



A New Realm in Suicide Prevention: A Validation Study

Ava Polaszek, May Sulema, Dr. Thomas Joiner, Sara Prostko Dept. of Psychology at Florida State University

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.



- Past 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

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

PRELIMINARY RESULTS

Findings based upon results from 42 participants, of desired 110 sample size

Demographics

Age: $M = 20$, $SD = 2.24$
Race: White 78.6 %, Black 9.5 %, Asian 9.5 %, Other Race 2.4 %
Gender: Female 64.3 %, Male 31.0 %, Nonbinary 4.8%
Hispanic Ethnicity: not Hispanic 69%, Hispanic 31%

Table 2 FSS and FAD as predictors of VR Suicide										
Examining Fearlessness about Suicide and Fearlessness about Death as predictors of VR Suicide										
Predictor	FASS					FADS				
	Log-Odds	SE	95% CI	z	p	b	SE	95% CI	z	p
Intercept	-.75	.35	[-1.48, -.08]	-2.14	.033	-.72	.34	[-1.42, -.08]	-2.14	.032
General VR Suicide	.14	.07	[.02, .29]	2.12	.034	-.07	.05	[-.18, .04]	-1.22	.223

Note. CI = confidence interval; FASS = Fearlessness about Suicide Scale, FADS= Fearlessness about Death Scale

Perception of Realism in the scenarios

- ANOVA revealed a significant effect of scenario on perceived realism, $F(3, 123) = 3.87$, $p = .01$.
- Shooting was perceived as more realistic than cutting $t(1,41) = 3.15$, $p = .016$

Scenario Comparisons:

- Jumping & Shooting: $p = .9262$
- Jumping & Overdosing: $p = .6558$
- Jumping & Cutting: $p = .1367$
- Shooting & Overdosing: $p = .1987$
- Shooting & Cutting: $p = .0157$
- Overdosing & Cutting: $p = .4943$

- To control for Type I error, Tukey post hoc comparisons were conducted.

DISCUSSION

- Logistic regression results showed that higher levels of fearlessness about suicide were associated with greater odds of engaging in VR suicide. In contrast, fearlessness about death was not a significant predictor, indicating that general fear of death alone may not be sufficient to influence engagement in simulated suicidal behavior.
- Suggests that fearlessness about suicide, rather than a broader lack of fear about death, may be more closely associated with behavioral willingness in a suicide-relevant context. This difference can be tied to many different factors as for many people, death may be viewed as a natural or inevitable part of life, whereas suicide carries distinct moral, social, and personal meanings. As a result, attitudes toward death do not necessarily translate into attitudes toward suicidal behavior, which may explain why fearlessness about suicide, but not fearlessness about death, predicted VR suicide engagement.
- The shooting scenario was perceived as significantly more realistic than the cutting scenario.
- Based upon current results, no significant gender differences were found.

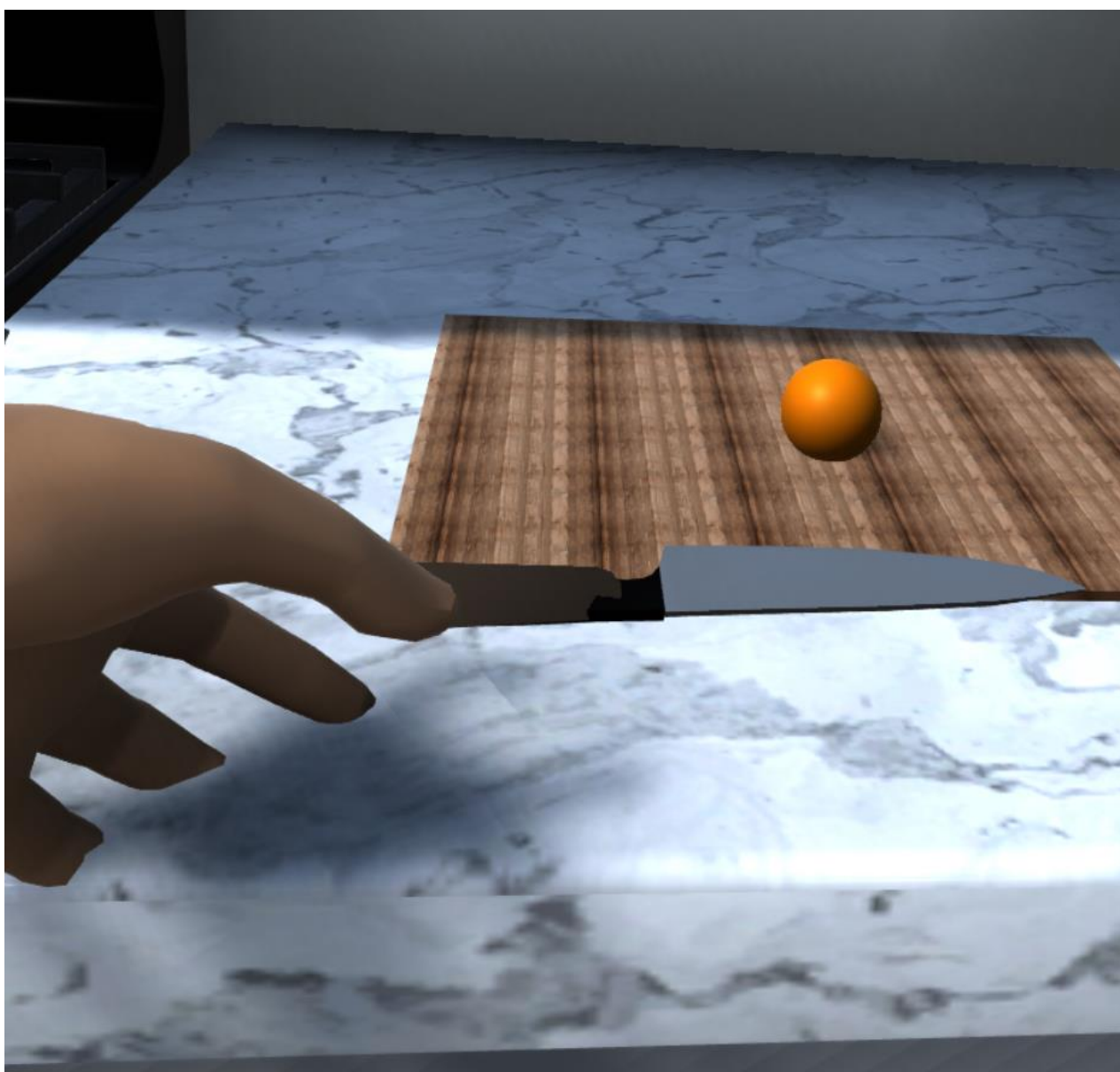
IMAGES



VR Environment

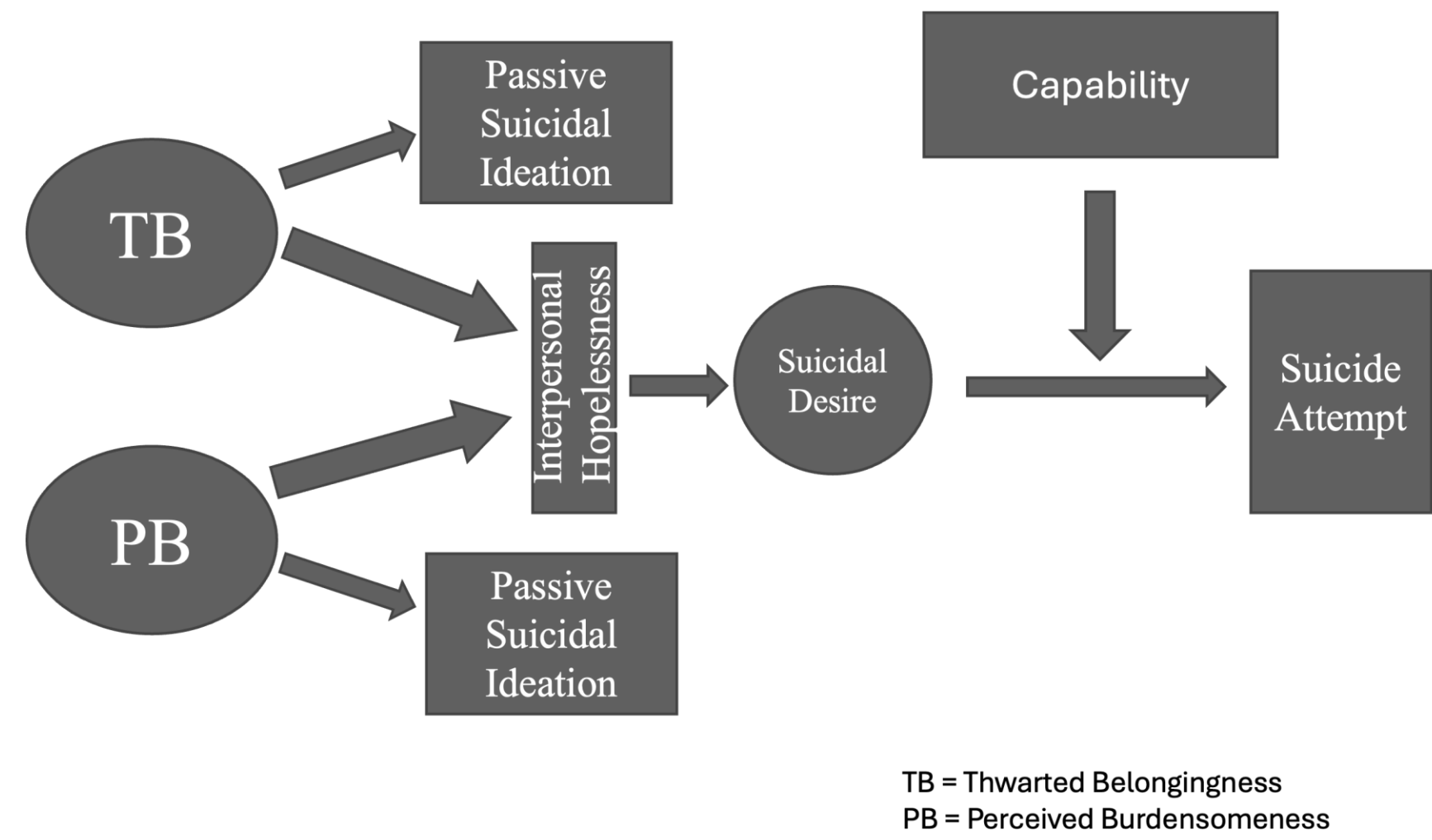


Gun from the shooting scenario



Knife from the cutting scenario

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

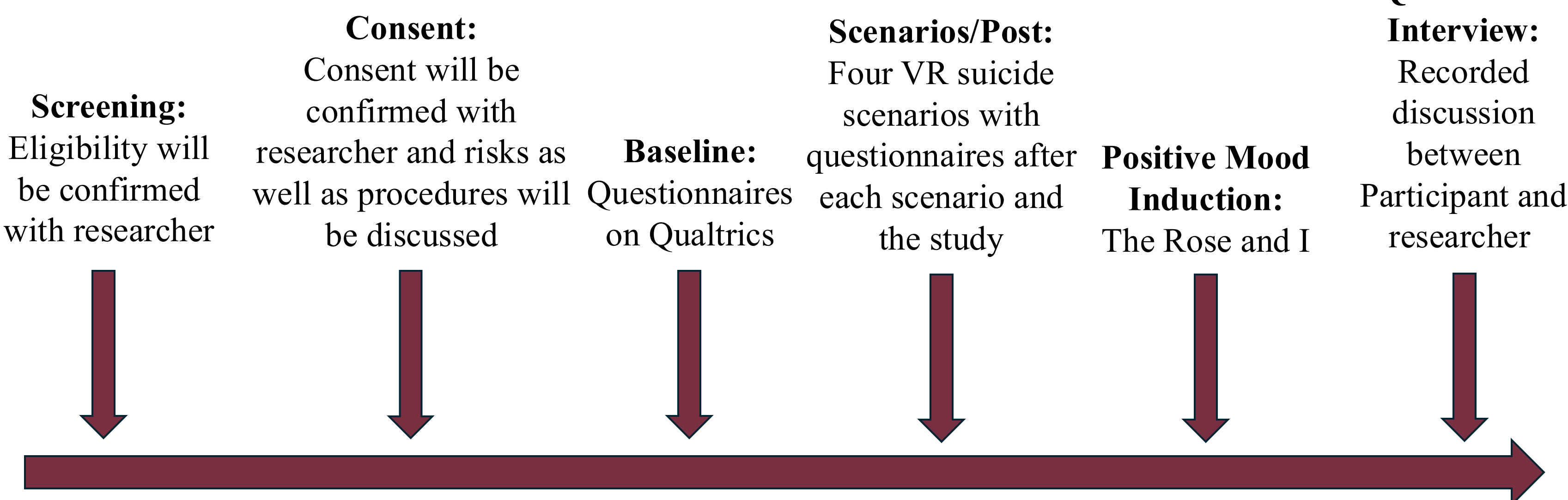
Table 1. Balanced Latin Square Design for order of VR suicide scenarios.

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
- SITBI
- FAD
- FASS
- INQ

After Each VR Scenario

- Realism and Suicide-Relevance

End of Study

- FAD
- FSS
- Suicide Risk Assessment (if applicable)



Meta Quest 3

REFERENCES

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



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