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# A meta-analysis of the aftermath of South Africa's apartheid on its health care system

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# A Meta-Analysis of the Aftermath of South Africa's Apartheid on its Health Care System

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An Honors College Project Presented to  
the Faculty of the Undergraduate  
College of Health and Behavioral Studies  
James Madison University

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by Caitlin Lorraine Jaeckel

May 2017

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Accepted by the faculty of the Department of Health Sciences, James Madison University, in partial fulfillment of the requirements for the Honors College.

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PUBLIC PRESENTATION

This work is accepted for presentation, in part or in full, at James Madison University on April 21<sup>st</sup>,

To my family, friends, and professors who supported me through my academic journey at  
James Madison University.

## Table of Contents

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Acknowledgements.....	4
Abstract.....	5
Chapter One: Introduction.....	6
Chapter Two: Review of the Literature.....	7
Chapter Three: Methodology.....	29
Chapter Four: Results.....	32
Chapter Five: Discussion and Conclusion.....	36
References.....	43
Tables.....	51
Figures.....	62
Appendix A: Survey Questions .....	67
Appendix B: James Madison University: Human Research Review Request.....	68
Appendix C: IRB International Research Questionnaire.....	77
Appendix D: Additional IRB Questions and Answers.....	79
Appendix E: Recruitment Letter.....	81
Appendix F: Consent to Participate in Research Form.....	82
Appendix H: Email provided to the two United State residents to send to their South African contacts.....	84
Appendix G: Email send to participants contact email that was provided to the researcher by other participants .....	85

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## **Abstract**

The objective of the study was to assess the possible problems of the quality of health care that whites and non-whites receive in South Africa. The research question was specific to how the residual effects of apartheid are affecting South Africa's health care today and if citizens still feel the presence of apartheid in health care. Prior to the start of the study the researcher hypothesized that access, quality, and funding of South Africa's health care system has not been able to recover from the effect of apartheid and South Africans still observe the effects of apartheid on an individual level. To attempt to answer the research question an in depth literature review of the history of South Africa and its health care was conducted, and surveys were distributed electronically and then analyzed. The research supports the hypothesis by showing that health care is still largely affected by the residual effects of apartheid due to South Africa's struggle to create a functional health care system and individuals' negative emotional responses to questions pertaining to health care and apartheid.

## **Chapter One**

### **Introduction**

#### *Background*

South Africa's vanquish of apartheid is a piece of proud history for the country. Segregation in South Africa began in the mid-17<sup>th</sup> century with the arrival of European settlers and continued into the 19<sup>th</sup> and 20<sup>th</sup> centuries with the systematic segregation referred to as apartheid (Wainwright, 2014). One of the first discriminatory laws under British Rule began in 1892, with the *Franchise and Ballot Act*, which limited black voters by finance and education standards (Allen, 2005). The legislation progressed to be more and more dehumanizing to non-white populations and eventually came to depriving them the right to vote, limiting them to fixed locations, prohibiting the practice of skilled trade, and forcing them to register and carry passes. The last legislation under British Rule was in 1946 (Allen, 2005). While the rule over South Africa changed, the segregation movement did not falter under the Nationalist Rule. So that one may not be mistaken that the change of political power may have led to a betterment of apartheid system, John Allen (2005) refers to the legislation under British rule as ‘the evolving of apartheid’ and the discriminatory legislation under Nationalist Rule as ‘the perpetuation of apartheid’. Apartheid continued to grow in strength with the passing of Acts that prohibited marriage across color or ethnic lines, deprived non-whites of education, formalized racial discrimination in employment, permitting indefinite detention without trial, and resettling more than three million black to homelands by force.

The 1994 Democratic election of Nelson Mandela, a member of the African National Congress, marked the end of apartheid. Many would assume that since the end of the government enforced segregation, the nation would have been able to improve equality and be

comparable to other developed nations. In some categories, South Africa has risen to the same levels as other developed countries and has even held honors, such as hosting the Fifa World Cup in 2010. However, the nation is still struggling to overcome the shadow cast by its history of segregation. For instance, approximately 47% of South Africans live in poverty, which is a significantly higher rate than it was in 1994 (Gibson, 2015). The recent developments in democracy and economic growth have not been able to overcome the many social and economic challenges that South Africa continues to experience.

The long history of segregation in South Africa overlaps with the development of modern medicine. During apartheid, the South African government required black South Africans to live in designated areas, called Bantustans, away from white citizen and the basic infrastructure needed for healthy lives. These Bantustans only covered 13% of South Africans' inhabitable land, yet was home to 80% of the population (Price, 1986). The black citizens' health care consisted of non-profit missionary hospitals that were overseen by local elites, while the white population was able to receive the rising benefits of modern medicine (Scrubb, 2011). The crowded living conditions and lack of access to proper health care during apartheid caused the black South Africans' health to be significantly worse than that of white citizens (Jaeckel, 2014).

### *Significance of the Study*

The purpose of this study is to create a meta-analysis of South Africa's health care. The researcher has already written a paper that focused on South Africa's health care inequalities during apartheid. The current study will be a continuation by attempting to determine if South Africa's history of segregation has had a lasting effect on South Africa's current health care. More specifically, it is hypothesized that South Africa's health care has been and is currently



being negatively affected due to apartheid. Due to the country's long segregation history and relatively recent end, it is believed that South Africa's health care will not be fully recovered from apartheid.

The objective of the current study is to compare, contrast, and synthesize various results from previous studies via online databases, and develop an informative analysis that will be compensable to someone who is not fully educated on the topic. Surveys conducted through Qualtrics were utilized to add personal stories and perspectives that research data alone could not provide. This study may be used to inform the general public, government, and health care professionals. The researcher hopes that this study will lead to a larger workforce and more significant attempts to reduce the continued effects of apartheid.

### *Statement of the Problem*

By analyzing data, current research, and through personal experience, there may be a contrast in the quality of health care that whites and non-whites receive in South Africa.

### *Research question*

“What, if any, are the residual effects of apartheid on South Africa's health care today?” and “Do South African citizens still feel the presence of apartheid in health care today

### *Research hypothesis*

Twenty-three years after the end of apartheid, access, quality, and funding of South Africa's health care system has not been able to recover from the effect of apartheid and South Africans still observe the effects of apartheid on an individual level.

### *Limitations of the Study*

As the much of the history and current events of South Africa may have an effect on the nation's health care, the study is limited to the availability of literature that is relevant to the development of health care in South Africa. In addition, the researcher's access to the population is limited. The subjects surveyed were limited by the researching using the snowball sampling method through her contacts with acquaintances in South Africa and through one of the researcher's reader's South African acquaintances. Thus, the small sample size limits generalizability of the findings. Lack of fluency in languages besides English may have limited the research by not providing the survey in multiple versions in different common South African languages, and by reducing the available literature to review. The amount of time the survey was available and the electronic nature of the survey could have been restrictive.

### *Key Terms*

apartheid

health care

health disparities

National Health Insurance

South Africa

## **Chapter Two**

### **Literature Review**

To understand the social, economic and political problems that South Africa faced during and after apartheid, it's important to understand the country's history. In the news one may hear of the troubles that many nations are facing due to health care access and effectiveness.

However, South Africa stands out due to its uniqueness in ending governmentally mandated segregation less than three decades ago. To gain proper understanding of the South Africa's history of racial tension and current state, the literature surrounding South Africa's entire history is reviewed. By studying colonial and postcolonial periods, the researcher hopes to aid the reader in comprehending why apartheid developed. Research on South Africa's history during apartheid may assist the reader to develop further insight as to why apartheid still affects current day South Africa.

#### *Pre-Colonial South Africa*

Prior to the arrival of European colonists, communities in southern Africa, which would later be named South Africa, were surviving the same way that their ancestors had been for thousands of years; by hunting, fishing, and collecting edible plants (Thompson, 1995). The ancestors, who lived prior to 500 AD and before the competition between African tribes, were thought to have a population of 150,000 to 300,000 living through out southern Africa (Moran, 2009). Due to different environments the lifestyle ranged from region to region in southern Africa (Thompson, 1995). Life expectancies ranged across the regions as disease prevalence and food supplies were not universal across southern Africa. Indigenous populations in tropical environments may have heavily been affected by malaria and yellow fever, whereas those living

in the mountains would not have been affected by these diseases as heavily. Those living in arid environments were protected from malaria and yellow fever due to the lower populations of mosquitos, however they faced hardship trying to sustain adequate food supply during winter seasons and periods of drought (Thompson, 1995).

Soon, southern Africans began more modern living methods. Food was collected through the use of pastures, and cattle and sheep were herded (Thompson, 1995). Those in arid areas continued to live as their ancestors had. In areas of healthy rainfall people began to use pastures, and near the Cape people were herding sheep and cattle. People east of the rainfall area created semi-permanent villages with political organization, spoke Bantu languages, utilized cattle, and grew cereal crops (Thompson, 1995). Due to the progress in development and separation from other groups, the dialect of Bantu developed by this group of people separated 5-6,000 years ago from other speakers of the Niger-Congo language (Amidu, 1995). The Bantu people, who the Europeans would come to call Kaffirs, originated in the savanna country and moved east, west, and south, which gradually displaced other groups of people into dense forest or the desert areas of southern Africa (Amidu, 1995). When the Europeans arrived, they would categorize the hunter-gatherers, the pastoralists, and the mixed farmers in the respective terms Bushmen, Hottentots, and Kaffirs (Thompson, 1995).

Prior to the arrival of European settlers and their diseases and medical practices, the people of South Africa relied on traditional medicine to cure ailments. As the oldest form of health care, traditional medicine has lasted through the eras and has been referred to as ethno-medicine, folk medicine, native healing, and complementary and alternative medicine. Different indigenous cultures have different forms of traditional medicine, because it is a culture bound method (Abdullahi, 2011). For many regions, including South Africa, healing and religion and/or

spirituality are intertwined (Mokgobi, 2015). Religion had existed in South Africa prior to European civilization (Mkize, 2009). Many tribes believed in a form of God, and believed in external and ubiquitous spirits of ancestors. Ancestors were thought to act as the connection between the living and God, since the spirits of ancestors had crossed to the other side of life (Mokgobi, 2015). Tribal South Africans, and some still today, believed that disease is caused by the hierarchy of the supernatural, which goes in the order of the highest deity, lesser spiritual entities, ancestral spirits, living people, animals, plants, and other objects (Kale, 1995).

Traditional healers aided in communication with the supernatural through the use of rituals (Mokgobi, 2015). Using the knowledge of healing methods and materials that were passed down through the years, traditional healers catered to the needs of individuals and the community (Mkize, 2009). In the past and today, traditional healers' role goes beyond physical health. They are highly respected by their community since they often serve as educators of traditional culture, cosmology, and spirituality, as well as counselors, social workers and psychotherapists (Mokgobi, 2015; Kale, 1995). There are different types of healers, who have different beliefs and/or hierarchies As seen in the Table 1, traditional healers range in their skill, method and nature of service, and accessibility. After assessing the social, spiritual and physical symptoms of their patient, a traditional healer would ultimately determine the cause and the best remedy to rebalance the relationship within the social or spiritual order (Mkzie, 2009). Involvement of the community was imperative for the healing process as the sick, the healer, and the community participated in environmental sanitation, community planning, quarantining communicable disease, rehabilitating, and reintroducing the patient back into the community by working together (Mkzie, 2009). Traditional healers were pivotal to the precolonial societies of South Africa as they fulfilled the role of many vital positions in their civilization.

### *Division of History after Pre-colonial and before Apartheid*

While other Europeans stepped foot in South Africa prior to colonial South Africa, the era of colonial South Africa began with the arrival of the Dutch East India Company (Thompson, 1995). The history of pre apartheid South Africa may be divided into the periods, the Dutch East India Company era, the British colony, and the pre-apartheid Union of South Africa. While the Dutch East India Company's control of the cape accounts for two-hundred-and-ninety years of South African history, some scholars do not record much as the settlers, Afrikaners, were herdsmen and hunters who remained unchanged and isolated until the British take over in the nineteenth century (Wyndham, 1942). However, as history shows, a great number of events happened during the two-hundred-and-ninety-year period that affected and changed the life of the native South Africans. In order for consistency and clarity, terminology of the names of different populations at this time is necessary. The indigenous people who were mentioned in *Pre-colonial South Africa* were still present and were prominent characters during the colonial period of South Africa. During this period and into the future, the terms used to describe the natives were being used at derogatory labels and so the Hottentot, the Bushmen, and the Kaffir, started to be identified with the politically correct terms, which were respectfully the Khoikhoi or Khoi, the San, and the Zulu (Lindfors, 1996). Eventually the distinction between the Khoi and the San began to blur and Khoisan was used as a blanket term. By the nineteenth century the Khoisan began to merge with ex-slaves and were referred to as the colored population (Keegan, 1996). As different Bantu-speaking kaffir chiefdom encounters with the colonial forces are a prominent feature in the colonial history, the population of these natives is distinguished from the Khoisan population (Keegan, 1996). Those of European descent also have a variety of

terminology for different populations. Those from European origin who came to Southern Africa to form a dominant colonizing population are referred to as ‘colonists’, ‘burghers’ were colonist of Dutch-Afrikaner origin, ‘settlers’ were colonist of British origin who arrived 1820 onwards, and ‘Afrikaners’ were the white population who spoke Dutch or a variant of Dutch (Keegan, 1996).

### *Dutch East India Company Era*

Prior to the arrival of the Dutch in South Africa, the Portuguese expeditions were rounding the Cape of Good Hope to reach India. Slave-trading activities in Africa brought the Portuguese further and further south, and, in 1487, Bartholomeu Dias’s expedition rounded the Cape’s peninsula and anchored in South Africa (Thompson, 1995). During the sixteenth century the Portuguese government sent fleets to the Indian Ocean by rounding the Cape, and by the end of the century Dutch, English, French, and Scandinavian merchants were using the Cape peninsula to restock supplies by trading with the local Khoikhoi pastoralists (Thompson, 1995). The Dutch East India Company did not originally intend to create a colonial society on the Cape, however its need to provide sustenance for their merchants was enough of a reason to create a colonial society (Keegan, 1996). Jan van Riebeeck was sent to occupy and settle the Cape to serve as a link between Europe and their eastern empire (Thompson, 1995). Despite the resistance of the Khoisan, during the eighteenth century the Dutch settlers were able to spread from the shore to engross and take control of land inward (Dooling, 2008; Thompson, 1995). The Khoisan attempted to protect their land, however the smallpox epidemic of 1713 disintegrated the population (Keegan, 1996). The natives had the option to leave their fresh water resource and pastures or remain and become servants for the Dutch (Thompson, 1995). Due to the violent

battles between the Khoisan and the burghers, and due to health challenges the San were eradicated (Coovadia, Jewkes, Barron, Sanders, & McIntyre, 2009). The Hottentots were also affected by European disease but portions of the population were able to flee and integrate into the race mixture of that was occurring on the East cape, where they faced the fate of being impoverished vagrants (Simons, 1997).

Health challenges during the era of the Dutch East India Company included diseases caused by poverty, smallpox and measles epidemics, malaria, and famines (Coovadia et al., 2009). Survivors of the Dutch colonizing process were cursed by nutritional diseases and thereby affected more by diseases that were present prior to the Dutch's arrival, such as influenza, tuberculosis, dysentery, and other intestinal diseases. During 1858, smallpox reeked havoc on the Eastern Cape by infecting virtually all of the inhabitants and in some regions hit the worst more one-quarter of the people were killed (Crais, 2011). Unfortunately, the health systems in place at the time were limited to the hospital care by the Dutch East India Company, colonial governments, and Christian missions. The practitioners at the time were traditional healers, European trained doctors, and missionaries (Coovadia et al., 2009). In the regions affected the most by the influx of colonists, natives were heavily affected by disease and hunger which resulted in the death of one half to three quarters of the population and many of the natives that survived the influx fled (Crais, 2011).

### *British Rule*

For years the Dutch East India Company was on the brink of bankruptcy, however, in 1806, Britain took control of the Cape Colony with the hopes to use the slave-owning outpost as a naval base (Meredith, 2007). At first the British welcomed the support from the Afrikaners



in driving out the Kaffir population (Keegan, 1996). However, in the 1820s, British rule was more intrusive and the settlers were proponents for antislavery and humanitarian ideas; due to this the Afrikaners became disgruntled and started the Great Trek to the interior of the country in the 1830s (Keegan, 1996). Although the colonists and their diseases destroyed many of the hunting and herding societies, the Kaffirs in the eastern part of southern Africa weren't affected heavily (Thompson, 1995). The missionary, David Livingstone, observed the medical abilities and knowledge on the inland natives (Simons, 1997). He observed that while the natives on the coast had been affected by waves of small-pox and measles, both diseases had not traveled inland since the first outbreaks (Livingstone, 1858). Livingstone was shocked that these natives inoculated themselves in the forehead by using animal deposits with small-pox itself, in order to protect themselves from a disease that had decimated the Native Americans and almost eradicated the South Sea Islanders (Livingstone, 1858). During the Great Trek, the Afrikaners faced violent encounters with the natives, Kaffirs, who survived during the Dutch East India Company era (Meredith, 2007; Thompson, 1995). In the 1850s, the Transvaal and Orange Free State, that was inhabited by indigenous population, was recognized by Britain as independent Afrikaner republics, even though there were still frequent violent encounters with Kaffirs. After many battles between Kaffirs and the Afrikaners and settlers, regions changing ownership, mining of diamonds and gold, and the War between the Whites, the Union of South Africa was formed in 1910 (Thompson, 1995).

During the British colonialism the main health challenges were epidemics of syphilis, tuberculosis, bubonic plague, yellow fever, typhus, cholera, and malnutrition (Coovadia et al., 2009). During the early 19<sup>th</sup> century, the health-care resources were limited to those provided by medically trained doctors which resulted in the reduction of the use of traditional. By the late 19<sup>th</sup>

century medical practices were provided by trained doctors and nurses, yet many of the natives did not have access to these trained health providers (Coovadia et al., 2009). Several health system changes occurred under the rule of British colonialism. The following changes occurred; in 1807 Supreme Medical Committee was created to oversee all health matters, in 1830 regulation of all health practices began, by 1883 smallpox inoculation was made compulsory, by the Mid-1800s hospitals were located in most major centers, and the last one occurred in 1897 which separated curative and preventive care (Coovadia et al., 2009)

### *Pre-apartheid Union of South Africa*

To attempt to resolve the issue involving the settlers from Britain and Afrikaner's battles over land, Britain, hoping that the settlers and Afrikaners would resolve their differences, amalgamated its colonies to form the Union of South Africa. The Kaffir population was not involved in the decision to form the Union, and were denied political rights and would continue to be denied those rights for the next eighty years (Meredith, 2007). The unified white racist state, the Union of South Africa, ruled with the sole interest of restoring the white ruling class (Dooling, 2008). Prior to the creation of the Union, there was the first sign of segregation by the creation of the South African Native Affairs Commission in 1903-5 that outlined the theory of assigning Africans to territorial segregation (Dubow, 1989). In this instance, segregation was a complex combination of political, ideological, and administrative strategies to maintain and enhance the separation between the white population and native populations (Dubow, 1989). Soon afterwards legislation was produced that created more and strengthened the present segregation in the Union, such as the 1913 Natives Lands Act that prohibited blacks from owning own land outside of reserves that the Union created (Crais, 2011). In 1912, the

nationwide organization, the African National Congress, was formed by Africans. This would soon become an important organization of resistance during apartheid (Thompson, 1995). By 1939, The Natives Land Act and subsequent legislation resulted in 11.7 percent of the area of South Africa, which was scattered amongst the country, to be reserves that natives were allowed to reside upon. Resistance by the Black South Africans to the White ruling was hindered as those involved differed in their cultural and historical differences. According to the census of 1936, two percent of the population was Indian, eight percent was Coloured, and sixty-nine percent was African, which resulted in seventy-nine percent of the population being disunited as they had little in common with each other (Thompson, 1995).

Due to the transition from a colony to the independent Union of South Africa, it is understandable that the population faced new health concerns and started to make progress to a sturdy health care system. The movement from rural to urban environments resulted in poor working and living conditions where the population had to deal with diseases caused by overcrowding, poor sanitation and diets, stress, and social disintegration (Coovadia et al., 2009). The continued work in the mines left workers at risk for lung disorders and mesothelioma. Diseases were still prevalent, some of which has affected the population for centuries while other diseases emerged and/or incidence rates increased, such as syphilis, tuberculosis, malaria, and sexually transmitted diseases (Coovadia et al., 2009). The first national public health measure produced by South Africa was the Public Health Act of 1919, which established a Union-wide Public Health department (Coovadia et al., 2009; Phillips, 1990). The Spanish influenza epidemic of 1918, led the Union to put aside their vested interests and create the public health measure that remained until 1977 (Phillips, 1990). In 1942, the National Health Services Commission was placed in charge of planning the health services of South Africa (Coovadia et

al., 2009; Digby, 2008). Under the chairman, Henry Gluckman, the Commission created the South African *Report* that recommended establishing a national health service that would focus on the provision of more health centers, so that all members of the population could be examined (Digby, 2008). Since the majority of the population had been failed by the use of high-cost private practice medicine and large urban hospital systems, the *Report* aimed at establishing integrated curative, preventive, and promotional health services (Marks, 1997). By 1945, Gluckman was the Minister of Health and had assisted in the creation of community health centers that focused on community-based primary health care (Coovadia et al., 2009). In 1948, the National Party won in the polls. This resulted in an apartheid government that rejected Gluckman's plan, which would have improved the lives of the black population, and the idea of healthcare reforms (Digby, 2008). While the politics of health care was occurring, the populations were experiencing different amounts of access to doctors. For instance, the nation's ratio was one doctor per 3,600 people, however there was one doctor per 308 white people in Cape Town and only one doctor for 22,000 to 30,000 people in the reserves (Coovadia et al., 2009).

### *South Africa under Apartheid*

Similar to the nineteenth century, during the twentieth century English-speaking South Africans, despite their smaller proportion of the population, dominated the political economy of South Africa (Marks & Trappido, 1987). While the ANC had almost six thousand members stressing the need for African self-reliance and unity, they had no control over the the actions of white South Africans actions in the 1948 general election (Thompson, 1995). The contacts and conflicts between the racial groups in South Africa that occurred over the past three centuries

prior to apartheid had a direct affect on the attitudes and policies that emerged during apartheid. During the colonization the racial rivalry was between the Dutch and the English, however the racial conflict transitioned to be between Europeans and Non-Europeans (Neame, 1963). The racial inequality between the white Europeans and the colored Non-Europeans, that was magnified by apartheid, was created by first the slavery and frontier conquest that placed the black labor force under white control, next the number of white men in high positions in the political, economic and administrative system, and lastly the racial discrimination the started in the colonial society and continued onwards (Giliomee & Schlemmer, 1989). Due to the whites not being willing to share authority with non-whites, they used political, social, industrial, and residential separation between the two groups (Neame, 1963). The worry about the state of race relations, and the desire to maintain white supremacy and the purity of the race led the National party to form alliances with Afrikaner organizations by appealing to their ethnic and racial attitudes. With the help of the use of negative propaganda against their opponent, the Nationalist party and thereby Afrikaners were able to gain political control of the control of land in which they comprised no more than 12 percent of the population (Thompson, 1995). With the use of laws and executive actions, the National party government started apartheid (Thompson, 1995). There were four beliefs of the apartheid system:

First, the populations of South Africa comprised four “racial groups” – White, Coloured, Indian, and African – each with its own inherent culture. Second Whites, as the civilized race, were entitled to have absolute control over the state. Third, white interests should prevail over black interests; the state was not obliged to provide equal facilities for the subordinate races. Fourth, the white racial group formed a single nation, with Afrikaans- and English-speaking components, while Africans belonged to several (eventually ten)

distinct nations or potential nations-a formula that made the white nation the largest in the country. (Thompson, 1995, p. 190)

With the forceful resettlement of the colored populations into townships, there was an increase in the material gap, the wage gap, and the rate of unemployment; the non White population experienced high levels of poverty, under nutrition and disease (Thompson, 1995).

Apartheid not only segregated the South African population by designated living areas, economics, and social rights, but also by healthcare. Health deteriorated because of low wages, overcrowding, inadequate sanitation, malnutrition and stress which led to very high burden of poverty-related diseases (Coovadia et al., 2009). Apartheid government forced black South Africans to live in designated areas called Bantustans that were separated from areas inhabited by white South Africans. Bantustans were 13% of the land in of South Africa and were home to over 80% of the South African population (Price, 1986). Health care in each Bantustan was primarily provided by non-profit missionary hospitals and overseen by local elites (Scrubb, 2011). Since there were very few white South Africans living in the Bantustans, health policymakers had little interest in ensuring adequate basic health care in rural hospitals (Scrubb, 2011). The uneven health services were used as instruments in achieving apartheid goals (Price, 1986). Since the individual Bantustans were given control of their own healthcare systems the national government was freed from its responsibility to monitor and account for the quality of health services. Portions of black South Africans were able to find work as maids or cooks for the urban white population, and to prevent these blacks from spreading disease to the white population basic health services were provided by the government (Scrubb, 2011).

Prior to apartheid there were efforts made to provide holistic health care to rural communities, however the racial inequalities that flourished under apartheid caused the

progression in medical care to be reversed until South Africa's liberation in 1994 (Maillacheruvu & McDuff, 2014). Researchers, such as van Rensburg and Benatar (1993), believed that apartheid was the most influential force in molding South African's health care. The health care system that was designed during apartheid resulted in race-related disparities, inequalities, and divergent race-related health outcomes and health status for people of color (Van Rensburg & Benatar, 1993). In 1993, it was concluded that apartheid was present in health and health care, and it was hypothesized that apartheid would remain in South African health and health care in the future generation (Van Rensburg & Benatar, 1993). The difference in health between races can be witnessed by the differences in average life expectancy. In the 1960s the average white man lived until age 65 and the average white woman lived until age 72. In the case of Black South Africans, these ages were 51 for black men and 59 for black women (Maillacheruvu & McDuff, 2014). Regulation of the public health care sector was removed during apartheid and the private sector expanded, which led to the expansion of the private sector and prevented many non-whites from affordable health care (Maillacheruvu & McDuff, 2014). The limited governmental regulation and oversight led to the health services in Bantustans to frequently ignore quality-of-care guidelines and become ridden with abuse and maltreatment (Scrubb, 2011). In the 1960s and 1970s, the divide in access increased because the state began to seize control of the missionary hospitals that were the backbone of the Bantustan health services (Coovadia et al., 2009; Maillacheruvu & McDuff, 2014). The lack of missionary hospitals led the doctor to population ratio in the Bantustans to be nine times lower than that of the rest of the nation (Maillacheruvu & McDuff, 2014). From 1946 to 1976 the doctor to patient ratio increased from 1 : 2,427 to 1 : 1,721, however in the 1970s the doctor to patient ratio was estimated at 1:15,000 (Coovadia et al., 2009). In 1978, health systems in Bantustans received 0.23% of the South

African gross domestic product (GDP), while urban health centers received 2.3% of the South African GDP (Scrubb, 2011). Due to the limited resources, those doctors still present in the Bantustans had to focus on seriously ill patients and not on primary care, which led to only 11% of the funding for public health care to be allocated to primary care (Maillacheruvu & McDuff, 2014). The government continued to have an effect on the health care system; the 1977 Health Act furthered the fragmentation of health by making curative practices a provincial responsibility. The 1983 Tricameral Parliament increased the fragmentation by creating health service departments for the affairs of the whites, coloreds, and Indians (Coovadia et al., 2009). The private healthcare system was accessible to 15% of the population, with the majority of the facilities in urban areas, making them inaccessible to the populations living in Bantustans (Scrubb, 2011). Medical professionals were drawn to move from public facilities to private sectors due to the sounder infrastructures and higher profit margins, which resulted in the 40% of healthcare professions working in the private sector in the 1980s to increase to 66% in the 1990s (Scrubb, 2011). The lack of standardization in training, oversight, and supervision of healthcare workers harmed the delivery of programs for child health, maternal health, tuberculosis (TB), and HIV/AIDS (Scrubb, 2011). Key health challenges faced during apartheid differed between races, with the whites suffering with the rise of non-communicable diseases and the other races still facing poverty-related disease (Coovadia et al., 2009). In the 1980s, TB was the most common serious disease in South Africa, killing between ten to twenty people each day, an estimated 23,000 people in ten years (de Beer, 1986). During the 1980s there were 50,000 new cases of TB reported each year, yet whites made up less than 0.5% of people with TB in South Africa (de Beer, 1986). Mental health disorders that were related to apartheid became common in black and colored people (Coovadia et al., 2009). In 1990, the HIV/AIDS prevalence was 0.7%,



yet by 1994 that prevalence raised to 8% (Scrubb, 2011). While maternal, infant, and child mortality was high nationwide during this time period, in the urban areas teenage pregnancy, unsafe abortions, and infanticide were at an increased rate compared to rest of the nation (Coovadia et al., 2009).

Mark Mathabane shared his experience growing up during apartheid in his autobiography, *Kaffir Boy*. Black South Africans were required to have their government papers in order to receive education or work, which were the only ways to afford contemporary treatments (Jaeckel, 2014). Mathabane (1998) describes the difficulty of receiving these papers that allowed clinical treatments or access to education because he was not delivered in the clinic like many other blacks at the time, and his parents found it to be more important to work than to miss days of work to argue with the government to receive a birth certificate. The travel distance, the price, and the possibility of faulty papers and rejection caused many black South Africans to turn to tribal and home remedies instead of contemporary treatments (Jaeckel, 2014).

Mathabane's family frequently used urine to treat burns caused by fire, because they could not afford salves (Mathabane, 1998). The use of home remedies and traditional medicine were very common for those living in Bantustans, because they allowed one to avoid the trek to a clinic, however some of the remedies could cause future serious problems (Jaeckel, 2014). Mathabane's explanation of his experience seeking medical attention, which was rare because blacks often only sought medical attention in life or death situation, included him having to save money for three weeks to afford the bus ride to the hospital and the anticipated costs, waiting multiple days in line without seeing a doctor, seeking a traditional treatment, and eventually also receiving medical treatment from the hospital (Mathabane, 1998). Mathabane's autobiography highlights how South Africa's health care system failed many individuals by placing extreme emphasis on

government papers, not addressing absurdly long waiting lines, and not regulating the unfair prices for medical treatment (Jaeckel, 2014).

### *South Africa after Apartheid*

During the later 1980's, many influential whites began to think of alternatives to apartheid. The logic behind this change of heart may be summed up by five reasons. There was a decline in the white population from the peak of 21% to 15% in 1985 with a projected 10% in 2005 (Thompson, 1995). The cumulative economic power of non-whites as consumers, workers, and entrepreneurs increased. The white predominance in education decreased due to the population of students reflecting the demographic trends and the government providing segregated and unequal schooling. In addition, South Africa's economy was unsound and was facing a deep recession. Lastly, changes in the global context resulted in the ANC gaining much of its support and made the Nationalist party's claim of protecting South Africa from communism to be void (Thompson, 1995). The government began to have contact with ANC leaders, including Nelson Mandela, to discuss alternatives to controlling the country by force. These negotiations eventually resulted in the interim constitution, which embodied a set of compromises to satisfy the ANC's desire for majority rule and the Nationalist party's demand for the safety of the white population. The first nonracial election in South Africa's history occurred peacefully between April 27<sup>th</sup> and April 30<sup>th</sup> in 1994, and resulted in the ANC party winning 62.7 percent on the votes. Nelson Mandela was sworn in as president on May 10<sup>th</sup>, 1994. The end of the apartheid era was marked with the creation of the Government of National Unity (Thompson, 1995).

Post-apartheid government promised to help dissolve the differences between the public and the private sectors of health care through the unification of the Bantustan health system by using jurisdictions of provincial and national healthcare systems (Scrubb, 2011). The Reconstruction and Development Program (RDP) was in place from 1994 to 1996 and made efforts to improve health and health care and to reduce negative social determinants of health, such as poverty, inequality, inadequate housing and poor education (Mooney, and McIntyre, 2008). In 1994, the government introduced free health care for pregnant mothers and young children, and in 1996 provided free primary health care for all (Burger, Bredenkamp, Grobler, Berg, 2012). Under the influence of neoliberalism, the RDP was replaced with the macroeconomic policy GEAR (Growth, Employment, and Redistribution) in 1996, however, the levels of poverty and inequality did not significantly change between 1996 and 2001 (Mooney, and McIntyre, 2008). In addition, since the Millennium Development Goals baseline was set in 1990, South Africa was one of only 12 countries where child mortality increased, rather than declined (Coovadia, et al., 2009).

The election of Mandela led to the momentum needed to create of the National Health Plan, which had the goal for a universal public primary care-centered system. In 2002, the National Health Bill was passed and included sections outlining the comprehensive primary health services to all by promoting health and healthy lifestyles with the use of community participation in the planning, provision and evaluation of health services (Maillacheruvu & McDuff, 2014) Some of the goals of South Africa's health care system have been successful; the nation spends 8.3% of its GDP on health care, which is more than any other middle-income country spent in 2009 (Maillacheruvu & McDuff, 2014). In 2008, almost 60% of health care expenditures remained private, while only 14% of the population had private health insurance.

The explanation for this unequal split and other unsuccessful progress is that the government is worried for the financial repercussions with the International Monetary Fund and World Bank if the government introduces reforms too fast (Mooney, and McIntyre, 2008).

Since 1994, there has been a large effort to improve health outcomes by making public health care more accessible by allocating more of the government budget towards public health care and expanding the health care facilities network. There are now more than 1,300 clinics being built or upgraded, and increased provision of free primary health care (Burger, et al., 2012). Yet there is still a persistent racial inequality in the delivery of healthcare in South Africa, which is well illustrated in the distribution of morbidity and mortality, especially related to HIV/AIDS, in South Africa between races. Inequality is reflected in the racial differences between access to living conditions and other determinants of health (Scrubb, 2011). In 2009, the national prevalence estimates for HIV showed that whites' and Indians' prevalence of the disease was 0.6% and 1.9%, whereas the black population had the highest prevalence, which was 13.3% (Coovadia, et al., 2009). These differences in prevalence may be attributed to the uneven health care and health education that was provided during apartheid to different races (Jaeckel, 2014). The spread of false treatments and preventions of HIV could have affected the prevalence of the disease in South Africa (Jaeckel, 2014). The second post-apartheid President of South Africa, Thabo Mbeki, doubted that the facts of HIV and AIDS were true, and he and other party leaders believed that the government's attention and finances should not be diverted to the the treat of a single disease. Mbeki believed that the assertion that HIV was spread through sex was a means that whites were using to reinforce their racist thought of the hyper sexualized lives of blacks (Foster, 2010). Mbeki's beliefs may have prevented the availability of HIV treatment for South Africans (Jaeckel, 2014). Zuma the fourth post-apartheid President, during his 2005 rape trial,

stated that he knew the female was HIV-positive, but didn't use a condom, as there were none present, and showered after intercourse to lessen the risk of becoming infected. At that time, Zuma was in charge of the national effort to rid the country of HIV infection, and his ignorance in not using a condom and his irrational prevention measure of showering reinforced unsafe sexual activities in men who admired him (Foster, 2012). Some black South Africans still rely on traditional cures because they don't trust the current medical care, can't afford current medical care, or because they are desperate and willing to take any step necessary to be healthy (A. Gaston, personal communication, May 30<sup>th</sup> 2014). Some populations believe in the use of the traditional cure for HIV, which is to rape a virgin, and as desperation to be cured increases the victims of this traditional cure become younger (A. Gaston, personal communication, May 30<sup>th</sup> 2014). In collaboration with the National AIDS Committee of South Africa, the government created a National AIDS Plan that would make the nation's health policy focus on the prevention and treatment of HIV/AIDS (Scrubb, 2011). The program promoted primary health care, preventative interventions, educational initiatives on safe sex, condoms and treatment options, but ultimately the program was not heavily successful. Political instability, the occurring societal reconstruction, and a weak preexisting healthcare infrastructure may be blamed for the lack of significant success of the National AIDS Plan. Scrubb (2011) believes that the rise of government funding for the treatment of HIV/AIDs from 6.6% in 2001 to 59.3% in 2004 is likely a result of the black South African demand for treatment. Dookie and Singh (2012) further Scrubb's reasons for possible failure by believing that the restraints on the present day health care in South Africa are due to the resource constraints, migrations of professions, the unequal balance between the public and private sectors, low skill levels, poor staff motivation to improve, and the lack of managerial capacity.

Health care is currently financed through a combination of private and public sources such as general tax, private insurance, and out-of-pocket payments. It is currently provided through both private and public sectors, however the transition to universal health care is on the horizon (Ataguba & McIntyre, 2012). Table 2 presents that in 1995, more than half of the African and Colored groups used public services, the majority of Indians and Whites used the private sector, and that even among the higher income quintiles there was a difference in the rate of private sector use (Wadee, Gilson, Thiede, Okorafor, & McIntyre, 2003). On the other hand, Table 3 displays that over the course of four post-apartheid years, no matter the race, there was an increase in the use of the private sector (Wadee, et al., 2003). In 2005 a large fraction of the population was dependent on publically funded health care, with 43% of the total health finances from the general tax revenue used for the 68% of the population who were entirely dependent on the public sector, while 44% of the total health care finance, which was from private insurance contributions, was used to cover 16% of the privately insured population (Ataguba & McIntyre, 2012). Figure 1 presents the distribution of health care benefits delivered by private, public, and combined private and public services to different quintiles that were divided by wealth. It shows that the richest 20% enjoy over 55% of the total benefits of private services (Ataguba & McIntyre, 2012). Figure 2 compares the distribution of private sector and public sector health benefits compared to the need for health care and displays that socio-economic groups are not receiving health care benefits equally (Ataguba, McIntyre & 2012).

Due to the unacceptable quality of care in the public sector, Health Minister Aaron Motsoaledi unveiled plans for universal health care named the National Health Insurance or NHI for short (*South Africa Unveils Universal Health Care Scheme*, 2011). As a country the creation of a program such as NHI has been explored since 2002 (Chipman, 2011). Motsoaledi

announced that in April 2012, a pilot scheme would be released in ten areas which will spread nationally in the course of 14 years. Chipman believes that policy makers must find a way to handle the underperforming health institutions, poor management, deteriorating infrastructure, and under-funding. Yet, Chipman also believes that the nation needs to be capable of balancing the asset and the potential obstacle of the nation's well-established and high quality private insurance system (*South Africa Unveils Universal Health Care Scheme*, 2011). The program hopes to create solidarity by ensuring all citizens benefit from equitable health care financing by utilizing both public and private health providers and allowing the citizen to use private health care, yet those using private health care would still be required to contribute money to the public health care system (Chipman, 2011).

The government of South Africa is aiming for a total re-engineering of the existing system by creating healthcare service provisions and delivery that focus on primary care rather than curative care, and by designating hospitals as district, regional, tertiary central and specialized facilities (Chipman, 2011). Four months after the initiation of the pilot scheme of the NHI, the IRIN published an article describing the nation's lack of health workers to ensure access to health service nationwide (IRIN, 2012). The training and schooling of doctors is becoming increasingly more difficult as hospitals with broken infrastructure, a shortage of advanced equipment, and the lack of intensive care beds are losing their training accreditation (*There can't be a 'good story'*, 2014). With limited access to quality healthcare services the South African National Department of Health explored different methods to increase the number of skilled healthcare. The first 23 clinical associates of South Africa, known in the United States as physician assistants, graduated and will serve as competent and professional members of the healthcare team (KwaZulu-Natal Department of Health, 2011).

In May 2015, Motsoaledi proposed primary care reforms that would result in 3,507 public primary health care facilities by April 2018; however, with this process he discovered that NHI is a schismatic issue between the private health insurance companies and service providers, academics, and government officials (Madore, Yousif, Rosenberg, Desmond, & Weintraub, 2015). For success of NHI the commitment of private sector general practitioners (GPs) is necessary to address staff shortages and capacity, however the overall experience of GPs involved in the pilots has been frustrating with the lack of appropriate infrastructure and equipment in NHI facilities, lack of professional autonomy, and with contracting arrangements; these results show the the pilots still need to improve thereby meaning that the integration of NHI may take much longer than the government anticipated (Surender, Van Niekerk, & Alfes, 2016).

## **Chapter Three**

### **Methodology**

#### *Introduction*

Chapter Three discusses the hypothesis, procedure, research design, sampling, and data analysis. A thorough literature review and an open answer survey assessment were used to address the research question: how are the residual effects of apartheid affecting South Africa's health care today and do South Africans still feel the presence of apartheid in health care? The two-part hypothesis is that twenty-two years after the end of apartheid, access, quality, and funding of South Africa's health care system have not been able to recover from the effect of apartheid and South Africans still observe the effects of apartheid on an individual level.



### *Research Design*

To gain a fuller understanding of South Africa's health care system and possible disparities, an in-depth literature review and international surveys were used.

The literature review was completed by using the James Madison University library database, Google Scholar, and books that the researcher was previously been exposed to. Due to the extensive history of South Africa's history, there was not a particular time period that the published information had to fall within. To find relevant sources the following key terms were utilized: apartheid, South Africa, health care, health disparities, universal health care, National Health Insurance, tribal, pre-colonial, Dutch East India Company, British Rule, HIV/AIDS, and Tuberculosis.

In order to obtain data on the current attitudes between apartheid and health care a survey was distributed through emails to South Africans. The survey contained three questions about the participants' demographics and four open end questions pertaining to the participants' experience with apartheid and health care (See Appendix A). The survey was available for participants to complete for 21 days.

### *Sampling*

The research required access to South Africans so that the current opinion of the possible residual effects of apartheid on health care could be examined. To gain access to this population, the snowball sampling, also know as chain referral sampling, was used to recruit participants. After obtaining permission from James Madison University's Institutional Review Board (IRB) by submitting a human research request and answering additional questions, the researcher

started to recruit participants (See Appendix B, Appendix C, and Appendix D). The researcher sent the contact letter to three contacts who reside in South Africa and to two previous professors who once resided in South Africa so they could help distribute the contact letter to their South African contacts (See Appendix E). The professors asked for the contact letter, the consent to participate in research form, and the link to the survey to be combined to limit the amount of email traffic (See Appendix F). If participants responded with the contact information for another possible participant an email was sent with the contact letter, the consent to participate in research form, and the link (See Appendix G).

The contact letter informed participants that they were being asked to participate in an anonymous online survey to assist a student completing her thesis. In addition, the contact letter informed the possible participant that the subject of the research was to examine the residual effects of South Africa's health care system due to apartheid. The contact letter ended by assuring that participation was voluntary and one may resign from participation at any point during the research. The consent to participate in research form was sent to each possible participant to inform the participant further on the time required, possible risks and benefits, confidentiality, participation and withdrawal, and who to contact with questions (See Appendix H).

### *Instrument and Procedure*

Due to the nature of the first part of the research question, "How are the residual effects of apartheid affecting South Africa's health care today?", a literature review was used and therefore no participants were included in this portion of the research. The history of South Africa was divided into pre-colonial, colonial, pre-apartheid, apartheid, and post-apartheid, and

the history of racial divisions, land mark governmental developments, healthcare, and health trends during each segment of history were reviewed.

The second portion of the research question, “Do citizens still feel the presence of apartheid in health care?”, and the hypothesis, “Twenty-two years after the end of apartheid, South Africans still observe the effects of apartheid on an individual level,” were examined through the responses to the international surveys. The responses to questions 1, 2, and 3 pertain to the diversity of the sample pool. The responses to questions 4, 5, 6, and 7 pertain to answering the research question and thereby supporting or not supporting the hypothesis. The surveys were collected through *Qualtrics*, an online surveying tool, and using the anonymous settings of the surveying tool. The qualitative analysis software, *NVivo 10*, was used to determine major themes in participants’ responses, which were divided in positive or negative experience.

## **Chapter Four**

### **Results**

#### *Introduction*

The surveys were analyzed with the use of *NVivo* and the results were displayed with the use of *NVivo 10* and *Microsoft Excel*. The answers from questions 1, 2, and 3 were used to identify the demographics of the population sample, and further used to see if opinions varied depending on different demographics. Answers from questions 4, 5, 6, and 7 were used to determine positive and/or negative themes in the responses. After distributing the surveys, *Qualtrics* collected the results of the seven participants (N=7).

## Results

The results from questions 1, 2, and 3 displays that the demographic of the sample population are shown in Table 3, which show that the average participant was black, male, and in the age population of 31-50 years. The data presented in Table 3 is also presented by the use of graph with Figure 3. With the use of *NVivo 10*, each of the responses for questions 4, 5, 6, and 7 were searched for phrases that displayed positive and/or negative responses to the survey question. Table 4 and Figure 4 displays that some questions such as, “Do you believe that citizens now have equal access to health care? Explain your response,” received more emotional responses than the question, “Were any of your loved ones’ health affected at this time? If so, how?” Table 5 is composed of the segments of the sample populations’ responses to questions 4, 5, 6, and 7 to display the quantity and extent of emotional responses to the questions. The responses that were highlighted in Table 7 range from yes, no or short five worded responses to responses that were full ideas, explanations, or examples. Participants’ 50 most repeated and mentioned words that are or are longer than five characters are displayed in Figure 5 as a word cloud. Figure 5 is used as a visual aid to assist in highlighting the participants main focus points by showing that the words hospitals, white, access, private, and government were heavily used in the participants’ responses.

Responses to the question “Please explain any health-related disparities you experienced during apartheid” received a mix of responses with a more negative theme, 14 emotional responses were highlighted by the use of *NVivo* with in the participants’ responses with 12 negative themed responses and 2 positives themes response (See Table 3). The negative themes observed consisted of ‘hard to get medical help’, ‘ambulance were not allow in black people area’, and ‘pay lots of money’ (Table 4). On the other side the positive themes observed were,

‘born in government hospitals’, and ‘particular hospitals were reserved for white patients, white doctors and white nursing staff. I was led to believe that these facilities were comparable with the first-world’ (Table 4). As expected there were more negative themed responses than positive for the participants’ health-related experiences during apartheid.

‘Were any of your loved ones’ health affected at this time? If so, how?’ received a total of 11 emotional phrases that were split into 4 with the negative theme and 7 with a positive theme (Table 3). The negative themes observed consisted phrases like ‘people die’, ‘by virtue of their skin color and social economic background, they were restricted to "blacks only" medical treatment’ (Table 4). Positive themes observed were, ‘none – being a white South Africa’, ‘life was very easy then’, and ‘no accidents cause we had no cars’ (Table 4). The amount of negative themed phrase was not as many as anticipated.

Question 6, ‘Do you believe apartheid has had a long-term affect on your life? If so, how?’ received 16 emotional phrases that were evenly split with 8 phrases with the negative theme and 8 phrases with a positive theme (Table 3). The negative themes observed consisted of ‘life was very hard’, ‘changes in key management positions where made too quickly’ and “jobs for friends” became the focus to get rich quickly, rather than appointing qualified and experienced officials to maintain what was built’, ‘forced to seek employment abroad’, and ‘parents who are still programmed to believe that by virtue of skin color, white people are superior to blacks’ (Table 4). Eight positive themed phrases were received for question six with some being, ‘beneficiary of tremendous privilege in almost every aspect of life’, ‘we get free health care’, and ‘don’t have to wait in long lines’ (Table 4). The equal amount of key phrases with a negative theme and with a positive theme received by the participants was not expected.

‘Do you believe that citizens now have equal access to health care? Explain your response.’, received the most of phrases that were tagged as emotional responses with a total of 31 responses split into 19 negative themed phrases and 12 positives themed phrases. The negative themes observed consisted of 19 phrases with some being ‘absolutely not’, ‘equal access to health care under law, but not in practice’, ‘the nurses in government hospitals are generally lazy, unprofessional and uncompassionate’, and ‘Those with money have better access to healthcare institutions & a superior quality of care’ (Table 4). Unlike the unique phrases with negative themes, the positive themes observed were 12 in total with very similar response with some being, ‘yes’, ‘we all get the same treatment’, ‘doctors in private and government hospitals tend to be of the same standard’, ‘private healthcare is run extremely well and is very profitable, therefore there is an abundance of investors in this sector, giving these hospitals enough capital to run efficiently and with optimal technology’ (Table 4). Consistent with the findings of the literature review there were more emotional responses with a negative theme than those with a positive theme.

Cross correlations between demographics and the amount of positive responses were created with the use of *NVivo 10*. Table 6 displays the differences in the amount of negative and positive statements made in the survey by different age groups. This table enables one to see how responses may vary due to the age of the participant, such as the age group of 31-50 year-olds only had positive responses to question five, and the age group of 18 -30 year-olds had more negative responses than positive responses to the survey question. On the other hand, Table 7 examines the possible differences in emotional response due to different genders. By using Table 7, one may observe that males had more negative responses than positive to questions 6 and 7 in the survey, while females had a more negative response to questions 4 and 5 of the survey. Table

8 is the last cross sectional analysis used in this study, and is used to examine how the participants, who distinguished themselves as black or white, vary in emotional response to the survey questions. Question 7, 'do you believe that citizens now have equal access to health care? Explain your response.' had 17 negative and 3 positive responses within the white population and 2 negative responses and 9 positive responses within the black population. Except for the answers for question 6, there is a noticeable difference when you compare the in the amount of negative and positive themed responses whites and blacks provided for each question. Table 8 also displays a difference in the responses to question 4, 'Please explain any health-related disparities you experienced during apartheid', by displaying that whites had two positive responses and no negative responses, while blacks had 12 negative responses and no positive response. As anticipated, except for the answers for question 6, there is a noticeable difference when you compare the in the amount of negative and positive themed responses whites and blacks provided for each question

## **Chapter Five**

### **Discussion and Conclusion**

The results of the current study demonstrated that, overall, the history of apartheid and racial tension has a negative affect on South Africa's current provisioning of health care system. The in depth literature review and the emotional phrases received from the survey provide evidence that apartheid had and still has a strong effect on South Africa's health care. The literature review was used to gather an understanding of the history of the nation, the beginnings and continuation of racial tension, and the changes that have occurred to the health and health care system. Distribution and the completion of the surveys allowed this study to gather unique

data. The survey responses were able to be used to snapshot the beliefs and attitude of individual South Africans.

By the use of the literature review, one may conclude that the hypothesis was correct in stating that, access, quality, and funding of South Africa's health care system has not been able to recover from the effect of apartheid. With the arrival of the Europeans the division in access to equal health care began, which led to different subgroups to have varying qualities of life. Through out the different periods of South Africa's history there have been attempts to reduce and attempts to increase the differences in health and health care among races in South Africa. Traditional medicine used has been practiced in South Africa far before the arrival of the Europeans. The literature review discussed the success of traditional medicine by natives inoculating themselves to be protected from the disease spread by the arrival of the Europeans. However, the negatives of traditional medicine were also revealed by discussing the use of urine for burns and the treatment of HIV/AIDS by raping a virgin. The racial split in quality of health care which developed into the unequal quality of life began with Europeans having more knowledge and resources. In pre-apartheid times, the Union of South Africa was focused on reducing the divide in health by focusing on primary health care, yet their progress was quickly reversed by apartheid. The population living in Bantustans experienced a lower quality of physical, mental, and environmental health than those living in the urban areas with access to private health care. Since apartheid ended in 1994, South Africa's government has been attempting to reduce and eventually erase the differences in health among races by trying to improve health care by the use of legislation. In 1996, the government passed legislation to make all primary health care free. Currently South Africa is piloting NHI with the hopes to achieve universal health care (Coovadia et al., 2009). However, even with all of the effort made by the



post apartheid government, there are still residual affects from apartheid affecting South Africa's healthcare system. The division of the private and public health sectors display that access to proper health care requires much more money than most citizens can afford. Due to the differences in education, health, and family history most of those who can not afford the private sector are those who were negatively affected by apartheid.

Analysis of the survey responses was used to determine that the hypothesis was correct in stating that, South Africans still observe the effects of apartheid on an individual level. The word cloud created displayed that the participants' main focus points in their responses were similar to the words present in the literature review of present South Africa, such as, access, private, and government. This displays that individuals are aware of the division in the private and public health sectors. Due to the process of identifying emotional themes single words were weighed at the same amount as longer responses. While the amount of positive themed or negative themed emotional responses were not consistent with what was expected, the quality of the actual statements holds more power than the quantity. As simple phrases such as 'yes' or 'no' held the same value as full sentences and explanations. The majority of the participants were in the age group 31-50, which could have been beneficial as those participants would have had experiences with health care during apartheid. It was interesting that the negative and positive responses for the questions were correlated to gender, however this research did not provide any explanations for this correlation. The difference between the amount of negative and positive response between blacks and whites corresponds to literature review's conclusion that there is still a difference in health care received due to racial, economic status, and the negative residual affects of apartheid.

### *Limitations*

Due to the low number of participants any correlation seen in the responses represent the sample population but may not represent the population of South Africa or be viewed to have a causality relationship. Since the snowball method was used to collect data the researcher did not expect many responses, but the response rate was lower than anticipated. There are a number of possible reasons for a low number of participants. The amount of time the survey was available could have been restrictive as it is possible that some participants did not have a chance to recruit their acquaintances during that period. By being an electronic survey a portion of the population of South Africans without access to a computer and/or internet may have been eliminated. The survey was in English, as that is the language used for business, but there are South Africans who do not speak English and in addition some of the participants' answers may have been affected by their comprehension of English. If this research were to be completed again having a longer period of time for participants to complete the survey could assist in increasing the number of participants. In the future, the researcher could team up with a researcher in South Africa who would be able to distribute and collect paper versions of the survey, which would increase access to South Africans. Offering the survey in different languages would hopefully reduce the possibility of a language barrier affecting the data. In future research these changes would be made with the hopes of increasing the knowledge that is already present in the study.

In conclusion, the problem of the quality of health care that whites and non-whites receive in South Africa was analyzed by an in depth literature review and the analysis of surveys. The research question was specific to how the residual effects of apartheid are affecting South Africa's health care today and if citizens still feel the presence of apartheid in health care. Prior to the start of the study the researcher hypothesized that twenty-two years after apartheid the access, quality, and funding of South Africa's health care system has not been able to recover

from the effect of apartheid and South Africans still observe the effects of apartheid on an individual level. The contents of the research support the hypothesis by showing that health care is still largely affected by the racial tension, that has been present in the country since the arrival of the Europeans and further increased during apartheid. Further research should be conducted to see if the conclusion of this research is agreeable with any future conclusions when a larger and/or different participation pool is utilized.

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## List of Tables

Agent	Skills	Method of service	Nature of service	Accessibility
<b>Isangoma:</b>				
High grade	1 Lower and middle grade qualifications a prerequisite 2 "Call" by spirits 3 Apprenticed to an expert 4 Medical skills acquired as in inyanga	1 Essentially diagnostic 2 Contact with patient not needed for diagnosis 3 History, symptoms, and nature of problem not revealed by patients	1 Conflict resolution 2 Revelation of misfortune and illness 3 Recommends solution 4 Provides expertise and leadership	Access given to relatively few
Middle grade	1 Lower grade qualification a prerequisite 2, 3, and 4 as above	1 As above 2 Throws and reads "bones" 3 As above	1, 2, 3, and 4 as above	Relatively accessible compared with above
Lower grade	1 First entry point to divination 2, 3, and 4 as above	1 As above 2 Divination through trance 3 As above 4 Cooperation of clients sought	Confirms patient's beliefs	Much more accessible
<b>Inyanga</b>	1 Individual choice to become one 2 Apprenticed to an expert	1 Knowledge of symptoms and patient's history necessary 2 Contact with patient necessary	Comprehensive, curative, prophylactic, ritualistic, and symbolic	Freely accessible
<b>Specialist Spiritual healer</b>	Usual family prerogative Trances and contact with spirits	Essentially curative Essentially diagnostic	Consultant, special skills Lays on hands, prays, provides holy water and other symbols	Fewer in number Freely accessible

Figure 1: Traditional healing agencies in South Africa

Kale, R. (1995). Traditional healers in South Africa: a parallel health care system. *South Africa's*

*Health*, 310. Retrieved from

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<b>AFRICAN</b>				
Income Quintiles	Public %	Private %	Traditional/ spiritual healer %	Did not seek health care %
1	57.5	14.1	3.6	25.0
2	55.7	19.4	3.3	21.6
3	54.9	23.1	4.5	17.6
4	53.2	22.0	4.2	20.6
5	48.1	29.7	3.5	18.9
<b>Total</b>	<b>53.7</b>	<b>21.8</b>	<b>3.8</b>	<b>20.7</b>
<b>COLOURED</b>				
Income Quintiles	Public %	Private %	Traditional/ spiritual healer %	Did not seek health care %
1	64.5	16.3	0.9	18.3
2	52.0	22.7	0.0	25.3
3	53.0	22.0	0.4	24.6
4	52.5	32.9	1.1	13.5
5	31.7	49.3	0.5	18.5
<b>Total</b>	<b>50.1</b>	<b>29.3</b>	<b>0.6</b>	<b>20.1</b>
<b>INDIAN</b>				
Income Quintiles	Public %	Private %	Traditional/ spiritual healer %	Did not seek health care %
1	56.9	33.9	0.6	8.6
2	33.3	39.9	4.2	22.6
3	26.1	61.8	0.9	11.2
4	28.1	59.4	7.1	5.4
5	25.1	65.7	0.9	8.3
<b>Total</b>	<b>37.4</b>	<b>48.7</b>	<b>2.4</b>	<b>11.4</b>
<b>WHITE</b>				
Income Quintiles	Public %	Private %	Traditional/ spiritual healer %	Did not seek health care %
1	34.7	56.6	0.3	8.3
2	32.1	53.7	1.2	13.0
3	23.0	54.9	0.2	21.9
4	23.3	62.2	0.5	14.1
5	17.5	69.7	1.0	11.8
<b>Total</b>	<b>26.7</b>	<b>59.3</b>	<b>0.6</b>	<b>13.34</b>

Table 2: Utilization by income qualities within population groups in 1995 (in %)

Wadee, H., Gilson, L., Thiede, M., Okorafor, O., & McIntyre, D. (2003). Health care inequity in South Africa and the public/private mix [PDF]. *United Nations Research Institute for Social Development (UNRISD)*, 3-27. Retrieved from [http://www.unrisd.org/80256B3C005BCCF9/\(httpAuxPages\)/890762B189D36924C1256DB90030161B/\\$file/wadee2.pdf](http://www.unrisd.org/80256B3C005BCCF9/(httpAuxPages)/890762B189D36924C1256DB90030161B/$file/wadee2.pdf)

Population group		Public %	Private %	Traditional/ spiritual healer %
African	1995	67.7	27.5	4.8
	1999	59.7	38.1	2.3
Coloured	1995	62.7	36.7	0.7
	1999	58.2	41.8	0.1
Indian	1995	42.2	54.9	2.7
	1999	37.0	63.0	0
White	1995	30.8	68.4	0.7
	1999	17.3	82.4	0.3
Total	1995	60.1	36.3	3.6
	1999	51.5	46.9	1.6

Table 3: Utilization pattern by population groups, 1995/1999

Wadee, H., Gilson, L., Thiede, M., Okorafor, O., & McIntyre, D. (2003). Health care inequity in South Africa and the public/private mix [PDF]. *United Nations Research Institute for Social Development (UNRISD)*, 3-27. Retrieved from [http://www.unrisd.org/80256B3C005BCCF9/\(httpAuxPages\)/890762B189D36924C1256DB90030161B/\\$file/wadee2.pdf](http://www.unrisd.org/80256B3C005BCCF9/(httpAuxPages)/890762B189D36924C1256DB90030161B/$file/wadee2.pdf)

	Sample Size of Each Demographic
Male	4
Female	3
White	3
Black	4
Age	
18- 30	1
31-50	4
51-75	2

Table 3: Demographic of the sample population.

Name	References
Please explain any health-related disparities you experienced during apartheid.	14
Negative	12
Positive	2
Were any of your loved ones health affected at this time If so, how?	11
Negative	4
Positive	7
Do you believe apartheid has had a long-term affect on your life if so, how?	16
Negative	8
Positive	8
Do you believe that citizens now have equal access to health care? Explain your response.	31
Negative	19
Positive	12

Table 4: Individual references in the collection of surveys of positive and/or negative responses to the survey questions.



	Negative	Positive
Please explain any health-related disparities you experienced during apartheid.	hard to get medical help	born in government hospitals
	hospital were very few and very far	particular hospitals were reserved for white patients, white doctors and white nursing staff. I was led to believe that these facilities were comparable with the first-world
	long lines	
	spend days before doctors. See you	
	not allow to just go hospital	
	had to go private doctors and then they will give you reference to go to hospital	
	ambulance were not allow in black people areas	
	having their baby at home	
	no clinics	
	pay lots of money	
	they were romans who had church and clinic. that was the only clinic	
	I would not have been born in a hospital facility of the same quality as my white counterparts.	
Were any of your loved ones' health affected at this time? If so, how?	did not really use hospital	No
	using izinyanga (traditional doctors)	did not known clinics and hospital so that did not affect us
	people die	no accidents cause we had no cars
	by virtue of their skin color and social economic background, they were restricted to "blacks only" medical treatment	life was very easy then
		No

Do you believe apartheid has had a long-term affect on your life? If so, how?	Life was very hard	beneficiary of tremendous privilege in almost every aspect of life
	no freedom	we get free health care
	only white people were allow to hospital	lots of clinics in our area or location
	changes in key management positions where made too quickly and "jobs for friends" became the focus to get rich quickly, rather than appointing qualified and experienced officials to maintain what was built	almost everything or anyone can get health help
	breakdown in services, infrastructure and the countries growth and has lead to much corruption	don't have to wait in long lines
	forced to seek employment abroad	No
	Yes	given a government education that was of a very high standard compared to that of the rest of the country
	parents who are still programmed to believe that by virtue of skin color, white people are superior to blacks	enabled us to secure better paid jobs which allowed mothers to stay at home with their children
Do you believe that citizens now have equal access to health care? Explain your response.	Absolutely not	Those with reasonable jobs or access to finance have private health care which is as good as any health care in the world
	disadvantaged have to use the government system with staff shortages, long queues, malfunctioning equipment etc.	Yes
	equal access to health care under the law, but not in practice	we all get same treatment
	some live further away from medical facilities than others	the only difference is when u have medical aid
	patient-to-doctor ratio varies drastically from one hospital to the next	Yes
	long queues	were are equal

	waiting list for several months before treatment	have same rights
	the nurses in government hospitals are generally lazy, unprofessional and uncompassionate	We are equal
	financial constraints	same hospital'clinics
	Private health care is becoming more and more expensive, with the cost of medical aid membership always increasing at above the inflation rate	doctors in private and government hospitals tend to be of the same standard
	some government hospitals provide better health care than others, but you are not allowed to choose your hospital	Private healthcare is run extremely well and is very profitable, therefore there is an abundance of investors in this sector, giving these hospitals enough capital to run efficiently and with optimal technology
	the quality of health care depends on where you live and what you can afford	situation has certainly improved
	No	
	Public healthcare on the other hand is slowly deteriorating due to mismanagement of funds	
	buildings and equipment break down and unable to be fixed or replaced	
	demand of patients is now higher	
	Longer waiting periods, low stocks of medicine and lack of staffing and infection issues	
	elements of human dignity in a capitalist system are a commodity	
	Those with money have better access to healthcare institutions & a superior quality of care	

Table 5: Segments from responses to questions 4, 5, 6, and 7 of the survey that display a positive or negative response to the question.

	<b>Please explain any health-related disparities you experienced during apartheid.</b>		<b>Were any of your loved ones' health affected at this time? If so, how?</b>		<b>Do you believe apartheid has had a long-term affect on your life? If so, how?</b>		<b>Do you believe that citizens now have equal access to health care? Explain your response.</b>	
<b>Age</b>	<b>Negative</b>	<b>Positive</b>	<b>Negative</b>	<b>Positive</b>	<b>Negative</b>	<b>Positive</b>	<b>Negative</b>	<b>Positive</b>
18-30	1	0	1	0	2	0	2	1
31-50	7	2	0	7	3	7	15	7
50-75	4	0	3	0	3	1	2	4

Table 6: A cross sectional table displaying the positive and negative responses provided by different age demographics in the sample population.

	<b>Please explain any health-related disparities you experienced during apartheid.</b>		<b>Were any of your loved ones' health affected at this time? If so, how?</b>		<b>Do you believe apartheid has had a long-term affect on your life? If so, how?</b>		<b>Do you believe that citizens now have equal access to health care? Explain your response.</b>	
<b>Gender</b>	<b>Negative</b>	<b>Positive</b>	<b>Negative</b>	<b>Positive</b>	<b>Negative</b>	<b>Positive</b>	<b>Negative</b>	<b>Positive</b>
Male	1	2	1	3	5	3	19	4
Female	11	0	3	4	3	5	0	8

Table 7: A cross sectional table displaying the positive and negative responses provided by different genders in the sample population.

	Please explain any health-related disparities you experienced during apartheid.		Were any of your loved ones' health affected at this time? If so, how?		Do you believe apartheid has had a long-term affect on your life? If so, how?		Do you believe that citizens now have equal access to health care? Explain your response.	
<b>Race</b>	<b>Negative</b>	<b>Positive</b>	<b>Negative</b>	<b>Positive</b>	<b>Negative</b>	<b>Positive</b>	<b>Negative</b>	<b>Positive</b>
White	0	2	0	3	3	3	17	3
Black	12	0	4	4	5	5	2	9

Table 8: A cross sectional table displaying the positive and negative responses provided by different races in the sample population.

## List of Figures

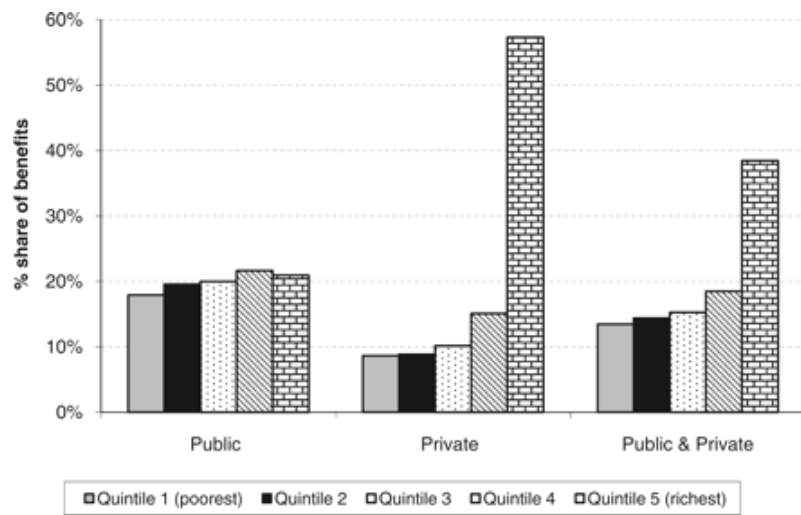


Figure 1: Distribution of Health Benefits

Ataguba, J. E., & McIntyre, D. (2012). Paying for and receiving benefits from health services in South Africa: is the health system equitable? *Oxford*. Retrieved from [http://heapol.oxfordjournals.org/content/27/suppl\\_1/i35.full](http://heapol.oxfordjournals.org/content/27/suppl_1/i35.full)

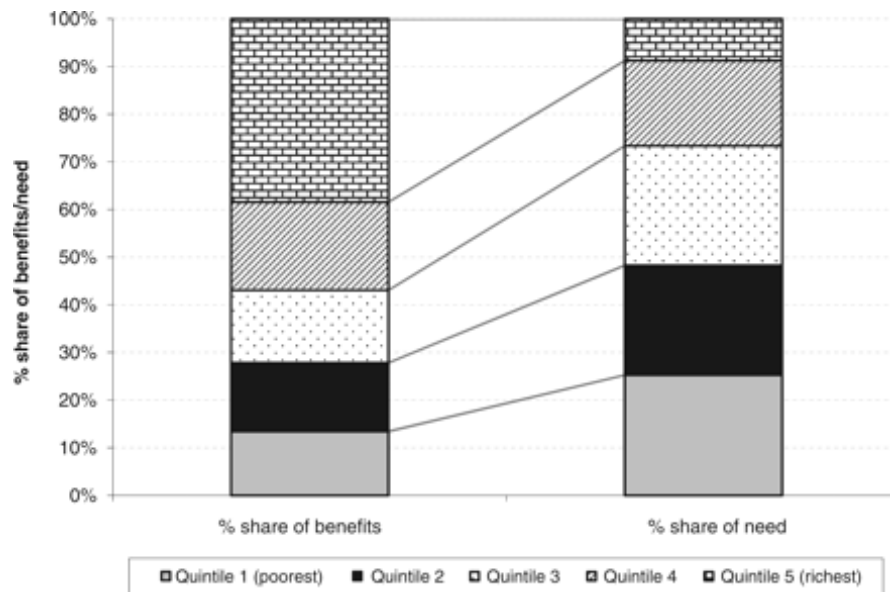


Figure 2: Distribution of Health Benefits in Comparison to Need for Health Care

Ataguba, J. E., & McIntyre, D. (2012). Paying for and receiving benefits from health services in South Africa: is the health system equitable? *Oxford*. Retrieved from [http://heapol.oxfordjournals.org/content/27/suppl\\_1/i35.full](http://heapol.oxfordjournals.org/content/27/suppl_1/i35.full)



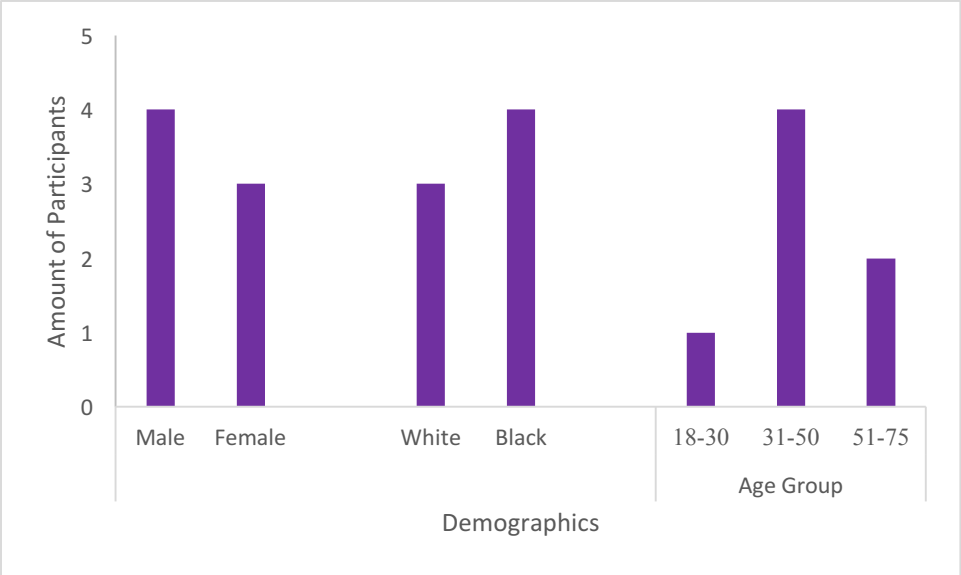


Figure 3: Demographic of the sample population.

Survey Response				
Do you believe that citizens now have equal ac...		Do you believe the Ap...	Please explain any ...	Were any of y...
Negative	Positive	Positive	Negative	Positive
		Negative		Negative

Figure 4: Hierarchy chart of individual references in the collection of surveys of positive and/or negative responses to the survey questions.

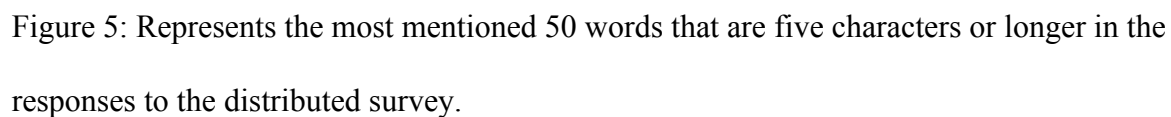


Figure 5: Represents the most mentioned 50 words that are five characters or longer in the responses to the distributed survey.

## **Appendix A**

### **Survey Questions**

1. What is your gender?
2. What is your age?
3. What is your race?
4. Please explain any health-related disparities you experienced during apartheid.
5. Were any of your loved ones' health affected at this time? If so, how?
6. Do you believe apartheid has had a long-term affect on your life? If so, how?
7. Do you believe that citizens now have equal access to health care? Explain your response.

## Appendix B

### James Madison University: Human Research Review Request

FOR IRB USE ONLY:			
<b>Exempt:</b>	<input type="checkbox"/>	<b>Protocol Number:</b>	<b>1<sup>st</sup> Review:</b> _____ <b>Reviewer:</b> _____
<b>Expedited</b>	<input type="checkbox"/>	<b>IRB:</b> <u>17-0297</u>	<b>2<sup>nd</sup> Review:</b> _____ <b>Reviewer:</b> _____
<b>Full Board:</b>	<input checked="" type="checkbox"/>	<b>Received:</b> <u>12/05/16</u>	<b>3<sup>rd</sup> Review:</b> _____

<b>Project Title:</b>	<u>An Analysis of the Aftermath of South Africa's Apartheid on its Health Care System</u>		
<b>Project Dates:</b> (Not to exceed 1 year minus 1 day)	From: <u>02/10/16</u> MM/DD/YY	To: <u>05/10/17</u> MM/DD/YY	

<b>Responsible Researcher(s):</b>	<u>Caitlin Jaeckel</u>		
<b>E-mail Address:</b>	<u>jaeckelc@dukes.jmu.edu</u>		
<b>Telephone:</b>	<u>(703) 927-5006</u>		
<b>Department Address (MSC):</b>	<div style="background-color: #cccccc; height: 15px; width: 100%;"></div> <div style="background-color: #cccccc; height: 15px; width: 100%;"></div>		
<b>Please Select:</b>	<input type="checkbox"/> Faculty <input checked="" type="checkbox"/> Undergraduate Student <input type="checkbox"/> Administrator/Staff Member <input type="checkbox"/> Graduate Student		

<b>(if Applicable):</b>			
<b>Research Advisor:</b>	<u>Audrey J. Burnett</u>		
<b>E-mail Address:</b>	<u><a href="mailto:burnetaj@jmu.edu">burnetaj@jmu.edu</a></u>		
<b>Telephone:</b>	<u>540-568-8969</u>		
<b>Department Address (MSC):</b>	<u>Health Sciences 4301</u>		

<b>Minimum # of Participants:</b>	<u>5</u>
<b>Maximum # of Participants:</b>	<u>25</u>

<b>Funding:</b>	<b>External Funding:</b> Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	<b>If yes, Sponsor:</b> _____
	<b>Internal Funding:</b> Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	<b>If yes, Sponsor:</b> _____

<b>Incentives:</b>  <b>Must follow JMU Financial Policy:</b>	<b>Independently:</b> Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/> <b>Will monetary incentives be offered?</b> Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/> <b>If yes: How much per recipient?</b> _____ <b>In what form?</b> _____  <a href="http://www.jmu.edu/financemanual/procedures/4205.shtml#.394IRBApprovedResearchSubjects">http://www.jmu.edu/financemanual/procedures/4205.shtml#.394IRBApprovedResearchSubjects</a>
<b>Institutional Biosafety Committee Review/Approval:</b>	<b>Use of recombinant DNA and synthetic nucleic acid molecule research:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>If “Yes,” approval received:</b> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Pending <b>IBC Protocol Number(s):</b> <b>Biosafety Level(s):</b>
<b>Will research be conducted outside of the United States?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <b>If “Yes,” please complete and submit the International Research Form along with this review application:</b> <a href="http://www.jmu.edu/researchintegrity/irb/forms/irbinternationalresearch.docx">http://www.jmu.edu/researchintegrity/irb/forms/irbinternationalresearch.docx</a>
<b>Certain vulnerable populations are afforded additional protections under the federal regulations. Do human participants who are involved in the proposed study include any of the following special populations?</b>	<input type="checkbox"/> Minors <input type="checkbox"/> Pregnant women ( <i>Do not check unless you are specifically recruiting</i> ) <input type="checkbox"/> Prisoners <input type="checkbox"/> Fetuses <input checked="" type="checkbox"/> My research does not involve any of these populations

Some populations may be vulnerable to coercion or undue influence. Does your research involve any of the following populations?

- ☐ Elderly  
☐ Diminished capacity/Impaired decision-making ability  
☐ Economically disadvantaged  
☐ Other protected or potentially vulnerable population (*e.g. homeless, HIV-positive participants, terminally or seriously ill, etc.*)  
☒ My research does not involve any of these populations

**Investigator: Please respond to the questions below. The IRB will utilize your responses to evaluate your protocol submission.**

1. ☒ **YES** ☐ **NO** Does the James Madison University Institutional Review Board define the project as **research**?

The James Madison University IRB defines "research" as a "systematic investigation designed to develop or contribute to *generalizable knowledge*." All research involving human participants conducted by James Madison University faculty and staff and students is subject to IRB review.

2. ☒ **YES** ☐ **NO** Are the human participants in your study **living** individuals?

"Individuals whose physiologic or behavioral characteristics and responses are the object of study in a research project. Under the federal regulations, human subjects are defined as: living individual(s) about whom an investigator conducting research obtains: (1) data through intervention or interaction with the individual; or (2) identifiable private information."

3. ☒ **YES** ☐ **NO** Will you obtain data through **intervention** or **interaction** with these individuals?

"Intervention" includes both physical procedures by which data are gathered (*e.g.*, measurement of heart rate or venipuncture) and manipulations of the participant or the participant's environment that are performed for research purposes. "Interaction" includes communication or interpersonal contact between the investigator and participant (*e.g.*, surveying or interviewing).

4. ☐ **YES** ☒ **NO** Will you obtain **identifiable private information** about these individuals?

"Private information" includes information about behavior that occurs in a context in which an individual can reasonably expect that no observation or recording is taking place, or information provided for specific purposes which the individual can reasonably expect will not be made public (*e.g.*, a medical record or student record). "Identifiable" means that the identity of the participant may be ascertained by the investigator or associated with the information (*e.g.*, by name, code number, pattern of answers, etc.).

5. ☒ **YES** ☐ **NO** Does the study present **more than minimal risk** to the participants?

"Minimal risk" means that the risks of harm or discomfort anticipated in the proposed research are not greater, considering probability and magnitude, than those ordinarily encountered in daily life or during performance of routine physical or psychological examinations or tests. Note that the concept of risk goes beyond physical risk and includes psychological, emotional,

or behavioral risk as well as risks to employability, economic well being, social standing, and risks of civil and criminal liability.

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**CERTIFICATIONS:**

For James Madison University to obtain a Federal Wide Assurance (FWA) with the Office of Human Research Protection (OHRP), U.S. Department of Health & Human Services, **all** research staff working with human participants must sign this form and receive training in ethical guidelines and regulations. "Research staff" is defined as persons who have direct and substantive involvement in proposing, performing, reviewing, or reporting research and includes students fulfilling these roles as well as their faculty advisors. The Office of Research Integrity maintains a roster of all researchers who have completed training within the past three years.

Test module **at ORI website**

<http://www.jmu.edu/researchintegrity/irb/irbtraining.shtml>

Name of Researcher(s) and Research Advisor	Training Completion Date
Caitlin Jaeckel	09/12/16
Audrey J. Burnett, PhD	07/20/16

For additional training interests, or to access a Spanish version, visit the National Institutes of Health Protecting Human Research Participants (PHRP) Course at:

<http://phrp.nihtraining.com/users/login.php>.

**By signing below, the Responsible Researcher(s), and the Faculty Advisor (if applicable), certifies that he/she is familiar with the ethical guidelines and regulations regarding the protection of human research participants from research risks. In addition, he/she agrees to abide by all sponsor and university policies and procedures in conducting the research. He/she further certifies that he/she has completed training regarding human participant research ethics within the last three years.**

\_\_\_\_\_  
Principal Investigator Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Faculty Advisor Signature

\_\_\_\_\_  
Date

Submit an electronic version (in a Word document) of your **ENTIRE** protocol to  
[researchintegrity@jmu.edu](mailto:researchintegrity@jmu.edu).

Provide a **SIGNED** hard copy of the Research Review Request Form to:  
Office of Research Integrity, MSC 5738, 601 University Boulevard, Blue Ridge Hall, Third Floor,  
Room # 342

**Purpose and Objectives**



Please provide a lay summary of the study. Include the purpose, research questions, and hypotheses to be evaluated. (Limit to one page)

South Africa's mostly peaceful vanquish of apartheid is a piece of proud history for the country. Segregation in South Africa began in the mid-17<sup>th</sup> century with the arrival of European settlers and continued into the late 19<sup>th</sup> and early 20<sup>th</sup> centuries with the systematic segregation referred to as apartheid (Wainwright, 2014). The 1994 Democratic election of Nelson Mandela, a member of the African National Congress, marked the end of apartheid. Many would assume that since the end of the government enforced segregation, the nation would have been able to improve equality and be comparable to other developed nations. In some categories, South Africa has risen to the same levels as other developed countries and has even held honors, such as hosting the Fifa World Cup in 2010. However, the nation is still struggling to overcome the shadow cast by its history of segregation. For instance, approximately 47% of South Africans live in poverty, which is a significantly higher rate than it was in 1994 (Gibson, 2015). The recent developments in democracy and economic growth have not been able to overcome the many social and economic challenges that South Africa continues to experience.

The long history of segregation in South Africa overlaps with the development of modern medicine. During apartheid, the South African government required black South Africans to live in designated areas, called Bantustans, away from white citizen and the basic infrastructure needed for healthy lives. These Bantustans only covered 13% of South Africans' inhabitable land, yet was home to 80% of the population (Price, 1986). The black citizens' health care consisted of "non-profit missionary hospitals and over seen by local elites", while the white population was able to receive the rising benefits of modern medicine (Scrubb, 2011). The crowded living conditions and lack of access to proper health care during apartheid caused the black South Africans' health to be significantly worse than that of white citizens.

The purpose of this study is to create an analysis of South Africa's health care, by using both literature reviews and empirical research. The researcher has already written a paper that focused on South Africa's health care inequalities during apartheid. The current study will be a continuation by attempting to determine if South Africa's history of segregation has had a lasting effect on South Africa's current health care, and if so, how this effect differs from other countries. An empirical research study will be used to collect information from South African citizen's, so the researcher can see if individual citizens still feel residual effects from apartheid. More specifically, it is hypothesized that South Africa's health care has been and is currently being negatively affected due to apartheid. Due to the country's long segregation history and relatively recent end, it is believed that when compared to other countries with similar economic statuses, South Africa's health care will not be up to par.

The objective of the current study is to compare, contrast, and synthesize various results from previous studies via online databases, and develop an informative analysis that will be comprehensible to someone who is not fully educated on the topic. Interviews conducted through email will be utilized to add personal stories and perspectives that research data alone could not provide. This study may be used to inform the general public, government, and health care professionals. The researcher hopes that this study will lead to a larger workforce and more significant attempts to reduce the continued effects of apartheid.

## Procedures/Research Design/Methodology/Timeframe

Describe your participants. From where and how will potential participants be identified (e.g. class list, JMU bulk email request, etc.)?

Participants will comprise South African residents with whom the primary researcher has had previous contact via a study abroad experience, who lived in South Africa during apartheid. Through these contacts that I made during my time studying abroad, I will use the snowball sampling method. I still have the contact information for seven individuals who live in South Africa, and I hope to use those to contact participants. As my contacts are from different regions and social classes of South Africa, the participants will vary in socioeconomic status. In spite of using the snow ball method, the use of several different contacts to reach participants will aid in receiving a diverse population pool. Depending on the successfulness of recruiting through the snowball method, my relationship to the participants would be through several different degrees of separation from my contacts.

How will subjects be recruited once they are identified (e.g., mail, phone, classroom presentation)? Include copies of recruitment letters, flyers, or advertisements.

The subjects will be recruited by email. Below is a copy of the recruitment letter.

Describe the design and methodology, including all statistics, IN DETAIL. What exactly will be done to the subjects? If applicable, please describe what will happen if a subject declines to be audio or video-taped.

This project is an empirical research study. The email questionnaire is qualitative in nature. The survey will be collected through *Qualtrics*, an online surveying tool, and using the anonymous settings of the surveying tool. The first screen of the survey presented on Qualtrics will be the informed consent agreement. The qualitative analysis software, *NVivo*, will be used to determine major themes in participants' responses. The data will then be securely stored through a password encrypted emails that will only be shared between the undergraduate and advisors, and only opened on computers that are not shared by others.

Emphasize possible risks and protection of subjects.

The investigator perceives that a possible risk to the subjects is emotional distress. The research plans on protecting the subjects from the risk by informing the participant of the purpose of the study as well as reminding the participant that participation is voluntary in the cover letter.

What are the potential benefits to participation and the research as a whole?

A possible benefit of the research is to promote awareness and education on the effects of apartheid.

Where will research be conducted? (Be specific; if research is being conducted off of JMU's campus a site letter of permission will be needed)

The research will be conducted online through email and Qualtrics, an online surveying tool.

Will deception be used? If yes, provide the rationale for the deception. Also, please provide an explanation of how you plan to debrief the subjects regarding the deception at the end of the study.

No.

What is the time frame of the study? (List the dates you plan on collecting data. This cannot be more than a year, and you cannot start conducting research until you get IRB approval)

Pending IRB approval, data will be collected over a course of a month by sending out emails and then collecting the responses via Qualtrics.

## Data Analysis

How will data be analyzed?

The qualitative analysis program, *NVivo 10*, will be used to determine major themes among participants' responses.

How will you capture or create data? Physical (ex: paper or tape recording)? Electronic (ex: computer, mobile device, digital recording)?

Electronically through Qualtrics.

Do you anticipate transferring your data from a physical/analog format to a digital format? If so, how? (e.g. paper that is scanned, data inputted into the computer from paper, digital photos of physical/analog data, digitizing audio or video recording?)

N/A

How and where will data be secured/stored? (e.g. a single computer or laptop; across multiple computers; or computing devices of JMU faculty, staff or students; across multiple computers both at JMU and outside of JMU?) If subjects are being audio and/or video-taped, file encryption is highly recommended. If signed consent forms will be obtained, please describe how these forms will be stored separately and securely from study data.

Data entered into Qualtrics will only be accessible by the student's honors thesis advisor on her private computer via the password-protected Qualtrics website. Out of the student's advisors, only Dr. Burnett will have access to the data. Given that undergraduate students are not allowed Qualtrics access via JMU, the advisor is the only one with a Qualtrics account. (If undergraduates can receive access, I will contact Tina Grace so that I can receive access for a separate account.) The data will then be securely stored through a password encrypted emails that will only be shared between the undergraduate and advisors, and only opened on computers that are not shared by others. As the only subject contact is the email invitation to complete the online Qualtrics survey, we will not be storing subject signatures.

Who will have access to data? (e.g. just me; me and other JMU researchers (faculty, staff, or students); or me and other non-JMU researchers?)

The primary researcher's advisor and the student researcher will have direct access to the data. She will share printouts of the data with the primary researcher for data analysis purposes via *NVivo* in a closed door office with only the two researchers present.

If others will have access to data, how will data be securely shared?

The data will be securely shared through the password-protected Qualtrics website. The primary researcher's advisor will share printouts of the data with her for data analysis purposes.

Will you keep data after the project ends? (i.e. yes, all data; yes, but only de-identified data; or no) If data is being destroyed, when will it be destroyed, and how? Who will destroy the data?

Yes, all data, which will be de-identified in nature. At the end of the study, all data will be deleted/removed from the Qualtrics account (i.e., the survey link and all of its results will be deleted).

## **Reporting Procedures**

Who is the audience to be reached in the report of the study?

Community residents, professionals – particularly those affected by or working with those who were affected by apartheid.

How will you present the results of the research? (If submitting as exempt, research cannot be published or publicly presented outside of the classroom. Also, the researcher cannot collect any identifiable information from the subjects to qualify as exempt.)

Possibly via poster/oral presentation and/or manuscript submitted to a peer-reviewed journal.

How will feedback be provided to subjects?

Feedback will be provided by sending the completed thesis via email to all the individuals who were asked to participate.

## **Experience of the Researcher (and advisor, if student):**

Please provide a paragraph describing the prior relevant experience of the researcher, advisor (if applicable), and/or consultants. If you are a student researcher, please state if this is your first study. Also, please confirm that your research advisor will be guiding you through this study.

The researchers, Caitlin Jaeckel is conducting their second study as Health Science students at James Madison University. As seniors in her major she has relevant experience through taking mandatory health science courses. Caitlin is in the process of completing a current IRB approved study. With two other James Madison University seniors, Caitlin is working on a project titled Type of Sexual Education Curriculum's Impact on Undergraduate Contraceptive Usage. The purpose of this study is to examine if there is an effect of the form of sexual education curriculum on contraceptive use among undergraduate students. To evaluate this, the use of a questionnaire is being used to research how educational curriculums for sexual health affect undergraduate students' contraceptive. The questionnaire contains five sections: background information, sexual education exposure, sexual education curriculum review, contraceptive use review, and a review of the last time the participant engaged in sexual intercourse. The data for this research resulted in non-significant findings between the relationship of sexual education curriculum, contraceptive knowledge, and contraceptive use among undergraduate students. Due to these findings the null hypothesis was unable to be rejected.

Audrey J. Burnett earned a PhD from Virginia Tech and has previously completed IRB training. Her previous research experience includes quantitative, qualitative, and mixed-methods research studies involving special populations, such as preschool children, high school students, and older adults (aged 65 and older). Furthermore, Dr. Burnett has conducted a variety of research endeavors with VA Tech, the Virginia College of Osteopathic Medicine (VCOM), and the Virginia Department of Health, among other colleagues. Several examples of relevant past research projects include a youth risk behavior survey distributed throughout the Roanoke Public School System, Oxycontin abuse in Southwest Virginia (in partnership with VCOM and support from an NIH grant), an assessment of VA Tech's Adult Day Services intergenerational program, and a health needs assessment across five counties comprising the New River Health District that included both a quantitative mail-out survey and several focus group sessions. Dr. Burnett's primary research interests include chronic disease (e.g., HIV/AIDS); health-risk behaviors among college students; older adults, religiosity, and quality of life; and community needs assessment among special populations (e.g., ethnic minorities, socioeconomically disadvantaged, chronically ill and/or disabled).

**Appendix C**  
IRB International Research Questionnaire

**International Research**

**Complete this form if the proposed research will be conducted outside of the United States and submit with the Human Research Review Request form.**

**Responsible Researcher(s):** Caitlin Jaeckel and Dr. Audrey Burnett

**Project Title:** A Meta-analysis of the Aftermath of South Africa's Apartheid on its Health Care System

1. In which country will the research be conducted?

The research will be conducted in South Africa.

2. Describe the rationale for selection of this site.

As the study is a meta-analysis of South Africa's post-Apartheid health care system conducting an empirical research among a population that lived during and after apartheid will be beneficial for the study.

3. Describe the ways in which cultural norms and/or local laws differ between the host site and the United States. Consider the differences in consent procedures, age of majority, autonomy of individuals, group consent, and/or parental consent. Include an explanation of what cultural sensitivities will be required to conduct this study.

Similar to the United States of America, in South Africa a person under the age of 18 is considered to be a child a not yet a legal adult. As the research is focused on individuals that lived during apartheid the age of consent and parental consent will not be a concern. While some people in the United States prefer straight forward communication through technology, many South Africans favor face-to-face communication. The researchers hope that the individuals involved in the research will be amenable with the online survey. Since some of the information could be emotionally triggering we hope to overcome this social sensitivity by informing the participant of the purpose of the study as well as reminding the participant that participation is voluntary in the consent form.

4. Describe any aspects of the cultural, political, or economic climate in the country where the research will be conducted which might increase the risks for participants. Describe the steps the researcher will take to minimize these risks:

As names and any other identifiable characteristics will not be used during the study, we do not expect any aspects of the cultural, political, or economic climate to increase the risks for participants.

5. Describe how the researcher will obtain culturally appropriate access to this community.

Culturally appropriate access to the community will be achieved by having another professor at James Madison University, Dr. Theresa Harris, who previously resided in South Africa, introduce the researchers to the participants.

6. What is the primary language of the potential research subjects?

As South Africa has 11 official languages, the study has been limited to only one of those 11 which is English. The most commonly spoken language in official and commercial public life is English so most of the participants will hopefully not need translations to complete the survey.

7. Is the researcher fluent in the primary language? If no, please explain how the researcher will communicate with the subject population during recruitment, consent, and completion of the study.

Yes.

8. There are instances in which an ethics committee (IRB equivalent) or other regulatory entity must review and approve the research. Please provide information about the committee or entity reviewing this project.

No.

9. If the researcher is a student, describe how the faculty advisor and student will communicate to ensure there is adequate oversight of the project.

The student will be the main researcher, but before any official analysis or publication honors thesis advisor, Dr. Burnett, will review the student's work.

## **Appendix D**

### **Additional IRB Questions and Answers**

Q: Since the only subject contact is the email invitation to complete the survey, having a link to the Qualtrics survey and the end of your invitation letter will stop you getting and storing any subject signatures.

A: We will remove the information referring to storing subject signatures, as the only subject contact is the email invitation to complete the online Qualtrics survey.

Q: Risks/Benefits: I do not believe that reflecting on racism is a benefit of research. The emotional distress that may be caused by doing so is actually a slight risk.

A: Emotional distress is now included as a risk of participating in the research project and the proposed benefit of reflecting on racism has since been removed.

Q: Data Analysis: Will the email account be "encrypted" or simply password \_protected\_? There is a difference and the researcher needs to be precise in relating which they intend to use. Also, what happens to the email responses from subjects during and at the end of the study? Regarding the data from Qualtrics, the researcher needs to be more precise in the language: "the password protected Qualtrics will be destroyed". What exactly will happen?

A: The Qualtrics data will be password-protected, so only the researcher and the honors thesis advisor would have access to the data. At the end of the study, all data will be deleted/removed from the Qualtrics account (i.e., the survey link and all of its results will be deleted).

Q: The recruitment letter shouldn't be the consent form. Compose a separate introductory email. The consent form should come after they have agreed to participate.

A: I have since composed a separate introductory email to serve as the recruitment letter.

Q: What is your sampling method?

A: Through contacts that I made during my time studying abroad, I will use the snowball sampling method. I still have the contact information for seven individuals who live in South Africa, and I hope to use those to contact participants.

Q: The recruitment message indicates that the potential benefit is to "to help identify how to best achieve equality of health care in South Africa." The objectives previously stated that the "current study will be a continuation by attempting to determine if South Africa's history of segregation has had a lasting effect on South Africa's current health care, and if so, how this effect differs from other countries." If this is a study of existing info, then it's not really directly influencing change (to improve quality of health care to black citizens) but providing info and informing readers of the study. Suggest rewording this potential benefit.

A: Deleted the portion stating, "to help identify how to best achieve equality of health care in South Africa."

Q: Page 6 mentions "The data will then be securely stored through a password encrypted emails that will only be shared between the undergraduate and advisors, and only opened on computers that are not shared by others." If there are others (advisors plural) who will access the data other than the student and Dr. Burnett, they should be named on the protocol.



A: My other honors thesis advisors will not have access to the data.

Q: The project starting date needs to be revised.

A: February 1, 2017 is used as a revised starting date.

Q: As an answer for how feedback will be provided to subjects (p. 8), the response is "Feedback will be provided by sending participants a copy of the honors thesis to the email that they were contacted through." Since the questionnaire is anonymous, how will you know who the participants are? Will you simply send the thesis to all the individuals that will be asked to participate?

A: I will send the thesis via email to all the individuals who were asked to participate.

Q: Please describe sample participants more completely. Who do you plan to survey? What is your relationship with the participants? How many?

A: As my contacts are from different regions and social classes of South Africa, the participants will vary in socioeconomic status. In spite of using the snow ball method, the use of several different contacts to reach participants will aid in receiving a diverse population pool. Depending on the successfulness of recruiting through the snowball method, my relationship to the participants would be through several different degrees of separation from my contacts.

Comments and/or Revisions (*Not Required for Approval*):

Q: This is not a meta-analysis. A meta-analysis is a summary of studies. This is an original study.

A: Any references to 'meta-analysis' have been removed from the protocol and changed to indicate that this is an empirical research study.

Q: You can receive Qualtrics access as an undergraduate ...

A: If this is the case, I will contact Tina Grace so that I can receive access for a separate account.

**Appendix E**  
Recruitment Letter

To Whom It May Concern:

You are being asked to participate in a research study conducted by Caitlin Jaeckel from James Madison University. The purpose of this study is to examine the residual effects on South Africa's health care system due to apartheid. This study will contribute to the researcher's completion of her senior honors thesis. If you are agreeable to be a participant in this research, I will email you the consent form, that further details your participation, and the link to lead you to the online questionnaire. Participation in this research is completely voluntary, and you may resign from participation at any point during the research.

Best regards,

Caitlin Jaeckel

James Madison University; Class of 2017

Health Science, Pre-PA

## **Appendix F**

### **Consent to Participate in Research Form**

Project Title: An Analysis of the Aftermath of South Africa's Apartheid on its Health Care System

#### **Consent to Participate in Research**

##### **Identification of Investigators & Purpose of Study**

You are being asked to participate in a research study conducted by Caitlin Jaeckel from James Madison University. The purpose of this study is to examine the residual effects on South Africa's health care system due to apartheid. This study will contribute to the researcher's completion of her senior honors thesis.

##### **Research Procedures**

This study consists of an online questionnaire that will be administered to individual participants via Qualtrics. You will be asked to provide answers to a series of questions related to your personal experience during and after apartheid.

##### **Time Required**

Participation in this study will require approximately one hour of your time.

##### **Risks**

The investigator perceives that a possible risk to the subjects is emotional distress. The researcher plans on protecting the subjects from the risk by informing the participant of the purpose of the study as well as reminding the participant that participation is voluntary in the consent form.

##### **Benefits**

A potential benefit from participation in this study is to promote awareness and education on the effects of apartheid.

##### **Confidentiality**

The results of this research will be presented in the form of an honors thesis paper. While individual responses are anonymously obtained and recorded online through the Qualtrics survey software, data is kept in the strictest confidence. No identifiable information will be collected from the participant, and no identifiable responses will be presented in the final form of this study. All data will be stored in a secure location only accessible to the researcher and the researcher's honors thesis advisor. The Qualtrics data will be password-protected, so only the researcher and the honors thesis advisor would have access to the data. At the end of the study, all data will be deleted/removed from the Qualtrics account (i.e., the survey link and all of its results will be deleted). The researcher retains the right to use and publish non-identifiable data. Final aggregate results will be made available to participants upon request and may be presented at an academic conference and/or published in a scholarly journal.

##### **Participation & Withdrawal**

Your participation is entirely voluntary. You are free to choose not to participate. Should you choose to participate, you can withdraw at any time without consequences of any kind.

However, once your responses have been submitted and anonymously recorded, you will not be able to withdraw from the study.

**Questions about the Study**

If you have questions or concerns during the time of your participation in this study, or after its completion, or you would like to receive a copy of the final aggregate results of this study, please contact:

Caitlin Jaeckel  
Department of Health Sciences  
James Madison University  
Email Address: [jaeckec@dukes.jmu.edu](mailto:jaeckec@dukes.jmu.edu)

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Email Address: [burnetaj@jmu.edu](mailto:burnetaj@jmu.edu)

**Questions about Your Rights as a Research Subject**

Dr. David Cockley  
Chair, Institutional Review Board  
James Madison University  
(540) 568-2834  
[cocklede@jmu.edu](mailto:cocklede@jmu.edu)

**Giving of Consent**

I have been given the opportunity to ask questions about this study. I have read this consent and I understand what is being requested of me as a participant in this study. I certify that I am at least 18 years of age. By clicking on the link below, and completing and submitting this anonymous survey, I am consenting to participate in this research.

Caitlin Jaeckel  
Name of Researcher

02/10/16  
Date

***This study has been approved by the IRB, protocol # 17-0297.***

## **Appendix G**

Email provided to the two United State residents to send to their South African contacts

To Whom It May Concern:

You are being asked to participate in a research study conducted by Caitlin Jaeckel from James Madison University. The purpose of this study is to examine the residual effects on South Africa's health care system due to apartheid. This study will contribute to the researcher's completion of her senior honors thesis. If you are agreeable to be a participant in this research, attached is the consent form, that further details your participation, and below is the link to lead you to the online questionnaire. Participation in this research is completely voluntary, and you may resign from participation at any point during the research.

Thank you for agreeing to participate. Attached is the Consent to Participate in Research Form, please review the form prior to completing the survey. The following web link will direct you to my honors thesis survey: [http://jmu.co1.qualtrics.com/jfe/form/SV\\_enubwWOILdFO6Al](http://jmu.co1.qualtrics.com/jfe/form/SV_enubwWOILdFO6Al)

If you know anyone who would be willing to participate in my research, please forward me their email so I can contact them as well. Thank you again for volunteering to participate.

Best regards,

Caitlin Jaeckel  
James Madison University; Class of 2017  
Health Science, Pre-PA

## **Appendix H**

Email send to participants contact email that was provided to the researcher by other participants

To Whom It May Concern:

One of your colleagues has provided your contact information because they thought that you might be interested in aiding my research. You are being asked to participate in a research study conducted by Caitlin Jaeckel from James Madison University. The purpose of this study is to examine the residual effects on South Africa's health care system due to apartheid. This study will contribute to the researcher's completion of her senior honors thesis. If you are agreeable to be a participant in this research, attached is the consent form, that further details your participation, and below is the link to lead you to the online questionnaire. Participation in this research is completely voluntary, and you may resign from participation at any point during the research.

Thank you for agreeing to participate. Attached is the Consent to Participate in Research Form, please review the form prior to completing the survey. The following web link will direct you to my honors thesis survey: [http://jmu.co1.qualtrics.com/jfe/form/SV\\_enubwWOILdFO6Al](http://jmu.co1.qualtrics.com/jfe/form/SV_enubwWOILdFO6Al)

If you know anyone who would be willing to participate in my research, please forward me their email so I can contact them as well. Due to time restraints, the survey will close on April 1st. Thank you again for volunteering to participate.

Best regards,

Caitlin Jaeckel  
James Madison University; Class of 2017  
Health Science, Pre-PA