Bone & Joint Research

Supplementary Material

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Table i. Comparison of the true and designated values of the thickness, width, and length of the fragment as well as the calcaneal bone mineral density.

Measurement	Test value	Mean (SD)	p-value*
Thickness, mm	5	5.05 (0.06)	0.107
	10	10.00 (0.08)	0.949
	15	14.90 (0.09)	0.051
Width, mm	12	11.92 (0.10)	0.132
Length, mm	12	11.93 (0.10)	0.155
BMD, g/cm^2	0.65†	0.66 (0.01)	0.102

*One-sample *t*-test.

†Reference human calcaneal bone mineral density in the literature.

BMD, bone mineral density; SD, standard deviation.

Table ii. Tests of normality for all the outcome measures.

Outcome measure	Mean (95% CI)	N	p-value*
Load to failure test			
Peak failure load, N	374.82 (337.27 to 412.37)	18	0.220
Stiffness, N/mm	65.34 (65.34 to 58.28)	18	0.134
Cyclic loading test			
Peak failure load, N	347.24 (65.34 to 58.28)	18	0.083
Average stiffness, N/mm	44.28 (65.34 to 58.28)	15	0.021
Creep, mm	7.89 (65.34 to 58.28)	15	0.571

*Shapiro-Wilk test.

CI, confidence interval.

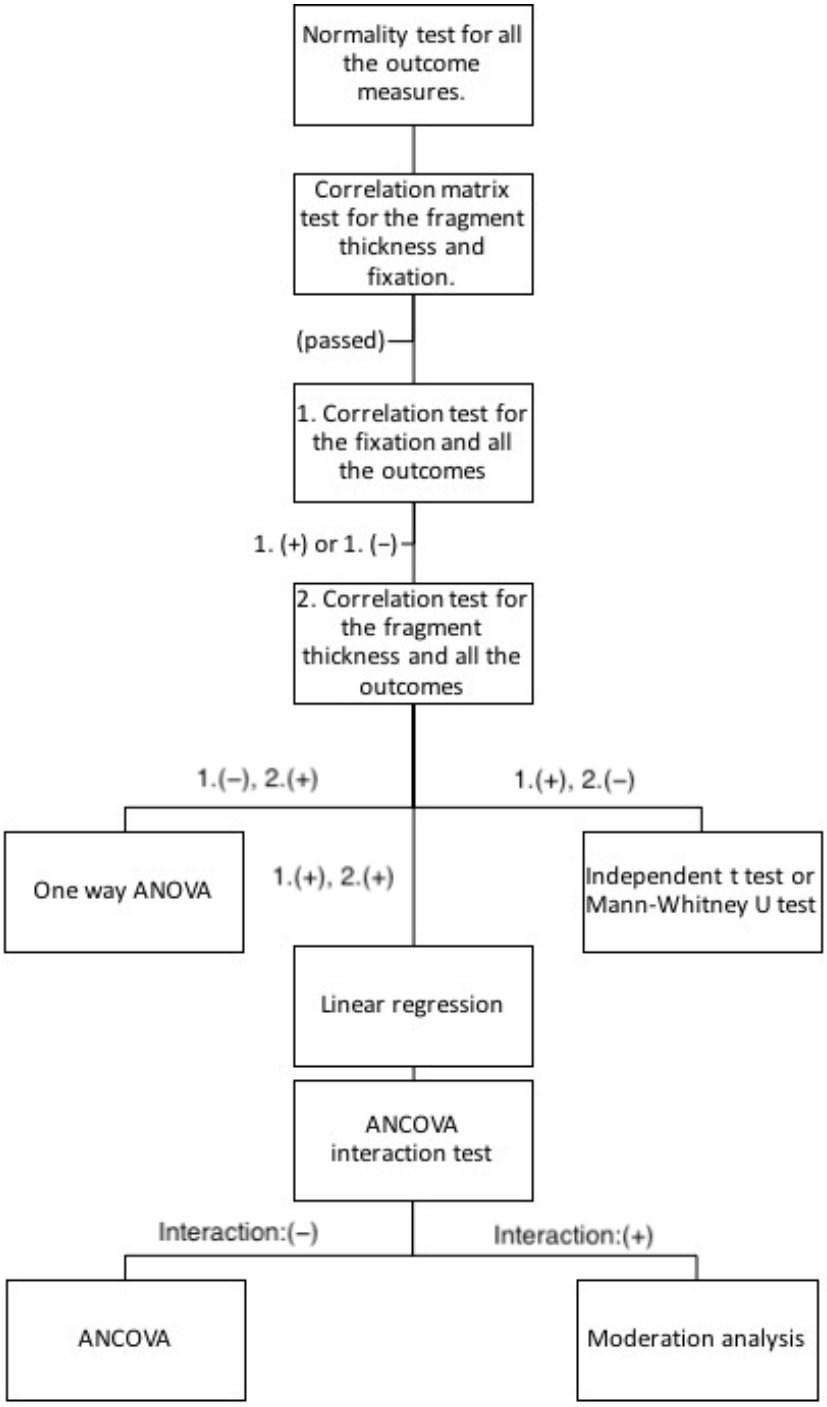

Fig. a. The statistical workflow of the study. All the outcome measures went through the process to examine the effect the two independent variables (fragment thickness and fixation methods). The normality of the outcome measures and the multicollinearity of the two independent variables were checked. Linear correlation was assumed, and the correlation of the outcomes with the fixation methods or fragment thickness was examined. Next, if there was no significant interaction between the two independent variables, analysis of covariance (ANCOVA) was performed to measure the individual effect of the thickness and fixation methods on the outcomes. Conversely, with significant interaction, moderation analysis calculated the effect of the fragment thickness, fixation method,

and combined on the outcomes. The moderation analysis was performed by introducing the PROCESS macro package into SPSS v26.0 (IBM, USA). ANOVA, analysis of variance.

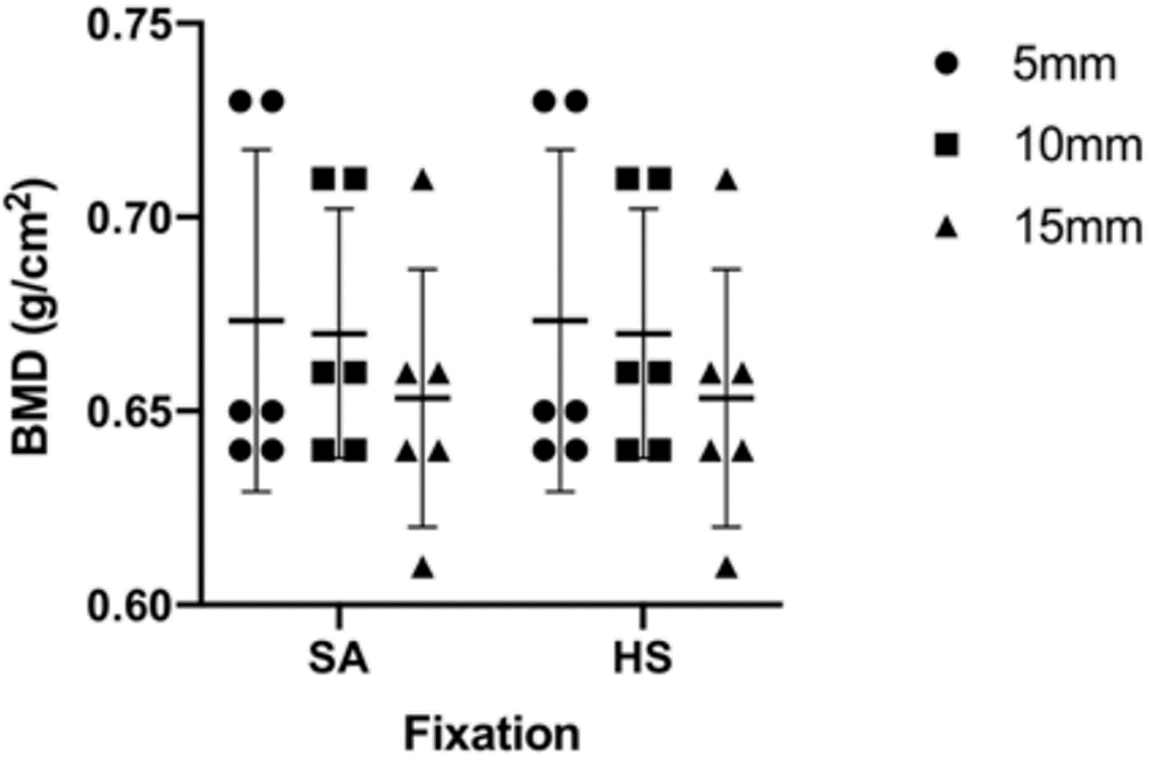

Fig. b. Means and 95% confidence intervals (CIs) of the bone mineral density (BMD) in the six subgroups. No significant difference in BMD among the six groups was detected by one-way analysis of variance (ANOVA) ($p = 0.120$). HS, headless screws; SA, suture anchors.