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MACRO-LEVEL EVALUATION OF ROAD SAFETY IMPROVEMENT INTERVENTIONS: AN EVALUATION OF THE ARRIVE ALIVE 1 (1997/98) ROAD SAFETY CAMPAIGN

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MAKRO-VLAK EVALUERING VAN VERKEERSVEILIGHEIDSVERBETERINGS-PROGRAMME: 'n EVALUERING VAN DIE ARRIVE ALIVE 1 (1997/98) VERKEERSVEILIGHEIDSVELDTOG

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'n Verhandeling voorgelê ter gedeeltelike vervulling van die vereistes vir die graad

MAGISTER IN INGENIEURSWESE
(VERVOERINGENIEURSWESE)

in die

FAKULTEIT INGENIEURSWESE
UNIVERSITEIT VAN PRETORIA

Februarie 2000

DISSERTATION SUMMARY

MACRO-LEVEL EVALUATION OF ROAD SAFETY IMPROVEMENT INTERVENTIONS: AN EVALUATION OF THE ARRIVE ALIVE I (1997/98) ROAD SAFETY CAMPAIGN

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Degree: Master of Engineering (Transportation Engineering)

700 000 people die annually in road traffic accidents around the world and road traffic safety interventions are implemented annually across the world. Macro-level evaluation is necessary to ensure financial accountability and clarification that the intervention improved road safety. The study identified two categories of indicators that can be utilised, namely quantitative (evaluating accident data using, for example, statistical analysis and also other methods) and qualitative indicators like the human factor (this includes aspects such as behaviour, attitudes, perception, etc.). The study found that the statistical analysis and trend analysis of macro-level accident data is problematic as changes and predictability is statistically non-significant. The evaluation of human factors was identified as a possible alternative and complementary indicator of the effectiveness of road traffic safety improvement interventions. The aspects relevant to road safety improvements with regard to behavioural changes were investigated. The study found that there is a number of criteria that can be used to measure the input (e.g. communication, publications, the media etc.) and output-related aspects of the human factor (e.g. changes in behaviour, attitudes, motivation, risk, skills etc.). A list of these indicators were generated based on the study of aspects related to behavioural change and a preliminary evaluation of the Arrive Alive 1 was made. The study recommends that a measure of exposure be developed that will allow for the utilisation of macro-level accident data in the evaluation process and that the human factor also be included in the macro-level evaluation of road safety improvement interventions.

SAMEVATTING VAN VERHANDELING

MAKROVLAK DIE EVALUERING VAN VERKEERSVEILIGHEIDSVERBETERINGSPROGRAMME: 'n EVALUERING VAN DIE ARRIVE ALIVE I (1997/98) PADVEILIGHEIDSVELDTOG

I VAN SCHALKWYK

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Graad: Magister in Ingenieurswese (Vervoeringenieurswese)

Jaarliks sterf 700 000 mense in padverkeersongelukke in die wêreld. Verkeersveiligheidsverbeteringsprogramme word jaarliks regoor die wêreld geimplementeer. Makrovlak evaluering van verkeersveiligheidsverbeteringsprogramme is noodsaaklik vir finansiële toerekenbaarheid en om te verseker dat die program wel verkeersveiligheid verbeter het. Die studie het twee kategorieë aanwysers geïdentifiseer wat gebruik kan word in die evalueringsproses, naamlik: kwalitatiewe en kwantitatiewe aanwysers. Kwantitatiewe aanwysers verwys na byvoorbeeld die analise van ongeluksdata met statistiese analise metodes en kwalitatiewe aanwysers verwys na die menslike faktor wat aspekte soos gedrag, houding, persepsies ens. insluit. Die studie het gevind dat statistiese en tendens-analise van makrovlak ongeluksdata problematies is aangesien die veranderinge en voorspelbaarheid daarvan nie statisties betekenisvol is nie. Die evaluering van die menslike faktor is geïdentifiseer as 'n alternatiewe en komplimentêre maatstaf vir die evaluering van verkeersveiligheidsverbeteringsprogramme. Die aspekte wat met gedragsveranderinge tydens en na verkeersveiligheidsverbeteringsprogramme verband hou, is bestudeer. Die studie het gevind dat 'n aantal kriteria gebruik kan word om die in-en uitset van die menslike faktor te meet. Die inset kriteria verwys na byvoorbeeld kommunikasie, publikasies, die media ens en uitset kriteria verwys na veranderinge in gedrag, houding, motivering, risko, vaardighede ens. 'n Lys van hierdie kriteria is ontwikkel gebaseer op die studie oor faktore wat gedragsveranderinge beinvloed en daarmee verband hou. 'n Voorlopige evaluering van die Arrive Alive 1 veldtog is ook gedoen. Die studie beveel aan dat 'n maatstaf vir blootstelling ontwikkel word wat die gebruik van makro-vlak ongeluksdata in die evaluering van verkeersveiligheidsprogramme sal moontlik maak. Die studie beveel ook aan dat die menslike faktor ingesluit word in die makrovlak evaluering van verkeersveiligheidsverbeteringsprogramme.

ABSTRACT

MACRO-LEVEL EVALUATION OF ROAD SAFETY IMPROVEMENT INTERVENTIONS: AN EVALUATION OF THE ARRIVE ALIVE I (1997/98) ROAD SAFETY CAMPAIGN

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ACKNOWLEDGEMENTS

I wish to express my appreciation to the following organizations and persons who made this dissertation possible:

- My promotor, Mr Louis Roodt, for introducing me to the human behaviour aspect of road safety during my postgraduate studies and for his guidance and support during the study – and for lots massive patients and faith!
- The Durban Central Council for providing excellent accident data for me on an almost continuous basis, in particular Mrs Preeta Piree, Mrs Colleen Crawford and Mr John Dellis
- The Durban City Police
- The City Council of Pretoria, in particular Mr Dirk Lombaard.
- The CSIR, Transportek for making the raw national and provincial data available for the study
- Mr Gerrie Botha of National Department of Transport for making the long-term annual accident data of South Africa available for the study
- Cornel Wenzel from the Department of Energy Affairs for making the fuel sale information available for the study
- Prof Christo van As for assisting me with the conversion of the accident data to a standard data format
- Prof Romano del Mistro for making me think again about the conclusions I was sure of
- Dr Hermi Boraine and Mrs Rina Owen from the University of Pretoria for the specialist statistical analysis
- My parents for their support
- Mrs Marga Jordaan for her motivation and support
- Mrs Lea Wissing for proof-reading the dissertation
- For all my friends and colleagues that supported me continuously in the strive towards safer road traffic systems.

TABLE OF CONTENTS

Page No

1. INTRODUCTION

1.1 Background 1-1
1.2 Objectives of the Study 1-1
1.3 Scope of the Study 1-2
1.4 Methodology 1-3
1.5 Problem statement 1-3
1.6 Organisation of the Report 1-4

2. THE ROAD SAFETY PROBLEM

2.1 Introduction 2-1
2.2 The road safety problem in context 2-1
2.3 South Africa's road safety record compared to other countries 2-1
2.4 The cost of road traffic accidents and potential savings 2-2
2.5 Attitude towards road safety 2-2
2.6 Conclusions 2-3

3. APPROACHES TOWARDS IMPROVING THE ROAD SAFETY PROBLEM

3.1 Introduction 3-1
3.2 Views on road traffic safety improvements 3-1
3.3 Stages in the historical development of road safety improvement interventions 3-3
3.4 The mono-causal casuistic approach 3-3
3.5 The mono-causal accident proneness approach 3-4
3.6 The mono-causal chance phenomenon approach 3-4
3.7 The multi-causal chance phenomena approach 3-4
3.8 The multi-causal static systems approach 3-5
3.9 The multi-causal dynamic systems approach 3-5
3.10 Conclusions 3-6

4. INTERNATIONAL PROGRAMS TO IMPROVE ROAD SAFETY

4.1 Introduction 4-1
4.2 United Kingdom 4-1
4.3 Australia 4-2
4.4 United States 4-3
4.5 Similarities in the international approach 4-3
4.6 The South African approach 4-4
4.7 Conclusions 4-6

5. ARRIVE ALIVE 1

5.1 Introduction 5-1
5.2 Background 5-1
5.3 Project focus 5-1
5.4 Objectives 5-1
5.5 Funding allocation 5-2
5.6 Law enforcement actions 5-3
5.7 Conclusion 5-3

6. EVALUATION OF ROAD SAFETY IMPROVEMENT INTERVENTIONS

6.1 Introduction 6-1
6.2 The need for evaluation 6-1
6.3 Evaluation methods 6-1
6.4 Conclusions 6-2

7. ANALYSIS OF ACCIDENT HISTORY

7.1 Introduction 7-1
7.2 Problems with statistical analysis of accident data 7-1
7.3 Measures for accident data analysis 7-2
7.4 Accident frequency 7-2
7.5 Accident rates 7-3
7.5.1 Population-based rates 7-3
7.5.2 Exposure-based accident rates 7-3
7.5.3 Basic accident rates 7-4
7.6 Accident severity and costs 7-4
7.7 Trends 7-4
7.8 Accident types 7-6
7.9 Risk indices 7-6
7.10 Conclusions 7-6

8. STATISTICAL ACCIDENT ANALYSIS

8.1 Background 8-1
8.2 Accidents as a random event 8-1
8.3 ARIMA 8-2
8.4 Contributing variables 8-4
8.5 Conclusions 8-4

9. ACCIDENT DATA ANALYSIS USING YEARLY DATA

9.1 Introduction 9-1
9.2 Accident frequency 9-1
9.3 Population based accident rates 9-2
9.3.1 Death or accident characteristic frequency per million area population 9-2
9.3.2 Deaths or accident characteristics frequency per 1,000 registered vehicles 9-3
9.4 Exposure-based accident rates 9-4
9.4.1 Introduction 9-4
9.4.2 Available data 9-4
9.4.3 Fuel sales as a measure of exposure 9-5
9.4.4 Degree of injury 9-7
9.5. Trends 9-7
9.6 Conclusions 9-8

10 ACCIDENT ANALYSIS FOR ARRIVE ALIVE 1 USING MONTHLY DATA

10.1 Introduction 10-1
10.2 Methodology 10-1
10.3 Accident frequency 10-5
10.4 Population-based accident rates 10-5
10.5 Exposure based accident rates 10-5
10.5.1 Introduction 10-5
10.5.2 Available data 10-5
10.5.3 The analysis 10-5
10.6 Degree of injury 10-6
10.7 Involvement rates and accident characteristics 10-6
10.7.1 Introduction 10-6
10.7.2 Drivers ages per vehicle type 10-6
10.7.3 Passenger ages per vehicle type 10-7
10.7.4 Day of week 10-7
10.7.5 Visibility conditions 10-7
10.7.6 Time of day 10-8
10.8 Accident types 10-8
10.9 Trends and Arima analysis 10-9
10.10 Selection of worst locations and worst routes 10-9
10.11 Conclusions 10-9

11. HUMAN FACTORS RELATED TO ROAD SAFETY INTERVENTIONS - A LITERATURE SURVEY

11.1 Introduction 11-1
11.2 Background 11-1
11.3 Testing the human factors in road safety interventions 11-1
11.4 Behaviour and motivation 11-2
11.4.1 The relationship between behaviour and motivation 11-2
11.4.2 How fear influences motivation and behaviour 11-4
11.4.3 The character of motivation in road safety management 11-5
11.5 Attitude 11-5
11.5.1 Introduction 11-5
11.5.2 Defining attitude 11-5
11.5.3 Attitudes and behaviour modification 11-6
11.5.4 The components of attitudes 11-6
11.5.5 The characteristics of attitudes 11-8
11.5.6 The functions of attitudes 11-9
11.5.7 Attitude change 11-9
11.5.8 The levels of attitudes 11-11
11.6 Behaviour and attitude 11-12
11.6.1 Introduction 11-12
11.6.2 Attitudes influence behaviour 11-12
11.6.3 Behaviour influences attitudes 11-13
11.6.4 Mutual influence 11-14
11.6.5 Influence by other factors 11-14
11.6.6 Theory of reasoned action 11-14
11.6.7 Health belief model (HBM) 11-17
11.7 Risk 11-20
11.7.1 Introduction 11-20
11.7.2 Risk and behaviour 11-20
11.7.3 The ability of the Individual to estimate risk 11-21
11.7.4 Other factors affecting the acceptance of risk 11-21
11.7.5 Risk and the media 11-23
11.7.6 Risky behaviour 11-23
11.8. Risks, attitudes and behaviour 11-24
11.9 The risk homeostasis theory 11-25
11.9.1 Introduction 11-25
11.9.2 The risk homeostasis theory 11-25
11.9.3 The target level of risk 11-25

11.9.4 Perceived level of risk 11-27
11.9.5 Objective level of risk 11-28
11.9.6 Adjustment action 11-28
11.9.7 The effect on the accident toll 11-28
11.9.8 The influence of skills on behaviour 11-29
11.9.9 The risk homeostasis theory and individual accidents 11-31
11.9.10 Application of the risk homeostasis theory to influence the human factor in road traffic accidents 11-32
11.9.11 Accident analysis and the risk homeostasis theory 11-33
11.10 Law enforcement and behaviour 11-33
11.11 Conclusions 11-34

12. EVALUATION OF THE HUMAN FACTOR IN ROAD SAFETY IMPROVEMENT INTERVENTIONS

12.1 Introduction 12-1
12.2 Criteria and evaluation elements 12-1
12.3 Input-related criteria and evaluation elements 12-1
12.4 Output-related criteria and evaluation elements 12-4
12.5 Preliminary evaluation of the input-based elements of Arrive Alive 1 12-6
12.6 Preliminary evaluation of the output-based elements of Arrive Alive 1 12-8
12.7 Conclusions

13. CONCLUSIONS AND RECOMMENDATIONS

13.1 Conclusions 13-1
13.2 Recommendations 13-2

14. REFERENCES 14-1

Appendix A: The regression analysis of number of accidents and fuel sales.

Appendix B: The regression analysis of number of accidents and number of registered vehicles.

Appendix C: The graphic representation of monthly accident data series for South Africa, Gauteng, KwaZulu-Natal, Western Cape, the Durban Metro, a selection of worst locations in Durban Metro and a selection of major routes in the Durban Metro area.

Appendix D: The graphical representation of the distribution of driver and passenger ages involved in accidents in the Durban Metro area.

LIST OF TABLES

TABLE 5.1: Funding of Arrive Alive 1 5-2
TABLE 5.2: Breakdown of notices issued during the Arrive Alive 1 5-3
TABLE 11-1: Concepts in attitude-behavioural models 11-19
TABLE 12.1: Input-criteria for road safety improvement interventions 12-2
TABLE 12.2: Output-related criteria and evaluation elements 12-4

LIST OF FIGURES

FIGURE 10.1: An example of the normalised accident data shown in Appendix C and D 10-4
FIGURE 11.1: The relationship between fear, motivation and road safety 11-4
FIGURE 11.2: Psychological variables and influences 11-6
FIGURE 11.3: The first three theories regarding attitudes and behaviour 11-16

Page No

FIGURE 11.4: The HBM model 11-18
FIGURE 11.5: The theoretical representation of the road user as a net benefit maximiser 11-27
FIGURE 11.6: The homeostatic model 11-28

LIST OF GRAPHS

GRAPH 2.1: Comparative fatality rate per 1000 rgistered vehicles in 1996 (after CSS 1999) 2-1
GRAPH 7-1: Number of fatalities and the fatality rate per 1000 registered vehicles 7-2
GRAPH 9-1: The number of accidents and fatalities in South Africa 9-1
GRAPH 9-2: Fatalities and accidents as a rate per million area population 9-2
GRAPH 9-3: The number of accidents and fatalities per 1000 registered vehicles 9-3
GRAPH 9-4: The predicted number of accidents based on the number of registered vehicle population 9-4
GRAPH 9-5: The number of accidents and the fuel sales in South Africa 9-5
GRAPH 9-6: Predicted and recorded number of accidents based on the petrol and diesel sales 9-6
GRAPH 9-7: The degree of injuries in South Africa 9-7
GRAPH C.1: Total: Total number of accidents C1
GRAPH C.2: Total: Total number of fatalities C2
GRAPH C.3: Total: Total number of fatalities and severe injuries C3
GRAPH C.4: Head on accidents: Total number of accidents C4
GRAPH C.5: Head on accidents: Total number of fatalities C5
GRAPH C.6: Head on accidents: Total number of fatalities and severe injuries C6
GRAPH C.7: Overturning accidents: Total number of accidents C7
GRAPH C.8: Overturning accidents: Total number of fatalities C8

GRAPH C.9: Overturning accidents: Total number of fatalities and severe injuries..... C9
GRAPH C.10: Total no of accidents per Kilolitre fuel..... C10
GRAPH C.11: Total no of fatalities and severe injuries per Kilolitre fuel C11
GRAPH C.12: Fixed object accidents per Kilolitre fuel C12
GRAPH C.13: Fixed object accident fatalities and severe injuries per Kilolitre fuel C13
GRAPH C.14: Head on accidents per Kilolitre fuel..... C14
GRAPH C.15: Head on accident fatalities and severe injuries per Kilolitre fuel C15
GRAPH C.16: Left turn (same)accidents per Kilolitre fuel C16
GRAPH C.17: Left turn (same)accident fatalities and severe injuries per Kilolitre fuel C17
GRAPH C.18: Overturning accidents per Kilolitre fuel..... C18
GRAPH C.19: Overturning fatalities and severe injuries per Kilolitre fuel C19
GRAPH C.20: Rear end accidents per Kilolitre fuel C20

Page No

GRAPH C.21: Rear end fatalities and severe injuries per Kilolitre fuel C21
GRAPH C.22: Right angle (straight)accidents per Kilolitre fuel C22
GRAPH C.23: Right angle (straight)accident fatalities and severe injuries per Kilolitre fuel C23
GRAPH C.24: Right angle (turn) accidents per Kilolitre fuel C24
GRAPH C.25: Right angle (turn) fatalities and severe injuries per Kilolitre fuel C25
GRAPH C.26: Right turn (opp) accidents per Kilolitre fuel C26
GRAPH C.27: Right turn (opp) fatalities and severe injuries per Kilolitre fuel C27
GRAPH C.28: Right turn (same) accidents per Kilolitre fuel..... C28
GRAPH C.29: Right turn (same) fatalities and severe injuries per Kilolitre fuel C29
GRAPH C.30: Side swipe (opp) accidents per Kilolitre fuel C30
GRAPH C.31: Side swipe (opp) Total no of fatalities and severe injuries per Kilolitre fuel C31
GRAPH C.32: Side swipe (same) accidents per Kilolitre fuel..... C32
GRAPH C.33: Side swipe (same) fatalities and severe injuries per Kilolitre fuel C33
GRAPH C.34: Total: Degree of injuries C34
GRAPH C.35: Head on accidents: Degree of injuries..... C35
GRAPH C.36: Overturning accidents: Degree of injuries..... C36
GRAPH C.37: Total: % weekday accidents C37
GRAPH C.38: Total: % Saturday accidents C38
GRAPH C.39: Total: % Sunday accidents C39
GRAPH C.40: Total: % daylight accidents (visibility)..... C40
GRAPH C.41: Total: % night accidents (visibility)..... C41
GRAPH C.42: Total: % twilight accidents (visibility) C42
GRAPH C.43: Total: % AM-Peak accidents C43

GRAPH C.44: Total: % PM-Peak accidents C44
GRAPH C.45: Total: % Off-Peak accidents C45
GRAPH C.46: Fixed object accidents as % of the total accidents C46
GRAPH C.47: Head on accidents as % of the total accidents C47
GRAPH C.48: Left turn (same) accidents as % of the total accidents C48
GRAPH C.49: Overturning accidents as % of the total accidents C49
GRAPH C.50: Parked/ parking accidents as % of the total accidents C50
GRAPH C.51: Rear end accidents as % of the total accidents C51
GRAPH C.52: Reversing accidents as % of the total accidents C52
GRAPH C.53: Right angle (straight) accidents as % of the total accidents C53
GRAPH C.54: Right angle (turn) accidents as % of the total accidents C54
GRAPH C.55: Right angle accidents as % of the total accidents C55

Page No

GRAPH C.56: Right turn (opp) accidents as % of the total accidents C56
GRAPH C.57: Right turn (same) accidents as % of the total accidents C57
GRAPH C.58: Right turn accidents as % of the total accidents C58
GRAPH C.59: Side swipe (opp) accidents as % of the total accidents C59
GRAPH C.60: Side swipe (same) accidents as % of the total accidents C60
GRAPH C.61: Side swipe accidents as % of the total accidents C61

APPENDIX D : DRIVER AND PASSENGER INVOLVEMENT DISTRIBUTION OF ACCIDENTS IN THE DURBAN METRO AREA

GRAPH D1 All Drivers D-1
GRAPH D2 Percentage bus drivers D-2
GRAPH D3 Percentage passenger car drivers D-3
GRAPH D4 Percentage combi and mini-bus taxi drivers D-4
GRAPH D5 Percentage motor-cycle drivers D-5
GRAPH D6 Percentage truck drivers D-6
GRAPH D7 Percentage LDV drivers D-7
GRAPH D8 All passengers D-8
GRAPH D9 Percentage bus passengers D-9
GRAPH D10 Percentage passenger car passengers D-10
GRAPH D11 Percentage combi and mini-bus taxi passengers D-11
GRAPH D12 Percentage motor-cycle passengers D-12
GRAPH D13 Percentage truck passengers D-13
GRAPH D14 Percentage LDV passengers D-14