

The Acceptability and Feasibility of 3D Reconstruction and Virtual Reality in addressing Body Image in Bariatric Surgery

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I have no potential conflict of interest to report



Background:

- Motivation for 1 in 5: Body image dissatisfaction (BID) and stigma
- Bariatric surgery results in 12-45% total body weight loss in 3 years (Avg. 25%)
- Recent studies: Patients continue to experience BID post operatively
- May be due to unrealistic expectations
- Poorer outcomes → Impacts weight loss and QOL

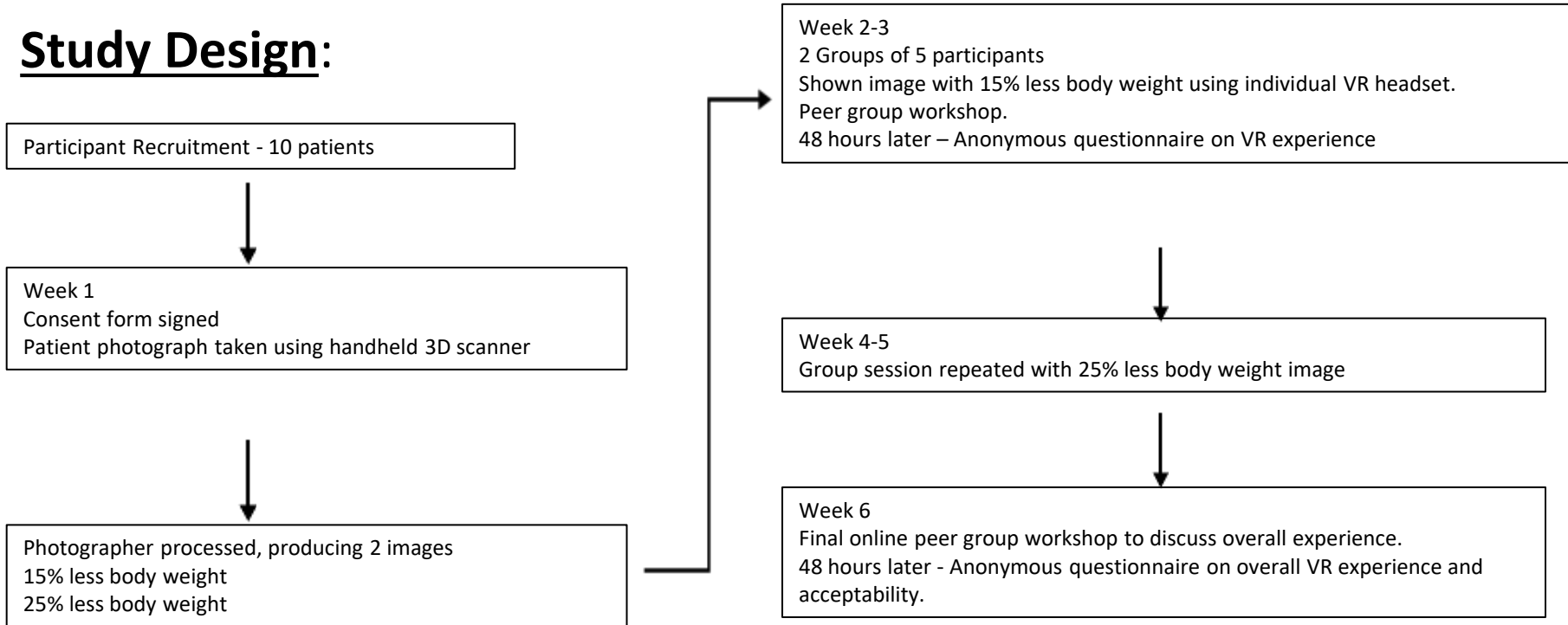
Pilot Study:

Is 3D reconstruction and virtual reality (VR) a feasible and acceptable method of helping bariatric patients improve their psychological outcomes and body image satisfaction after surgery?

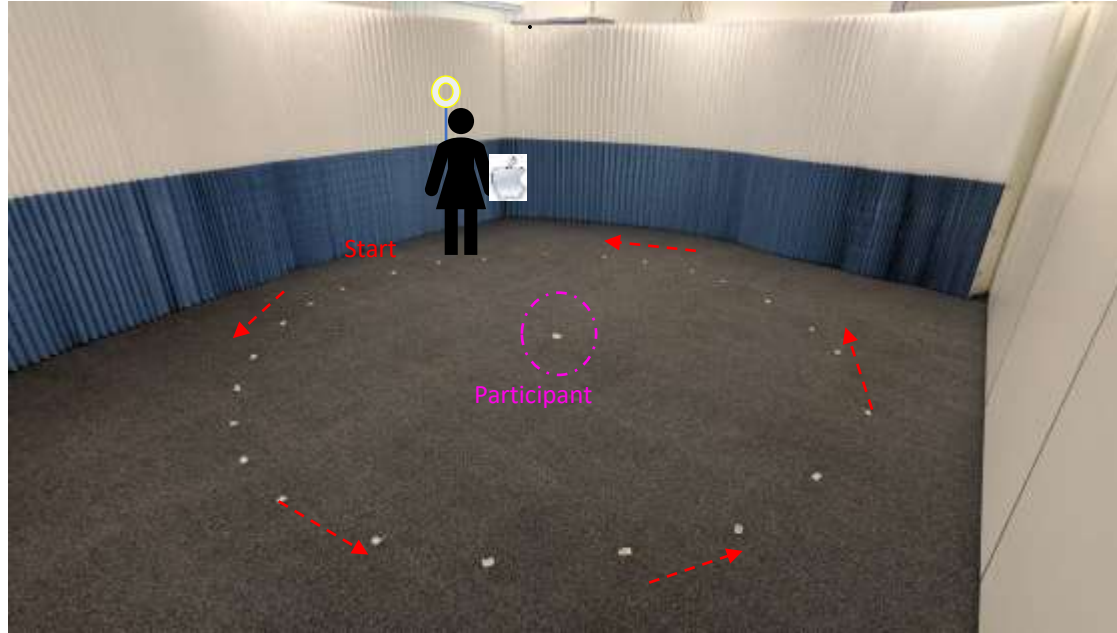
This study was given a favourable ethical opinion for conduct by the NHS by Surrey REC.



Study Design:



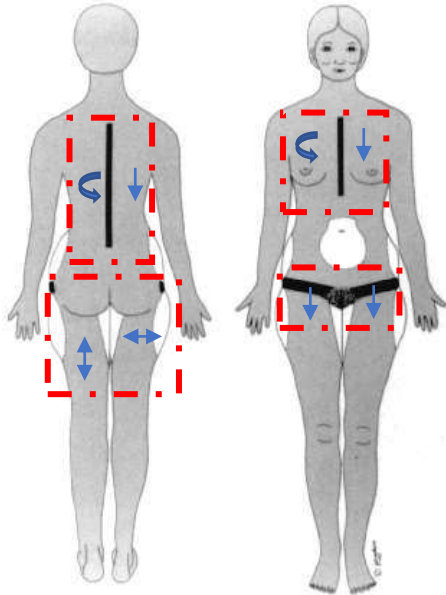
3D Scanning:



Time taken to scan: 2-3 mins

3D Reconstruction:

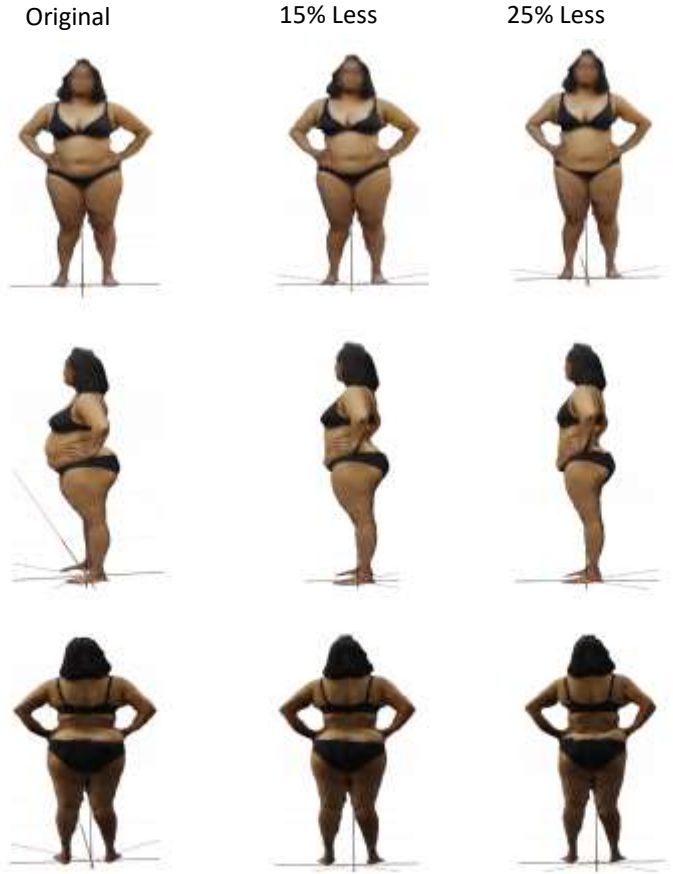
Thighs
Change in
“-” &
“|”axis
Skin
appears
deflated
and hangs
down



“|” Zones
Drooping
and
rotation of
skin
medially

“-” Zones
Drooping
and folding
over of skin

Key
— Tight zones of adherence
□ Loose zones of adherence



Intervention – Virtual Reality :



Results:



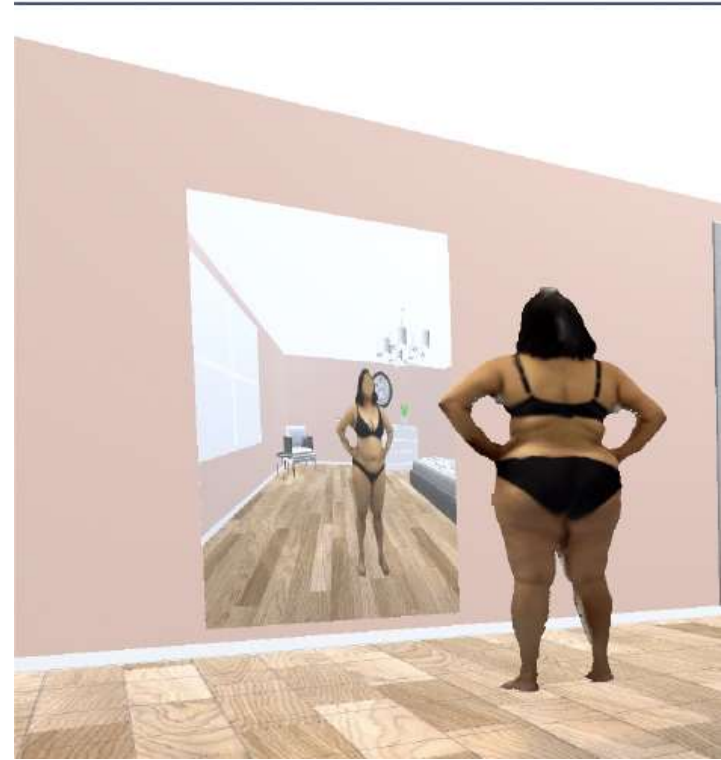
Results: Common Themes

- Motivation, realistic goals and expectations
- Safe space
- VR scene realistic
- 3D models provided sufficient detail
- Enormous value in group sessions

Results: Mirror

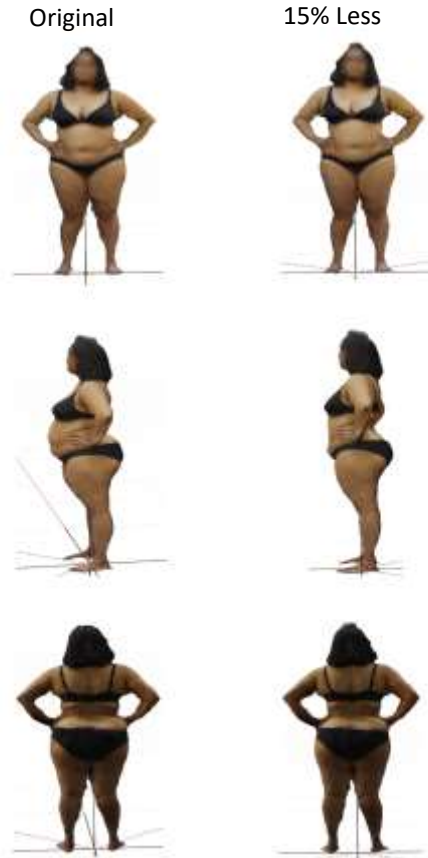
Harsher to themselves

Reflects their relationship with the mirror in real life



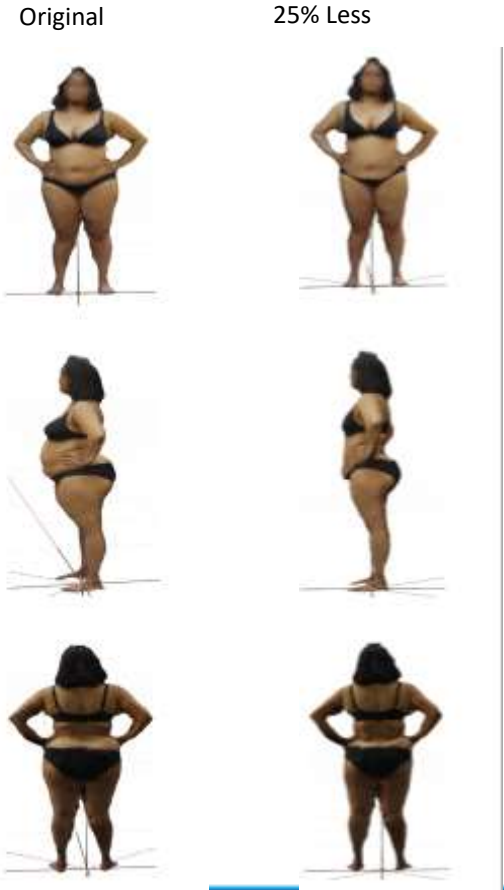
Results: 15% Weight Loss

- Mixed reviews
- Odd and shocking
- Didn't notice weight loss
- Triggered thinking about skin folds
- 50% better idea of body image
3-5 months post op



Results: 25% Weight Loss

- More positive reviews
- Encouragement
- Value in appearance
- Looking forward
- Skin folds reality
- 83% better idea of 6-12 months post op



Overall

- Experience very good
- Idealistic → realistic.
- Better informed
- Setting milestones
- Bariatric journey is a process and not an end point
- Takes the focus away from scales
- Mindset change.
- Helpful in adjusting to changes after bariatric surgery
- Wanted intervention to be integrated into bariatric service

Conclusion

This is the first study to demonstrate that 3D reconstruction and VR is a feasible and acceptable method of addressing body image in bariatric surgery. It has been an invaluable experience for all those involved and we hope it paves the way for some exciting research ahead.

