvascular lower extremity amputation. *Disabil Rehabil.* 2013;35(15):1269-75.
2. Littman A.J. et al. Lower-limb amputation and body weight changes in men. *J Rehabil Res Dev.* 2015;52(2):159-70.

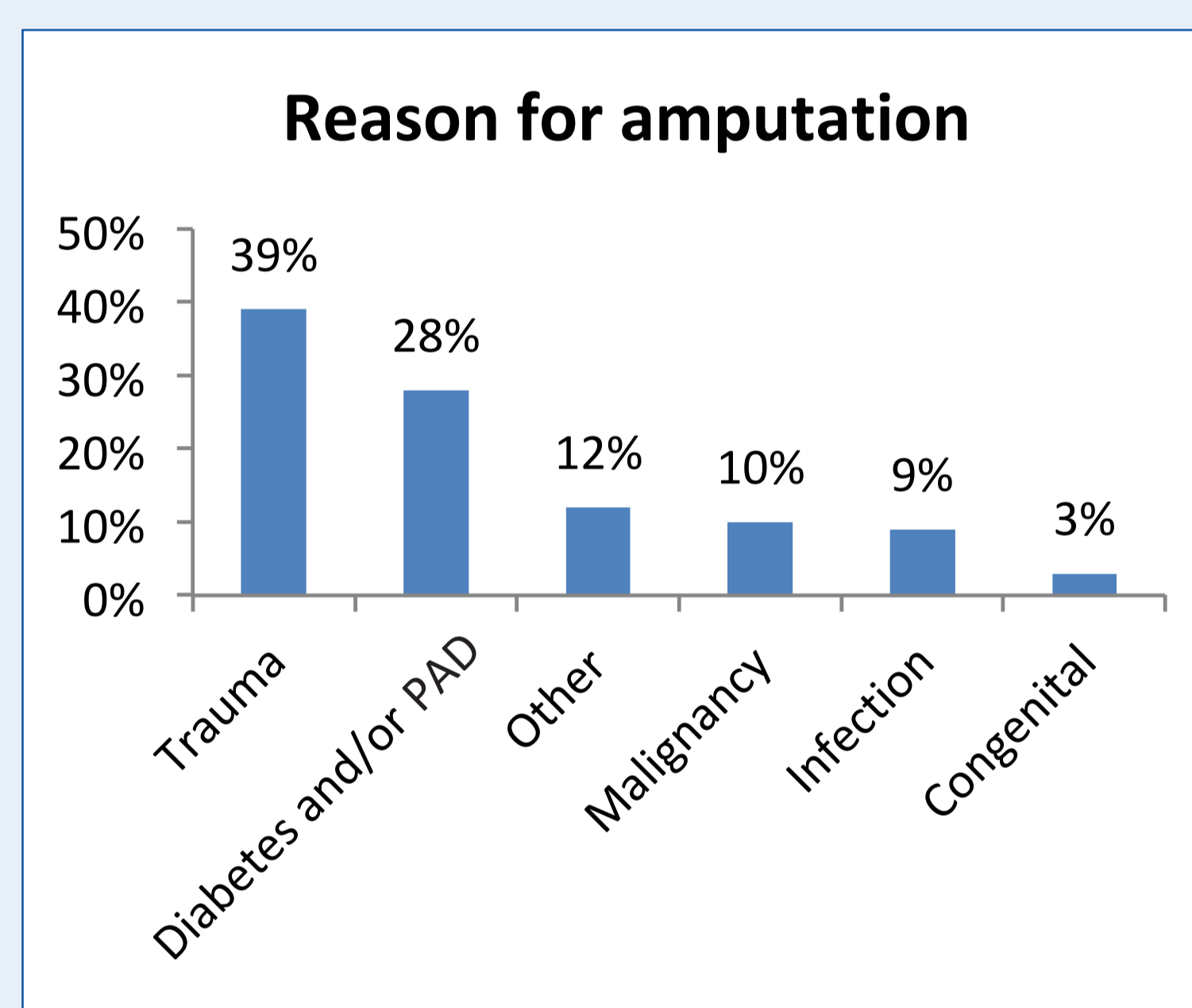
Conclusion

In the Dutch ambulant population with a LLA 39% is overweight and 28% is obese. No association was found between body weight, BMI and general skin problems of the residual limb and the frequency of prosthetic repairs.

Clinical message

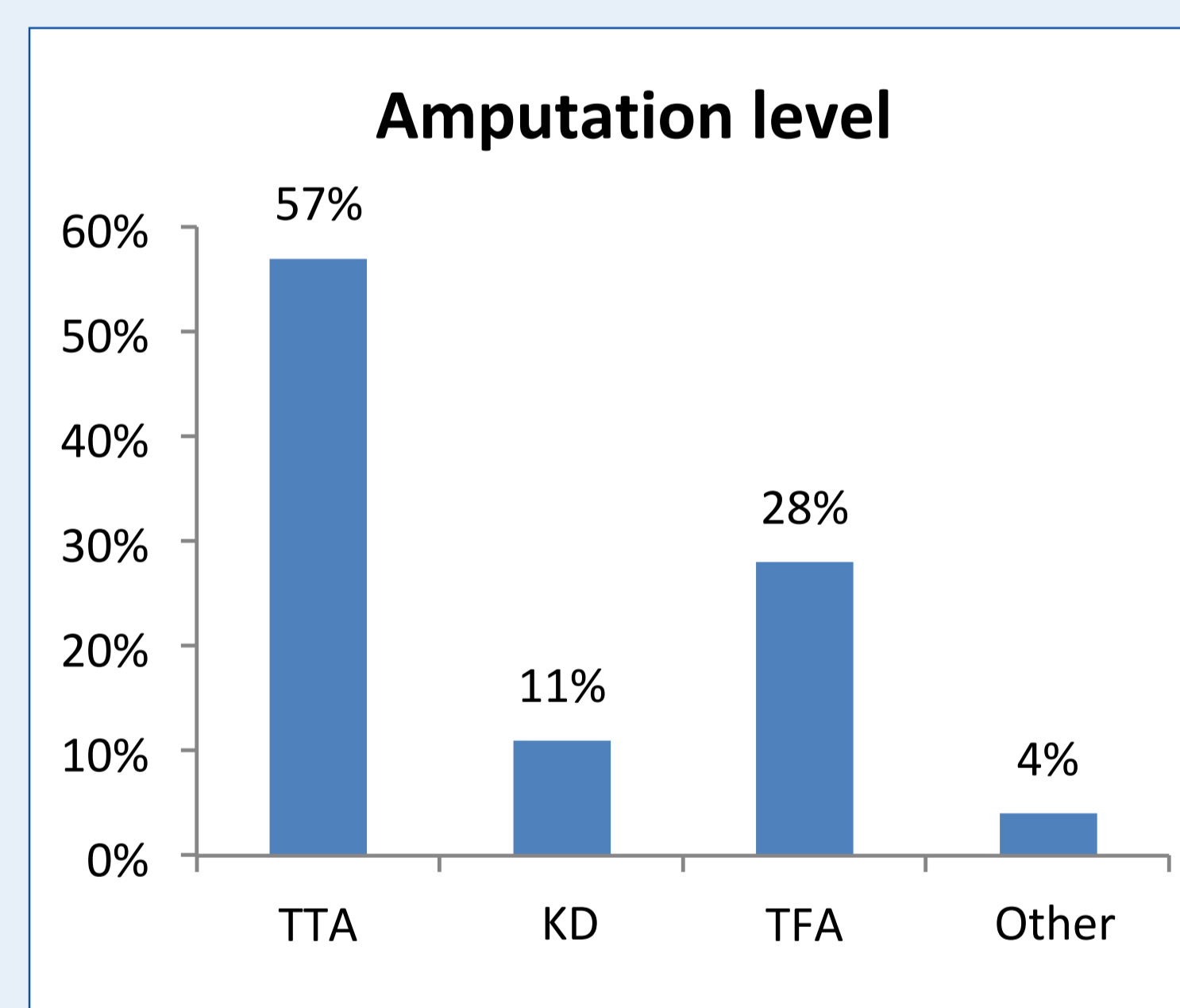
Obesity may not be a risk factor in the development of skin problems and the need for prosthetic repairs. Still, we recommend careful assessment of the BMI in this population, as obesity has a well-known negative impact on general health.

Figure 1a Reason for amputation.



PAD = peripheral arterial disease

Figure 1b Amputation level.



TTA = trans-tibial amputation, KD = knee disarticulation, TFA = trans-femoral amputation

Figure 1c BMI.

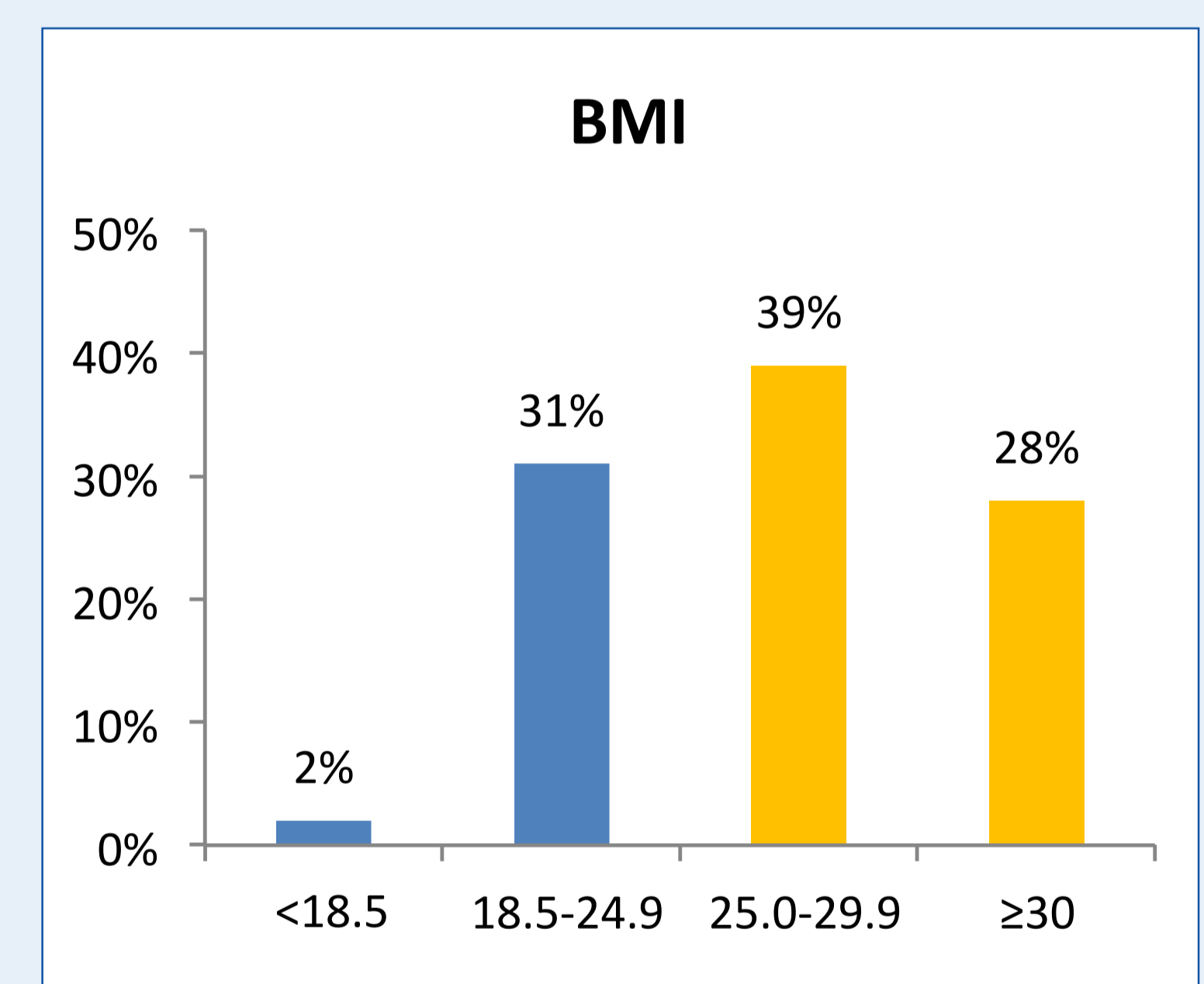


Figure 2a Difference in mean age in persons with and without skin problems ($p < .001$).

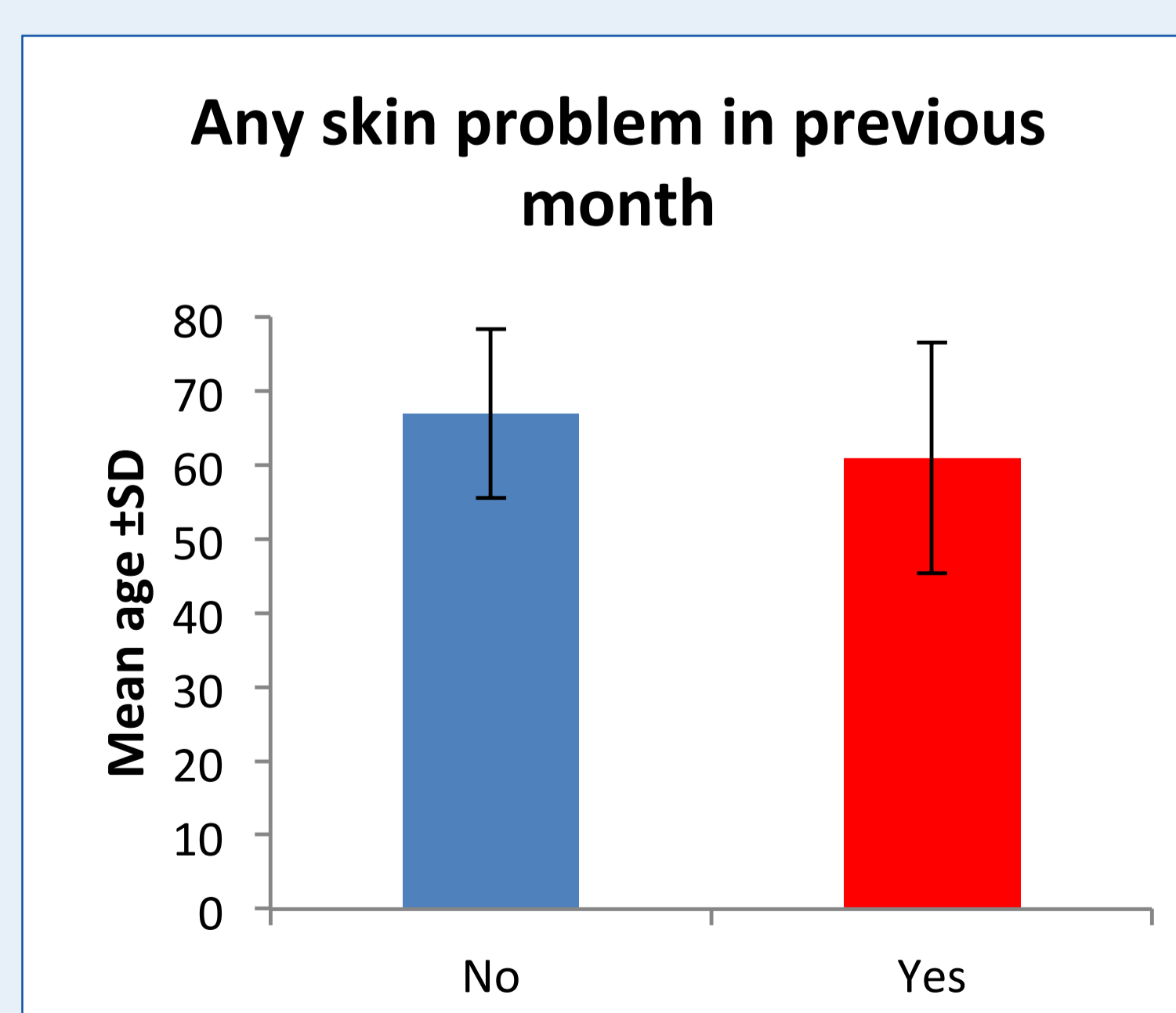


Figure 2b Difference in mean age in persons with and without severe skin problems ($p = 0.001$).

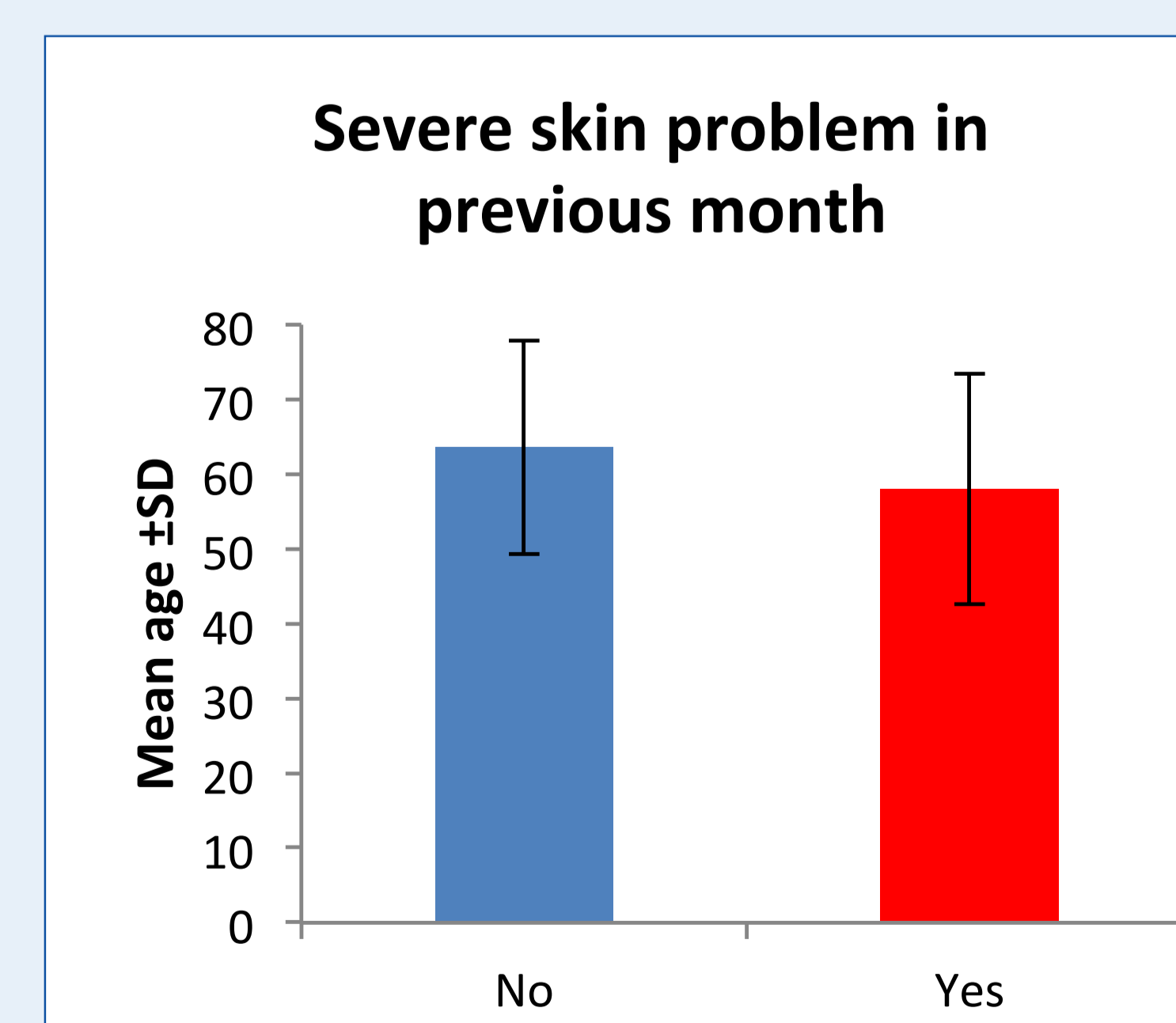
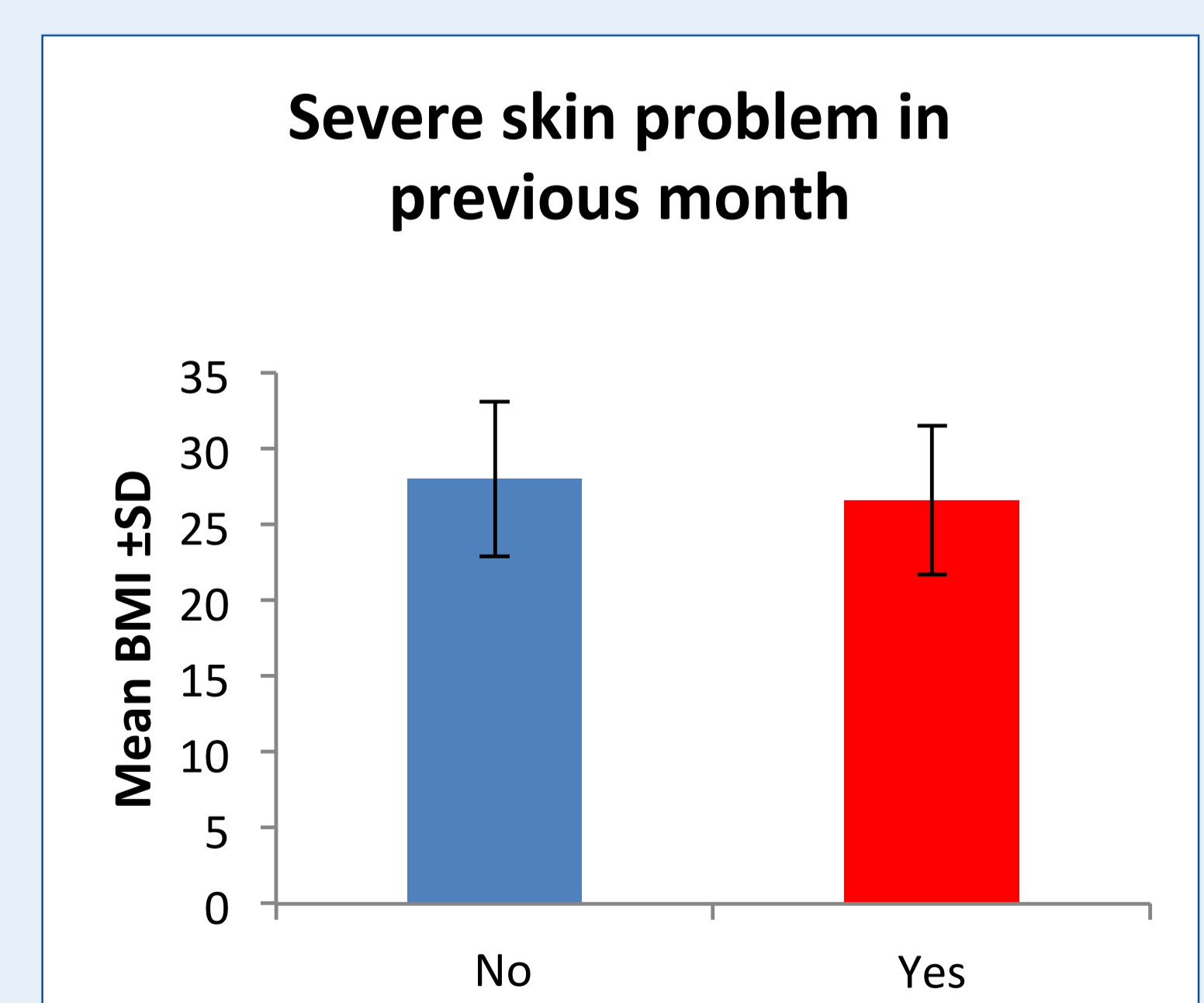


Figure 2c Difference in mean BMI in persons with and without severe skin problems ($p = 0.012$).



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