International students as young migrant workers in South Australia: The role of the University in occupational health and safety awareness and education

Yahya Thamrin

B.PubHlth, MPH, MOHS

A thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy

The School of Public Health, Faculty of Health Sciences
The University of Adelaide
South Australia
April 2016
Declaration

I, Yahya Thamrin, hereby certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint award of this degree.

I give consent to this copy of my thesis when deposited in the University Library, being made available for loan and photocopying, subject to the provisions of the Copyright Act 1968.

I also give permission for the digital version of my thesis to be made available on the web, via the University’s digital research repository, the Library Search and also through web search engines, unless permission has been granted by the University to restrict access for a period of time.

Yahya Thamrin
Acknowledgements

_Bismillahirrahmaanirrahim_,

I commence this with thanking to members of my supervisory panel. I have been very fortunate to be supervised again by Prof. Dino Pisaniello. His intelligence, commitment and guidance have inspired me to challenge myself to move forward with the best of my ability to be an independent researcher. I express my sincere gratitude to Dr. Cally Guerin. My confidence in academic writing has flourished through her tireless effort in providing feedback, understanding, suggestions, and advice along my journey. Without her support I wouldn’t have been able to finish writing this thesis. To Dr. Arthur Saniotis, I thank you for helping me in conducting qualitative research.

I salute all international students who are working while studying for their tenacity, resilience and persistence during the process of achieving their dream to study in Australia and at the same time work in an Australian workplace, and contribute to the advancement of the Australian economy. I am deeply grateful to those who participated in this research for sharing their experiences, perspectives, and hope for better conditions in the future.

I would like to say thank you to the Indonesian Government for providing a DIKTI Scholarship and funding my PhD program. I also thank the Rector of Hasanuddin University, the Vice Rectors and staff, the Dean of the Public Health Faculty, the Deputy Deans and all colleagues and staff in the Department of Occupational Health and Safety who provided me supports to pursue my PhD.
I have a debt of appreciation to SafeWork SA for providing me the workers’ compensation dataset. Special thanks go to Mr. John Horrocks for data delivery and interpretation of the variables and findings and for his valuable time for consultations regarding my reports. Also, I extend my thanks to SafeWork SA for awarding a WHS Supplementary Scholarship. To Dr. Michael White, Mr. Brian Adams and Ms. Bev Hodge, I say thank you for that. The generosity of this scholarship provided me financial assistance to fund a part of my research and to support my family life here in Adelaide throughout my journey.

I am indebted to Mrs. Patricia Anderson, the manager of the International Student Centre of the University of Adelaide, who always provided me advice and support not only in conducting this research but also in helping me to solve my problems encountered as an international student. I am thanking Dr. Glen Stafford, Manager of Academic and Global Relations of the Global Engagement Office at the University of Adelaide who gave the access to the ISB survey 2013 data.

My appreciation also goes to Dr. Nasreen Jahan, Dr. Jianjun Xiang, Dr. Elvia Shauki (UNISA) and Dr. Sue Williams for their assistance and consultation in data analysis and methodological aspects. Not to forget all staff and other PhD students of Discipline of Public Health and School of Education in thesis writing group for your support, friendship and scholarly interaction.

Special thanks go to all my Aussie friends in my “real-working experience” in the Australian workplace: Michael, Simon, Leanne, Chris, Joe, Chad, Steve, Vincent, Anthony and Tom for your contributions to improve my English, to help me understand more about Australian culture and to enrich my social life and working life simultaneously.
I dedicate this thesis and wish to thank my loving parents Hj. Rukiah Tahir and H. Thamrin Hamid for their endless love giving strength to chase my dream and prayers to let me go beyond the walls of our house. To my kids Muhammad Khairil Ali Yahya, Ahmad Khairul Fauzi Yahya and Nurul Khaira Zidni Yahya, you are the greatest gifts of my life. Thank you for staying strong in good times and bad times while your Mum and Dad at the same time on their way driving this bumpy road. But, yes we are nearly there honey.

Not to forget, I would like to say thank you all brothers (Abdullah Thamrin, DCN, M. Kes., Ir. Abdul Syukur Thamrin, and dr. Abdul Muthalib Thamrin, SpAn, M. Kes) and my sister (Dra. Hj. Juariah Thamrin) for your support to my family life together with all my brothers, sisters and my mother in law (Hj. Andi Colli Poji) and also to Nina who looked after my kids.

Last but certainly not least, I would like to thank my beloved wife Hj. Iin Karmila Yusri, SST, M. Eng. Sorry, for sometimes I didn’t realise that you are a PhD candidate as well. Your love, patience and support are my inspiration and my internal driving force throughout this journey. I always said that it is not easy to go along this way when we are all at the same boat but you strongly believed that we can make it. Insya Allah. So thank you for that.

Walhamdulillahirabbilaalamiin.
Abstract

Problem Statement

Despite the possibility of major under-reporting, young workers are over-represented in injury statistics. Among this group are international students, who constitute a significant and rising proportion of young workers in part-time, casual or seasonal jobs. International students may be at greater risk for occupational injury than their domestic peers because of cultural issues, language barriers, financial pressures and the nature of the work available to them. Thus, they represent a vulnerable segment of the workforce. There is a need to better understand their risk profile and develop evidence-based interventions to reduce risk.

Gap Analysis

There is a substantial body of literature on young workers, including migrant workers. However, limited research has been conducted regarding international students as a vulnerable subpopulation in the Australian workplace context. Furthermore, the role of the university as a potential (or actual) provider of occupational health and safety (OHS) awareness and education for international students has been poorly explored.

Purpose Statement

The ultimate goal of this research is to reduce accident and injuries among international students as young migrant workers. The aims are to explore their work experiences while studying at university, and understand their perspectives on OHS, including the role of the university in occupational illness and injury prevention.
Research Questions

Two broad research questions are proposed:

1. What are the work health and safety experiences of international students as young migrant workers?
2. What is the role of the university in terms of OHS awareness raising and education among international student employees?

Methodology

Four complementary approaches were employed to answer the research questions. These comprised two statistical reviews and two empirical studies in a parallel mixed methods research design.

1. Statistical reviews:
   a. Injury claims experience from South Australian Workers Compensation data (2004-2013). For the purpose of this statistical review, an international student was defined as a worker between the ages of 15-24 years who was non-Australian born and of non-English speaking background.
   b. Working experience from the 2013 University of Adelaide International Student Barometer (ISB) Survey. The survey is run on a regular basis to gauge perceptions and to improve services for enrolled international students.

2. Empirical studies
   a. An online questionnaire survey of international students at the University of Adelaide. This was designed to explore working experiences, injury experiences and work-study interference.
b. A qualitative focus group study of international students at the University of Adelaide. This explored the perceived current practice of OHS education in the University and its potential injury-preventive role for work outside of the University.

Main Findings

Statistical reviews of workers compensation data and ISB survey data

Young workers were more likely to experience serious injuries if they were:
- Non-Australian born, Odds Ratio (OR) = 1.20 (CI: 1.07-1.35);
- Non-English speaking background (NESB), OR= 1.38 (CI: 1.09-1.76);
- Older young workers (20-24 yr old), OR=1.38 (1.29-1.47);
- Female, OR =1.51 (1.41-1.61);
- Outdoor workers OR= 1.87 (1.73-2.02).

These data are consistent with international students being at greater risk compared to local young workers.

The majority of participants in the ISB 2013 survey (n=656) reported that they were being underpaid. Male students were more likely to be in paid employment compared to females, who were more likely to be in a voluntary job. In addition, this study found a gap between male and female overseas students concerning their average income.

Online survey of international students

This study (n=466) found international students worked in part-time jobs (55.3%), casual (39.2%) and seasonal employment (5.4%). The majority were engaged in restaurants (42.1%), supermarkets or grocery stores (21.1%) and in cleaning jobs (12.6%). Sixty percent reported that they did not receive any OHS training before commencing the work and 10% reported that they had experienced an injury in an Australian workplace. Of those with OHS training, 43% experienced
injury after the training. About 65% of students felt that work adversely impacted on study, with tiredness being the main form of interference.

Injury experience and perceptions of work-study interference were modelled with logistic regression. Significant predictors of injury were working 20 hours or more per week, adjusted odds ratio (AOR) = 2.20 (CI: 1.03-4.71); lack of confidence in discussing OHS issues, AOR = 2.17 (CI: 1.13-4.16); a perception of unfair wages or feeling exploited, AOR = 2.42 (CI: 1.24-4.71); and being a second year student in either undergraduate or postgraduate programs, AOR = 2.69 (CI: 1.04-6.96). For work-study interference, the corresponding variables were working 20 hours or more per week, OR=1.91 (CI: 1.08-3.41); a perception of unfair wages, OR=1.89 (CI: 1.31-2.75); being a second year student, OR= 1.80 (CI: 1.02-3.18); being a holder of a partial scholarship, OR=1.98 (CI: 1.14-3.43); and lack of confidence in discussing OHS issues, OR=2.05 (CI: 1.41-2.99).

Focus group discussions

This study (3 groups, n=21) found that international students had multiple reasons to work while studying, and it was not all about earning money. Improving their English, adapting to Australian culture and making friends were cited as other reasons to work.

There were mixed experiences relating to work-study interference. Some participants revealed that they had experienced negative impacts of long working hours on study. However, other students argued that there was reduced impact when the jobs were flexible, were undertaken in a vacation period, on the weekends, or when the working hours did not exceed 20 hours a week.
Similarly, there were mixed views regarding OHS. Some participants were not concerned about the risks, even if they understood the hazard.

Student perspectives on OHS training and education tended to be shaped by their experiences and study backgrounds. With regard to the current University of Adelaide practices on OHS education, it was found that there was a different emphasis between the schools of engineering and social sciences. The participants recalled OHS information and education being provided but felt that this tended to focus on student security and safety around the University environment. Participants felt that there was little or no consideration of work outside of the University. Some suggested that the institutional concern about students’ working life should be raised from “zero” to “hero”. The University should better prepare international students to work in the community as part of its social responsibility and duty of care. The role of the University was to provide generic or basic knowledge such as workers’ rights and responsibilities. However, this could never replace specific on-the-job training provided by employers.

**Novelty and Implications**

This research is the first to explore the combination of international students’ working experiences, injury experiences, work-study interference and perspectives on the role of the University in preventing injuries in students’ working life.

The findings from statistical reviews and the online survey provide new evidence about international student vulnerabilities in the workplace. When these findings were integrated with the qualitative data, a conceptual framework for the prevention of injury was derived, identifying the University as a key stakeholder.
Finally, the research provides new evidence for improving the effectiveness of OHS education for international students.

**Conclusions and Recommendations**

On the basis of this research, it is clear that international students have multiple vulnerabilities and that there are particular risk factors for occupational injury and work-study interference. Students expressed the view that the University should do more to support their work activity while studying. It is highly likely that the findings from the University of Adelaide can be generalised to other universities. Universities are effectively sponsors of students into the local community, but have a limited awareness of their contribution to the local workforce. As such, there is a social responsibility which extends beyond academic and social support to encompass work life. A better understanding of work arrangements may also improve academic performance.

A series of recommendations are made for the universities, OHS regulators, ISB providers and future researchers. These include:

- better preparation of international students for integration into workplaces;
- regulation of the hours of work and the prevention of exploitation;
- continued use of the ISB as one means of monitoring student work experience, and benchmarking across universities and states;
- a longitudinal study of international students; and
- exploring the perceptions of academics and university administrators to complement the findings from students.
Table of Contents

Declaration ................................................................................................................... i
Acknowledgements .................................................................................................... ii
Abstract ...................................................................................................................... v
Table of Contents ....................................................................................................... xi
List of Figures ............................................................................................................. xx
List of Tables ............................................................................................................. xxv
Abbreviations ............................................................................................................ xxvii
Thesis Overview ........................................................................................................ xxix

CHAPTER 1. INTRODUCTION ................................................................................. 1
1.1 Research background ........................................................................................... 1
  1.1.1 The benefits of international education engagement ..................................... 1
  1.1.2 Who are international students? .................................................................. 3
  1.1.3 The legislative frameworks and responsibilities of the education providers... 8
    1.1.3.1 International students’ employment rights ........................................... 11
    1.1.3.2 The responsibilities of the University as education provider ............ 11
1.2 Research aim and objectives .............................................................................. 13

CHAPTER 2. LITERATURE REVIEW .................................................................... 14
2.1 Introduction ......................................................................................................... 14
2.2 Methods .............................................................................................................. 15
2.3 Migrant Workers’ Health and Safety .................................................................. 16
2.4 Young Workers’ Health and Safety .................................................................... 24
2.5 International Students as a Working Population .............................................. 30
2.6 Overlapping vulnerabilities as migrant workers as well as young workers .... 35
2.7 Gap Analysis and Research Questions .............................................................. 37
  2.7.1 Broad research questions ........................................................................... 38
  2.7.2 Specific research questions ........................................................................ 39
2.8 Research Design and Methodology .................................................................... 39

CHAPTER 3. STATISTICAL REVIEWS ................................................................ 42
3.1 Introduction ......................................................................................................... 42
3.2 Analysis of workers’ compensation dataset for young workers in South Australia from 2004 to 2013: Descriptive and analytical statistics of selected variables for young migrant workers ....................................................... 42

3.2.1 Introduction ........................................................................................................ 42

3.2.1.1 Why serious injury? ....................................................................................... 43

3.2.2 Methods ............................................................................................................ 45

3.2.2.1 Data collection ............................................................................................... 45

3.2.2.2 Data analysis .................................................................................................. 46

3.2.2.3 Data cleaning .................................................................................................. 46

3.2.2.4 Coding ........................................................................................................... 47

3.2.3 Results ............................................................................................................. 47

3.2.3.1 Descriptive analysis ...................................................................................... 47

3.2.3.1.1 Time trends of all compensation claims between 2004 and 2013: comparison between serious claims and non-serious claims ................................................................. 47

3.2.3.1.2 The comparison of time trends between all claims, serious claims and the proportion of serious claims out of all claims based on selected variables directed at young migrant workers’ characteristics ............................................ 49

3.2.3.1.3 The comparison of time trends between all claims, serious claims and the proportion of serious claims out of all claims based on nation of birth .............................................................................. 49

3.2.3.1.4 The comparison of time trends between all claims, serious claims and the proportion of serious claims out of all claims based on language background ..................................................... 51

3.2.3.1.5 The comparison of time trends between all claims, serious claims and the proportion of serious claims out of all claims based on age ......................................................................................... 53

3.2.3.1.6 The comparison of time trends between all claims, serious claims and the proportion of serious claims out of all claims based on gender .............................................................................. 55

3.2.3.1.7 The comparison of time trends between all claims, serious claims and the proportion of serious claims out of all claims based on working experiences ..................................................... 57
3.2.3.1.8 The comparison of time trends between all claims, serious
claims and the proportion of serious claims out of all claims
based on time of injury ........................................... 59
3.2.3.1.9 The comparison of time trends between all claims, serious
claims and the proportion of serious claims out of all claims
based on employer size ........................................... 61
3.2.3.1.10 The comparison of time trends between all claims, serious
claims and the proportion of serious claims out of all claims
based on industry sector ......................................... 63
3.2.3.1.11 The comparison of time trends between all claims, serious
claims and the proportion of serious claims out of all claims
based on exempt type ........................................... 65

3.2.3.2 Multivariate Analysis ........................................... 68
3.2.3.3 Summary of study findings .................................... 70

3.3 International Student Barometer (ISB) 2013: Exploring international
students’ working hours and rates of payment .............................. 71
3.3.1 Introduction ................................................................ 71
3.3.2 What is the ISB? ....................................................... 72
3.3.3 ISB 2013 Relevance and the Research Questions .................. 72
3.3.4 Methods .................................................................. 76
  3.3.4.1 Study population .................................................... 76
  3.3.4.2 Data collection and analysis ...................................... 77
3.3.5 Results .................................................................. 78
  3.3.5.1 Working hours for paid employment ......................... 78
    3.3.5.1.1 Working hours for paid employment based on gender ... 80
    3.3.5.1.2 Working hours for employment: a voluntary job ........ 83
    3.3.5.1.3 Working hours for voluntary jobs based on gender ....... 85
  3.3.5.2 Students’ rate of payment ....................................... 87
3.3.6 Summary of study findings ......................................... 90
  3.3.6.1 Working hours ....................................................... 90
  3.3.6.2 Rates of payment ................................................... 90
  3.3.6.3 Type of employment ............................................. 90
3.4 Discussion .................................................................. 91
3.5 Strengths and limitations ............................................... 93
3.5.1 Statistical review of workers’ compensation data ........................................ 93
3.5.2 Statistical review of ISB survey 2013 data .................................................. 94
3.6 Conclusions ............................................................................................................. 94

CHAPTER 4. INTERNATIONAL STUDENT ONLINE SURVEY ........... 96

4.1 Introduction ............................................................................................................. 96
4.2 Study rationale and research questions ................................................................. 96
4.3 Methods .................................................................................................................. 98
  4.3.1 Study population and sample .............................................................................. 98
  4.3.2 Data collection and analysis ............................................................................. 99
4.4 Results .................................................................................................................... 102
  4.4.1 The characteristics of respondents (univariate descriptive statistics) .......... 102
    4.4.1.1 International student demographics ......................................................... 102
    4.4.1.2 International students’ academic backgrounds ........................................ 105
    4.4.1.3 International students’ reasons for working ............................................. 107
    4.4.1.4 International students’ working experiences ........................................... 109
    4.4.1.5 International students’ OHS training experiences ................................. 116
    4.4.1.6 International students’ injury experiences .............................................. 121
    4.4.1.7 International students’ perception of work-study interference .......... 126
    4.4.1.8 International students’ perception of the role of the university in OHS education ................................................................. 128
  4.4.2 Factors associated with international students’ health and safety and interference with study (Bivariate analysis) ......................................................... 131
  4.4.3 Important predictive factors (Multivariate analysis) ........................................ 135
  4.4.4 Summary of the study findings ........................................................................ 136
4.5 Discussion ............................................................................................................. 137
  4.5.1 Reasons to work and positive ramifications .................................................... 138
  4.5.2 International students’ working experiences ................................................... 139
  4.5.3 No OHS training or yes but yet ineffective .................................................... 140
  4.5.4 Injury experiences ......................................................................................... 141
    4.5.4.1 Kinds of injuries ..................................................................................... 142
    4.5.4.2 The risk factors of injury experiences and work-study interference ................................................................. 143
    4.5.4.2.1 Predictive factors of international students’ injury experiences .......... 143
4.5.4.2.2 Predictive factors of international students’ work-study interference .................................................. 146

4.6 Strengths and limitations ................................................................. 147

4.7 Conclusions .............................................................................. 148

CHAPTER 5. INTERNATIONAL STUDENTS’ PERSPECTIVE ON THE ROLE OF THE UNIVERSITY IN OHS AWARENESS AND EDUCATION .......................................................................................... 149

5.1 Introduction.................................................................................. 149

5.2 Background to qualitative study ................................................ 149
  5.2.1 Being an insider researcher .................................................... 149
  5.2.2 The birth of research questions ............................................. 151

5.3 Methods ..................................................................................... 152
  5.3.1 Ethical considerations ............................................................ 152
  5.3.2 Selection criteria .................................................................... 154
  5.3.3 Recruitment procedure .......................................................... 154
  5.3.4 Developing Focus Group Schedule ...................................... 155
  5.3.5 Participants ............................................................................ 155
  5.3.6 Data collection procedures .................................................... 155
  5.3.7 Data analysis ......................................................................... 156

5.4 Results ....................................................................................... 157
  5.4.1 Reasons to work .................................................................... 158
    5.4.1.1 High living cost in Australia ........................................... 158
    5.4.1.2 Family reasons ................................................................. 159
    5.4.1.3 Improving English ........................................................... 160
    5.4.1.4 Understanding Australian culture and making friends ....... 161
  5.4.2 Conflict between working and academic performance ........... 161
    5.4.2.1 Conflict exists .................................................................. 162
    5.4.2.2 No conflict ....................................................................... 163
    5.4.2.3 Prioritizing study over working ....................................... 165
  5.4.3 The impact of paid employment on health and safety issues ...... 166
    5.4.3.1 Only a few students were concerned about the risks ....... 166
    5.4.3.2 Some students were not concerned about the risks and performed risk-taking behaviour .................................................. 167
5.4.3.3 Injury experiences ................................................................................................................................. 168
5.4.4 International students’ perception of OHS education .................................................................................... 169
  5.4.4.1 OHS as a broad and boring term ............................................................................................................. 169
  5.4.4.2 OHS as a compulsory and requirement matter ......................................................................................... 169
  5.4.4.3 OHS as hazard and risk awareness ......................................................................................................... 170
  5.4.4.4 OHS as a standard operating procedure ................................................................................................. 171
5.4.5 The current practices of OHS education within the University ................................................................. 172
  5.4.5.1 OHS Induction ........................................................................................................................................ 172
  5.4.5.2 OHS lecture ........................................................................................................................................... 173
  5.4.5.3 OHS video on the University website (MyUni) ......................................................................................... 174
  5.4.5.4 Different emphasis of OHS education in engineering and non-scientific areas........................................ 175
5.4.6 The relevance of the current practices to the workplaces ............................................................................ 176
5.4.7 International students’ perspective of OHS curriculum ............................................................................. 177
  5.4.7.1 OHS education as a part of induction or orientation program ............................................................... 177
  5.4.7.2 OHS education as a compulsory course ................................................................................................ 179
  5.4.7.3 OHS education as an optional course .................................................................................................... 180
  5.4.7.4 Providing a certificate for completing OHS training .............................................................................. 181
5.4.8 International students’ perspectives on whether the University is concerned about OHS education .......... 182
  5.4.8.1 “Zero” concerned ................................................................................................................................... 182
  5.4.8.2 So, what is the University concerned about? ....................................................................................... 184
  5.4.8.3 The university discourages international students from having part-time jobs .................................. 185
  5.4.8.4 Be responsible for your own risks ......................................................................................................... 186
  5.4.8.5 Illegal working, being vulnerable and needing a “hero” ..................................................................... 187
5.4.9 International students’ perspective of the role of the University in teaching OHS ........................................ 189
  5.4.9.1 Teaching about rights and responsibilities ............................................................................................ 189
  5.4.9.2 Teaching about hazards and risks in the workplace .............................................................................. 190
  5.4.9.3 Teaching OHS basic knowledge ............................................................................................................ 190
  5.4.9.4 Provide safety training for international student employees ................................................................. 191
5.4.10 Suggestions for improvement ................................................................................................................... 192
  5.4.10.1 OHS training needs to be more practical, fun, attractive and simple .................................................... 193
5.4.10.2 OHS tutorial using peer shared experiences ........................................ 193
5.4.10.3 OHS email for reminder ...................................................................... 194
5.4.10.4 OHS week, Hub Centre and noticeboard ................................................. 194
5.4.10.5 OHS unit to handle H&S issues ................................................................. 195
5.4.10.6 Conduct a survey to address students’ needs ........................................... 196
5.4.11 Summary of the study findings ................................................................. 197
5.5 Discussion .................................................................................................. 198
  5.5.1 What should be done for improvement? ....................................................... 201
5.6 Strengths and limitations ............................................................................. 202
5.7 Conclusions ................................................................................................. 204

CHAPTER 6. GENERAL DISCUSSION .................................................................. 205
6.1 Introduction: novelty of the research .............................................................. 205
6.2 Key findings in the context of existing literature .......................................... 206
  6.2.1 Statistical reviews ..................................................................................... 206
    6.2.1.1 Workers’ compensation dataset analysis ............................................... 206
      6.2.1.1.1 Time trends and likely claims behaviour ........................................... 206
      6.2.1.1.2 International student demographic variables as risk factors for serious injury .................................................. 207
    6.2.1.2 International Student Barometer (ISB) 2013 data analysis ........... 208
  6.2.2 Online survey .......................................................................................... 208
    6.2.2.1 Reasons to work .................................................................................. 209
    6.2.2.2 International students’ working experiences ........................................ 209
    6.2.2.3 OHS training experiences .................................................................... 210
    6.2.2.4 Conflict between working and academic performance .................... 211
    6.2.2.5 Predictive factors of injury experiences .............................................. 211
  6.2.3 Focus group discussions ............................................................................ 213
    6.2.3.1 Reasons to work .................................................................................. 213
    6.2.3.2 Conflict between working and academic performance .................... 213
    6.2.3.3 Hazards and risks perception ................................................................. 214
    6.2.3.4 Current practices of OHS education and its relevance to the workplace ................................................................ 214
    6.2.3.5 Support to integrate OHS into the University’s curriculum .......... 215
    6.2.3.6 The role of the University in OHS education ...................................... 216
    6.2.3.7 Suggestions for improvement .............................................................. 216

xvii
6.3 Strengths and limitations of the research ......................................................... 217
   6.3.1 Statistical reviews (Workers’ compensation dataset and ISB survey) ............. 217
   6.3.2 Online survey ............................................................................................... 218
   6.3.3 Focus Group Discussion ............................................................................... 221
6.4 Summary of the research findings ................................................................. 221

6.5 Towards conceptual frameworks ................................................................. 223
   6.5.1 Development of a conceptual framework of international students’ vulnerabilities in the Australian workplaces ......................................................... 223
      6.5.1.1 Identifying relevant literature ................................................................ 223
      6.5.1.2 Integrating the literature and the research findings ............................. 225
   6.5.2 Integrated conceptual framework of effective OHS education for international students to reduce vulnerability and to improve adaptation to the workplace ................................................................. 227
      6.5.2.1 Stating objectives .................................................................................. 230
      6.5.2.2 Selection of content ............................................................................. 230
      6.5.2.3 Organising learning experiences (selection of method) .................... 231
      6.5.2.4 Evaluation (assessment) ...................................................................... 232

CHAPTER 7. CONCLUSIONS AND RECOMMENDATIONS .................... 233

7.1 Conclusions ....................................................................................................... 233
   7.1.1 Time trends and risk of serious injury among young migrant workers ...... 233
   7.1.2 International students’ reasons to work, working experiences and injury experiences ........................................................................................................... 234
   7.1.3 The predictive factors of injury experiences and work-study interferences 235
   7.1.4 The current practices of OHS education and the role of the University ..... 235

7.2 Recommendations ............................................................................................ 237
   7.2.1 Future researchers ..................................................................................... 237
   7.2.2 University ................................................................................................. 238
   7.2.3 Government ............................................................................................... 239
   7.2.4 I-Graduate ................................................................................................. 240

References ........................................................................................................... 241

List of Appendices ............................................................................................... 253

Appendix 2. The ISB survey 2013 questions .............................................. 255
Appendix 3. Ethics approval ................................................................... 264
Appendix 4. Online survey invitation via International Students Centre (ISC) office ......................................................................................... 266
Appendix 5. Online survey information sheet and consent form ............... 267
Appendix 6. Online survey questionnaire .................................................... 269
Appendix 7. Online survey questionnaire flowchart ................................... 273
Appendix 8. FGD flyer .............................................................................. 279
Appendix 9. FGD participant information sheet ........................................ 280
Appendix 10. FGD consent form ................................................................. 282
Appendix 11. FGD questions .................................................................... 283
Appendix 12. Conceptual model and self-measure of occupational health and safety vulnerability ................................................................. 284
List of Figures

Figure 1.1. Australia’s export income from education services 2010-2014 (Department of Education and Training, 2015a) ....................................... 2

Figure 1.2. International student numbers by top 10 nationalities from 2002 to 2014 in Australia (Department of Education and Training, 2015b) ....... 5

Figure 1.3. International student enrolments in Australian higher education from 1998 to 2013 (Norton, 2014)......................................................... 6

Figure 1.4. Change in international student enrolments 2002-2008(Australian Bureau of Statistics, 2009) ................................................................. 7

Figure 1.5. International students’ commencement in Australia and South Australia from 2009 to 2014 (Study Adelaide, 2014)......................... 7

Figure 2.1. Process of selection of articles of the review.................................. 16

Figure 2.2. Fatality rate of US workers by nativity, 1996-2001(Loh and Richardson, 2004) ........................................................... 22

Figure 2.3. Young workers serious claims by age group and year (Jahan et al., 2010)........................................................................................... 30

Figure 2.4. International students as young migrant workers’ overlapping vulnerabilities........................................................................................ 37

Figure 3.1. Time trend of all compensation claims based on serious and non-serious injury among young workers in SA from 2004 to 2013 ........ 48

Figure 3.2. Time trend of all compensation claims based on nation of birth among young workers in SA from 2004 to 2013............................. 50

Figure 3.3. Time trend of serious injury claims based on nation of birth among young workers in SA from 2004 to 2013....................................... 50

Figure 3.4. The proportion of serious injury claims from all claims based on nation of birth among young workers in SA from 2004 to 2013 ...... 51

Figure 3.5. Time trends of all compensation claims based on language background among young workers in SA from 2004 to 2013............... 52

Figure 3.6. Time trends of serious injury claims based on language background among young workers in SA from 2004 to 2013....................... 52

Figure 3.7. The proportion of serious injury claims out of all claims based on language background among young workers in SA from 2004 to 2013 ..................................................................................... 53
Figure 3.8. Time trends of all compensation claims based on age group among young workers in SA from 2004 to 2013.................................................. 54

Figure 3.9. Time trends of serious injury claims based on age group among young workers in SA from 2004 to 2013.................................................. 54

Figure 3.10. The proportion of serious injury claims out of all claims based on age group among young workers in SA from 2004 to 2013............... 55

Figure 3.11. Time trends of all compensation claims based on gender among young workers in SA from 2004 to 2013.................................................. 56

Figure 3.12. Time trends of serious injury claims based on gender among young workers in SA from 2004 to 2013.................................................. 56

Figure 3.13. The proportion of serious injury claims out of all claims based on gender among young workers in SA from 2004 to 2013 ............... 57

Figure 3.14. Time trends of all compensation claims based on working experience among young workers in SA from 2004 to 2013.......................... 58

Figure 3.15. Time trends of serious injury claims based on working experience among young workers in SA from 2004 to 2013.......................... 58

Figure 3.16. The proportion of serious injury claims out of all claims based on working experience among young workers in SA from 2004 to 2013 .......................................................... 59

Figure 3.17. Time trends of all compensation claims based on time of injury among young workers in SA from 2004 to 2013.................................. 60

Figure 3.18. Time trends of serious injury claims based on time of injury among young workers in SA from 2004 to 2013.................................. 60

Figure 3.19. The proportion of serious injury claims out of all claims based on time of injury among young workers in SA from 2004 to 2013...... 61

Figure 3.20. Time trends of all compensation claims based on employer size among young workers in SA from 2004 to 2013.............................. 62

Figure 3.21. Time trends of serious injury claims based on employer size among young workers in SA from 2004 to 2013.............................. 62

Figure 3.22. The proportion of serious injury claims out of all claims based on employer size among young workers in SA from 2004 to 2013...... 63

Figure 3.23. Time trends of all compensation claims based on industry sector among young workers in SA from 2004 to 2013.............................. 64
Figure 3.24. Time trends of serious injury claims based on industry sector among young workers in SA from 2004 to 2013 ........................................ 64

Figure 3.25. The proportion of serious injury claims out of all claims based on sector of industry among young workers in SA from 2004 to 2013 .......... 65

Figure 3.26. Time trends of all compensation claims based on exempt type among young workers in SA from 2004 to 2013 ........................................ 66

Figure 3.27. Time trends of serious injury claims based on exempt type among young workers in SA from 2004 to 2013 ........................................ 67

Figure 3.28. The proportion of serious injury claims from all claims based on exempt type among young workers in SA from 2004 to 2013 .............. 67

Figure 3.29. The distribution of the ISB survey respondents based on age and gender ........................................................................................................ 77

Figure 4.1. The distribution of respondents by age ........................................ 102

Figure 4.2. The proportion of respondents by gender .................................... 103

Figure 4.3. The proportion of respondents by marital status .......................... 103

Figure 4.4. The proportion of respondents by number of children ................. 104

Figure 4.5. The proportion of respondents who have family members living in Adelaide .................................................................................................... 104

Figure 4.6. The distribution of respondents by 10 biggest countries of origin ... 105

Figure 4.7. The proportion of respondents by faculties ................................... 106

Figure 4.8. The proportion of respondents by year of study ............................ 106

Figure 4.9. The proportion of respondents by study program .......................... 107

Figure 4.10. The proportion of respondents by financial support .................... 107

Figure 4.11. International students' reasons to work (multiple responses) ....... 108

Figure 4.12. The proportion of respondents by job status ............................... 109

Figure 4.13. The proportion of respondents by number of jobs ....................... 109

Figure 4.14. The percentage of respondents by industry sector (multiple responses) ........................................................................................................... 110

Figure 4.15. The proportion of respondents by working condition ................. 111

Figure 4.16. The proportion of respondents by perception of wages fairness ...... 111
Figure 4.17. The distribution of respondents by rate of payment ......................... 112
Figure 4.18. The proportion of respondents by know about award wage structure and minimum rate of pay .............................................................. 113
Figure 4.19. The distribution of respondents by number of working hours per week ......................................................................................... 114
Figure 4.20. The distribution of respondents by working length (months) ...... 115
Figure 4.21. The proportion of respondents working under supervision .......... 116
Figure 4.22. The proportion of respondents who have had some OHS training. 116
Figure 4.23. The percentage of respondents who had OHS training experiences by location of training (multiple responses)........................................... 117
Figure 4.24. The distribution of respondents who had OHS training by length of training (hours) ........................................................................ 118
Figure 4.25. The proportion of respondents who had OHS training by training mode ......................................................................................... 118
Figure 4.26. The percentage of respondents who had OHS training by format of the training (multiple responses) ............................................. 119
Figure 4.27. The proportion of respondents who had OHS training by assessed on the training ........................................................................... 120
Figure 4.28. The proportion of respondents who had OHS training by perception of the training ........................................................................... 120
Figure 4.29. The proportion of respondents according to level of confidence to discuss OHS issues with lecturer, or other relevant person ........... 121
Figure 4.30. The percentage of respondents by perception of the existence of hazards/risks in their workplace (not mutually exclusive) .......... 122
Figure 4.31. The proportion of respondents by injury experiences and time of injury before and after OHS training ............................................. 122
Figure 4.32. The proportion of respondents who had injury experiences by injury frequencies .............................................................................. 123
Figure 4.33. The proportion of respondents by who had injury experiences by kind of injuries (multiple responses) ........................................... 123
Figure 4.34. The proportion of respondents who had injury experiences by actions taken after injuries .................................................................... 124
Figure 4.35. The proportion of respondents who had injury experiences by reporting injury to supervisor or company ........................................ 124

Figure 4.36. The proportion of respondents by experience to witness a workplace accident while working in Australia ........................................ 125

Figure 4.37. The percentage of respondents by discrimination, intimidation and exploitation experiences (multiple responses) .................... 125

Figure 4.38. The proportion of respondents who feel that work interferes with study ................................................................. 126

Figure 4.39. The percentage of respondents who felt that work interferes with study by form of interference with study (multiple responses) ...... 127

Figure 4.40. The proportion respondents who felt stress due to having a paid job while studying .............................................................. 127

Figure 4.41. The proportion of respondents by perception of the responsible party for OHS awareness raising and education ............................ 128

Figure 4.42. The proportion of respondents who think that OHS has been included in the University study ....................................................... 129

Figure 4.43. The percentage of respondents who think that OHS has been included in the university study by kind of OHS information was provided in the University (multiple responses) .................................... 129

Figure 4.44. The proportion of respondents by think that the University needs to do more ........................................................................... 130

Figure 4.45. The percentage of respondents by suggested programs for OHS education (multiple responses) ............................................ 130

Figure 6.1. Overlapping OHS vulnerabilities among young immigrant workers in small construction firms (NIOSH and ASSE, 2015) ................. 225

Figure 6.2. Integrated conceptual framework of overlapping layers of vulnerabilities among international students in the workplace ....... 226

Figure 6.3. Integrated conceptual framework for effective OHS education for international student workers .............................................. 229
List of Tables

Table 2.1. Keyword used to identify relevant articles ........................................... 15
Table 2.2. Migrant Workers’ Health and Safety ..................................................... 17
Table 2.3 Standardised mortality ratio* (SMR) for overseas-born persons and
language group, by duration of residence ...................................................... 23
Table 2.4. Young Workers Health and Safety ....................................................... 24
Table 2.5. International Students as a Working Population ................................. 31
Table 3.1. Logistic regression predicting likelihood of serious injury claims
among young workers from 2004-2013 in SA .............................................. 68
Table 3.2. International students’ working hours per week for paid jobs in the
sector of employment directly related to field of study ............................... 78
Table 3.3. International students’ working hours per week for paid work in a
sector of employment not directly related to field of study .......................... 79
Table 3.4. International students’ working hours for paid jobs per week based on
gender in a sector of employment directly related to field of study.......... 80
Table 3.5. International students’ working hours for paid jobs per week based on
gender in a sector of employment not directly related to field of study........ 82
Table 3.6 International students’ working hours per week for voluntary jobs in the
sector of employment directly related to field of study .............................. 83
Table 3.7. International students’ working hours per week for voluntary jobs in a
sector of employment not directly related to field of study ........................ 84
Table 3.8. International students’ working hours for voluntary jobs per week
based on gender in the sector of employment directly related to field of study..................... 85
Table 3.9. International students’ working hours for voluntary jobs per week
based on gender in the sector of employment not directly related to
field of study.................................................................................................. 86
Table 3.10. International students’ rate of payment 2013 .................................... 87
Table 3.11. International students’ rates of payment in Australian dollar based on
gender ............................................................................................................ 89
Table 4.1. The percentage of rate of pay based on age (Fair Work Commission, 2014) ........................................................................................................................................... 113

Table 4.2. Bivariate and multivariate analysis; Factors associated with international students’ health and safety and interferences with study .................................................................................................................................................. 132

Table 6.1. OHS experience and perceptions among incoming undergraduate students: A comparison of four Australian universities ........................................ 219

Table 6.2. International students’ profiles in the University of Adelaide and in Australia ........................................................................................................................................... 220

Table 6.3. International student workers’ conditions of vulnerability ........... 222
### Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABS</td>
<td>Australian Bureau of Statistics</td>
</tr>
<tr>
<td>AEI</td>
<td>Australian Education International</td>
</tr>
<tr>
<td>ASSE</td>
<td>American Society for Safety Engineers</td>
</tr>
<tr>
<td>AOR</td>
<td>Adjusted Odds Ratio</td>
</tr>
<tr>
<td>CI</td>
<td>Confidence Interval</td>
</tr>
<tr>
<td>CRICOS</td>
<td>Commonwealth Register of Institutions and Courses for Overseas Students</td>
</tr>
<tr>
<td>DECS</td>
<td>Department for Education and Children Services</td>
</tr>
<tr>
<td>DFAT</td>
<td>Department of Foreign Affairs and Trade</td>
</tr>
<tr>
<td>DIAC</td>
<td>Department of Immigration and Citizenship</td>
</tr>
<tr>
<td>DEEWR</td>
<td>Department of Education, Employment and Workplace Relations</td>
</tr>
<tr>
<td>EAP</td>
<td>English for Academic Purposes</td>
</tr>
<tr>
<td>EEWR</td>
<td>Education, Employment and Workplace Relations</td>
</tr>
<tr>
<td>ELICOS</td>
<td>English Language Intensive Courses for Overseas Students</td>
</tr>
<tr>
<td>ESB</td>
<td>English Speaking Background</td>
</tr>
<tr>
<td>ESOS</td>
<td>Education Services for Overseas Students</td>
</tr>
<tr>
<td>EU-OSHA</td>
<td>European Agency for Safety and Health at Work</td>
</tr>
<tr>
<td>FGD</td>
<td>Focus Group Discussion</td>
</tr>
<tr>
<td>HREC</td>
<td>Human Research Ethics Committee</td>
</tr>
<tr>
<td>ILO</td>
<td>International Labour Organization</td>
</tr>
<tr>
<td>ISS</td>
<td>International Student Survey</td>
</tr>
<tr>
<td>IBP</td>
<td>Integrated Bridging Program</td>
</tr>
<tr>
<td>ISB</td>
<td>International Student Barometer</td>
</tr>
</tbody>
</table>

xxvii
Thesis Overview

Research Title:
International students as young migrant workers in South Australia: The role of the University in OHS awareness and education

Research aim

This research employs a mixed method approach to understand work health and safety experiences among international students as young migrant workers in South Australia (SA) and to identify the role the university potentially plays in providing effective occupational health and safety (OHS) awareness and education for international students.

Thesis outline

For the first part of this research, a literature review was conducted to identify research gaps and develop the research questions. Following the literature review, three studies were carried out to answer the research questions.

The first study was a pair of statistical reviews using secondary data analysis. The first dataset was a ten-year period of the Workers’ compensation data from SafeWork SA (SWSA) from 2004-2013 to explore young migrant workers’ (non-Australian born) serious injury experiences in South Australia. The second dataset is the International Student Barometer (ISB) 2013 data to describe information regarding international students’ working experiences focusing on working hours and rate of payment.

The second study was an online survey to explore international students’ working experiences and its association with health and safety issues and work-study interference.
The third study utilised a qualitative approach. Focus group discussions were conducted to explore international students’ perspective of the role of the university in terms of raising OHS awareness and education.

The last part of this research comprised general discussion and conclusions and recommendations. This part outlines two conceptual frameworks (the layers of international students’ vulnerabilities; and effective OHS education for international students in the university sector), future research needs and recommendation for improvement flowing from the research. The detail of each chapter is as follows:

**Chapter 1. Introduction**

This chapter provides an explanation of what of this research has concerned with, the research background such as the benefits of international students engagement, international student profiles, the legislative frameworks of education provided for international students’ health and safety welfare, international students’ rights to work and the research aim and objectives.

**Chapter 2. Literature review**

This chapter provides the review of the literature to identify the research gaps and research questions development. This includes a review of migrant workers health and safety, young workers health and safety and international students as a working population.

**Chapter 3. Statistical reviews (Study 1)**

The chapter provides an analysis of the South Australian workers’ compensation dataset between 2004 and 2013. The focus was on young workers, those who were migrants and those who first language was not English. The
analysis entails investigation of time trends, injury profiles, risk factors and the relative proportion of serious claims against total claims.

Turning specifically to international students, the International Student Barometer (ISB) 2013 data was explored focusing on international students’ working hours and rate of payments.

Chapter 4. International student online survey (Study 2)

This chapter profiles the characteristics of international student workers by demographics, academic backgrounds, working experiences, OHS training experiences, injury experiences, work-study interference and their perception of the role of the University in OHS education.

Bivariate and multivariate analysis were conducted to identify the risk factors and important predictive factors for the outcome variables; students’ health and safety issues and work-study interference.

Chapter 5. International students’ perspective on the role of the university in OHS awareness and education (Study 3)

This chapter presents international students’ perceptions of the concept of OHS education and training in the University. Furthermore, the current practices of OHS education, materials and curriculum and the role of the university in terms of OHS awareness raising and education together with recommendations to the University to improve the situation were explored.

Chapter 6. General discussion

This chapter critically assesses the previous studies related to serious injury profile of young non-Australian born workers, international students’ working experiences and injury experiences, the factors associated with health and safety
issues and work-study interference and international students’ perspectives on the role of the University in OHS awareness and education. This chapter also discusses the importance of the findings in comparison with other research. Furthermore, the chapter proposes the development of a conceptual framework of young migrant workers vulnerability. And lastly, this chapter develops a conceptual framework for effective OHS education for international students in the University sector based on the research findings and other literature.

Chapter 7. Conclusions and recommendations

This chapter concludes all study findings and provides suggestions for future research needs together with recommendations to improve work health and safety among international students in the workplace.
## Thesis Layout

<table>
<thead>
<tr>
<th>CHAPTERS</th>
<th>DETAILS</th>
<th>OUTCOMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thesis overview</td>
<td>Thesis organization</td>
<td>Guiding readers to understand research structure and research focus areas of this thesis</td>
</tr>
<tr>
<td>Chapter 1 Introduction</td>
<td>The nature of international students as working population</td>
<td>Providing an account of the benefits of international education engagement, the responsibilities of education providers, and the rights of international students to work</td>
</tr>
<tr>
<td>Chapter 2 Literature review</td>
<td>Research context and research significance</td>
<td>Identification of research gaps and research questions</td>
</tr>
<tr>
<td>Chapter 3 Statistical reviews</td>
<td>The situation of young migrant workers’ health and safety in SA and international students’ in paid job</td>
<td>Producing a statistical analysis on injury among young migrant workers in SA and a descriptive analysis of international students’ working hours and rates of payment</td>
</tr>
<tr>
<td>Chapter 4 International student online survey</td>
<td>International students’ working experiences, OHS training, health and safety issues, and work-study interference</td>
<td>Identification of predictive factors associated with international students’ injury experiences and work-study interference due to having a paid employment</td>
</tr>
<tr>
<td>Chapter 5 International students’ perspective on the role of the university in OHS awareness and education</td>
<td>International students’ perspective on OHS education and their perception of the role of the university in OHS education</td>
<td>Identification of international students’ story about the current practices of OHS education and their perception of the role of the university in OHS education</td>
</tr>
<tr>
<td>Chapter 6 General discussion</td>
<td>Main findings of the studies in the context of existing literature</td>
<td>Presenting reflections of the studies significance and providing conceptual frameworks</td>
</tr>
<tr>
<td>Chapter 7 Conclusions and recommendations</td>
<td>Conclusions of the research findings and opportunities</td>
<td>Providing recommendations for development and further research directions</td>
</tr>
</tbody>
</table>