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UNDERSTANDING DRIVING-RELATED FEAR

**A thesis presented in partial fulfilment of
the requirements for the degree of
Doctor of Philosophy
in Psychology at
Massey University**

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*To my family, who have travelled this road with me,
and some of whom I hope will have a go at reading this thesis
so they can see what it is I've been doing all this time.*

ABSTRACT

Driving-related fear (*DRF*) has been investigated predominantly through research on the psychological consequences of motor vehicle accidents. There is a small but growing literature documenting the characteristics of *DRF* within a broader population. These few studies have described *DRF* as diagnostically complex and difficult to characterise in terms of clear anxiety disorders. Particularly problematic is the frequent presence of many different foci of fear and fear cognitions that are typically used to distinguish the various anxiety disorders. In addition, driving skills in those who report *DRF* has been a neglected issue in previous studies. The central aim of the present study was to conduct a comprehensive examination of the clinical characteristics of those who report *DRF*. Such an investigation would help to generate a clearer understanding of the nature of *DRF* and subsequently inform approaches to assessment and treatment.

The present research comprised two separate studies. Study One aimed to ascertain the need for more comprehensive research by comparing the characteristics of drivers who were fearful as a result of a motor vehicle accident (*MVA*) with those who developed their *DRF* through other means. Participants were 85 media-recruited volunteers who reported some degree of *DRF*. Questionnaire data provided information on the types of concerns and expectations while driving, as well as various measures of anxiety and fear severity. There were few prominent differences between those who attributed their *DRF* to an *MVA* and those who reported some other reason for their fear. In addition, the data suggested useful preliminary subtypes of *DRF* that would benefit from further research attention.

Study One then provided the impetus for Study Two, which entailed a more comprehensive investigation of the clinical characteristics and subtypes of *DRF*, as well as an examination of the role of driving skills in *DRF*. Study Two involved a quasi-experimental approach to the analysis of data from media-recruited driving-fearful and control groups each comprised of 50 participants. The control group was matched by average age and years of driving experience. All participants completed an initial questionnaire that provided demographic data as well as information about driving

history and DRF. Various self-report measures of anxiety, fear, and avoidance behaviour were included in the initial questionnaire. Subsequently, those participants who met selection criteria underwent a diagnostic interview, further self-report questionnaires, and a practical driving assessment. Measures of self-rated and instructor-rated participant anxiety and driving skill were completed in conjunction with the driving assessment, mainly to ascertain the potential impact of test anxiety on the assessment results.

Fearfuls were characterised by the reported severity of DRF when compared with controls. Helpseeking behaviour was not reflected in the relatively high levels of fear, anxiety, and avoidance behaviour reported by the fearful group. This was of particular concern given that almost half of the fearfuls met diagnostic criteria for at least one anxiety disorder. Social concerns (i.e., the perceptions of others) as a focus of fear were evident throughout the assessment, and fearfuls rated a higher likelihood of being involved in an MVA than controls, as well as higher levels of concern about the negative reactions of other drivers and injuring other people while driving. Subtypes of DRF were identified and will be an important focus for future research. In what is thought to be the first investigation of driving skills in DRF, the practical driving assessment found that fearfuls made more errors than controls. However, the pattern of errors was identical for both groups, indicating that fear and anxiety may affect the *number* rather than the *type* of errors made. The relationship between DRF and driving skills was discussed and then placed within the context of broader theories of driver behaviour.

While the present research has served to further the understanding of DRFs and, in particular, has provided a starting point for understanding the role of driving skills in such fears, many avenues for future research are suggested. Additional studies will help to further clarify the findings of the present research, and to develop more clearly the kinds of practical and clinical recommendations that form the basis of efficient and effective treatment for DRF.

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PREFACE

The 20th century will go down in history as a time of incredible change and technological progress. One 20th century phenomenon has transformed the way we live, possibly more than any other - the mass production and wide availability of motor vehicles.

Cars, trucks, and motorcycles have given us freedom of movement, quick and reliable transport and the ability to move goods easily from one place to another. The direct and indirect contribution of automobiles to the global economy is immeasurable.

Unfortunately, the age of the car has also been the age of the car crash. And the trauma of crashes *is* [italics added] measurable. Today there are an estimated 700,000 killed world-wide every year.

Like most countries, New Zealand has been hit hard by road crashes. Since the first known fatal crash in Christchurch in 1908, an estimated 32,700 people have lost their lives on our roads. (“The 20th century road toll”, 1999, p. 4)

The above quote succinctly captures the double-edged nature of the invention of the automobile, by highlighting the major economic advancements enabled by such an invention that are coupled with the introduction of fatalities and injuries associated with travel in an automobile.

As at March 12th, 2002, the road toll stood at 82, with 437 killed in the last year on our roads (Land Transport Safety Authority, n.d.). Such statistics are reflected in the wealth of research on survivors of MVAs, which has comprehensively investigated the psychiatric, psychological, social, legal, medical, and cognitive (amongst others) sequelae of MVAs, as well as issues for assessment and treatment (e.g., see Blanchard & Hickling, 1997).

In an attempt to understand the causes of MVAs, researchers have studied an exhaustive array of human factors, including mood, aggression, risk-taking behaviour, fatigue, stress, age, gender, brain injury, drug-taking behaviour, and psychiatric symptomatology (Little, 1970; Shinar, 1978). Anxiety is another factor that has been studied in relation to driving, although has featured more frequently as a *consequence* (such as post-traumatic stress disorder) than a *cause* of motor vehicle accidents.

More recently, researchers have begun to document the presence of anxiety, fears, and phobias related to driving in samples not selected solely for their post-MVA status (Ehlers, Hofmann, Herda, & Roth, 1994; Taylor & Deane, 1999). Furthermore, preliminary research by Taylor and Deane (2000) found a lack of differences between those with MVA- and non-MVA-related driving fears on various measures of fear severity. In light of this finding, Taylor and Deane called for a more comprehensive investigation of DRF. The present research aims to answer this call.

As part of this answer, driving skills are raised as an area to be assessed that has been notably absent from previous research on DRF. This focus necessitates a review of the literature on general theories of driving as well as theory and research on the relationship between anxiety and driving. The intention in reviewing this material is to provide a context for the present study, which is particularly important given the novel consideration of driving skills. This further required an exploratory and descriptive focus to driving skills in the present study.

It was considered important in the first instance to gain detailed information about driving skills in a group of people with DRF, and that this information could then be used, in combination with further studies, to develop a theoretical position on the relationship between driving-related fear and driving performance, based on a collection of research rather than a single study. While the present study therefore did not intend and was not designed to expound a theory about this relationship, attempts were made to locate and integrate the results with existing research and theory.

Finally, various abbreviations are used throughout this thesis. Those for *driving-related fear* (i.e., *DRF*), *motor vehicle accident* (i.e., *MVA*), and *standard deviation* (i.e., *SD*) remain consistent throughout. Abbreviations for psychometric measures are initially presented in relation to the particular measure and are reiterated in later sections for ease of reading. Data are presented rounded to two decimal places, except for some of the results of factor and cluster analyses in which output is given to three decimal places.