

# Developing a visual perception screening test for stroke survivors using data from adult South-East Asian participants.

Visual perception is “the brain’s ability to receive, interpret, and act upon visual stimuli,” (Schriber Orloff, 2004). This research aims to better understand visual perception difficulties that people may experience after a brain injury or more specifically, a stroke. Such complications that people may suffer include Simultanagnosia – “the inability to perceive the simultaneous presentation of multiple stimuli and interpret the whole despite having the capacity to recognise individual elements” (Mazza, 2017), and Apperceptive Visual Agnosia, wherein people are “unable to recognise objects, draw or copy a figure.” Those with Apperceptive Agnosia cannot perceive objects correctly even with prior knowledge of the object (Kumar & Wroten, 2021).

Another significant visual perception condition that this research can be used to learn more about is the common, yet rather unknown, Cerebral Visual Impairment (CVI). Although well established, it has no internationally accepted definition (Sakki, Dale, Sargent, Perez-Roche, & Bowman, 2019) but is characterised by “impaired object and face processing” as well as “impaired clutter and distance viewing” (Itzhak, et al., 2020). Although this impairment is most prevalent in children, many adults who have experienced a stroke or other brain injuries can also develop CVI, hence the importance of further research into the diagnosis and rehabilitation of those with visual perception difficulties.

In particular for this research project, I aim to utilise current visual perception screening tests provided by Dr Vancleef and her research team to further diversify their work and this field of research overall. I will translate these tests into Filipino: the Filipino population in the UK is considered the “largest outside Asia and the US”, and is also the largest South-East Asian minority in the UK with approximately 200,000 Filipinos residing here (Burman, 2011), hence why this research is significant. I hope to further establish a more diverse research population for future studies, starting with the incorporation of more South-East Asians by collecting data from non-British participants.

The main objectives of the research are: collecting data from healthy adult volunteers to answer questions on ageing of visual perception skills; to make this screening test more accessible for a minority group in the United Kingdom by translating to another language; to compare the data of non-British participants, in particular Filipino-speakers in the UK to another group in the Philippines of the same approximate age group; to look at cultural differences in visual perception, and to ultimately contribute to the development of assessments and interventions for those suffering from visual perception difficulties.

## Summary

*I will translate the screening tests for stroke survivors on ageing of visual perception skills into Filipino and conduct research with healthy adult participants of Filipino descent in the United Kingdom and the Philippines. These adults will be of a similar age group: middle-aged, from approximately around 40 to 60 years old. I will subsequently analyse these findings and compare them with data from prior studies by Dr Vancleef using the same screening tests in English. The results of the data from the healthy participants can help develop assessments and interventions to improve the lives of patients suffering from visual perception difficulties.*

## References

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