

# MASKING OUR COMMUNICATION: THE EFFECTS OF FACE COVERINGS ON THE PERCEPTION OF FACIAL EXPRESSIONS

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## INTRODUCTION

Facial expressions represent the social and emotional stimuli that must be interpreted to engage in meaningful interactions. Appropriate response to other's emotions is entirely dependent on accurate recognition of the emotion expressed by their face (Lee et al., 2013). Ekman (2007) and others assert there are six basic emotions: anger, fear, sadness, enjoyment, disgust, and surprise. Each element of the face is significant in portraying and differentiating such emotions (Bruce, 1986). Studies have revealed that the lower face - mouth region, more specifically, has been found to be most informative for emotions; happiness, surprise and disgust, and the eye region for expressing fear and anger, whereas both play a significant role in sad and neutral expressions (Noyes et al., 2021). Following the introduction of facemasks in 2020 (World Health Organization, 2020), we have only recently observed the cessation of such requirements in Ireland (Government of Ireland, 2022). The current study gathers data from the general population to study the identification of facial expression under various conditions whilst subsequently reflecting and comparing current communicative exchanges to those experienced during this time.

## AIMS

This study investigated if face coverings affect the ability to recognise facial expressions/emotions; pertinence of the location of face coverings (upper versus lower face), and, if face coverings are considered to impact communication.

## CONCLUSIONS

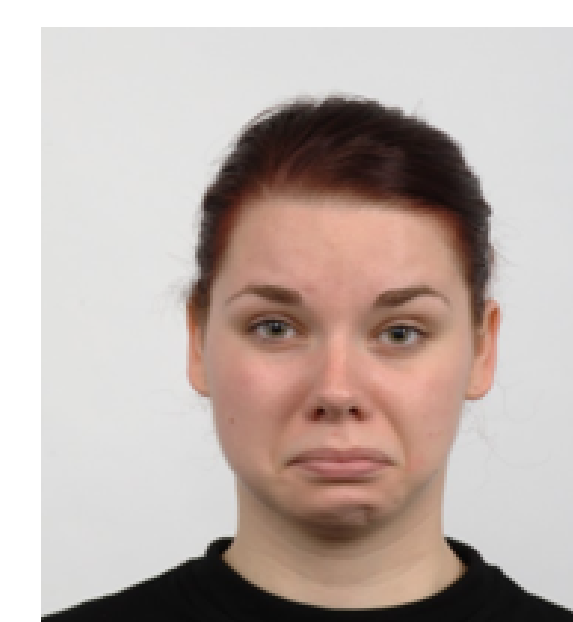
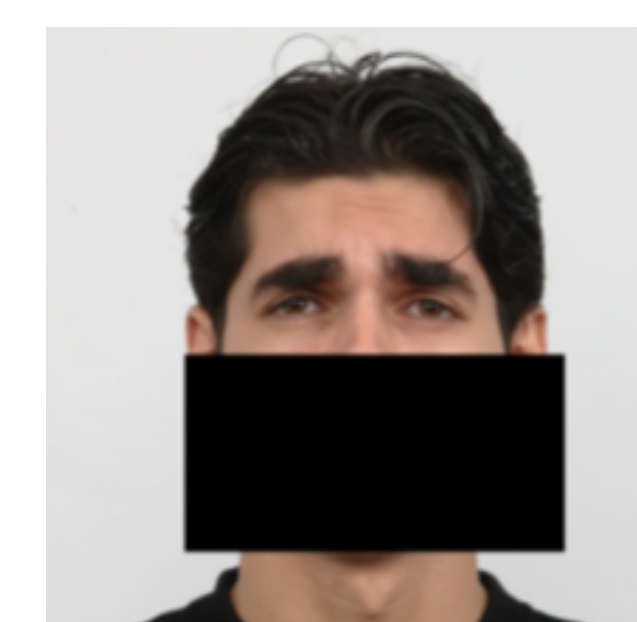
The research findings corroborate with existing literature, suggesting the use of masks and sunglasses negatively affect the interpretation of facial expressions, masked images more so than sunglasses. It was also found that mask use affects communication in the following domains: breakdown in communication, understanding verbal output, and the ability to see and interpret non-verbal communication accordingly.

For more information about this study, please contact:

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## METHODOLOGY

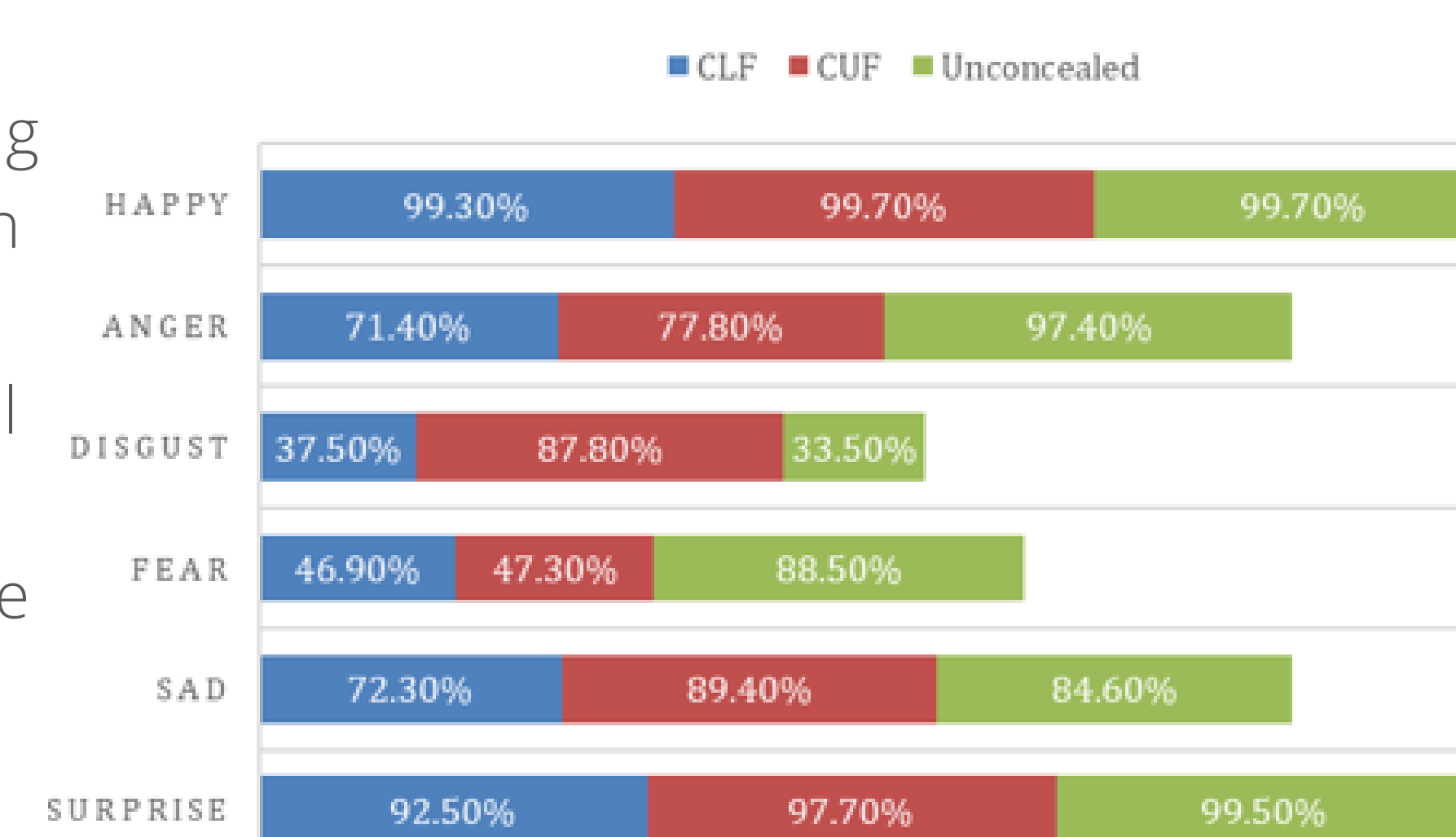
An online survey was completed by 573 participants (aged 18-75+) who matched photographic facial expressions with emotions (happy, sad, anger, surprise, fear, disgust) under three conditions (upper face covered, lower face covered, uncovered). Accuracy of facial expression identification was analysed. One-way ANOVA compared within/between conditions. Potential association with occupation type was analysed using Chi-square. Participants' reflections on experiences of wearing face masks and impacts on communication were examined using a qualitative descriptive approach.



## FINDINGS

'Happy' was the most accurately identified emotion for all conditions with 'fear' and 'disgust' more challenging to recognise, particularly with lower face covering. There was no association with facial expression/emotion identification and gender, age or occupation. Participants (85%) agreed that face coverings negatively impact communication.

### RATE OF CORRECT RESPONSES



Three themes were identified from participant's reflections - Visual Aspect of Communication; Understanding Verbal Communication and Interpreting Emotional Expressions. Consensus was reached in

terms of the necessity of the full face to portray a facial expression.

Interpreting a communication partner's thoughts, feelings and emotions; particularly distinguishing between the six universal emotions emerged as a considerable challenge across responses.

Theme identified	Illustration of Theme
Visual Aspect of Communication	"I believe you cannot tell all expressions correctly when the face is partially obscured" (149)
Understanding Verbal Communication	"They muffle voices - making it hard to understand what people are saying." (81)
Interpreting Emotional Expressions	"...people rely on others facial expressions to gauge how they are feeling and to interact without having to necessarily say anything..." (294)

Note: Figures in brackets denote participant numbers

## REFERENCES

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