

COVID-19 and Memory: A Novel Contamination Effect in Memory

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INTRODUCTION

According to the **adaptive memory** view (Nairne, 2010), evolutionary **pressures** encountered in the distant past sculpted our memory systems to retain **fitness-related information** (e.g., predators, food and water) better than non-related fitness information.

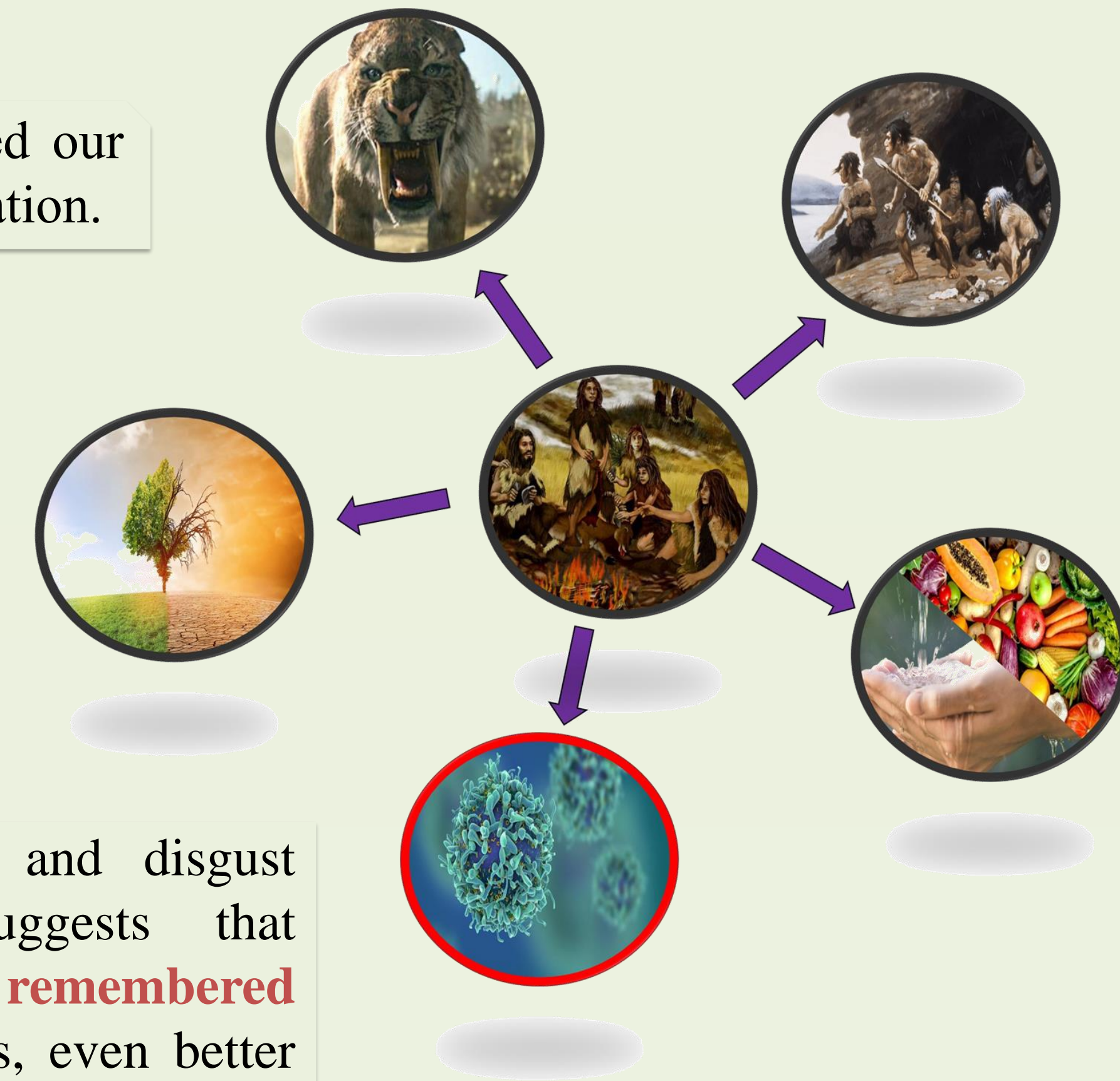
Recent evidence suggests that **contaminated things** are **remembered better** than non-contaminated things.

- Objects associated with **verbal descriptions** related to disease (Fernandes et al., 2017, 2021).
- Objects associated with **sick faces** (Bonin et al., 2019).
- Objects touched in videos by an **actor with influenza** (Gretz & Huff, 2019).

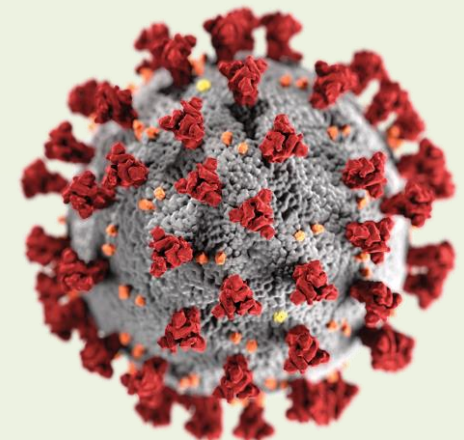
➔ **Contamination effects** in memory represent a relatively **new line of evidence** in favor of the adaptive memory view.



Contaminated things are related to **disgust**, and disgust modulates **memory**. Previous research suggests that photographs depicting **disgusting** things are **remembered better** than photographs depicting neutral things, even better than photographs eliciting fear (Chapman et al., 2013).

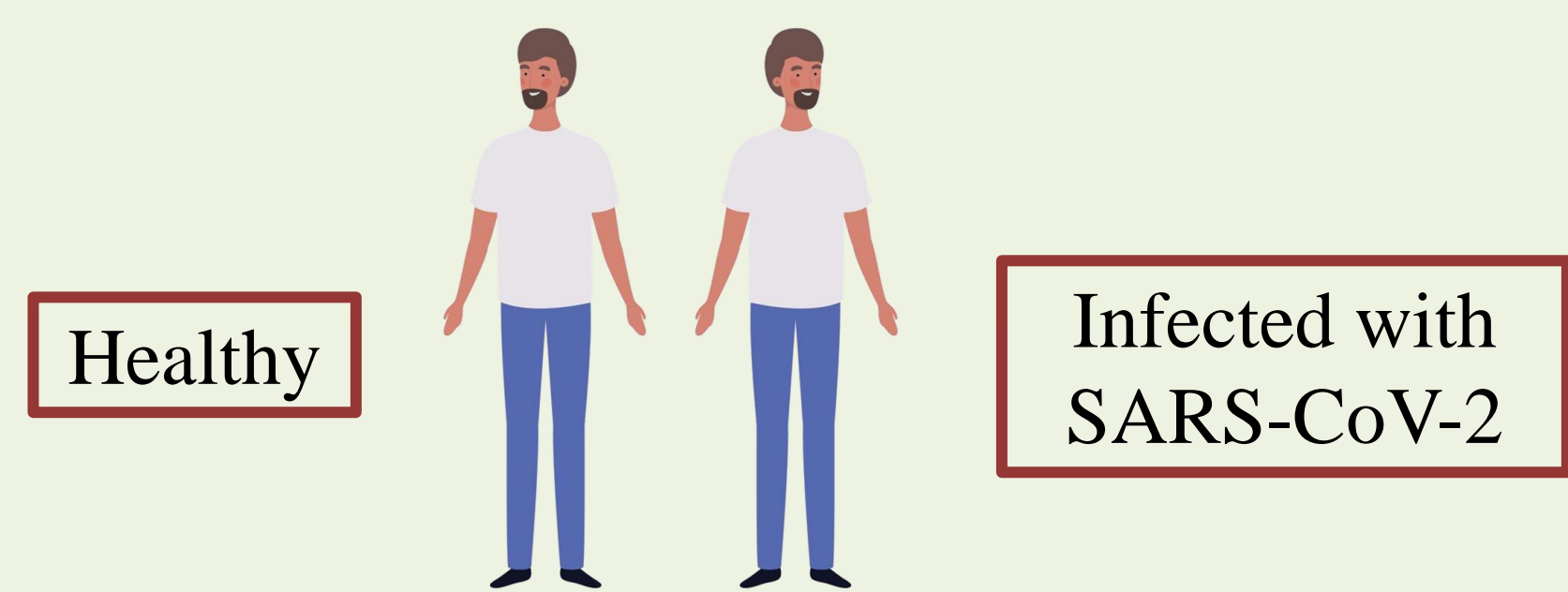


The present study aimed to investigate **contamination effects** in memory in relation with the **SARS-CoV-2**.



6.55 million deaths on the 5th of October 2022

One formidable problem in the case of the **COVID-19** pandemic is related to the **asymptomatic carriers**. These individuals cannot be identified as potential threats and people who are infected **do not show signs of infection** (Moore, 2020).



Study: Investigating memory using photographs of everyday objects shown in the hands of either a healthy or a contagious person (infected with the **SARS-CoV-2**).

METHOD

N = 80 (M = 20.42 years; SD = 2.08; 68 females)

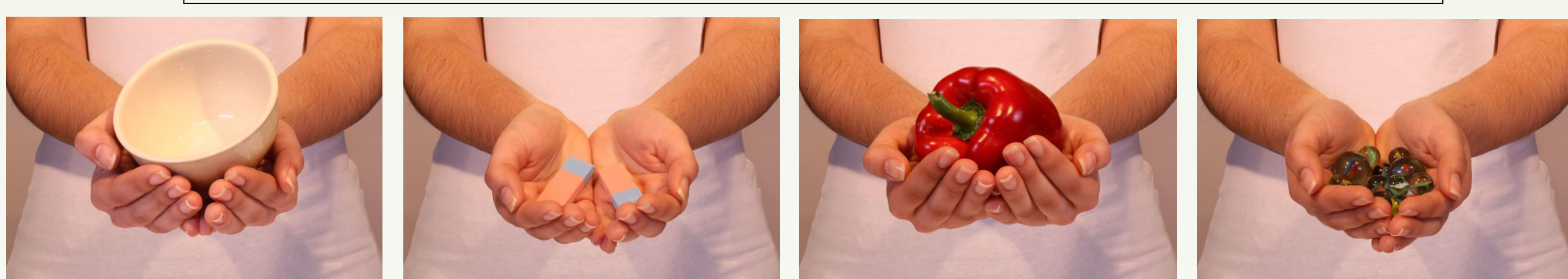
N = 40

N = 40

The person is infected with the COVID-19 and is extremely contagious

The person is healthy and has an excellent health report

Usefulness of 30 items in everyday life on a scale of 1 to 5



Interference tasks (3 minutes)

Surprise free recall (5 minutes)

Perceived Vulnerability to Disease (Duncan et al., 2009)

Three Domain Disgust Scale (Tybur et al., 2009)

STUDIES

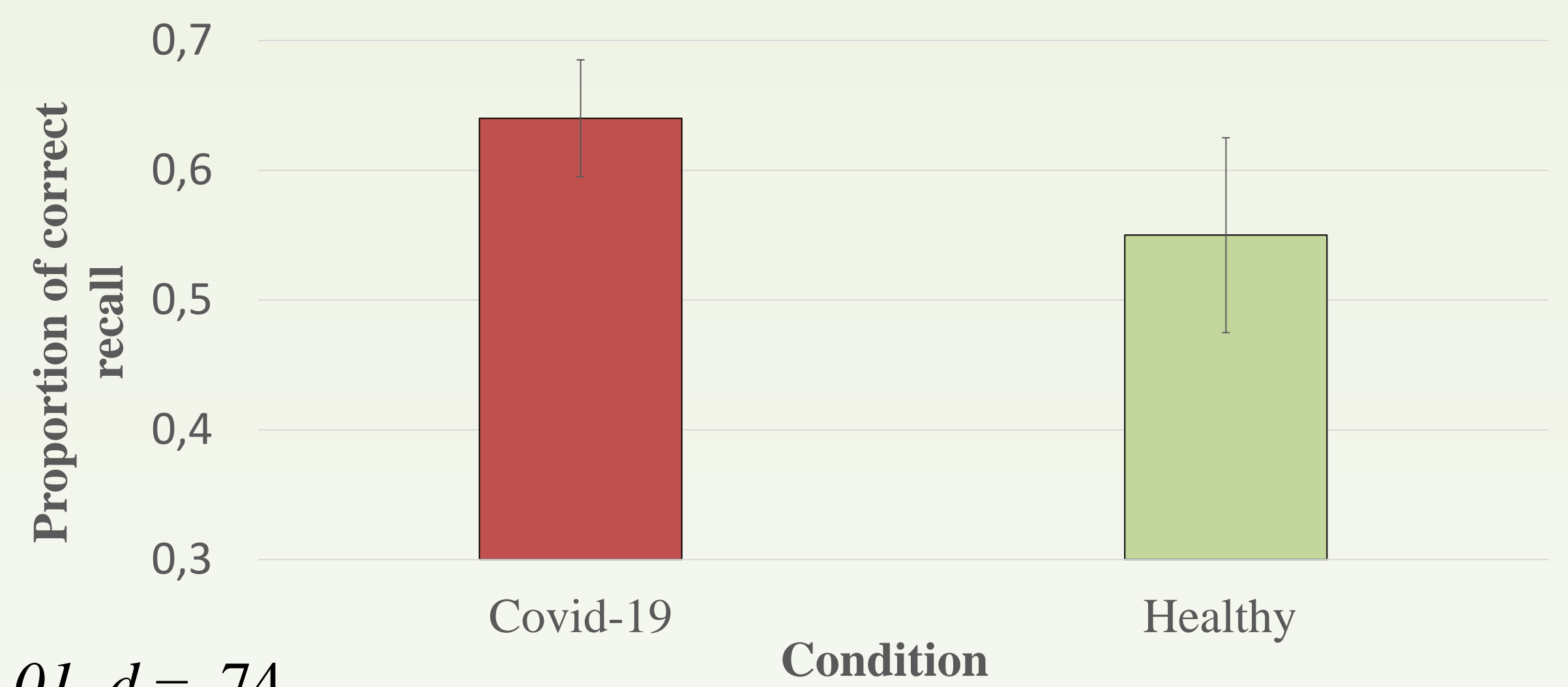


Table 1. Mean Scores (and Standard Deviations) on the PVD and TDDS Scales.

	Healthy condition	Covid-19 condition	P value
Perceived infectability	21.6 (8.15)	24.6 (9.54)	.138
Germ aversion	33.6 (7.85)	32 (9.31)	.401
Moral disgust	27.2 (8.24)	24.8 (9.94)	.248
Sexual disgust	19.2 (8.54)	21.9 (10.8)	.227
Pathogen disgust	26.9 (6.96)	26 (6.34)	.536

DISCUSSION

- We found that **contaminated objects were recalled better** than non contaminated objects, even when the objects were presented in hands showing no visible signs eliciting **disgust**.
- A **contamination effect** in memory is found when a disease-context is present suggesting that, perhaps, **disgust** is not the main determinant of this effect.
- Our findings thus indicate that sources of **contamination** do not have to be visually **disgusting** in order to bring about a memory boost.
- Our findings concerning individual differences in the PVD and TDDS and their relation to memory performance also do not fit well with the idea that **disgust** is involved in the **contamination effect** found here.

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