



Let's Get Technical: Virtual Reality in Clinical Nutrition

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LOTTERY

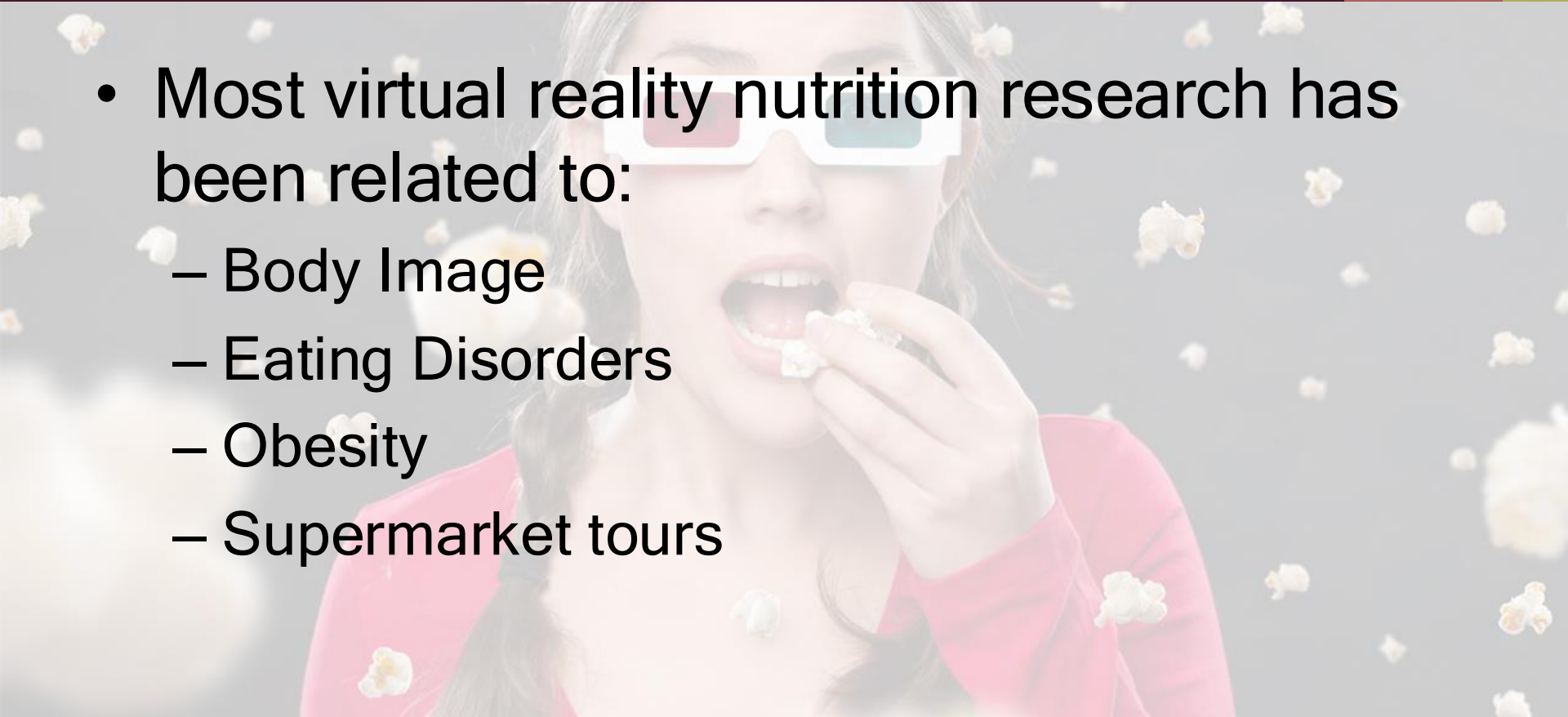
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Virtual Reality & Nutrition

- Most virtual reality nutrition research has been related to:
 - Body Image
 - Eating Disorders
 - Obesity
 - Supermarket tours





<https://edition.cnn.com/style/article/vr-technology-fights-obesity>
<https://is.mpg.de/publications/thaler-sap-2019>

ON JAPAN

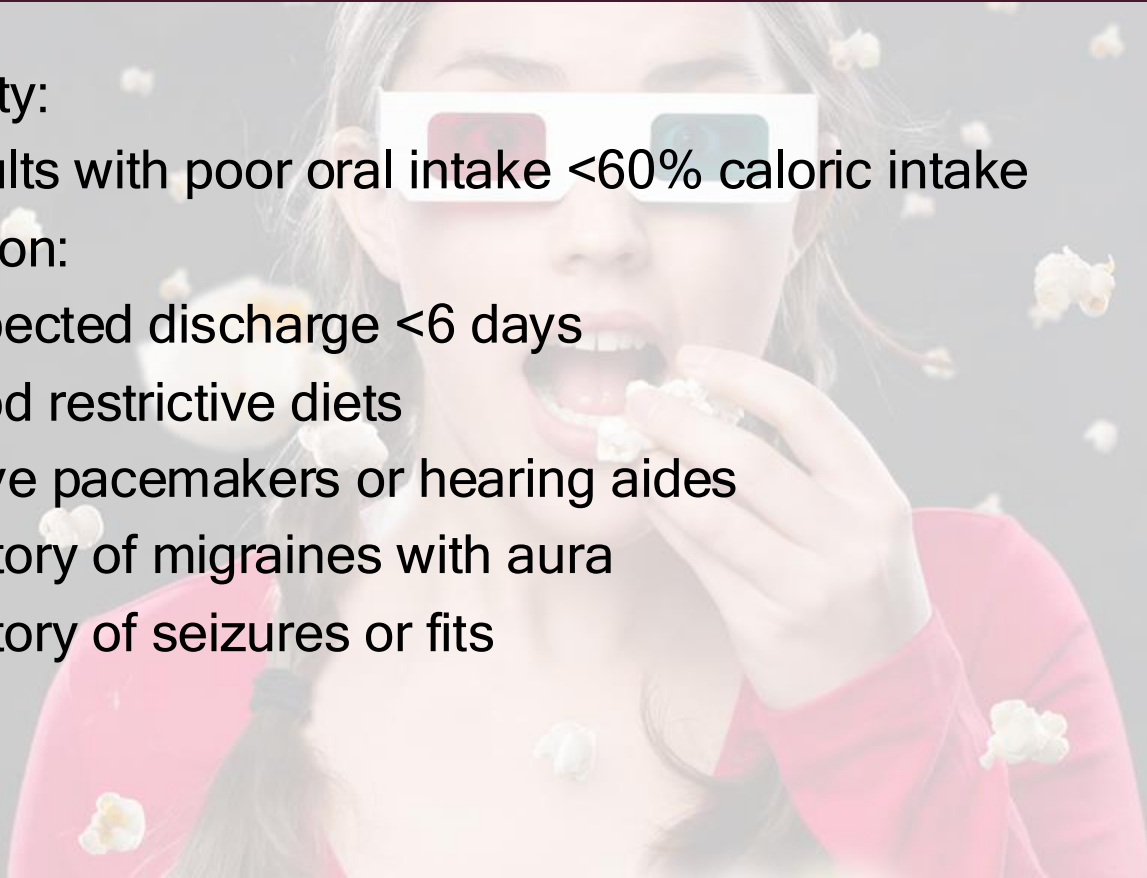


How can we use VR to enhance clinical nutrition therapy?



USING VIRTUAL REALITY TO IMPROVE ORAL INTAKE IN HOSPITAL: A FEASIBILITY STUDY

- Eligibility:
 - Adults with poor oral intake <60% caloric intake
- Exclusion:
 - Expected discharge <6 days
 - Food restrictive diets
 - Have pacemakers or hearing aides
 - History of migraines with aura
 - History of seizures or fits



USING VIRTUAL REALITY TO IMPROVE ORAL INTAKE IN HOSPITAL: A FEASIBILITY STUDY

Day1-2
Control

- Received usual oral intake
- Food charts measuring energy and protein
- Practice sessions with VR headset outside meal-times

Day 3-4
Intervention

- Received usual oral intake
- Wore VR headset during mid meals for approx. 10-15 minutes
- Food charts measuring energy and protein

Follow-up

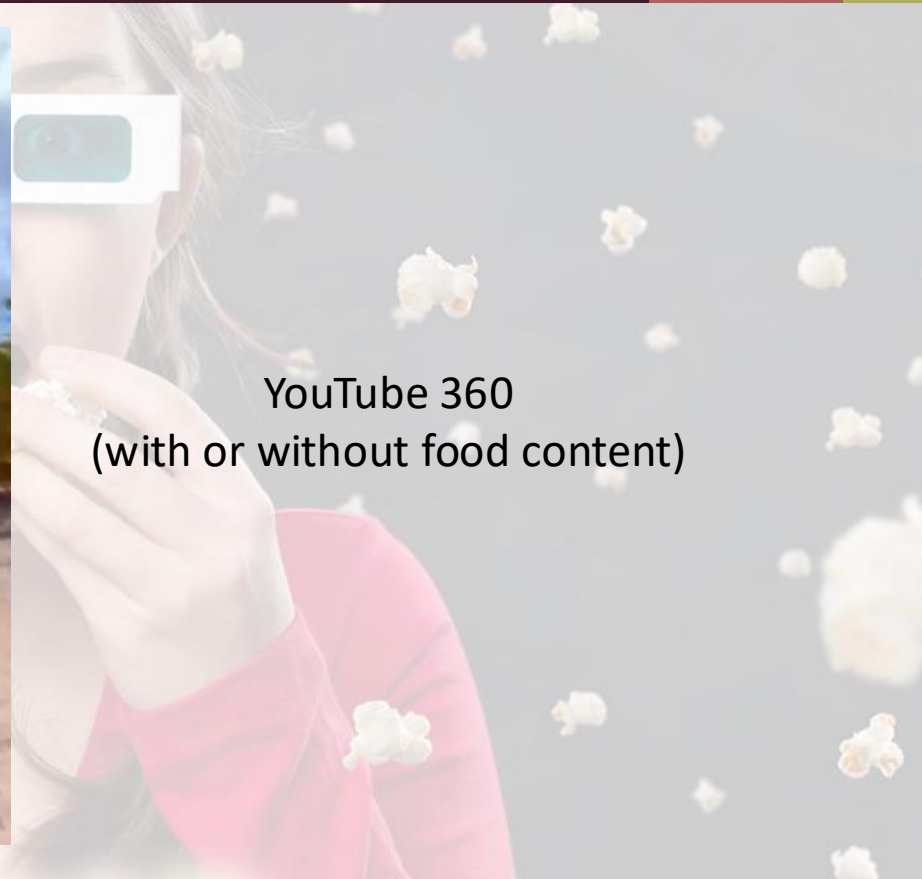
- Qualitative interviews exploring physical and sensory experiences using VR headset while eating and drinking

Augmented Environments



Workrooms YouTube

Augmented Environments



YouTube 360
(with or without food content)

Augmented Environments

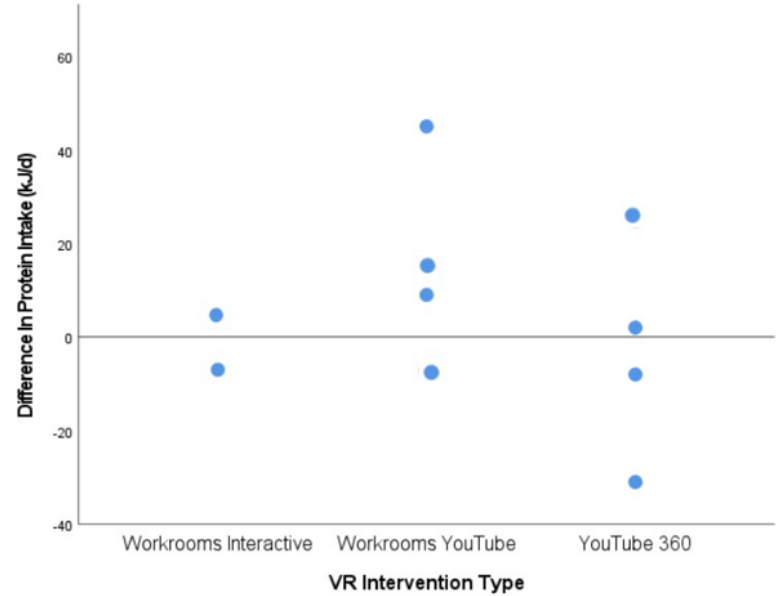
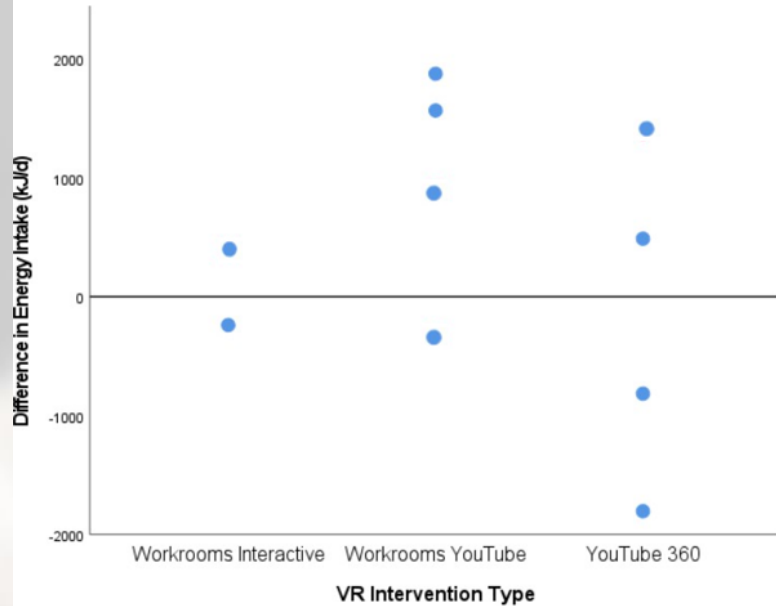


Workrooms Interactive

Study Outcomes



Calorie and Protein Intake Results



A comparison between the VR intervention types

You can't see. You know, you've got to see where you put the food to your mouth and open the packets



YouTube 360

It was so amazing to see that 360 degree perspective... It was one in a million, it's just something so different



Workrooms YouTube

I've been in this room for 4 or 5 weeks now so just to have something new and exotic to look at, it was very light and stimulating



Workrooms Interactive

That was really cool... I enjoyed talking to someone

Challenges/Feasibility

- Limited capabilities of the Augmented Reality
- Challenges of eating and drinking with the VR Headset
- Weight of VR Headset
- Wi-Fi connectivity & firewalls in the hospital
- Costs, skills and resourcing commitment
- Infection Control management

The Challenge Is Ours



Acknowledgements

- Camilla Liebson and Katrina Wilkinson (Usyd MND research students, 2022)
- Prof Payal Mukherjee, ENT Surgeon
- Dr Hamish MacDougall, ENT researcher
- RPA Institute of Academic Surgery (IAS)