

The Role of Cognitive Defusion on the Believability of a Self-Relevant Negative Thought Among a Non-Clinical Pakistani Population



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INTRODUCTION

- **The Representational Gap:** Third-wave frameworks such as ACT are highly effective, yet empirical data remain overwhelmingly **Western-centric**. South Asian and Pakistani populations face **massive structural barriers, language gaps, and cultural stigmas** surrounding traditional mental health care.
- **The Micro-Intervention Solution:** Scalable, brief, multilingual digital tools can bypass clinical taboos, offering an accessible, real-world bridge to **psychological flexibility**.
- **The Mechanism: Cognitive defusion** (e.g., using phrases like “I am having the thought that...””) targets the **believability of Self-Relevant Negative Thoughts** (SRNTs) by changing an individual’s relationship to their cognitive processes.
- **Study Objectives:** This study investigates the immediate impact of a brief defusion audio on SRNT believability within a non-clinical Pakistani population. It explicitly examines the potential moderating role of baseline cognitive fusion and the cross-cultural utility across genders and languages.

Just 3 MINUTES of a Brief Audio Task, Significantly REDUCES How Deeply People BELIEVE in Their Self-Relevant Negative Thoughts

METHODS

- **Design:** A randomised controlled experimental design with a pre-post repeated-measures structure.
- **Participants:** $N = 111$ Pakistani-descent participants recruited mainly in Norway, the UK, and Pakistan, divided into 21 males and 89 females, 1 self-described.
- **Measures:** Available fully in English, Norwegian, and Urdu. Baseline fusion tracked via the Cognitive Fusion Questionnaire (CFQ-7).
- **The Process:**
 1. Participants completed the **demographic section**.
 2. Then, participants generated a personal, **medium-intensity SRNT** and rated its **baseline believability** (0-100).
 3. Random assignment:
 - **Experimental Condition** ($n = 46$): Listened to a 3-minute, audio-guided cognitive defusion exercise introducing the phrase “I am having the thought that...”.
 - **Control Condition** ($n = 65$): Listened to a neutral, 3-minute audio lecture about Jellyfish.
 4. Both groups **re-rated the believability of their SRNT** post-intervention.

DISCUSSION

- **Rethinking the Active Mechanism:** The parallel drops suggest that **linguistic defusion is not the only active path**. The control task (scientific lecture + typing) forced an external cognitive load, potentially acting as a **grounding mechanism** that disrupted automatic, self-relevant distress frames just as effectively.
- **Universal and Scalable Utility:** The absence of a moderation effect could indicate the intervention’s **broad scalability**. Since efficacy did not depend on baseline levels of cognitive fusion, **a simple 3-minute digital break could universally reduce the believability of SRNT for anyone**, regardless of their initial psychological entanglement.
- **Bypassing Stigma:** For the South Asian diaspora, **traditional talk therapy carries heavy cultural stigma**. Since these **micro-interventions** are brief, language-adaptable, and universally effective, they can be deployed anonymously via smartphones to provide **highly accessible, stigma-free support**.
- **Limitations:**
 - **The Urdu Power Problem:** The Urdu translation lacked statistical power, most likely due to the small sub-sample. Lesson learned: targeted South Asian recruitment needs a much longer runway.
 - **The “Do Nothing” Group:** Since the control task was highly active, the natural time decay cannot be completely disentangled from the task’s grounding effect.
 - **The “Right Now” Snapshot:** Only the immediate post-audio drop was measured. Future research needs to track whether a single 3-minute audio keeps the thought unbelievable hours or days later.

RESULTS

- **Massive Time Effect:** A 2x2 Mixed ANOVA revealed a **highly significant reduction in SRNT believability** (see Table 1)
- **Parallel Drops:** The experimental group dropped by 36.17 points, and the control group dropped by 24.98 points (see Table 2). The group-by-time **interaction effect was non-significant** (see Table 1)

Table 1

Analysis of Variance Table

Measure	F	Sig.	Partial Eta Squared
Time	48.76	< .001	.31
Time * Group	1.63	.204	.015

- **No Moderation Effect (Universal Utility):** Hayes’ PROCESS macro (Model 1) revealed that **baseline cognitive fusion did not significantly moderate the relationship** between the groups and the drop in believability. **Baseline fusion was a significant independent predictor of the reduction size** ($\beta = .207, p = .029$).
- **Language Pathways:** Within-subject paired t-tests showed that the culturally adapted translations successfully reduced the believability of SRNT (see Table 3).
- **Demographic Universality:** No significant differences were found based on gender ($p = .746$).

Table 2

Descriptive Statistics for Variables of the Study

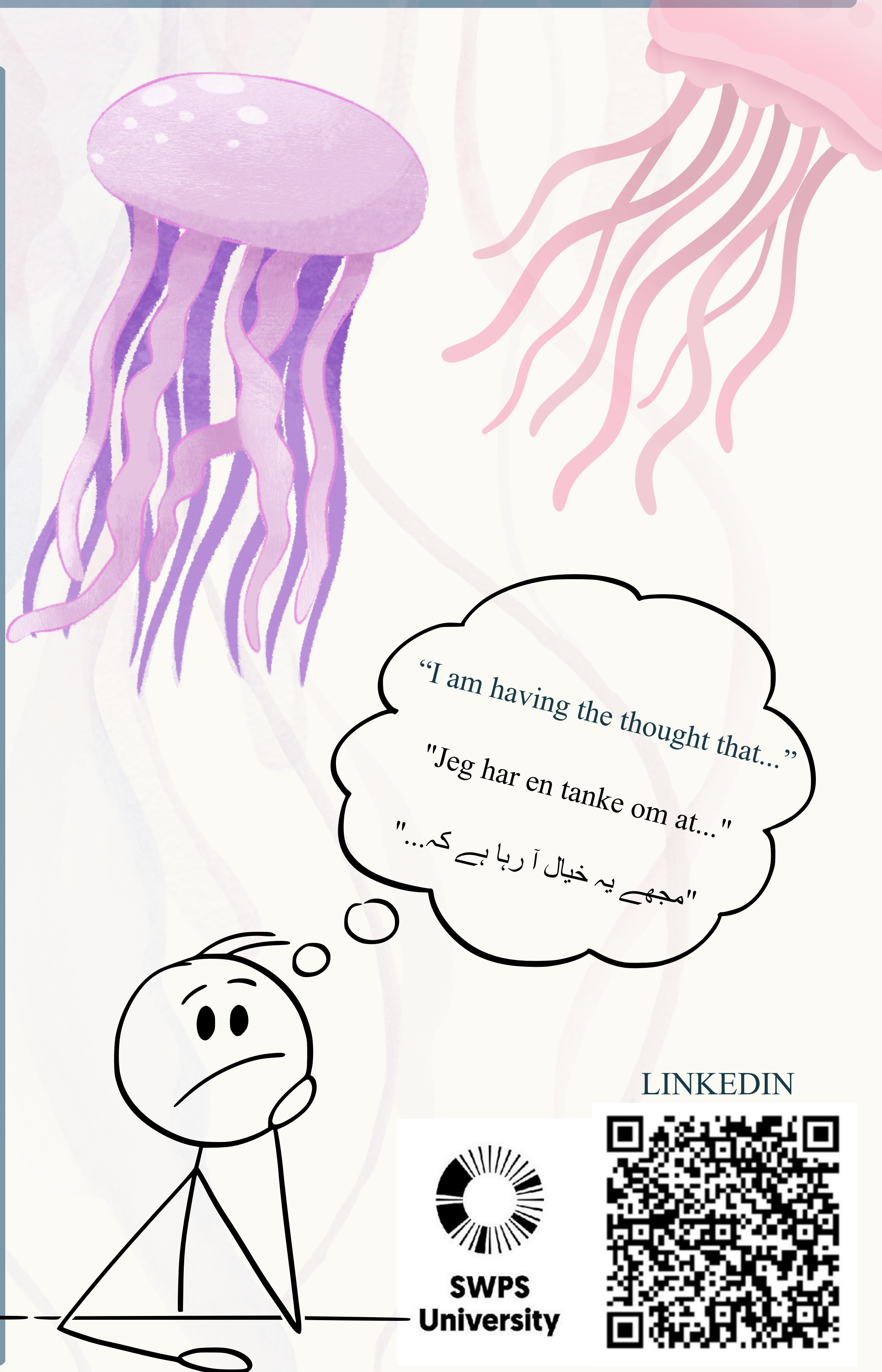
Facet	N	Mean	Std. Deviation
CFQ Total Score			
Experimental Group	46	22.94	9.88
Control Group	65	23.37	9.36
Male	21	19.71	9.38
Female	89	24.09	9.46
Total	111	23.19	9.54
Believability Pre			
Experimental Group	46	203.65	107.75
Control Group	65	207.72	96.58
Total	111	206.24	100.47
Believability Post			
Experimental Group	46	167.48	109.86
Control Group	65	182.74	95.82
Total	111	177.06	101.44

Table 3

Paired Samples T-Test Results for Pre- and Post-Intervention SRNT Believability

Across Language Versions

Language		Mean	N	Std. Deviation	t	p	d
English	Believability Pre	211.57	42	90.67			.61
	Believability Post	182.17	42	91.95			
	Believability Difference	29.41	42	48.54	3.93	<.001	
Norwegian	Believability Pre	210.05	60	103.94			.71
	Believability Post	178.87	60	107.16			
	Believability Difference	31.83	60	44.19	5.47	<.001	
Urdu	Believability Pre	153.44	9	121.60			.45
	Believability Post	132.22	9	108.58			
	Believability Difference	20.22	9	44.50	1.36	.210	



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