Effects of Video Call and Self-Image Display on Self-Focused Attention and Self-Evaluation in Individuals with High Social Anxiety

Ayaka Yanagida [a], Nozomi Tomita [b], Mao Nanamori [a], Hiroaki Kumano [c]
[a]Graduate School of Human Science, Waseda University. [b] Faculty of Humanities and Social Science, Jissen Women's University, [c] Faculty of Human Sciences, Waseda University.

Background: Social anxiety disorder (SAD) is maintained by self-focused attention and negative self-perception. Yanagida et al. (2023) investigated how video calls affect SAD maintenance mechanisms during speech tasks, comparing video calls with face-to-face interactions and examining the impact of self-images on screens or mirrors. However, their findings were limited by a small sample size.
Purpose: This study aims to address the limitation of the previous research by increasing the number of participants and reanalyzing the data to provide more robust insights into how video calls and self-images influence self-focused attention and negative self-perception in individuals with SAD.
Method: 53 university students with high social anxiety were stratified randomized to one of four conditions: face-to-face with self-image, face-to-face without self-image, video call with self-image, and video call without self-image. Each participant performed a 3-minute speech task, and self-focused attention and negative self-perception were measured using questionnaires before and after the task. The study was approved by the Institutional Review Board.
Results: A three-way ANOVA revealed a significant interaction between self-image and time for self-focused attention ($F(1, 49) = 4.93$, $p = .03$), with a significant increase from pre- to post-task in the no-self-image group. A significant interaction between condition and time was also observed ($F(1, 49) = 5.08$, $p = .03$), with an increase in the video call group from pre- to post-task. For negative self-perception, the main effect of time and the interaction between self-image and time were significant ($F(1, 49) = 14.56$, $p < .01$; $F(1, 49) = 5.23$, $p = .03$), showing a significant decrease during the task in the self-image group. No interaction between self-image and video call was found.
Conclusion: Although video calls heightened self-focused attention, the presence of self-images mitigated this effect and contributed to modifying negative self-perception. The lack of interaction between self-image and video call suggests that showing self-images during video calls could be beneficial for individuals with SAD.

Effects of Video Call and Self-Image Display on Self-Focused Attention and Self-Evaluation in Individuals with High Social Anxiety

Ayaka YANAGIDA[1, 4*], Nozomi TOMITA[2], Mao NANAMORI[1, 4], Hiroaki KUMANO[3]
[1] Graduate School of Human Science, Waseda University, Japan
[2] Faculty of Humanities and Social Science, Jissen Women's University
[3] Faculty of Human Sciences, Waseda University [4] Research Fellow of Japan Society for the Promotion of Science

Background

■Social Anxiety Disorder (SAD)

A mental health condition characterized by excessive fear and anxiety in social situations. It is maintained by two key cognitive factors (Clark & Wells, 1995; Hofmann, 2007).

① Self-Focused Attention (SFA)
An inward focus on one's own thoughts, feelings, and physical sensations.

② Negative Self-Evaluation
The belief that one's negative self-image is an accurate reflection of how others see them.

■ Challenges in Video Call Use for Highly Socially Anxious Individuals

The self-view function is a distinctive feature of video calls.

➡ For highly socially anxious individuals, viewing one's own mirror-like image has both advantages and disadvantages. (Yanagida et al, 2022)

○ Can reduce negative self-evaluation. (Hofmann & Heinrichs, 2003)

× Can increase self-focused attention and negative affect. (Vriends et al., 2017; Hass & Eisenstadt, 1990)

➡Video feedback therapy for SAD is based on a key premise: the self-view elevates self-focused attention. As a result, cognitive preparation is a recommended prerequisite.

Cognitive Preparation: (i)Preliminary Self-evaluation of the Speech performance (ii) Objective self-observation (Rodebaugh & Chambless, 2002)

Purpose

Effects of Modality (Face-to-Face vs. Video Call) and Self-Image on Self-Focused Attention and Negative Self-Evaluation

Method

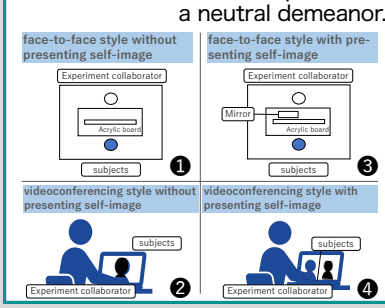
Ethics Approval Number : 2021-442

■Participants

A total of 62 highly socially anxious adults participated after providing informed consent.
Liebowitz Social Anxiety Scale – Japanese ver. : LSAS-J
A cutoff score of ≥ 30. (Asakura et al, 2002)

■Procedures

Allocation: Participants were assigned via stratified randomization and minimization.
Task: Deliver a speech to a confederate instructed to exhibit a neutral demeanor.



Speech Preparation (3min.)
Measures (Pre)
Speech Delivery (3min.)
Measures (Speech Task, Post)
Apply cognitive preparation to all groups

■Measures

1) **State Self-Focused Attention Scale** (SFA; Wells, 2009)
Measured changes over time using a single item.
(-3 : External, +3 : Internal)

2) **Speech Perception Questionnaire JP ver.**
(SPQ; Rapee & Lim, 1992; Shirotuki et al., 2010)
Prospective and retrospective self-evaluations of speech performance were assessed pre- and post-task, respectively.

3) **Self-Gaze Visual Analogue Scale** (VAS; Self-View Group only)
Manipulation Check : Rated the clarity of their self-image (0 = Not at all, 100 = Sufficiently clear).

■Analysis (R: ver.4.8.7)

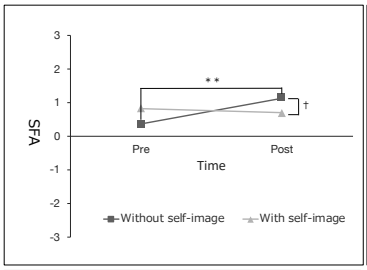
（1） IV : Groups | DV : LSAS-J | One-Way ANOVA
（2） IV : Environment, Self-image, Time | DV : SFA or SPQ | Three-Way ANOVA

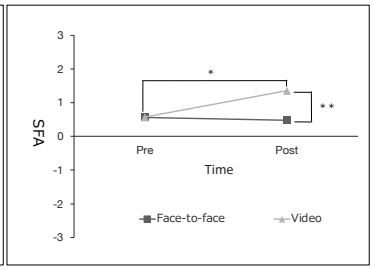
Results & Discussion

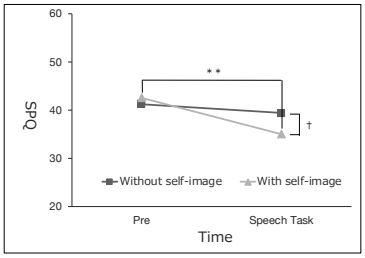
■ Data Screening

Excluded 9 participants due to a failed manipulation check (n=8, Self-View VAS ≤ 30) or being an outlier on the LSAS-J (n=1).

❶n= 15 (4 males, 11females) ❷n= 10 (4 males, 6 females)
❸n= 15 (4 males, 11females)❹n=13 (3 males, 10 females)
（1） There were no significant differences among groups on the LSAS-J(p = .54). （2） Top Figure: SFA, Bottom Figure: SPQ







Significant Interactions:
Self-image × Time (on both SFA and SPQ)
Environment × Time (on SFA)
Significant Main Effect:
Time (on SPQ)

†p < .10, *p < .05, **p < .01
Some of the data were previously presented in Yanagida (2023)

①Periodic self-observation
→ May have increased focus on external cues (self/other image).
②Video calls (fewer external cues)
→ May have increased focus on internal states.
③For highly anxious individuals, the self-image
→ May have corrected their negative self-image.

Conclusion

①Video call Environment ⇒ Self-Focused Attention ↑
②Effects of Self-Image ⇒ Mitigates heightened self-focused Attention ↓, Improves self-evaluation ↑

Future Direction
Clarify the effects of cognitive preparation.

Contact: Ayaka YANAGIDA【a.yanagida@ruri.waseda.jp】

This work was supported by JST SPRING, Grant Number JPMJSP2128 & JABCT
The authors declare no conflicts of interest associated with this study.

発表成果報告書

国際学術交流助成金に採択された方は，学会参加後１か月以内（ただし，助成決定時にすでに発表済みの場合は通知から１か月以内）に以下の資料をご提出ください。

① 発表成果報告書（本様式），②発表抄録（英文），③発表実績（ポスターやスライド等の写し）

【発表概要】（400 字程度）

2025 年 8 月 6 日～9 日にかけて，オーストリア・ウィーンで開催された第 18 回国際行動医学会（The 18th International Congress of Behavioral Medicine）に参加し，ポスター発表を行った。発表した研究では，近年普及したビデオ通話が社交不安傾向の高い人に与える心理的影響を明らかにすることを目的とした。特に，社交不安の維持要因である自己注目と否定的な自己評価に，スピーチ環境（対面・ビデオ通話）と自己像（鏡像・映像）の有無が与える影響を実験的に検討した。その結果，ビデオ通話の環境は自己注目を高めたが，自己像を提示することはむしろ自己注目を行いづらくし，否定的な自己評価を低減させることが明らかとなった。このことから，自己像は，社交不安傾向の高い人にとって一定程度有益である可能性が示唆された。

【参加体験記】（800 字程度）

本学会はウィーン大学で行われた。長い歴史を感じられる芸術的な外観・内観に驚きながら，そこで国際学会に来たのだという実感を得られた。ポスターセッション会場では，行動医学研究を中心とした様々なテーマのポスターが多く貼られており，特定の時間帯には軽食やコーヒー，ワインが提供された。セッション会場内には立食テーブルがいくつも用意されており，知り合った研究者同士でワインを楽しみながら活発に議論が交わされている姿は新鮮だった。私のポスターセッションにも，国内外の多様な背景を持つ研究者の方々が関心を持ってくださり，交流することができた。慣れない英語でのコミュニケーションには苦慮したが，真摯に聞いてくださり，意思疎通できた際の喜びは大きかった。しかし，思い通りに内容を伝えることが難しい場面もあり，議論を深めるための語学力とコミュニケーション能力の向上は今後の課題にもなった。口頭発表やシンポジウムでは，国内学会では触れる機会の少ない，大規模な国際共同研究の成果報告に触れ，世界の研究動向やスケールの大きさを肌で感じることができた。特に「Digital Interventions in Various Disease and Patient Contexts」「Using Animations to Promote Health Behaviours: Evidence of Effects and Future Directions」に関するシンポジウムは，私のビデオ通話やアプリケーションを用いる研究課題と関連が深く，最新の研究手法を学ぶ上で大変勉強となった。他にも，非英語圏の方がシンポジウムを堂々と行う姿には刺激を受け，自身もいつか国際学会のシンポジウムに登壇してみたいという思いが湧き上がった。

今回の国際学会への参加は，自身の研究成果を世界に向けて発信するだけでなく，国際的な研究者ネットワークを構築する重要性を再認識する機会になった。ここで得られた新たな知見や多様な研究者との交流は，今後の研究をより深化・発展させていく上でも大変貴重な経験である。この貴重な経験を糧とし，国際的な視野を持って今後もさらに研究活動に邁進していきたい。