

INTRODUCTION

Suicide Research

- Each year, over 720,000 people around the globe die by suicide (World Health Organization, 2024).
- Globally, suicide rates have decreased (World Health Organization, 2021), however, suicide rates in the United States remain stagnant (SAMHSA, 2022).

Virtual Reality and Suicide

- Virtual Reality (VR) may provide a translational approach to examine suicide in a controlled, safe, and ethical environment.
- Past studies have validated shooting and jumping scenarios from existing VR games as safe approximations of real-life suicide (Franklin et al., 2017; Fox et al., 2020). However, there is a limited representation of suicide methods and an inability to study the decision-making processes.



- Paster research found that factors that predict real-world suicide (i.e., gender, suicidal desire, and prior suicidality) influence VR suicide rates. This relationship effectively validates VR as a useful tool for suicide research, at least to a degree.

Research Objective

- The current study aims to validate and evaluate the safety of four new VR suicide scenarios by comparing their rates to both real-life and previously validated VR suicide scenarios.
- These novel VR suicide scenarios include a diverse set of scenarios that were created specifically for research purposes and better represent the real-life contexts in which suicidal thoughts and behaviors occur.

Hypotheses

1. Participants will perceive the scenarios as realistic, relevant to actual suicide contexts, and unpleasant.
2. High levels of interpersonal hopelessness or fearlessness about suicide will predict VR suicide attempt.
3. VR suicide rates will be low but higher than real-life prevalence, similar to past studies.

EXPECTED RESULTS

Data Analytic Strategy

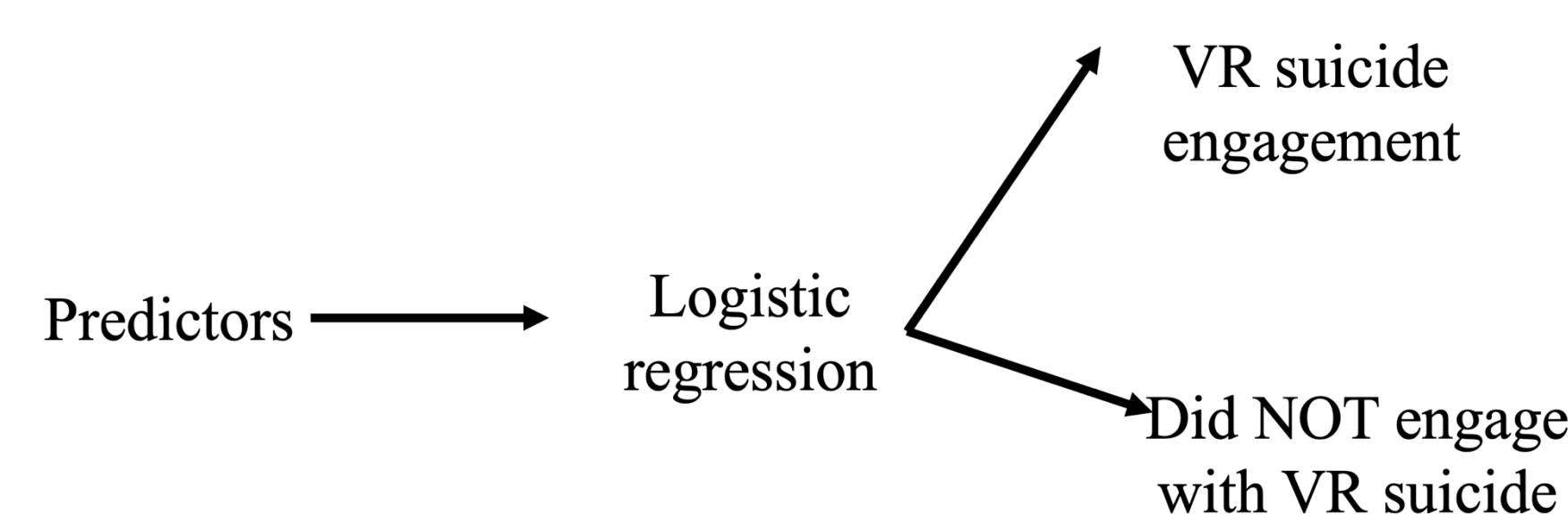
Realism and suicide-relevance rating

- We plan to report descriptive statistics about the reasons for VR suicide engagement, no engagement, and aborted VR suicide
- We plan to conduct chi-square analyses to compare the realism, suicide-relevance, and unpleasantness scores across all scenarios and if the choice effect (suicide, not suicide, or aborted) varied across scenarios.
- A Bonferroni correction will be used to control for Type 1 error.

Engagement/Aborted Attempt Rates

- Overall VR suicide attempt rate: $\frac{\text{total \# VR suicide attempts}}{\text{total \# opportunities given (\#participants \times 4)}}$
- Attempt rates for:
 - Each scenario
 - Administration order

Predictors of Attempt



Examine Novel ITS Measures (IHS and FSS)

- We plan to conduct hierarchical logistic regressions using Hayes PROCESS (Moon, 2023).

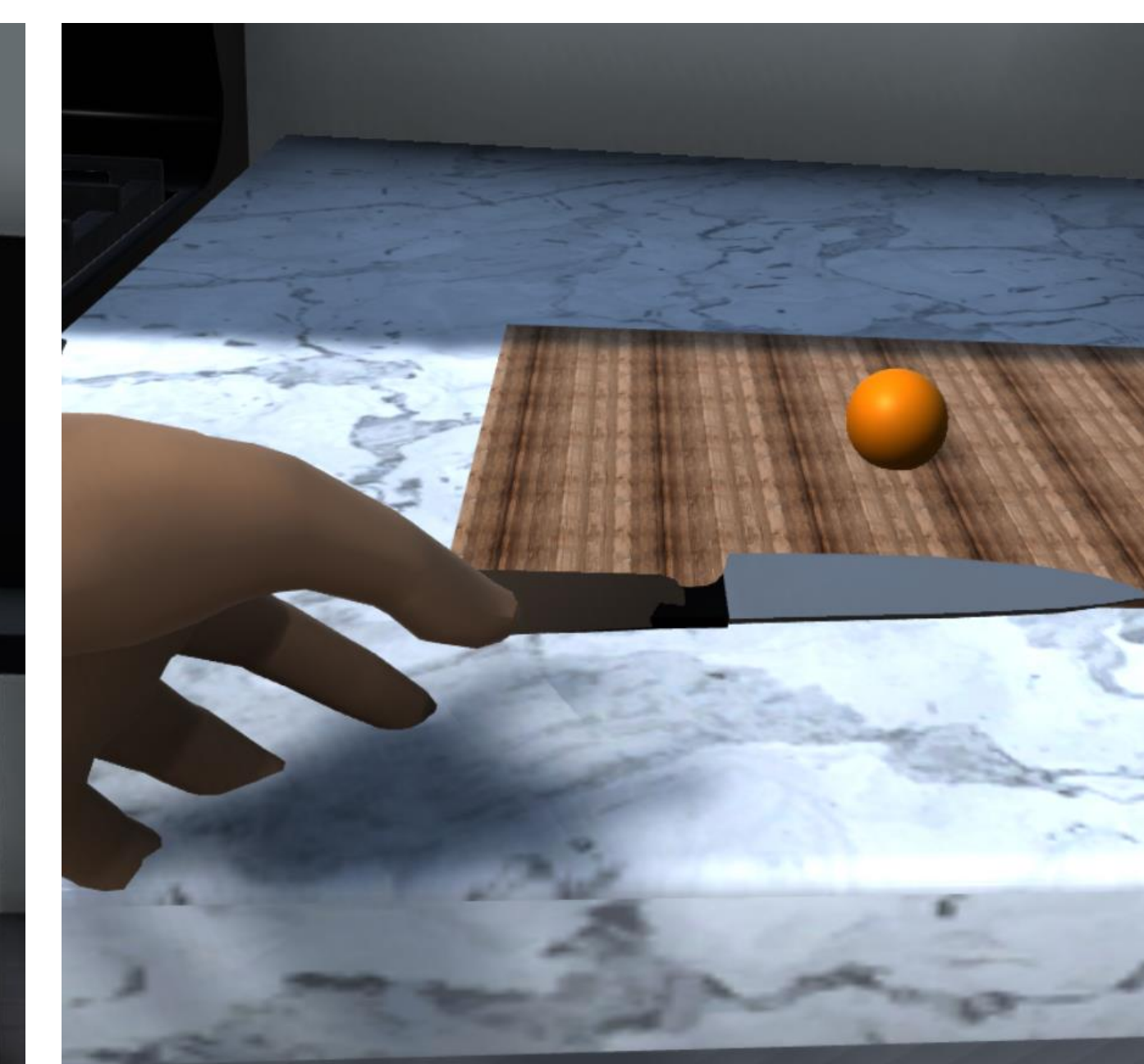
IMAGES



VR Environment



Gun from the shooting scenario

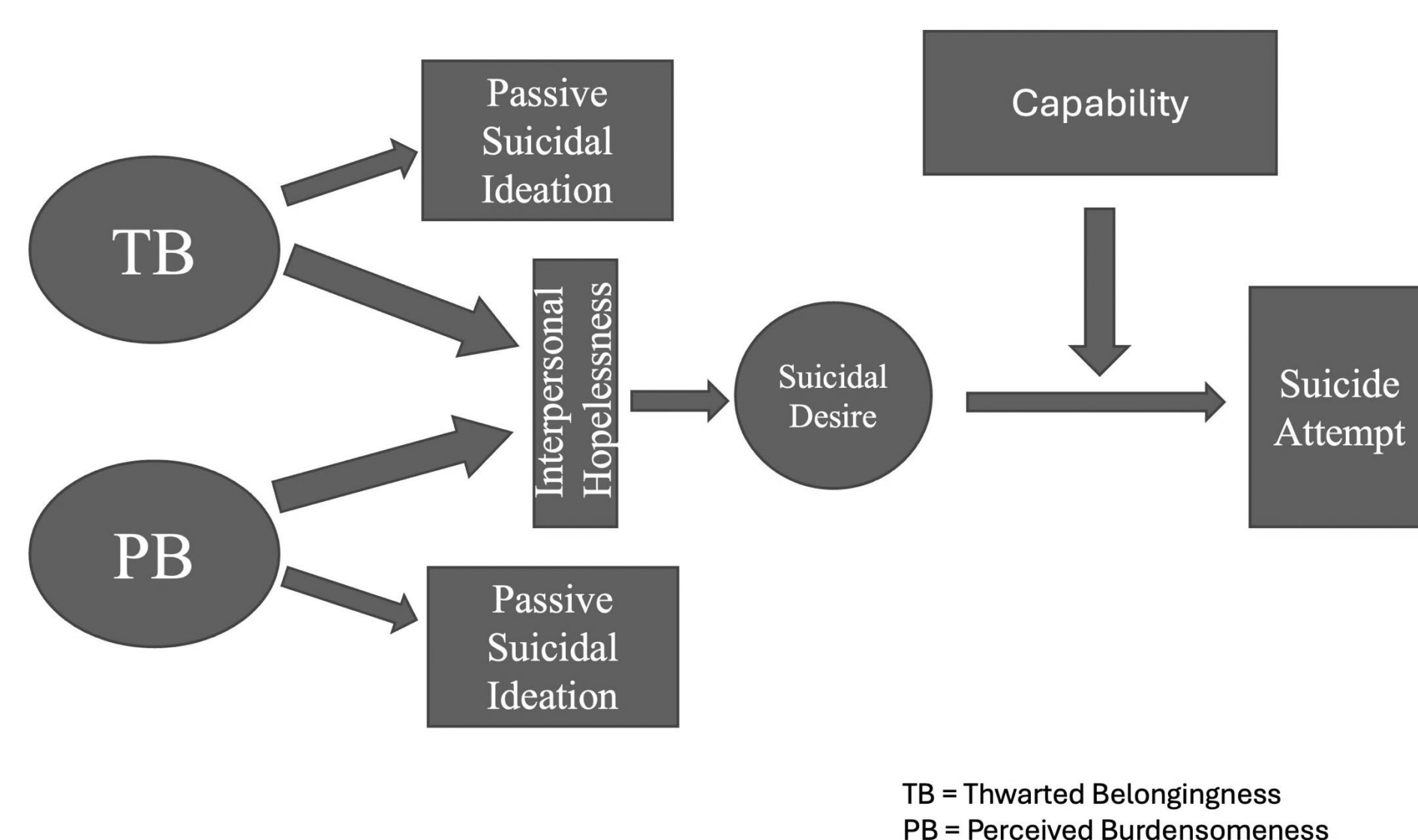


Knife from the cutting scenario

DISCUSSION

We expect to obtain similar results to past VR suicide studies. If the results reflect the findings of previous studies, the four scenarios within this study will be validated. If the results do not reflect the findings of previous studies, we will investigate why and adjust for future scenarios.

ITS



BALANCED LATIN SQUARE DESIGN

Participant Group	Scenario 1	Scenario 2	Scenario 3	Scenario 4
A	Jumping	Cutting	Shooting	Overdosing
B	Cutting	Overdosing	Jumping	Shooting
C	Overdosing	Shooting	Cutting	Jumping
D	Shooting	Jumping	Overdosing	Cutting

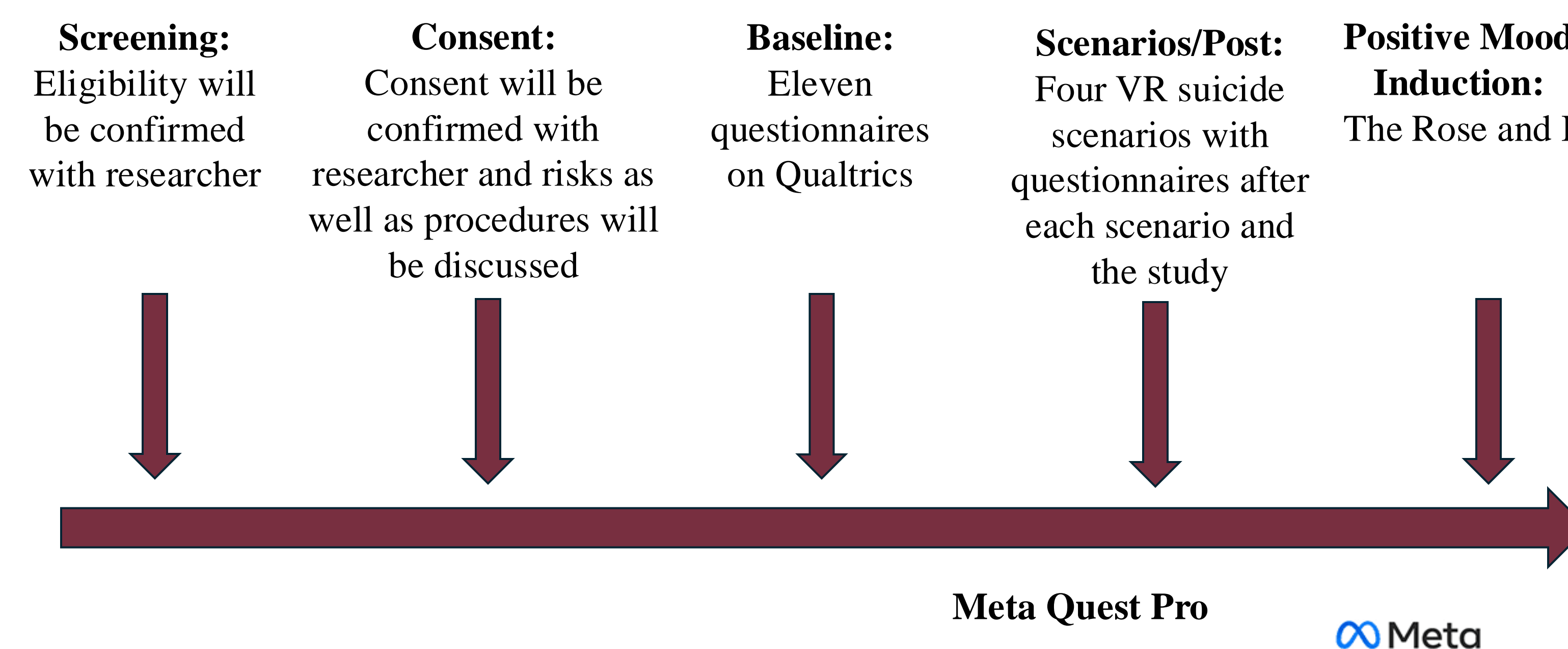
Table 1. Balanced Latin Square Design for order of VR suicide scenarios.

METHODOLOGY

Participants

- We plan to recruit 110 undergraduate students from Psychology courses for research participation credit.
- Eligible participants must:
 - Be over 18 years old
 - Speak and read English
 - Have normal or corrected-to-normal vision.
- Individuals who are at a high-risk for suicidality (i.e., endorse multiple recent suicide attempts in the past year or current active suicidal ideation) will be excluded from the study.

Methods



Measures and Materials

Baseline Assessment

- Demographic Questionnaire
- BSS
- BDI-II
- SITB
- FADS
- FASS
- INQ
- HIS
- BAM
- WHO - ASSIST
- CSD

After Each VR Scenario

- Realism and Suicide-Relevance
- Reasons for Not Engaging in VR Suicide Scale
- Reasons for Engaging in VR Suicide Scale
- Reasons for Not Aborting the VR Suicide Scale

End of Study

- CSD
- BSS
- Suicide Risk Assessment (if applicable)



REFERENCES

For the full list of references, scan the QR code →



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