Analysis of the representation of Indigenous Australians in mainstream print media: An exploration centred on the social determinants of health

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Acknowledgement to country

I wish to acknowledge the Wurundjeri people of the Kulin Nations, the traditional owners of the land on which I study and live.

I acknowledge them particularly as this research project looks at the coverage of

Indigenous Australians in the print media.

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List of Abbreviations

ABS Australian Bureau of Statistics

AGE The Age Newspaper

AHMAC Australian Health Ministers' Advisory Council

AIHW Australian Institute of Health and Welfare

AMA Australian Medical Association

ATSI Aboriginal and Torres Strait Islander

ATSIC Aboriginal and Torres Strait Islander Commission

ATSIHPF Aboriginal and Torres Strait Islander Health Performance

Framework

AUS The Australian newspaper

HS Herald Sun newspaper

MJA Medical Journal of Australia

NACCHO National Aboriginal Community Controlled Health Organisation

STI Sexually Transmissible Infection
UWA University of Western Australia

WHO World Health Organisation

^{*} Please note that the term 'Indigenous Australians' has been adopted and maintained throughout the thesis to ensure consistency. There are many different displays of this term however this term is used as it includes those who identify as Aboriginal, Torres Strait Islander and Aboriginal and Torres Strait Islander and is a term that has also been adopted by the Australian Institute of Health and Welfare, (AIHW).

Abstract

The objective of this research project primarily was to examine the representation of Indigenous Australian's through coverage in print media. The Age, The Australian and the Herald Sun were selected as representative examples of mainstream print media sources for Melbourne, Victoria. The study aimed to measure and categorise the coverage of Indigenous Australians in all areas of the selected newspapers and to specifically analyse the reportage of health articles and the social determinants of health.

The study employed content analysis of the three newspapers over the ten week period of April 1 2007 to June 10 2007. Over this period of analysis the study found the representation and exploration of the health of Indigenous Australians in print media articles to be disproportionately lower compared to articles on the topic of sport, arts and politics.

Dedication

This thesis is dedicated to my late Pop, Thomas Knell who passed away on the 9/10/2007.

As you were forever proud of my achievements, I will always be proud of your determination and grit in the courageous battle you fought.

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Statement of Authorship

Signature:

Except where reference is made in the text of the thesis, this thesis contains no material published elsewhere or extracted in whole or in part from a thesis by which I have qualified for or been awarded another degree or
diploma. No other person's work has been used without due acknowledgement in the main text of the thesis.
main text of the thesis. This thesis has not been submitted for the award of any degree or diploma in any other textions, institution
any other tertiary institution.

Date: / /

Introduction

The Australian Bureau of Statistics (ABS, 2005) reveals the life expectancy of Indigenous Australian males as 59.4 years and 64.8 years for females. Compared to the life expectancy of all Australians, males are expected to live until 78.5 whilst females are expected to live 83.3 years. This difference in life expectancy experience is a significant inequality on the behalf of Indigenous Australians. This figure is even more alarming when according to Marmot (2005) it is stated that Australia's overall life expectancy is among the highest in the world. The above figures display the importance of conducting research into the health inequalities experienced by Australia's Indigenous population. In 2006 Australia's population of Indigenous Australians was estimated at 517,200 or 2.5% of the total population according to the ABS (2006). Victoria's Indigenous population in the same year was found to be 30,800 or approximately 6% of the total population of Indigenous Australians. Of all the states and territories, Victoria's Indigenous population ranks behind New South Wales, Queensland, Northern Territory and Western Australia. Although in comparison to Victoria's overall population in 2006, Indigenous Australians account for 0.6%, the lowest compared to all states and territories in Australia.

The Solid Facts, a guide to the social determinants of health was first developed by the World Health Organization (WHO) in 1998 and released again in 2003. WHO (2003) reports the differences of health experienced within population groups in even the "most affluent countries" (p.7) as a key reason behind the need for understanding the sensitivity of health to the social environment. They have also acknowledged the emphasis that

needs to be placed upon policy, at all levels from government level down to the community level, identifying that a wider emphasis needs to be placed upon creating healthy societies.

In this project the social determinants of health outlined in the 2006 Australian Health Ministers' Advisory Council Report (AHMAC): Aboriginal and Torres Strait Islander Health Performance Framework (ATSIHPF) will be used to examine articles collected to determine whether selected print media are reporting on health issues with reference to the social determinants of health and also examine their sources of information. This will ultimately help to show whether the information supplied to the reader conforms with the social determinants outlined in the AHMAC (2006) report and whether this information is from a credible source.

The media, including television, radio and newsprint, is an active participant in giving meaning to issues and events as they arise in the public domain. In terms of representation in the print media, Meadows (2001) found that media coverage of Indigenous people has often consisted of stereotypical images that have been overtly racist. In Scott's (2006) study of the print media's reporting on the Aboriginal and Torres Strait Islander Commission (ATSIC) over four years it was found that overt racism was not a prominent feature of media coverage of Indigenous issues, however inferential racism was significant.

The media has an important role in disseminating health information to the community.

Chrisler and Levy (1990) state: "the media is a major source of information on health and illness for most people and thus plays an important role in shaping attitudes and beliefs." (p. 91). This statement is true for many areas of health, for which Schweitzer et

al (2005) agrees and also adds that health news and health stories sell newspapers and in the process generally those stories are distorted. Additionally because of this, newspapers tend to be less interested in the needs of: "Indigenous people, prisoners, the homeless and the poor." (p. 581).

Studies that have analysed health issues in the print media include: tobacco, smoking and health (Chapman & Dominello, 2001; Durrant, Wakefield, McLeod, Clegg-Smith & Chapman, 2003; Watson, Clarkson, Donovan & Giles-Corti, 2003 and Champion & Chapman, 2005), reporting of public health (Westwood & Westwood, 1999), cardiovascular health (Brownson, Mack, Meegama, Pratt, Brownson, Dean, Dabney & Luke, 1996), safety in public hospitals, (Walker & Jacobs, 2005), sun protection (Smith, Ferguson, McKenzie, Bauman & Vita, 2002), cancer breakthrough's (Ooi & Chapman, 2003) and women's health (Chrisler & Levy, 1990; Kirkman, 2001; Shugg & Liamputtong 2002 and Gattuso, Fullagar & Young, 2005).

Topics examining Indigenous issues in the media include: reconciliation (McCallum, 2003), riot and resistance (Hollinsworth, 2005), media misrepresentation (Meadows, 1995), comparison between Indigenous representation in television and the print media (Meadows, Hippocrates & Van Vuuren, 1997), education for journalists reporting on Indigenous issues (Eggerking, 1996) and the negative exposure in the print media of ATSIC (Scott, 2006). The only article found specifically relating to the health of Indigenous Australians in the print media was on the topic of sexually transmissible infections (Thompson, Green, Sterling & James, 2007).

This small focus on issues surrounding the health of Indigenous Australians in the media displays the importance in conducting this research project. The importance of the social determinants of health is also highlighted through the statistics of poor health suffered by the Indigenous Australian population. The research conducted in this study aims to bridge this gap.

In essence this study also aims to explore the representation of Indigenous Australians in the print media. Specifically it aims to examine the frequency of coverage of Indigenous health issues in three newspapers available in Melbourne, Victoria. The study also endeavours to examine if any of the social determinants of health outlined in the AHMAC Report (2006), are addressed in the articles collected. The other aims of this study are to establish which types of articles feature Indigenous Australians, who is represented in photographs and illustrations, as well as determining from where information in health articles is sourced.

For the purpose of this study, all articles concerning Indigenous Australians printed in the *Herald Sun*, *The Age* and *The Australian* newspapers between April 1, 2007 and July 10, 2007 have been collected. Each article has been recorded with the main points recorded including: date of publication, newspaper of publication, the page which it appeared, the section of the paper it appeared, the headline of the article, the subject area and specific subject topic. A complete list of variables examined in each article is included in Appendix 1.

Photographs and other images relating to the Indigenous population, including the presence of Indigenous children were also analysed in this project. This was done in accordance to the method of Hansen, Cottle, Negrine, and Newbold (1998), who show that they catch the eyes of the readers and can impact on the way an article can be interpreted, even without reading the text that accompanies the image. Hollinsworth

(2005) states that: "a single image can invoke sympathy, hostility, repulsion, fear, boredom...or tourist interest and other emotions and thoughts." (p. 17).

Further grounds for this research project of Indigenous Australians in the print media is due to Indigenous Australians being a group that tend to be marginalised in our society, as displayed by Scott (2006) in her study of the portrayal in the print media of ATSIC.

The role of the social determinants of health is crucial, Link and Phelan (2006) explain, as stigma places people at a substantial social disadvantage with respect to these determinants, it increases their exposure to risks and limits access to protective factors which in turn can potentially add to burden of disease or disability. This is particularly important in a media analysis as Hocking (2003) describes media as important players in any movement for change, as they have an important role in determining attitudes of the public.

Like other areas of research there are certain limits which are placed upon a study. Owing to time constraints of the Honours program, it was only possible to review the newspapers within a ten week period. This indeed may limit the possibilities of results gained through a longer study, although this research project is considered to be long enough in time to gain an in-depth analysis of Indigenous issues presented through the print media.

Following the introductory section is a review of the literature concerned with the portrayal of Indigenous Australians in the print media and in particular Indigenous Australian's health issues and the social determinants of health in the media.

Literature Review

The following text touches on previous literature relating to media analysis on topics of general health and those involving Indigenous Australians. The literature review has been divided by the following headlines; Health in the Media, Indigenous Issues in the Media, Social Determinants of Health, Research Project Framework and The Newspapers and can be read below.

Health in the Media

The predominance of health issues on the front page was analysed by Lupton (1995) in her study of the Sydney Morning Herald between April 1992 and March 1993. In this study each article was initially analysed in a quantitative textual manner to consider its content with regard to medical and health matters. Once this was achieved, each article was then categorised as a health or medical matter, regarding the main topic that was expressed. The number and type of news sources that were quoted and the use of visual images and photographs was also analysed in this study. This process was followed using qualitative discourse analysis, to provide an in depth look at the use of language in the headlines and main text and including the use of captions and visual imagery accompanying the article. This method of analysis was considered by Lupton (1995) to be of particular importance as it enabled the study to be overly critical in intent to identify the equal representation in coverage to all social groups and including the approaches used to identify and report illness and disease on the front page of The Sydney Morning Herald.

In this study Lupton (1995) revealed health related articles to be displayed on the front cover of The Sydney Morning Herald in approximately 37.5% of editions. This finding highlights the newsworthiness of health related articles, with the main areas of health reported include: health service delivery (12.9% of health related stories collected), tobacco/smoking (8.6%), cancer (8.6%) and the death of well known people (7.1%). It was also found that 34.5% of articles featuring health or medicine derived their information from the Government or Government sources, while only 12.8% and 11.9% were sourced via academe or research and medical professionals respectfully. This indicates the importance of sources for information and is one that will be utilised in this study to determine sources of information in health articles.

Lupton's (1995) study concluded that these health issues were being presented

frequently on the front page due to the easily created drama on the behalf of the journalist and additionally, by limiting the data collected to the front page of the newspaper, this has restricted the review of other health related articles that are found in the inner pages. The lack of coverage of Indigenous issues found in Lupton's (1995) study indicates that such issues need to be researched further in the media and it is for this reason that this research project will include content found in the entirety of the selected newspapers. However this is not the only study that has examined the reporting of health issues in the media. Westwood and Westwood (1999) conducted a four week analysis of health issues reported in Brisbane's Courier Mail newspaper. In the study reported health issues were separated into two models; public health and the medical model. Articles selected under the category of public health according to Westwood and Westwood (1999) included health promotion and primary health care as major components whilst articles selected

under the category of the medical model included articles featuring medical intervention or treatment and scientifically based procedures.

Westwood and Westwood's (1999) study employed the use of content analysis to enable: "an objective, systematic, quantitative description of the content." (p. 55). The analysis was split into the use of five headings: Measures of prominence, primary and secondary content, stakeholders, orientation and reporting, and tone of reporting.

In this study Westwood and Westwood (1999) identified a total of 264 health related articles over the four week analysis period that met the criteria for inclusion. Of these articles public health accounted for approximately 33.45% of articles included, whilst articles around the medical model accounted for approximately 65.5%. According to Westwood and Westwood (1999) these results suggest that there are significant differences in the manner in which public health and the medical model issues were reported. From these results it can be concluded that although the study looked into the importance of health reporting in terms of whether articles contain a public health focus or a medical focus, no specific areas of ill health or groups within the community were analysed or mentioned, highlighting the lack of reporting on the social determinants of health.

Brownson, Mack, Meegama, Pratt, Brownson, Dean, Dabney, and Luke (1996) conducted a large scale analysis of newspaper coverage of cardiovascular (CVD) health issues with community based interventions. The aim of this project was to determine whether the coverage of CVD related health issues had changed over time and was conducted examining content in 23 newspapers from six different counties of Missouri, USA. The study was conducted over quite a long period of time, with articles analysed

for every even numbered month from October 1988 through to August 1993, for a total of 30 months. Articles in this study were analysed with reference to content area, size, placement, source and type of article. The content area of the articles was characterised by CVD topic, or by other health related issues. Brownson et al's (1996) study found a total of 1292 articles relating to CVD and of these 129 cases were specifically linked to heart health conditions.

Although this study is specifically orientated towards CVD in the print media, it is a useful article to compare the use of content analysis in 23 newspapers conducted over an extended period of time. In comparison to this project which is conducted over a much shorter period of time, the main methodologies including the application of content analysis and the processes employed are similar in application.

Indigenous Issues in the Media

After extensive searching, only one article was located in the literature that examined any health issues concerning Indigenous Australians in the print media. Thompson, Green, Stirling and James (2007), examined the trends in Australian print media coverage of sexually transmissible infections (STI) in Indigenous Australians. The main interest of their study was to look into how mainstream Australian print media present issues relating to Indigenous Australians. In this study the Factiva database was used as a search engine to search for Australian newspaper articles about STI in the Indigenous community and the articles meeting the selection criteria were analysed using a content analysis approach. The analysis was divided into two periods, 1986-1995 and 1996-2004.

Through their study, 100 articles were found to be used for analysis, in which 28% of those articles referred to STI in Indigenous communities and was the focus of 72% of articles.

Through this research Thompson et al (2007) found surprisingly few articles relating to STI in Indigenous communities through Australia's print media: "despite continuing substantial disparities in rates of STI between Indigenous and non-Indigenous Australians" (p. 15). This statement highlights the necessity for more articles to be written concerning the health of Indigenous Australians in the print media.

A study analysing the exposure of the Aboriginal and Torres Strait Islander Commission in the print media was undertaken by Scott (2006). In this study a content analysis of mainstream print media was used to: "decifer whether fairness, accuracy and relevance were embraced in the reporting of ATSIC." (p. 79). The newspapers selected for analysis included; The Age, The Australian and the Herald Sun, over a period of 45 months. Of these articles collected 527 viewed ATSIC as the primary focus. Scott (2006) then found that of the 527 articles, 82% were in the news section of the newspapers and interestingly, articles that featured on the front page were mainly stories involving controversy and corruption within ATSIC. Of these 73% focussed individually on the conduct of Geoff Clarke, and Indigenous leader and chairperson of ATSIC.

A key point noted by Scott (2006) is that although the majority of coverage questioned ATSIC's abilities, the media: "failed to include voices of these people directly affected by its operations – Indigenous Australians." (p. 86). This study gives a clearer understanding of the issues involved in the reporting of Indigenous Australians in the print media. Scott (2006) particularly states: "Representations of Indigenous people in

Australian mainstream media are important as they have the potential to define Indigenous people to non-Indigenous Australians." (p.76). This analysis has laid the foundation to undertake further research into the print media's representation of issues relating to Indigenous health. This research project aims to fill this gap and delve further into Indigenous representation in the print media.

Another study analysing Indigenous issues in Australian media is that of Meadows, Hippocrates and Van Vuuren (1997), in which their study compared the coverage of print news to television news of <u>The Courier-Mail</u>, <u>The Cairns Post</u>, <u>ABC TV News</u> and <u>National Nine News</u> between January 28 and February 3, 1996.

The main issue examined through Meadows et al (1997) included news coverage of Indigenous protest meetings in Brisbane during the period of analysis. These stories were analysed utilising a discursive analysis approach in the methodology, to examine the visual and textual mediums. Meadows et al's (1997) reason for selecting such methodology was due to the limitations of more quantitative approaches similar to that of content analysis. Meadows et al (1997) study was able to find that over the period of analysis of the twenty eight news stories examined, only nine quoted Indigenous sources directly. In television news specifically fifteen news stories were analysed, of which only three allowed an Indigenous person to speak about Indigenous issues. This ultimately according to Meadows et al (1997) reveals: "all too clearly the superficiality of television news coverage." (p. 84). This study is an important analysis of the reporting of Indigenous issues in both television and print media. This representation of studies highlighting the lack of issues relating to the reporting of Indigenous health issues is

further evidence that this is an area that thus far has largely been neglected and one that this research project aims to improve on.

Social Determinants of Health

The social determinants of health have an important role in the public health world as they endeavour describe: "the complex and intersecting relationships between social phenomena and health outcomes." Carson, Dunbar, Chenhall and Bailie (2007, p.36). WHO (2003) explains the social determinants of health are concerned with key aspects of people's living and working circumstances, their lifestyles and the health implications of economic and social policies. The key components of the social determinants of health as outlined by WHO (2003) are social gradient, stress, early life, social exclusion, work, unemployment, social support, addiction, food and transport. Harvey (2006) attributes these factors of lack of education, poor quality housing and lifestyle options that are a consequence of adverse employment and economic status characterising less well off members of society, which in turn represents a large component of the demand on our health system. In terms of Indigenous health we only need to look as far as the life expectancy of Indigenous compared to Australia's non-Indigenous population to realise as well as the Indigenous burden of disease to see this as an issue that needs addressing. A study analyzing the causes of inequality of life expectancy between Indigenous and non-Indigenous Australians was undertaken by Zhao and Dempsey (2006). The study analysed the impact of burden of disease on Indigenous and non-Indigenous mortalities, taking a predominantly medical focus of theses diseases. This analysis displays the importance in researching a vulnerable group in the community however it is still necessary to analyse the impact of the social determinants of health.

Additionally, Marmot (2005) comments on the life expectancy of Indigenous Australians to be attributed to high levels of adult mortality from non-communicable disease and injury. Marmot (2005) attributes this to Indigenous Australians being a "socially excluded minority within their country" (p. 1100) and including the socioeconomic gradient. These statements based on morbidity and mortality statistics are crucial reasons to why the socioeconomic and other social determinants of health are to be examined through this research. The Aboriginal and Torres Strain Islander Framework (2006) has utilised the components of WHO's (2003) original report on the social determinants of health to produce a report including key components of the social determinants of Indigenous health and is used to direct policies and programs developed for Indigenous communities to address the social determinants.

Research Project Framework

This research project will utilise the Aboriginal and Torres Strait Islander Health Performance Framework (ATSIHPF). This document has been developed by the AHMAC (2006) to: "provide the basis for measuring the impact of the National Strategic Framework for Aboriginal and Torres Strait Islander Health (NSFATSIH) and inform policy analysis, planning and program implementation." (pp. 10). The ATSIHPF is a practical device to be used in this project due to its purpose in acting as a guide for health professionals, researchers, policy development and to foster informed debate surrounding Indigenous health. The AHMAC (2006) recognise the importance of the social determinants of health by stating: "Improvements in the living conditions and economic circumstances of Aboriginal and Torres Strait Islander peoples will be necessary to ensure significant progress." (p.10) Authors of articles containing reporting

on the social determinants of Indigenous health would expect to be obtaining their information form organistations and/or government departments that utilise this framework. With a new emphasis being placed on these determinants, this research project intends to examine the reporting of issues relating to the social determinants of health and also look into the sources journalists are getting their information from.

Currently in scientific literature only a few studies have been found that have conducted a media analysis concerning the Indigenous Australian community. None have included the social determinants of health and how this is reported in Indigenous health. Studies have been conducted on media reporting of other health related illnesses and some has researched the media reporting of gender in our society. However they have failed to give explanations to the consequences and effects the media has on informing the community and helping to shape attitudes towards individuals and groups within the community. This research project aims to analyse the reporting of health issues and the social determinants in relation to the Australian Indigenous community, thus bridging this gap in research of this group.

The Newspapers

The newspapers selected for use in this research project are *The Age*, *The Australian* and the *Herald Sun*. These newspapers have been selected over smaller country and metropolitan newspapers due mainly to their larger circulations in the community and also as two of the papers, *The Age* and *Herald Sun* both originate and are largely circulated throughout Victoria. The circulation figures for the three newspapers can be viewed on the next page in the Methods section of the thesis.

In selecting these newspapers it was also important that at least two of the newspapers are published by different publication houses as this reduces the impact of any bias which may be held by a particular publisher, regarding a particular issue. The Australian Press Council (2006) provides details of media ownership. For this study two of the newspapers; the *Herald Sun* and *The Australian* are owned by News Limited, whilst *The Age* is owned by Fairfax.

Following on from the review of the literature, the methods employed in the analyses of the above newspapers have been included.

Methods

To establish the coverage of Indigenous issues in the print media, a newspaper article review is the approach that has been chosen. This study utilises an unobtrusive method for researching Indigenous Australians and employs the use of content analysis. The unit of analysis includes news reports that utilise implying content on Indigenous Australians. The data includes all newspaper reports published in the ten week period from April 1 2007 to June 10 2007 from *The Age* and *Herald Sun* and the Melbourne edition of *The Australian*.

The Selected Media

For the purposes of this research project a stratified sampling method has been employed and the above mentioned newspapers have been selected due to their wide circulation into the Victorian community. The table below displays the 2006 average circulation of the daily editions (Monday – Friday) of the three newspapers used in the analysis.

Table 1. Newspaper Circulation

Newspaper	Ave Circulation
The Age	201,000
The Australian	131,538
Herald Sun	554,700

Source: Australian Press Council 2006 Report: State of the News Print Media in Australia.

These newspapers were selected over smaller, local and specialised newspapers as they have a larger reader population and they cover a greater geographical location in not only distribution but also with regard to the stories published (Lupton, 1995).

Unobtrusive Research & Ethical Considerations

Whilst usually applied to human observation, this technique falls into the general description of 'unobtrusive' as according to Kellehear (1993), it does not require verbal communication with another party, but still allows the researcher to learn about individual and groups, as well as their interactions with the social environment. This is an important issue in deciding to research a vulnerable population group such as Indigenous Australians and is one of the underlying reasons for selecting to undertake a media analysis for this research project. This research project was not required to encounter the path of gaining ethics approval, as the data collected are readily available in the public domain and does not require any contact with the population group being studied. The issues mentioned above are important when studying a vulnerable group such as Indigenous Australians, which for this reason ethics approval was sought from the University and deemed that ethics was not required. The letter from La Trobe University Ethics Committee has been attached and can be viewed in Appendix 3.

Research does not have an important role in helping find solutions. Some of the advantages of using relatively 'unobtrusive' methods, according to Rice and Ezzy (1999), include the possibility of research being reproduced by other researchers. This incorporates the added possibility of cross checking and re-examining for reliability. Other benefits include this type of research being relatively inexpensive and it can potentially permit easier access to data since this method does not entail contact with humans. The limitations related to research of this kind includes the time that is taken up by lengthy data entry and in relation to this research project the amount of time taken to daily read through the three selected newspapers.

Content Analysis

In this research project content analysis has been selected because of its use as both a quantitative and qualitative method. Krippendorff (2004) argues that although content analysis has in the past been widely associated as being a quantitative method, "the reading of texts is qualitative, even when certain characteristics of a text are later converted into numbers." (p. 16). Content analysis is a common method used in the systematic analysis of media and communications content and in the past has been described by Hansen, Cottle, Negrine and Newbold (1998) as being used for mapping the relationship between trends and changes in public opinion and beliefs.

Content analysis according to Hansen et al (1998) and Cunnigham and Turner (1997), is by definition a quantitative method and the purpose of the method is to identify and count the occurrence of specified characteristics or dimensions of texts and through this to be able to determine representations of such texts and their wider social significance.

Kellehear, (1993) explains that for content analysis conclusions to be reliable and valid the categories used for the purpose of analysis are required to be specific and clear definitions need to be established to produce clear reliability. The process of content analysis and its importance in textual analysis is highlighted by Cunningham and Turner (1997) as the counting the number of stories and column inches devoted to each story can indicate the stories importance.

According to Berger (1998, 2000) content analysis has many advantages, one that it is relatively inexpensive, material is readily available in the public domain, it is 'unobtrusive' and yields data that can be quantified. Disadvantages and difficulties associated with using content analysis, according to Berger (2000) include; length in time

the process can take, finding a representative sample, determining measurable units, obtaining reliability in coding and defining terms operationally. Berger (2000) does however offer that proper planning of the methodological and overall research design can counteract these difficulties. In this project the aims and objectives mentioned through the literature review form the basis for the production of the analysis template. This is ultimately used to address the research question. In this research project the advantages outweigh those of the difficulties and disadvantages and thus for the purpose of this project a content analysis is the method most advantageous to answer the research question.

Framework

The framework used in determining the social determinants of health is the AHMAC report (2006), titled Aboriginal and Torres Strait Islander Health Performance

Framework. This report is used as a guide for health professionals, researchers, policy development and to foster informed debate around Indigenous health and contains information specific to the social determinants of Indigenous health. Together with other key documents from WHO (2003) the framework for analyzing the social determinants of health has been formed. The key social determinants this project examines are; criminal justice, diet behaviour, education, family, health behaviours, housing, income, and transport. Life expectancy and human rights are also components of the AHMAC (2006) report and these have been included even though they are not considered social determinants of health. They are however included as health outcomes for this group and thus have been added to this section of the study for analysis. The category health behaviour covers tobacco use, alcohol consumption and drug use whilst diet behaviours

includes diet and breastfeeding behaviours and the income category covers welfare payments, CDEP, employment status and unemployment status.

Storage and Data Analysis

A content analysis will be used to analyse the data. This involves setting criteria and questions to be measured based on the objectives outlined earlier through the literature review. Therefore the data are appropriate in helping to answer the overall research question and in which a template data collection tool has been developed taking into account the aim and objectives emerging from the literature review (see Appendix 1). The development of the template involved the setting of limits to enable the research questions to be measured and quantified. Some of these limits include the use of the social determinants of health and are reviewed through the use of the following five headings, which have been derived from the main headings found in the AHMAC report (2006). These headings are: Health, Housing and Infrastructure, Education, Economic and Social Security, Child Protection and Transport. The template is discussed in further detail in the following sub-section.

A database used to enter data was constructed from the data collection template and placed into the EpiData 3.1 program, Lauritsen (2001-2006). All data was then analysed in EpiData Analysis 1.1 program, Lauristen (2001-2006) and has produced descriptive statistics where appropriate. This form of analysis is ideal as Hansen et al (1998) explains it enables the researcher to gain efficiency in the speed and reliability of the analysis, of which the data can be analysed. This tool was used to summarise newspaper articles collected over the ten week period (April 1 – June 10 2007). The nominated newspapers

were systematically collected and articles which include Indigenous people and issues identified. The data for each article has been critiqued and data extracted and recorded on the data collection sheet for entry to the database. Quantitative data are reported using summary and stratified statistics for quantitative and qualitative data, and qualitative data will be reported using a content analysis.

The data collected will then be entered into a computer program database. According to Krippendorff (2004), the most important reason for using computers in content analysis is their ability to process large volumes of data at high speed. This project will use the EpiData database to assist in determining certain trends in the articles content.

Once articles were entered into the database, entry is printed out and placed into the file with the corresponding article. Krippendorff (2004) describes this process as an important component of data analysis as it minimises mistakes and provides the researcher with additional copies of files in the event they are lost.

To ensure the reliability of the analysis, all data will be re analysed using the Kappa statistic, which according to Kerr, Taylor and Heard (1998), is a common method of assessment otherwise known as the test-retest method. At the end of this process the entire data collected will be used to determine trends that will be used for the discussion and results section of the thesis.

The Topic and Template

As this study is aimed at articles specifically related to issues surrounding Indigenous Health, a set of selection criteria are required to be established in order to provide a framework to guide the retrieval of articles relating to Indigenous Health.

All articles that mentioned any issue relating to Indigenous people are included in the study. This will be used to draw an added comparison to the types of articles that members from the Indigenous community predominantly feature in the three selected newspapers. Therefore of the selected newspapers, (the Herald Sun, The Age and The Australian), articles to be collected will include all sections of the newspapers from general news, opinion, editorial, sport, arts, culture, as well as including articles from all of the magazines that accompany these newspapers. The articles from the opinion, editorial and letters to the editor sections will be included to gauge public reactions to any issues that arise in relation to the Indigenous community. This forms a part of the analysis template where data from all of the articles has been recorded and coded. The first section of the template includes the details of the article: article number to distinguish one article from another, the newspaper the article is from, the date, day of the week, section the article was found as well as the start page number of articles. The start page number of articles is important in the analysis as it gives an indication of the importance of the article, which is highlighted by Lupton (1995) that front page news stories feature those that are the most important and attention-grabbing.

The types of articles collected also forms a part of the analysis template, for this reason the type of article, report, feature, editorial, letter etc has been recorded along with the State or Territory the article was reporting on and the subject area and topic of the article. The presence of pictures or illustrations has been recorded including, the total area of the article, the number of pictures/illustrations, area taken up by pictures and whether or not Indigenous children have been included in pictures or illustrations.

The text of the articles have also been analysed to determine the stakeholders mentioned and whether any of these are Indigenous peoples, leaders or organisations in addition to non-Indigenous community members, professionals and organisations from a local, state, commonwealth and non-government organisations.

As previously mentioned to determine the presence of the social determinants of health in articles, the ATSIHPF and other literature has been used to determine which social determinants should be utilised for analysis. The social determinants of health included for analysis in this study are: income, housing, education, family, criminal justice, transport, health behaviours, dietary behaviours, physical activity, life expectancy and human rights.

Additionally the focus of the article including who is being addressed, the main message content, when the issue is being addressed, the channel of communication as well as the byline have been included to determine whether collected articles have used any sources of information, who is writing the articles and whether people are being addressed before, during or after the issue occurred.

Following the methods section of the thesis, an overview of the results found through this study have been included.

Results

This chapter presents the findings of the study displaying the quantitative results, which outline the frequency and coverage of issues on Indigenous Australians in the print media. The results have been broken into sub sections according to the specific segment being analysed. These sub sections contain the total number of articles located, the location and article type collected, article area, frequency of the date distribution, article reportage, social determinants of health and illustrations will all be examined in this section.

Newspaper breakdown

The following table displays the total number of articles collected during the ten week period from April 1 to June 10 2007. In this period some 505 articles containing issues including Indigenous Australians appeared in *The Age*, *Herald Sun* and *The Australian* newspapers. Table 2 displays the numbers of articles found in each of the three newspapers.

Table 2: Number of articles by newspaper

Newspaper	No. (%)
The Age	172 (34.1)
The Australian	218 (43.1)
Herald Sun	115 (22.8)
Total	505

Interestingly 43% of the articles collected were found in *The Australian* newspaper.

Article types and arrangement

The following tables present the stratification by newspaper of the areas in which the articles were located in the three newspapers.

Table 3 below reveals the type of articles collected featuring Indigenous Australians. For these results all articles with an overall textual area less than 75cm² were categorized as news briefs, whist articles greater than 75cm² and less than 400cm² were considered to be short reports. Articles with a textual area greater than 400cm² were categorized as reports whilst articles contained in the features section that were greater than 900cm² were categorized as a feature article.

Table 3: Number of articles by newspaper and article type

Article Type	AGE (%)	AUS (%)	HS (%)	Total
ADVERTISEMENT	1 (33.3)	1 (33.3)	1 (33.3)	3 (0.6)
BRIEF	11 (44.0)	6 (24.0)	8 (32.0)	25 (4.9)
EDITORIAL	1 (6.7)	10 (66.7)	4 (26.7)	15 (3.0)
FEATURE	1 (16.7)	4 (66.7)	1 (16.7)	6 (1.2)
INTERVIEW	1 (14.3)	0	6 (85.7)	7 (1.4)
LETTER	11 (35.5)	14 (45.2)	6 (19.4)	31 (6.2)
OPINION	9 (50.0)	9 (50.0)	0(0.0)	18 (3.5)
PICTORIAL	1 (7.7)	4 (30.8)	8 (61.5)	13 (2.5)
REPORT	31 (35.2)	45 (51.1)	12 (13.6)	88 (17.5)
SHORT REPORT	105 (35.1)	125 (41.8)	69 (23.1)	299 (59.2)
Total	172 (34.1)	218 (43.2)	115 (22.8)	505

Expected value < 5 in 13 cells (43 percent). Chi2= 49.06 Df(18) p = 0.0000

Table 4 on the following page displays the subject area of the articles collected. The politics area includes Federal, State and Local government issues and issues surrounding the Federal budget, reconciliation, native title and the anniversary of the 1967 referendum. The Indigenous subject area covers articles that include ancient rock art findings, remains, sacred sites, traditional land and history.

The subjects most popular in the articles collected were sport (32.1%) and politics (27.9%).

Table 4: Number of articles by newspaper and subject area

Subject Area	AGE (%)	AUS (%)	HS (%)	Total
ART	27 (34.6)	40 (51.3)	11 (14.1)	78 (15.4)
BUSINESS	6 (46.2)	6 (46.2)	1 (7.7)	13 (2.5)
CRIME	3 (33.3)	5 {55.6}	1 (11.1)	9 (1.85)
EDUCATION	3 (33.3)	4 (44.4)	2 (22.2)	9 (1.85)
ENVIRONMENT	2 (33.3)	3 (50.0)	1 (16.7)	6 (1.2)
HEALTH	12 (36.4)	18 (54.5)	3 (9.1)	33 (6.5)
INDIGENOUS	20 (51.3)	14 (35.9)	5 (12.8)	39 (7.7)
MEDIA	0	2 (100.0)	0	2 (0.4)
MISCELLANIOUS	0	1 (25.0)	3 (75.0)	4 (0.8)
POLITICS	42 (29.8)	90 (63.8)	9 (6.4)	141 (27.9)
RACE	0 (0.0)	1 (50.0)	1 (50.0)	2 (0.4)
SPORT	55 (34.0)	29 (17.9)	78 (48.1)	162 (32.1)
TRAVEL	1 (25.0)	3 (75.0)	0	4 (0.8)
TELEVISION	1 (50.0)	1 (50.0)	0	2 (0.4)
VIOLENCE	0	1 (100.0)	0	1 (0.2)
Total	172 (34.1)	218 (43.2)	115 (22.8)	505

Expected value < 5 in 29 cells (64 percent). Chi2= 131.44 Df(28) p<0.01

Table 5: Subject topic of Health articles

Subject topic	No. (%)
ALCOHOL	1 (3.03)
ASBESTOS	2 (6.06)
BUDGET	2 (6.06)
CHILD AND INFANTS	2 (6.06)
CLOSE THE GAP CAMPAIGN	3 (9.09)
EYE SURGERIES	1 (3.03)
HEALTH GENERAL	12 (36.36)
HEALTH INDICATORS	1 (3.03)
HEALTH SYSTEM	1 (3.03)
INDIGENOUS HEALTH PROFESSIONALS	3 (9.09)
LIFE EXPECTANCY	4 (12.12)
PUBLIC HEALTH	1 (3.03)
Total	33

Table 5 on the previous page presents the specific subject topics of the health articles collected. General health issues were most popular (36.36%), followed by life expectancy (12.12%) and indigenous health workers and the close the gap campaign (9.09%).

Position of Articles

The following tables display details of the articles positioning in the three newspapers, including their starting page number and the section of the newspaper in which they were located. Table 6 below presents the start page number of all the articles collected. Of these 505 articles, only 19 were featured on the front page of the three newspapers.

Table 6: Start page number of all articles

Page No.	No. (%)
1	19 (3.8)
2-5	103 (20.4)
6-10	116 (23.0)
11-20	114 (22.7)
21-30	45 (8.9)
31-40	24 (4.7)
41-50	20 (3.9)
50 +	64 (12.6)
Total	505

Table 7 on the next page displays the sections in which articles were found and categorized for the analysis. The category main refers to articles that were found to be in the main news section of the paper which includes 'The Nation' in *The Australian* and 'News' items in *The Age*. The section coded feature contains articles from 'The Inquirer' in *The Australian*, the 'Focus' and 'Insight' sections of *The Age* and the 'Opinion' section of the *Herald Sun*. The opinion category refers to the 'Opinion' and 'Editorial' sections of *The Australian*, '50/50' and 'Your Say' in the *Herald Sun* and the 'Editorial' section of

The Age newspaper. From this table significantly we can see that 37.4% of articles were from the main sections of their papers and 28.1% of all articles were located in the sport section.

Table 7: Number of articles by newspaper and newspaper section

Section of paper	AGE (%)	AUS (%)	HS (%)	Total (%)
MAIN	62 (32.8)	101 (53.4)	26 (13.8)	189 (37.4)
OPINION	11 (22.4)	27 (55.1)	11 (22.4)	49 (9.7)
FEATURE	18 (37.5)	29 (60.4)	1 (2.1)	48 (9.5)
BUSINESS	6 (66.7%)	3 (33.3)	0	9 (1.8)
ART	7 (25.9%)	20 (74.1)	0	27 (5.3)
EDUCATION	1 (25.0%)	2 (50.0)	1 (25.0)	4 (0.8)
A2	5 (100%)	0(0.0)	0	5 (1.0)
TRAVEL	1 (33.3)	2 (66.7)	0	3 (0.6)
MAGAZINE	6 (40.0)	6 (40.0)	3 (20.0)	15 (3.0)
SOCIAL	0	0	1 (100.0)	1 (0.2)
ENTERTAINMENT	1 (16.7)	0	5 (83.3)	6 (1.2)
MEDIA	3 (60.0)	2 (40.0)	0	5 (1.0)
OBITUARY	2 (100.0}	0	0	2 (0.4)
SPORT	49 (34.5)	26 (18.3)	67 (47.2)	142 (28.1)
Total	172 (34.1)	218 (43.2)	115 (22.8)	505

Expected value < 5 in 25 cells (60 percent). Chi2= 136.03 Df(26) p<0.01

Below Table 8 demonstrates the starting page number of all the health articles collected. Of the total articles featured on the front page of the three newspapers (a total of 19, as displayed in Table 6) only 3 of these were related directly to Indigenous health.

Table 8: Start page Number of Health articles

No. (%)
3 (9.09)
9 (27.27)
12 (36.36)
6 (18.19)
3 (9.09)
33

Area of Articles

The following tables relate to the total area of articles, all of which were measured in cm². The main features these tables display are the total number of articles, sum area of the articles, the minimum and maximum article area, as well as the mean and median area of the articles. The table contains two lots of column headings, with the appropriate corresponding numbers located beneath each heading.

Table 9 below shows the figures for the area of all the articles collected from the three newspapers, with the mean article size of 490.59cm² and the median size 332.82cm².

Table 9: Area of all articles

Obs	Sum	Mean	Variance	Std Dev	95% CI	Mean	Std Err	
505	229087.5	453.64	178604.2	422.62	416.69	490.59	18.81	
Min	p5	p10	p25	Median	p75	p90	p95	Max
9.00	34.07	59.85	154.50	332.82	622.58	948.54	1206.06	2962.60

Students T-test for mean=0: T=24.12 df(504) p<0.01

The following Table 10 displays the figures for the area of articles collected in *The Age* over the collection period, with the mean article size of 559.52cm² and the median size 372.63cm².

Table 10: Area of The Age articles

Obs	Sum	Mean	Variance	Std Dev	95% CI	Mean	Std Err	
172	85003.0	494.2	188351.1	433.99	428.88	559.52	33.09	
Min	p5	p10	p25	Median	p75	p90	p95	Max
9.54	36.0	47.82	205.55	372.63	730.25	973.5	1204.91	2945.0

Students T-test for mean=0: T=14.93 df(171) p<0.01

The figures for the areas of articles collected in *The Australian* are featured on the next page in Table 11, with the mean article size of 501.46cm² and median size 290.9cm².

Table 11: Mean area of The Australian articles

Obs	Sum	Mean	Variance	Std Dev	95% CI	Mean	Std Err	
218	96874.3	444.38	182843.5	427.6	387.3	501.46	28.96	
Min	p5	p10	p25	Median	p75	p90	p95	Max
9.00	33.48	83.13	139.95	290.9	615.49	951.91	1237.01	2962.6

Students T-test for mean=0: T=15.34 df(217) p<0.01

Table 12 exhibits the data for the area of articles collected in the *Herald Sun* newspaper, with the mean article size of 483.14cm² and median size 324.65cm².

Table 12: Mean area of Herald Sun articles

Obs	Sum	Mean	Variance	Std Dev	95% CI	Mean	Std Err	
115	47210.2	410.52	154525.8	393.1	337.91	483.14	36.66	
Min	p5	p10	p25	Median	p75	p90	p95	Max
14.95	29.81	49.92	155.44	324.65	562.83	873.7	953.38	2194.57

Students T-test for mean=0: T=11.20 df(114) p<0.01

Table 13 below displays the figures for all articles concerning health. Surprisingly the mean size of health articles is a least 100cm² larger (604.47cm²) than the mean size of the entirety of articles collected.

Table 13: Mean size of Health specific articles

Obs	Sum	Mean	Variance	Std Dev	95% CI	Mean	Std Err	
33	14954.1	453.15	182104.4	426.74	301.84	604.47	74.29	
Min	p5	p10	p25	Median	p75	p90	p95	Max
24.32	28.37	60.34	150.71	339.2	614.8	913.83	1569.67	2063.88

Students T-test for mean=0: T= 6.10 df(32) p<0.01

Date Range

The following tables refer to the frequency of articles displayed in the three newspapers for each of the 10 weeks over the collection period.

Table 14 below displays a breakdown of the totals for all of the articles collected over the ten week period, with 20.5% of all articles collected in Week 8 (20/05 - 26/5/2007).

Table 14: Date range for all articles

Date Range	No. (%)
Week 1: 1/04/2007 - 07/04/2007	34 (6.7)
Week 2: 08/04/2007 - 14/04/2007	22 (5.1)
Week 3: 15/04/2007 - 21/04/2007	52 (10.3)
Week 4: 22/04/2007 - 28/04/2007	25 (4.9)
Week 5: 29/04/2007 - 05/05/2007	58 (11.5)
Week 6: 06/05/2007 - 12/05/2007	65 (12.9)
Week 7: 13/05/2007 – 19/05/2007	49 (9.7)
Week 8: 20/05/2007 - 26/05/2007	103 (20.5)
Week 9: 27/05/2007 - 02/06/2007	60 (11.3)
Week 10: 03/06/2007 - 10/05/2007	37 (7.1)
Total	505

Table 15: Date range for The Age articles

Date Range	No. (%)
1/04/2007 - 07/04/2007	11 (6.4)
08/04/2007 - 14/04/2007	12 (7.0)
15/04/2007 - 21/04/2007	20 (11.6)
22/04/2007 - 28/04/2007	9 (5.3)
29/04/2007 - 05/05/2007	15 (8.7)
06/05/2007 - 12/05/2007	18 (10.5)
13/05/2007 - 19/05/2007	20 (11.6)
20/05/2007 - 26/05/2007	33 (19.2)
27/05/2007 - 02/06/2007	21 (12.2)
03/06/2007 - 10/05/2007	13 (7.5)
Total	172

Table 15 on the previous page displays the date range for articles collected from *The Age* newspaper over the ten week analysis period, in which Week 8 was the largest with 19.2% of articles collected during this period.

Table 16 below exhibits the data collected for the range of dates for articles in *The Australian* newspaper, with 23.4% of articles collected in Week 8.

Table 16: Data range for The Australian articles

Date Range	No. (%)
1/04/2007 - 07/04/2007	13 (6.0)
08/04/2007 - 14/04/2007	8 (3.7)
15/04/2007 - 21/04/2007	20 (9.2)
22/04/2007 - 28/04/2007	8 (3.7)
29/04/2007 - 05/05/2007	28 (12.8)
06/05/2007 - 12/05/2007	31 (14.2)
13/05/2007 - 19/05/2007	19 (8.7)
20/05/2007 - 26/05/2007	51 (23.4)
27/05/2007 - 02/06/2007	23 (10.5)
03/06/2007 - 10/05/2007	17 (7.8)
Total	218

The following Table 17 displays the range of dates for articles collected in the *Herald Sun* newspaper, with 16.5% of articles collected during the Week 8 collection period.

Table 17: Date range for the Herald Sun articles

Date Range	No. (%)
1/04/2007 - 07/04/2007	10 (8.7)
08/04/2007 - 14/04/2007	6 (5.3)
15/04/2007 - 21/04/2007	12 (10.4)
22/04/2007 - 28/04/2007	8 (6.9)
29/04/2007 - 05/05/2007	15 (13.0)
06/05/2007 - 12/05/2007	16 (13.9)
13/05/2007 - 19/05/2007	10 (8.7)
20/05/2007 - 26/05/2007	19 (16.5)
27/05/2007 - 02/06/2007	13 (11.3)
03/06/2007 - 10/05/2007	6 (5.3)
Total	115

Reportage

The following section of analysis looks at the reportage of articles, including the state and territory of the reporting of all articles as well as the state and territory reporting by main subject area. This section also presents the communication used in the reporting of Indigenous health articles and the authors of these health articles.

Table 18 below gives an overview of the reporting of state and territories of articles found in all three newspapers. The Australia Wide (AUS WIDE) category was employed for articles not reporting on a particular state and was the highest recorded with 46.1%, followed by Victoria with 27.1%.

Table 18: State/Territory article reported

State/Territory	AGE (%)	AUS (%)	HS (%)	Total
ACT	0	0	0	0
AUS WIDE	82 (35.2)	124 (53.2)	27 (11.6)	233 (46.1)
NSW	4 (17.4)	12 (52.2)	7 (30.4)	23 (4.5)
NT	15 (35.7)	25 (59.9)	2 (4.8)	42 (8.4)
QLD	3 (10.0)	25 (83.3)	2 (6.7)	30 (5.9)
SA	1 (12.5)	3 (37.5)	4 (50.0)	8 (1.6)
TAS	3 (60.0)	2 (40.0)	0	5 (1.0)
VIC	53 (38.7)	15 (10.9)	69 (50.4)	137 (27.1)
WA	11 (40.7)	12 (44.4)	4 (14.8)	27 (5.4)
Total	172	218	115	505

Expected value < 5 in 12 cells (40 percent). Chi2= 139.08 Df(18) p<0.01

Table 19 on the following page presents the reporting of states and territories by the main subject areas of the articles collected, as per Table 4. Over half (52.5%) of articles reporting for Victoria were in Sport and there were no specific Victorian Indigenous Health articles reported on.

Table 19: Main subject areas by state/territory reported

Subject area	Art (%)	Health (%)	Indigenous (%)	POIIICS (%)	
ACT	0	0	0	0	0
AUS	36 (46.1)	25 (75.6)	15 (38.5)	97 (68.8)	38 (23.5)
NSW	3(3.8)	2 (6.1)	3 (7.7)	3 (2.1)	12 (7.4)
NT	4 (5.2)	4 (12.2)	1 (2.4)	18 (12.8)	1 (0.6)
QLD	4 (5.2)	2 (6.1)	7 (17.9)	10 (7.1)	2 (1.2)
SA	2 (2.5)	0	0	0	5 (3.1)
TAS	0	0	4 (10.2)	1 (0.7)	0
VIC	28 (35.9)	0	8 (20.5)	9 (6.4)	85 (52.5)
WA	1 (1.3)	0	1 (2.4)	3 (2.1)	19 (11.7)
Total	78	33	39	141	162

Table 20: Health specific articles: channel of communication

Communication	No. (%)
Nothing used	15 (45.45)
ABS Statistics	1 (3.03)
Advertisement	1 (3.03)
AIHW Report	2 (6.06)
AMA	2 (6.06)
Interview	4 (12.12)
Lancet	1 (3.03)
Letter	1 (3.03)
MJA	2 (6.06)
NACCHO Oxfam Report	2 (6.06)
UWA	1 (3.03)
WHO Report	1 (3.03)
Total	33 (100)

Table 20 above displays the channel of communication of key topics in Indigenous health articles. Almost half (45.45%) of these articles did not use any 'expert' material to support the information in these articles. Following this on the next page, Table 21 presents the author's of articles on Indigenous health, with surprisingly 18.18% not stating the author of these articles.

Table 21: Health specific articles: byline

Byline	No. (%)
No author	6 (18.18)
Adam Creswell	3 (9.09)
Andrew Hewett	2 (6.06)
Annabel Stafford	4 (12.12)
Ben Doherty	1 (3.03)
Caroline Overington	1 (3.03)
Cath Hart	1 (3.03)
Dewi Cooke	1 (3.03)
Ean Higgins	2 (6.06)
Greg Megalogenis	1 (3.03)
Grant McArthur	1 (3.03)
Leigh Dayton	1 (3.03)
Llindsay Murdoch	1 (3.03)
Liz Porter	1 (3.03)
Mike Steketee	2 (6.06)
Paige Taylor	1 (3.03)
Patricia Karvelas	3 (9.09)
Tony Koch	1 (3.03)
Total	33 (100)

Social Determinants

The following section looks into the reporting of the social determinants of health in the articles collected through the analysis period. The total number of social determinants featured in all articles and health articles is listed as well as stratification by the incidence of social determinants in each of the three newspapers.

On the following page, Table 22 displays the total number of social determinants of health featured in each of the three newspapers. Of these 152 articles contained at least one reference to a social determinant.

Table 22: Social determinants per newspaper

Y/N	AGE (%)	AUS (%)	HS (%)	Total (%)
N	119 (33.7)	132 (37.4)	102 (28.9)	353 (69.9)
Y	53 (34.9)	86 (56.6)	13 (8.6)	152 (30.1)
Total	172 (34.1)	218 (43.2)	115 (22.8)	505

Chi2= 28.41 Df(2) p<0.01

Table 23 as follows, displays the incidence of the social determinants of health, featured in health articles in each of the three newspapers, with 90.91% of articles containing at least one reference to the social determinants of health.

Table 23: Health specific articles: Social determinants

S.D.	AGE (%)	AUS (%)	HS (%)	Total
N	0	2 (66.7)	1 (33.3)	3 (9.09)
Y	12 (40.0)	16 (53.3)	2 (6.7)	30 (90.91)
Total	12 (36.4)	18 (54.5)	3 (9.1)	33

Expected value < 5 in 4 cells (67 percent). Chi2= 3.42 Df(2) p< 0.18

Table 24: Social determinants in all articles

Determinant	No. (%)
CRIMINAL JUSTICE	19 (7.0)
DIET BEHAVIOUR	5 (1.8)
EDUCATION	55 (20.4)
FAMILY	13 (4.8)
HEALTH BEHAVIOUR	28 (10.4)
HOUSING	46 (17.0)
HUMAN RIGHTS	12 (4.4)
INCOME	43 (15.9)
LIFE EXPECTANCY	47 (17.4)
PHYSICAL ACTIVITY	1 (0.4)
TRANSPORT	1 (0.4)
Total	270

Table 24 on the previous page displays the specific social determinant s located in all the articles collected through the analysis. Of the social determinants mentioned in all the articles, education was most popular (20.4%) followed by life expectancy (17.4%) and housing (17.0%).

Table 25: Social determinants in health articles: specific determinants

Determinant	Number (%)
LIFE EXPECTANCY	19 (57.6%)
HEALTH BEHAVIOURS	14 (42.4%)
EDUCATION	5 (15.2%)
INCOME	3(9.1%)
FAMILY	3 (9.1%)
DIET BEHAVIOURS	3 (9.1%)
HOUSING	2 (6.1%)
PHYSICAL ACTIVITY	1 (3.0%)
HUMAN RIGHTS	1 (3.0%)
CRIMINAL JUSTICE	0
TRANSPORT	0
Total	48 (100)

Table 25 above page displays the specific social determinants located in health articles collected through the analysis. Of the social determinants mentioned in articles, life expectancy was the most popular (37.3%) followed by health behaviours (27.5%).

Illustrations

This section presents the findings on the usage of illustrations such as cartoons and photography accompanying articles collected over the ten week period. The tables display the numbers of articles supported by visual images, as well as the areas of these

images and whether Indigenous children were presented in images accompanying health articles.

Table 26 below gives stratification of the use of illustration for the three newspapers. From this there were a total number of 327 articles that were supported by some form of visual imagery.

Table 26: Article illustration

Illustration	AGE (%)	AUS (%)	HS (%)	Total
N	57 (32.0)	95 (53.4)	26 (14.6)	178 (35.3)
Y	115 (35.2)	123 (37.6)	89 (27.2)	327 (64.7)
Total	172 (34.1)	218 (43.2)	115 (22.8)	505
	~		0.04	

Chi2= 15.01 Df(2) p<0.01

The following tables display the figures relating to the area of the images used to support the articles collected through the analysis. The area of all articles was measured in cm². Below, Table 27 displays the figures for the area of the entire collection of articles accompanied by a form of illustration, with the mean illustration size of 318.42cm².

Table 27: Mean area of all illustrations

Obs	Sum	Mean	Variance	Std Dev	95% CI	Mean	Std Err	
325	94360.4	290.34	66203.4	257.30	262.26	318.42	14.27	
Min	p5	p10	p25	Median	p75	p90	p95	Max
2.53	9.85	19.27	63.37	261.00	411.60	581.21	787.59	1775.77

Students T-test for mean=0: T= 20.34 df(324) p<0.01

The following three tables present the figures relating to the area of the images accompanying articles from the three newspapers. Table 28 looks at *The Age*, Table 29 *The Australian* and Table 30, the *Herald Sun*. All three have similar mean illustration sizes; *The Age* (363.13cm²), *The Australian* (311.14cm²) and the *Herald Sun* (347.52cm²).

Table 28: Mean area of illustrations in The Age

Obs	Sum	Mean	Variance	Std Dev	95% CI	Mean	Std Err	
114	35752.6	313.62	71197.4	266.83	264.11	363.13	24.99	
Min	p5	p10	p25	Median	p75	p90	p95	Max
5.04	11.99	18.34	88.32	304.30	431.40	679.86	925.75	1149.30

Students T-test for mean=0: T= 12.55 df(113) p<0.01

Table 29: Mean area of illustrations in The Australian

Obs	Sum	Mean	Variance	Std Dev	95% CI	Mean	Std Err	
123	33615.7	273.30	44950.9	212.02	235.45	311.14	19.12	
Min	p5	p10	p25	Median	p75	p90	p95	Max
2.53	5.36	16.00	77.00	260.26	417.60	559.95	610.83	933.25

Students T-test for mean=0: T= 14.30 df(122) p<0.01

Table 30: Mean area of illustrations in the Herald Sun

Obs	Sum	Mean	Variance	Std Dev	95% CI	Mean	Std Err	
88	24992.1	284.00	89879.8	299.80	220.48	347.52	31.96	
Min	p5	p10	p25	Median	p75	p90	p95	Max
8.96	12.39	19.64	44.49	230.97	371.75	564.74	915.00	1775.77

Students T-test for mean=0: T= 8.89 df(87) p<0.01

Table 31 below presents the number of health articles that were accompanied by a form of visual imagery. Interestingly, over half (54.5%) of the health articles collected were accompanied by a form of illustration.

Table 31: Illustrations in health specific articles

Illustration	No. (%)
N	15 (45.5)
Y	18 (54.5)
Total	33

The following table presents the number of health articles that were accompanied by an illustration and whether Indigenous children were represented in these illustrations. Table 32 confirms of these 18 articles, 61.1% used images of Indigenous children to support their articles.

Table 32: Children depicted in illustrations in health articles

Children	No (%)
N	7 (38.9)
Y	11 (61.1)
Total	18

Below, Table 33 displays the figures for the area of illustrations used to accompany health articles with the mean size of 473.79 cm2, which is over 150cm2 larger than the mean size of the entirety of illustrations in all the collected.

Table 33: Mean area of Illustrations in Health articles

Obs	Sum	Mean	Variance	Std Dev	95% CI	Mean	Std Err	
18	6392.9	355.16	56909.3	238.56	236.53	473.79	56.23	
Min	p5	p10	p25	Median	p75	p90	p95	Max
4.60	2.40	44.12	241.31	351.54	436.67	634.07	653.78	1091.94

Students T-test for mean=0: T= 6.32 df(17) p<0.01

Discussion

This project was designed to explore the representation of Indigenous Australians in the print media, including the frequency of coverage of Indigenous issues. In particular this study has examined the issues relating to Indigenous health and the social determinants of health to determine the reportage of these issues.

This section examines in detail the outcome of the results section and discusses these in relation to the aims and outcomes of the study.

Number of articles

Through the analysis process of this project there were a total of 505 articles collected which directly related to Indigenous Australians. Considering the analysis took place over a ten week period this number is unexpectedly high. Although Indigenous Australians have featured in the three newspapers, the articles relating to the health of Indigenous Australians received little coverage. Sport was the most predominant subject area concerning Indigenous Australians with a total of 162 articles and of these, 78 of the articles were located in the *Herald Sun*. This accounted for 67.8% of all articles featured in that newspaper. Arts and entertainment was the second most featured subject, comprising 9.5% of all articles featured in the *Herald Sun*. This suggests the *Herald Sun* editors do not focus on issues relating to Indigenous Australians unless they are featured in sport, arts or entertainment.

Interestingly, health articles involving Indigenous Australians only featured in 33 out of the total 505 articles, whilst art featured in 78 and politics in 141 of all articles. This

would indicate that issues of Indigenous health were not a priority when compared to sport, politics and the arts in the three newspapers analysed.

As explained in the results section, articles with an overall textual area less than 75cm² were categorised as news briefs, whilst articles greater than 75cm² and less than 400cm² were considered to be short reports. Articles with a textual area greater than 400cm² were categorised as reports whilst articles contained in the features section that were greater than 900cm² were categorised as a feature article. The most common article types used by the three newspapers were short reports(59.2%), followed by reports (17.5%). This suggests that the majority of articles involving Indigenous Australians were small in area and thus limited information would be presented to the readers.

Position of articles

Articles containing issues on Indigenous Australians featured predominantly in the main news section (37.4%) in the three newspapers, closely followed by sport (28.1%) and opinion and editorial (9.7%). The front page of newspapers according to Lupton (1995) is used to display the most prominent stories and to entice the readers' interest in an attempt to have them purchase the newspaper. The use of front page articles in this research found out of the 505 articles collected on Indigenous Australians, only 19 featured on the front page of the three newspapers. Of these 19, only 3 were specifically health articles. The location of articles on pages 2 through to 5 saw a total of 103 articles relating to Indigenous Australians and again Indigenous health issues did not feature prominently, with only 9 articles featuring on these pages. It is quite concerning that Indigenous health issues aren't featured prominently in any of the three newspapers and would suggest that

Indigenous health is not a high priority. Health stories that did feature on the front page included two articles on raising Indigenous life expectancy and one article about alcohol abuse in the community. Interestingly both the articles featuring Indigenous life expectancy were both from *The Australian* newspaper.

Size of articles

There was not a great difference in the mean area of the articles collected from the three newspapers, with *The Age* having a mean article size of 559.52cm² compared to 501.46cm² for *The Australian*. The Herald Sun however had a smaller mean article size of just 483.14cm². The mean article size for all three newspapers was also significantly higher than the median size with all the newspapers having a median at least 150cm² smaller than the mean sizes of the articles. This would be due to the fact some of the articles are quite large in size which has contributed to a higher overall mean size of the articles. Health articles however, had an overall higher mean than the average for all articles with the means coming to 604.47cm² and 490.59cm² respectively.

From this it could be suggested that the media are aware that coverage of Indigenous health issues is not as regular as it possibly could be and they therefore compensate this by featuring larger articles.

Date Range

As mentioned in the methods section, the articles were collected over a ten week period. When stratified by week of collection there was a fairly even distribution of articles with the exception of Week 8 (20/05/07 - 26/05/07), in which a total of 103 articles were collected from the three newspapers. Of these 51 (50.5%) articles were located in *The*

Australian newspaper. This is most likely due to the 40th Anniversary of the 1967 Referendum being on the 26th of May, 2007, hence more articles concerning these issues were present.

Reportage

The reportage of articles over the analysis period found in the three newspapers 46.1% of articles were Australia wide reports, followed by Victoria (27.1%) and the Northern Territory (8.4%). The high results of articles reported for Victoria can be attributed to 62% of these being reported on the area of sport. Politics accounted for 41.6% of articles reported Australia wide and 42.8% of articles reported for the Northern Territory. Of the articles reported for health, there were no articles recorded for South Australia, Tasmania, Victoria and Western Australia. Additionally, Australia wide articles accounted for 75.6% of health articles, with the Northern Territory (12.2%) and New South Wales and Oueensland (6.1%) each. This indicates the reporting of Indigenous health had a predominantly Australia wide focus. Additionally it is quite interesting that health issues of Victorian Indigenous people were not featured very highly in comparison to articles concerning the Northern Territory, New South Wales and Queensland. This is concerning due to two of the newspapers being Victorian newspapers (*The Age* and the Herald Sun) and therefore it would be expected that these issues would be covered more predominantly in these newspapers.

In addition to the state and territory reporting of health articles, the analysis also looked into the forms of communication used to report the issues detailed in health articles. Surprisingly out of the 33 health articles collected, 15 (45.45%) did not mention any 'expert' material to support their articles. Of the articles that did contain such material,

interviews were the most popular (12.12%), followed by the use of reputable sources including the Australian Institute of Health and Welfare (AIHW), the Australian Medical Association (AMA), the Medical Journal of Australia (MJA) and NACCHO and Oxfam Australia (6.06%) each. This suggests that for the information that is supplied to the public, just over half of the articles containing Indigenous Health contain information derived from a highly regarded source.

Social Determinants

This research project aimed to examine the reporting of the social determinants of health in articles featuring Indigenous Australians. The analysis has shown out of the 505 articles collected, the social determinants of health were addressed in 152 (30.1%) of these, whilst in health articles the social determinants of health appeared in 90.9%. In terms of the social determinants reported, in all articles the highest number was for education (20.4%), followed by life expectancy (17.4%) and housing (17.0%). In the reporting of the social determinants in health articles, the highest number was located for life expectancy (37.3%), followed by health behaviours (27.5%) and education (9.8%). This suggests that the issue of Indigenous life expectancy became a popular topic between the three newspapers. This can be attributed to the release of the NACCHO and Oxfam Australia report (2007) released during the collection period for this study in April.

Use of visual imagery

Photographs were the most popular form of visual imagery used to accompany articles on Indigenous Australians. On average a photograph or illustration accompanied 67.4% of the 505 articles collected and also accompanied 54.6% of health articles.

Of the total number of articles accompanied by photographs or illustrations, the mean size was found to be 363.13cm², whilst in health articles the mean was 473.79cm² indicating that the possible intention of bigger pictures was to 'grab' the attention of the readers.

Interestingly, of the 18 health articles accompanied by illustrations, 61.1% were found to depict Indigenous children. A possible reason for this could be to further appeal to the readers to ensure their attention. This is especially significant as images do have the power to evoke emotions of the readers, Hollinsworth (2005). Therefore it is possible that these images were included to do just that, however more research needs to be conducted relating to this issue.

Conclusion

The aims of this project centred on an exploration of the reporting of Indigenous Australians. This has been undertaken by looking specifically at the reporting of health articles and the social determinants of health. This study found 505 articles featuring Indigenous Australians covering varying subject areas. Of the 505 articles, only 6.5% comprised articles covering Indigenous health. It was also revealed over the collection period articles contained within the Herald Sun focussed on the areas of Indigenous sport and art, whilst The Australian had a high emphasis on Indigenous politics and art and finally The Age focussed on Indigenous sport and politics. It was concluded that Indigenous health issues were not a high priority for all studied newspapers, which contributes to a lack of knowledge of these issues in the wider community. From the health articles relating to Indigenous issues located in this study it can be concluded that almost half the time these issues are reported journalists are not utilising any 'expert' sources to support comments made in their articles. Regarding the reporting of the social determinants of health, at the time of this study the education and life expectancy of the Indigenous community were the most commonly reported social determinants of health.

This study identified that during the research period the reporting of health articles on Indigenous Victorians was absent. Health articles featured Indigenous communities from the Northern Territory, New South Wales and Queensland. This is concerning due to the fact that two of the newspapers utilised for this study are Victorian newspapers and it would be expected that these issues would contain more focus on these issues from a Victorian perspective.

This type of research involves lengthy periods of analysis and data entry, which is supported by Berger (2000). The number of articles collected over the analysis period was higher than expected and as a result an extensive amount of time was spent in the process of data entry. This project acquired a total of 505 articles, quite a large representative sample given the relatively small period of collection. Having obtained such a large number of articles has ensured the strength in the results this study was able to generate. To improve on the results of this project additional research should be completed with a comparison of all health articles found in the print media to be used as comparison for those articles located on Indigenous health issues. Additionally research should aim to analyse the distribution of Indigenous health articles focused on Victoria, as this study found the coverage of these issues to be disproportionately low in Victorian newspapers.

Owing to the fact that previous literature did not focus on issues relating to Indigenous health in the print media, studies focused on specific health issues in the media have helped to shape the methodology of this study. These include: Chapman & Dominello (2001); Durrent et al (2003); Westwood & Westwood (1999); Brownson et al (1996); Shugg & Liamputtong (2002) and Gattuso et al (2005). Additionally studies featuring Indigenous Australians in the print media have also contributed to the methodology of this study. None of these studies focused on Indigenous health in the print media. The studies featuring Indigenous issues in the media include: McCallum (2003); Hollinsworth (2005); Meadows (1995); Meadows et al (1997); Eggerking (1996); Scott (2006) and Thompson et al (2007).

Although this research project was conducted over a relatively short period of time, the results have displayed some important issues in the reporting of Indigenous health in newsprint media. This is supported by Cunningham and Turner (1997) as they explain that "figures derived from content analysis may only be the beginning of the enquiry, but it can often be extremely revealing evidence" (p. 297). Obviously it would be ideal to conduct a lengthy data analysis to perhaps cover some of the issues that were not raised or reported on in such a short analysis period. However, this research has attempted to begin to fill the gap identified around the lack of studies involving the analysis of Indigenous health in the print media. In particular this study makes an added contribution to previous media content analyses and is the first to focus Indigenous health and the social determinants of health in the newsprint media.

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Appendices

Appendix 1: Data Analysis Template

Article details

{artno}	Article number	<a>
{paper}	Newspaper	<a>
{date}	Date of Paper	<dd mm="" yyyy=""></dd>
{day}	Day of the Week	<a>
{sect}	Section of Newspaper	<a>
{page}	Page Number	###
{story}	Story Number	###

<u>Illustrations/pictures</u>

{illus}	Illustration	Yes or No
{area}	Area of Article in cm sq	###.##
{picno}	Number of Pictures	##
{picarea}	Area taken up by pictures	###.##

Article type

{arttype}	Type of article	<a>
{state}	State/Territory	<a>
{subject1}	Subject area of article	<a>
{subject2}	Specific subject topic	

Indigenous involved

{numstake}	Number of stakeholders mentioned in article	##
{indorg}	Indigenous Organisations	##
{icomlead}	Indigenous community leaders	##
{indcom}	Indigenous communities	##
{incommem}	Indigenous community members	##

Non Indigenous Community involved

14011 Indigene	dis Community involved				
{comgen}	Community in general	##			
{prof}	Professionals	##			
{locorg}	Local Organisation	##			
{ngocomp}	NGO Company	##			
{cgovorg}	Commonwealth Government Organisation	##			
{sgovorg}	State Government Organisation	##			
{mp}	MP either State or Federal	##			
{depspoke}	Departmental spokesperson	##			
{lgovorg}	Local Government Organisation	##			
{expert}	Does this article mention any experts?	##			
{socdeter}	Is a specific social determinant of health being add	ressed? <a> Yes or			
	No				
{income} <a< td=""><td>></td><td></td></a<>	>				
{housing} <a< td=""><td>1></td><td></td></a<>	1>				
{education} <	{education} <a>				
{family} <a>	>				
{criminaljust	} <a>				
{transport} <	A>				
{healthbehav	} <a>				
{dietarybehav	y} <a>				
{physactiv} <	<a>				
{indconc}Are Indigenous concepts of health being addressed? <a>Yes or No					
{inhist} Indigenous history <a>					
{inhealth} Indigenous health <a>					
{incomm} Indigenous community <a>					
{inland} Indi	{inland} Indigenous connections to land <a>				

Article focus			
{whoaddr}	Who is being addressed?		
{mescont}	Main message content		
{whnaddr}	When are people being addressed?		
{chnlcom}	Channel of communication		
{indvinst}	individual/institution		
{bline}	Byline <a> Does this article have an author? Y/N		
{author}	Author		

Appendix 2: List of Coding

Section

A2 A2 section of The Age

ART Arts

BUS Business and finance

EDU Education **ENTER** Entertainment **FEAT** Features MAG Magazines

MAIN Main news story/section MED Media and communications

OBIT Obituary

Opinion and editorial OP

SOC Social pages

SP Sport

TR Travel and tourism

Article Type

ADV Advertisement

BR Brief ED Editorial **FEAT** Feature INT Interview LTR Letter OP Opinion PIC **Pictorial** RP Report

SH RP **Short Report**

Subject Area

ART Arts and entertainment BUS Business and finance

CRM Crime **EDU** Education **ENV** Environment HLTH Health

Indigenous issues **INDIG**

MED Media and communications

MISC Miscellaneous

Politics POL **RACE** Racism SP Sport

TR Travel and tourism TV Television programs

olence

State/Territory

ACT Australian Capital Territory

AUS Australia wide/no specific state mentioned

NSW New South Wales NT Northern Territory

QLD Queensland SA South Australia TAS Tasmania

VIC Victoria

WA Western Australia

Appendix 3: Ethics



RESEARCH AND GRADUATE STUDIES OFFICE

MEMORANDUM

To: Ms Pricilla Robinson, School of Public Health, FHS

Jessica Roberts, School of Public Health, FHS

From: Secretary, La Trobe University Human Ethics Committee

Subject: Review of Human Ethics Committee Application No. 07-103

Title: Analysis of representation of Indigenous Australians in mainstream print

media. An exploration centred on the social determinants of health.

Date: 21 August 2007

Thank you for submitting your application for ethics approval to the La Trobe University Human Ethics Committee (UHEC) for the project referred to above.

Your application was forwarded to a subcommittee of the UHEC, who has assessed the project and responded that it does not require ethics approval as the project does not directly involve human participants. The methodology in the application describes a survey and analysis of media reports culminating in the identification of issues. If the methodology were to include responses to the project findings by Indigenous Australian people, the project will then require further ethics consideration.

The decision of the subcommittee is in accord with Clause 5.1.22 of the National Health and Medical Research Council's National Statement on Ethical Conduct in Human Research and with Clause 5 of the La Trobe University Human Research Ethics Guidelines.

The UHEC would like to thank you for taking the time to register your research proposal for ethics approval as any research involving Indigenous Australians is potentially of a sensitive nature. Your application now provides the University with a written record of the project should any further stages of the research directly engage human participation.

If you have any queries on the information above or require any further clarification please contact me at the Research and Graduate Studies Office on telephone (03) 9479 1443, facsimile (03) 9479 1464 or e-mail address humanethics@latrobe.edu.au

Barbara Doherty

Acting Secretary, La Trobe University Human Ethics Committee