

# 2014 年臺灣國際科學展覽會 優勝作品專輯

作品編號 130007

參展科別 行為與社會科學

作品名稱 The Effect of Hands Free - Cell Phone  
Conversation on Visual Fields

得獎獎項 四等獎

國 家 South Africa

就讀學校 Herzlia High School

作者姓名 Savanna Mendelsohn

## **Abstract**

It is a known fact that using a cell phone while driving can lead to reckless driving. According to research done by the World Health Organisation (2011) thousands of car accidents occur worldwide, each day, due to cell phone use whilst driving. Many of these car accidents result in serious injury or death of drivers, passengers or pedestrians. According to the Automobile Association (2012), cell phones are the number one cause of traffic accidents in South Africa.

The high rate of car accidents due to cell phone use has led to legislation being passed, in most countries, banning hand-held cell phone use while driving. Hands-free phone equipment is not prohibited as it is widely regarded as a safe means of making and taking a phone call while behind the wheel.

The purpose of this study was to show that the act of talking on a cell phone and not the method of talking (hand-held versus hands-free) increases accident probability.

This study used a Friedman Visual field analyser which measures subject's visual fields with and without engaging in hands-free cellular conversation.

The results showed a significant constriction of the visual fields when subjects were conversing on a cell phone. These results were and can be explained by the fact that the test subject experiences cognitive distraction. Cognitive distraction occurs because the driver has to divide his/her attention between the cell phone conversation and the tasks relating to driving.

These results have significant ramifications for road safety in a driving environment.

## 評語

此研究是研究使用免手持行動電話與視野的關係。

研究設計簡單清楚，結果具有意義，但也因為簡單、清楚，有些影響因素沒有放入，導致結果的說服性不夠。