Accumulated debates for the implementation of legalised medical cannabis in Australia.

SWM617 Supervised Research Thesis report

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Declaration:

I declare that this thesis is my own account of my own research. It contains as its main content work which has not been submitted for a degree at any university.

Signature: ______________________________________

29/10/2014

Thesis Supervisor: Professor Samuel Makinda
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Abstract:

There is abundant evidence to suggest that medical cannabis is a valuable resource both socially and medically. This thesis presents material which suggests that it is advisable for Australia to legalise the use of medical cannabis.

Research Problem:

This thesis raises concern surrounding Australia’s current policy on medical cannabis. Despite adequate material presenting medical cannabis to be an effective medicine in certain cases, and the fact that many developed countries have already adopted its use, medical cannabis is currently illegal in Australia.

Research Method:

The entirety of this research has been based on a vast array of internationally sourced journals, books, internet and newspaper articles. All presented research is an analysis of pre-existing texts, experiments and social declarations. Researched material within this thesis ranges from advanced medical journals to online newspaper articles – a broad scope and academic level of sources was purposely selected to avoid bias, opinions and contradictions.

Results:

This thesis has established that if implemented correctly, medical cannabis can be both a catalyst to a highly equitable industry and also a useful medicinal substance. Medical cannabis has also been discovered to be able to positively influence numerous social, legal and criminal inadequacies.

Conclusions:

It is apparent that Australia could ultimately benefit in numerous political, social, legal and economic circumstances if medical cannabis were to be legalised. Therefore, Australian policy in regards to the use of medical cannabis needs to be reconsidered.
Chapter 1: The Introduction

Chapter 1: Introduction

This chapter of the thesis will introduce the reader to medical cannabis. Definitions of cannabis will be given in this chapter, as will the historical and current medical use of the substance. This chapter will provide insight into the overall hypothesis of this thesis which debates that there is abundant evidence to suggest that medical cannabis is an extremely valuable resource both socially and medically.

Discussion

This thesis presents accumulated material, which suggests that the implementation of medical cannabis in Australia would be beneficial for the country. The term medical cannabis was coined by Dr. Grinspoon and refers to cannabis used for medical, not recreational, purpose (Aggarwal, et al. 2012, 1). This thesis has discovered that medical cannabis can present medicinal, social, political and economic benefits if correctly implemented. Due to the current position in Australian law, cannabis sales are illegal, therefore medical cannabis is illegal in Australia (National Cannabis Prevention and Information Center 2013, 3). This thesis challenges the negative connotations attached to medical cannabis use by presenting material that positions medical cannabis as being a substance that is medically useful, safe and economically advantageous. Due to cannabis’ illegal position in Australia, this thesis largely analyses writings and experiments produced within countries that have already implemented medical cannabis.

This thesis suggests that cannabis has been presented to hold medicinal benefits, most notably its analgesic (pain killing) effect. Cannabis is presented as a fast working drug, which can often show medicinal effect within 48 hours (DePetrocellis, et al. 1998, 8376). This thesis argues that in comparison to certain harmful pharmaceutical drugs, the low chance of overdosing from cannabis suggests that there is legitimacy in using cannabis medically. On the lines of cannabis’ medical efficiency, this thesis presents the fact that individual cannabis strains are being engineered to address separate medical conditions (Mullaway Medical Cannabis Pty Ltd 2012, 14).
This thesis highlights several methods to consume cannabis other than smoking. Removing the action of smoking cannabis can often ease the taboo of cannabis use. The thesis presents other advantages in regards to implementing medical cannabis, such as how cannabis use can often replace the use of existing medications, alcohol, tobacco or illegal drug use (Thomas and Reiman 2013, 7). This thesis also presents material that lists numerous medical conditions that cannabis can suggestibly aid, such as: cancer, HIV/AIDS, nausea, ‘MS’, epilepsy, strokes, arthritis, diabetes, Hepatitis-c, ‘PTSD’, psychosis, depression, schizophrenia, spasms, neurodegeneration, heart attack, glaucoma, ‘IBS’, sleeping problems and lack of appetite (Pilcher 2005, 214).

Aside from the presented medical efficiency of cannabis use, medical cannabis is presented within this thesis to hold political, social and economic advantages. Australia is sited within this thesis to have the perfect climate for outdoor cultivation of natural cannabis (Jiggens 2004, 3).

Australia also has a pre-existing Poppy industry that has been presented as being capable of producing industrial quantities of medical cannabis (ABC News 2014, State Health Minister to discuss medical cannabis trials at the University of Tasmanias, par.4). Finally this thesis suggests that medical cannabis can lead to many economic advantages if legalised.

The implementation of medical cannabis is presented within this thesis as being capable of saving the Australian government considerable amounts of capital through reduced prosecutorial, judicial, correctional and police spending (Evans 2013, 2). The thesis also presents the fact that implementing medical cannabis can often lead to a reduction in certain crimes as well as a reduction in the overall availability of illegal cannabis (Morris, et al. 2014, 1). By legalising medical cannabis, certain users are no longer be forced into contact with illegal drug dealers or arrested for trying to buy cannabis. A legal and medical supply of cannabis would also insure that the cannabis being provided to the patients is a safe, affordable and effective strain, not an unknown source of cannabis from a black market drug dealer.
This thesis raises concern in regard to the illegal status of medical cannabis under the current Australian Drug policy. As of Early 2014, the Cancer Council Australia has calculated that Australia has over one hundred thousand cancer sufferers (Cancer Council Australia 2014, par.1). This figure suggests that Australia would have a considerably large amount of individuals that could benefit from medical cannabis legalisation. Presented within this thesis are numerous theories that have come to present the positive medical and social outcomes that would emerge if medical cannabis is legalised in Australia. The hypothesis of this thesis is thus that there is abundant evidence to suggest that medical cannabis is an extremely valuable resource both socially and medically. Therefore this thesis ultimately suggests that it is advisable for Australia to consider researching the implementation of legalised medical cannabis.

The remainder of this chapter will give a more detailed description of cannabis and the ways cannabis can provide positive medical benefit. Separate forms of cannabis will be presented within this chapter, so too are the historical and current uses of medical cannabis.

Figure 1 (Hazekamp 2007, 4) shows the physical composition of cannabis bud, leaf stem and seeds.

1.1 What is cannabis?

The plant pictured in Figure 1 (Hazekamp 2007, 4) is cannabis, scientifically known as Cannabis sativa L. (Linnaeus). It is referred to by numerous names worldwide such as skunk, marijuana, pot, ganja, grass, chanvre, cheeba, chronic, weed, reefer, Mary Jane plus many more nicknames (United Nations Office on Drugs and Crime 2009, 7).
‘Cannabis is divided into several subspecies: cannabis sativa, cannabis indica, cannabis ruderalis, cannabis spontanea and cannabis kafiristanca, however there is no significant differentiation between the sub-species’ (Srivastava, et al. 2014, 2284). Cannabis is an annually flowering plant, the male plants are taller yet less robust than the female plants which can stand anywhere between 0.2- 6.0 meters tall (however on average they stand 1-3 meters tall) (United Nations Office on Drugs and Crime 2009, 7). The density of the cannabis plant: “depends on environmental and hereditary factors as well as the method of cultivation” (United Nations Office on Drugs and Crime 2009, 7). A more thorough description of cannabis follows:

“Cannabis is the generic term used for the psychoactive substance derived from the three species of the Cannabis plant. The main psychoactive component in cannabis is delta-9- tetrahydrocannabinol (THC). ‘Psychoactive‘ means that it has a relatively significant effect on the central nervous system. THC potency varies in different cannabis products. Cannabis is generally used in three forms: marijuana, hashish and hash oil. Marijuana is the dried flowers and leaves of the plant. It is the least potent of all cannabis products and is usually smoked. Hashish is made from the resin of the plant which is dried, pressed and smoked. It can also be added to food and eaten. Hash oil, the most potent cannabis product, is thick oil obtained from hashish. It is also smoked” (Australia. Australian Defence Force 2011, 2).

Cannabis has been presented in material to suggestibly possess over 60 chemicals which are suggested to have positive medical effect (Allen 2014, par.1). Recently great attention has been directed towards ‘the medical properties of chemicals present in cannabis alongside its main consistent chemical THC’ (Deiana 2012, 46). In summary, there has been key focus upon the chemical components of cannabis within medicine, primarily on the chemical THC. The term medical cannabis was first coined by Dr. Grinspoon (Aggarwal, et al. 2012, 1), Grinspoon was also one of the first doctors to reportedly acknowledge that for ‘centuries certain cultures have used cannabis medically’ (Massi, et al. 2003, 838). Medical cannabis has reportedly been used within Chinese culture for thousands of years, it was cited as being used
as a treatment ‘for at least ten ailments, including nausea and pain’ (Ware, et al. 2003, 211).

1.2 The historical use of cannabis

The practice of using cannabis for medical purpose has been clearly documented in material since “ancient times” (Pilcher 2005, 200), cannabis has featured in the “pharmacology of many cultures dating back to ancient times” (Pilcher 2005, 200). The earliest reference to cannabis was during the Ancient Egyptian era in 2000 BC, where cannabis was used for the treatment of “sore eyes” (Pilcher 2005, 202). Circa 1400 BC, cannabis was documented as a flourishing trade commodity which was marketed throughout the Mediterranean as a treatment for the ‘pain of childbirth’ (Pilcher 2005, 202). There has also been evidence of medical cannabis’ in 100 BC Indian culture and 200 BC Ancient Greek culture. Ancient Rome’s Emperor Nero was said to have “praised the medical properties of cannabis around 70 BC” (Pilcher 2005, 202). As presented by the material, cannabis has been used medically in numerous historical cultures throughout numerous historical eras.

Cannabis’ first notable documentation within Western medicine can be traced back to 1788, when it had its first European pharmacopoeial reference (Moffat 2002, 55). However, cannabis was first promoted for medical use in the West as early as 1621, when Englishman Robert Burton presented cannabis to be an effective treatment for depression in his book The Anatomy of Melancholy (Pilcher 2005, 203). Cannabis was first officially used in Western culture as a medicine for the reduction of pain, it was the British during the 1800’s that first adopted the use of medicinal cannabis from Indian culture (Pilcher 2005, 203). Physician William Brooke o’Shaugnessy started administering medical cannabis in Britain after he spent time in India, by 1809 o’Shaugnessy had already started to treat patients who had seizures and tetanus with cannabis (Pilcher 2005, 203).

By 1842 O’Shaugnessy collaborated with Peter Squire to develop “Squires Extract”, a cannabis based drug that was “prescribed for pretty much everything” (Pilcher 2005, 203). By the start of the 1900’s pharmaceutical companies such as Parke-Davis, Eli Lilly and Grimault and Company were selling cannabis for conditions such
as asthma and pain relief (Mack, Marijuana as Medicine 2000, 17). The evidence of cannabis’ therapeutic and medical capabilities convinced the American Pharmacopoeia to introduce the substance to their list of approved medicines in 1950 (Svrakic, et al. 2012, 91). Medical cannabis had become so widely used that even influential people such as Queen Victoria were provided cannabis as a medicine, Queen Victoria was administered cannabis by her court physician Dr. Reynolds (Pilcher 2005, 203). Cannabis’s early use was so prevalent that from 1842 to 1890, cannabis stayed in “the top three prescribes medicines in the US” (Pilcher 2005, 204).

In fact, it was still possible to visit certain UK pharmacies up to 1971 and pick up a medical prescription of cannabis (Pilcher 2005, 210). In summary, there have been numerous materials which suggest that cannabis has been used as a medicinal tool internationally, for centuries.

![Figure 2](Mack, Marijuana as Medicine 2000, 16)

1.3 Current medical use of cannabis

Medical cannabis is currently so entrenched within certain states of the U.S.A that New Mexico adopted the medical use of the substance without a single trial (Greer, Grob and Halberstadt 2014, 73). Prior to the New Mexico adoption of medical cannabis, it had been stated that “there really is massive proof that the suppression of medical cannabis represents the greatest failure of the institutions of a free
Due to evidence gathered from the U.S.A, it would be logical for Australia to at least consider researching the medical value of cannabis.

Currently medical cannabis is available in numerous developed states such as “the Netherlands, Israel, 23 states in the U.S.A, Canada and Spain” (Smith 2013, 56). Further material has stated that in Europe, certain Cantons (States) in Switzerland namely: Vaud, Neuchatel, Geneva and Fribourg as well as the whole of the Czech Republic have also legalised medical cannabis (MedicalMarijuana.org 2013, par. 9 and 36).

Figure 3 (NSW Parliament 2014, 16) highlights the 23 states in the U.S.A which have implemented medical cannabis.
Perhaps the prominence of medical cannabis’ use in these mentioned countries is the reason a 2014 bill was proposed by the Australian ACT Greens which requested the implementation of decriminalised cannabis to approved patients. The bill would allow patients with a terminal illness to apply for a certification that would prevent them from being prosecuted if found possessing small quantities of cannabis. The card would be issued by the Department of Health and based on advice from the patient’s doctor (Australia. NSW Parliament 2014, 2).

This ACT Greens bill is supported by Australian medical professionals such as Dr Kaye who stated that measures within this ‘bill’ would mean certain Australians would no longer have to make the “terrible choice” of breaking the law to gain cannabis. Dr Kaye puts forwards that “it is time for science and compassion to win out against prejudice and hysteria” (Australia. NSW Parliament 2014, 2), evidently Dr Kaye endorses the use of cannabis as a medical tool. It would seem democratic that Australian doctors and patients have the option to enquire about the use of medical cannabis. The ACT Greens bill could decriminalise cannabis use for ill patients, yet it does not address how these Australians would be provided cannabis (Boddy and Mcilroy 2014, par.1). The ACT Green’s bill does not aim to supply cannabis to the patients, it just removes the criminal prosecution attached to cannabis possession.

More efforts are needed in Australia to be able to research the potential of medical cannabis before any decisions on cannabis supply are pursued. Medical cannabis is a relevant issue within Australia, and the implementation of legalised medical cannabis may become a more heavily debated issue in the future. This thesis thus believes future efforts, such as the proposed medical cannabis bill from the ACT Greens are needed if Australia is to successfully consider implementing medical cannabis. However appropriate methods to cultivate the substance are clearly needed.
Chapter 1 Conclusion

In conclusion, this chapter has presented a description and introduction to medical cannabis. The historical and current uses of medical cannabis have also been presented. This thesis has raised concern that Australia has failed to adequately research medical cannabis. Due to numerous developed countries implementing medical cannabis in recent years, and the hypothesis that there is abundant evidence to suggest that medical cannabis is an extremely valuable resource both socially and medically. It is advisable that Australia at least considers researching the efficiency of medical cannabis.
Chapter 2: Medical debates for the Australian implementation of medical cannabis.

Chapter 2 Introduction

Throughout this chapter the medical debates for legalising medical cannabis are discussed, the general controversies in regard to the legalisation of medical cannabis is also highlighted. Presented in this chapter are alternative methods of ingesting cannabis which do not include smoking, the remainder of the chapter outlines the medical properties of cannabis by presenting a range of illnesses in which cannabis has been reported to aid.

Discussion

Advanced studies on cannabis have been presented in Harvard University’s research carried out in 2007, the research revealed that cannabis can reduce cancer growth in three weeks. The Harvard research revealed a chemical in cannabis, tetrahydrocannabinol (THC) has the potential to reduce cancer growth. Within the research, a controlled batch of cancerous mice was discovered to be 60% more likely of cancer retraction when compared to mice not provided with THC (Grotenhermen and Muller-Vahl 2012, 495). Even though this research was not on humans, it does reiterate cannabis’ ability to combat cancer growth.

Furthermore, German research in 2012 revealed that cannabis has the ability to treat multiple illnesses. The research presented cannabis to be beneficial in aiding illnesses ranging from: Parkinson’s disease, Alzheimer’s disease, Tourette’s syndrome, Multiple sclerosis, spasms, eating problems, nausea and chronic pain (Pilcher 2005, 214). Only considering cancer patients, over 180,000 individuals would be eligible for treatment if Australia implemented the use of medical cannabis (Cancer Council Australia 2014, par.1). “Todd Mikuriya MD, one of the world’s leading authorities on medical marijuana, cites 222 medical conditions reported to be helped by using cannabis” (Pilcher 2005, 214). If Mikuriya is correct, and cannabis can aid over 222 illnesses, then the Australian health system can seemingly benefit from researching medical cannabis.
There are three prominent methods within this thesis that present cannabis as an effective medical tool: 1) anecdotal evidence of individuals that use medical cannabis, 2) medical journals that support the legitimacy of medical cannabis and, 3) other academic materials that support medical cannabis’ use. RCT’s or Random Controlled tests are a clear way of seeing the benefits of medical cannabis. Certain RCT’s have revealed that out of 99 human subjects, 82 were convinced that medical cannabis was effective (Wodak and Mather 2014, par.13).

2.1 General controversies regarding the implementation of medical cannabis

One of the greatest concerns in regard to the legalisation of medical cannabis is the view that cannabis use can often be a ‘gateway to harder drugs’. However vast research has challenged this gateway drug consensus when suggesting, that an individual’s social environment is generally the key gateway to harder drugs, not cannabis use (Klofas and Letteney 2012, 11). Another key concern in regards to medical cannabis being legalised is the view that cannabis use can increase the likelihood of psychosis; however this idea has not been solidified. Most linkage between psychosis and cannabis has been attributed to either long term or excessive recreational use of recreational cannabis (Hall and Solowij 1998, 1613).

Medical cannabis is prescribed by doctors in regulated amounts, to assure the patient is only relieving their pain, not abusing the substance. As far as patients becoming addicted to cannabis are concerned, this has not been suggested as being problematic. Cannabis has been presented as being less addictive than tobacco and certain conventional medicines such as morphine or opium (Wodak and Mather 2014, par.6).

2.2 Alternative cannabis ingestion methods

Another key concern regarding cannabis use is how ‘smoking is bad for lungs’ (J.Baxter, H.Baker and S.Reece 2013, 6), yet this problem can be avoided. The taboo of smoking the substance can be removed by using the cannabis in other forms such as vapour or liquid. The cannabis substance can be heated up in a vaporizing machine, the THC (the chemical within cannabis suggested to reduce pain) is extracted into a vapour form that can be inhaled (Wodak and Mather 2014, par.19).
The vaporising method ensures that the patients are not be ingesting any harmful chemicals or carcinogens, only the medicinal THC is consumed. Other safe methods of consuming cannabis are available such as the Sativex spray; this is an oral spray that provides all the therapeutic benefits of cannabis. Sativex is available for use in numerous countries worldwide, suggesting that it is a reliable method of cannabis consumption (Wodak and Mather 2014, par.20).

Alternative cannabis products to vaporizers also exist, skin patches, inhalers and rectal suppositories are also available (Ware, et al. 2003, 214). Further material has provided other forms of cannabis products such as ‘oral tablets, cannabis foods and drinking teas’ (Mather, et al. 2013, 760). It is becoming justifiable that several taboos and concerns in regards to the legalisation of medical cannabis could be eased if more explanation was given to those concerned. This thesis debates that the Australian legality of medical cannabis by analysing material that suggests cannabis is in fact a useful medical substance.

2.3 Medical properties of cannabis

Prominent research has highlighted cannabis to have an effective analgesic (pain killing) effect on humans (Gowing, et al. 1998, 449). In fact, research has revealed cannabis to have ‘effective analgesic effect on humans without significantly affecting their mood’ (Lucas 2012, Cannabis as an Adjunct to or Substitute for Opiates in Treatment of Chronic Pain, 127). The Cancer Council NSW highlighted in their 2012 Position statement that cannabis is an effective “analgesic in patients with moderate to severe pain” (Cancer Council NSW 2012, 1). With so many variations of pain killers available in Australia, why would the implementation of one more be so controversial?

Two chemicals within cannabis have been presented to be specifically advantageous in medicine; they are the chemicals THC and CBD. THC is said to hold analgesic, anti-spasmodic, anti-tremor, anti-inflammatory, anti-emetic and appetite stimulant properties. Whilst CBD has been cited as containing an: anti-inflammatory, anti-convulsant, anti-psychotic and anti-oxidant effect on humans (Pilcher 2005, 214).
Cannabis produces its medicinal effects by binding to receptors in the human body, cannabis binds both to the body receptor CB1 which is in the brain, and receptor CB2 which is in the immune system (Massi, et al. 2003, 838). It has been put forward in the German medical journal *Deutsches Arzteblatt International* that ‘the various medical properties of cannabis lay in their ability to activate the bodies CB1 and CB2 receptors’ (Grotenhermen and Muller-Vahl 2012, 500).

Cannabis is a fast acting drug, for example: as far as apoptosis (death) in cancer cells is concerned – cancer cells can be significantly damaged within 48 hours (DePetrocellis, et al. 1998, 8376), and complete tumour apoptosis can occur in 72 hours (Preet, Ganju and Groopman 2008, 340). Neurodegeneration has also been cited as having a fast acting recovery when treated with cannabis. Studies have shown neurodegeneration to be prevented by up to 36% within the period of one week (Van Der Stelt, et al. 2001, 6475).

Different strains of cannabis have been suggested to be effective in tackling different forms of illnesses; Mullaway Medical Pty Ltd has successfully been engineering different strength of medical cannabis products that address numerous illnesses (Mullaway Medical Cannabis Pty Ltd 2012, 14). This medical tailoring of cannabis is confirmed when it is presented that ‘medical cannabis is so entrenched in Dutch society, that they have engineered different strains of cannabis to deal with different diseases’ (Johns 2014, par.9). Such innovations as tailored cannabis can assure that no matter the severity of illness, there can be a product designed to suit any patient’s needs. The fact that cannabis products can now be tailored to a doctor’s requirement, suggests that cannabis is possibly safe enough to be implemented within the Australian medicine.

Unlike some already approved pharmaceutical medications for example opium, cannabis is unique in the quality that it has been presented as impossible for humans to overdose from it. Thomas and Reiman suggest this when they put forward “there is no amount of marijuana than can result in an overdose” (Thomas and Reiman 2013, 7). Separate material supports the safety of cannabis: ‘unlike other pharmaceutical drugs, cannabis is safer in the way that you cannot overdose from it’ (Smith 2013, 57). Dr. Allen reinforces the idea of cannabis ‘safety when he
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states that humans can handle “extremely high doses” (Allen 2014, par.3) of cannabis. As far as humans are concerned, it has been suggested that cannabis is not overtly harmful. Medical research suggests that 99% of the time the main side effect of cannabis use is “dizziness” (Degenhardt and Hall 2008, 1685). In fact it has been presented that 71% of patients which used medical cannabis actually saw their condition worsen when they discontinued cannabis use (Topp 2006, 12).

Mainly due to the two substances sharing similar medical qualities (Lucas 2012, Cannabis as an Adjunct to or Substitute for Opiates in Treatment of Chronic Pain, 125), there are numerous materials that suggests cannabis can replace the use of opiates in pharmaceuticals. Australian Senator Di Natale reiterates this point when she suggests that ‘cannabis is far less addictive than many currently available opiate medications’ (Sky News 2014, par.13).

‘The existence of other harmful pharmaceutical medications within the Australian medical system’ (Gowing, et al. 1998, 446), may make it possible to replace some of these harmful medications with the option of medical cannabis (Thomas and Reiman 2013, 7). Previous studies on illegal medical cannabis use in Australia taken out by the New South Wales State Government revealed that out of 128 participants, 62% of them had discontinued use of other medications once they had used cannabis as a replacement (Swift, Gates and Dillon 2005, 5). Further research carried out in Canada revealed that out of 404 participants, 67.8% of them stopped using other prescribed medications once they were provided cannabis as a replacement (Lucas, Reiman, et al. 2012, 1).

Cannabis is also presented to share similar qualities to many anti-psychotic medications (Deiana 2012, 46); this again supports the point that cannabis could replace some existing medications in Australia. Furthermore, material by Lucas presents another positive correlation with legalising medical cannabis; Lucas suggests medical cannabis can reduce alcohol and illegal drug use. A certain medical cannabis trial presented that 36.1% of the participants had stopped using other illegal drugs once prescribed cannabis; a further 41% of the participants were presented to have stopped consuming alcohol (Lucas, Reiman, et al. 2012, 1).
2.4 Illnesses that cannabis may be an efficient replacement to existing medications.
Cannabis has been presented in certain material to be effective at combating numerous illnesses; one of the most prominent is cancer. It was put forward in research from Harvard University that ‘THC has the ability to inhibit tumour growth’ (Preet, Ganju and Groopman 2008, 339). Many chemical components of cannabis such as THC and temazolamide (TMZ) have been presented within medical research to ‘reduce the growth of cancer cells’ (Torres, Lorente and Rodriguez-Fornes 2011, 90).

Certain cannabinoids in cannabis are presented to fight cancer, generally via two methods. First it can kill cancer via tumour vascularization (by reducing the capacity of blood vessels within the tumours); or secondly it can cause cancer death by apoptosis (cancer death by fragmentation or shrinkage) (Caffarel, et al. 2010, 3). Research has suggested that THC can successfully reduce ‘the growth, number, amount and severity of lung cancers’ (Caffarel, et al. 2010, 1). It was concluded in the American Association for Cancer Research report for 2006 that, ‘the apoptosis of tumour cells when exposed to cannabinoids, validates the use of cannabis in medicine’ (Carracedo, Gironella and Lorente 2006, 6748).

Figure 6 (Gardner 2013, 1)

Figure 6 (Gardner 2013, 1) shows the almost periodical regression of a brain tumour (the white mass in the center of the brain) after 15 months of cannabis
Cannabis has been presented to be effective towards fighting breast cancer by inhibiting cell growth. The National Academy of Sciences (U.S.A) has presented that cannabis is effective at combating the ‘fast acting tumours in breast cancer’ (DePetrocellis, et al. 1998, 8375). Cannabis has also been presented as being efficient in fighting brain tumours; research published in the *British Journal of Cancer* supported this. The journal revealed that a proportion of terminal patients were administered cannabis to aid their cancer treatment, the research revealed that patients who used cannabis, saw an increased lifespan of 46-60% when compared to patients not provided cannabis (Guzman, et al. 2006, 197). This British research has suggested that cannabis can aid sufferers of breast cancer. This positive correlation between breast cancer reduction and cannabis cannot be solidified within Australia unless there is a change in the current national drug policy, which allows medical cannabis research.

Research published within the US National Library of Medicine has presented how prostate cancer can be decreased if exposed to cannabinoids (Mimeault, et al. 2003, 1-12). Similar study published by the *American Journal of Cancer* also presented cannabis to be effective in combating pancreatic cancer (Carracedo, Gironella and Lorente 2006, 6748). The US National Library of Medicine has also published material which suggests that cannabis is effective in combating the side effects of leukaemia (Jia, et al. 2006, 549). Separate research has similarly presented cannabis to be effective in combating multiple cancers such as lung cancer (Preet, Ganju and Groopman 2008, 342), liver cancer (Vara, et al. 2011, 1099) and glioblastoma (Torres, Lorente and Rodriguez-Fornes 2011, 90). There is clearly material which suggests cannabis can be effective in fighting multiple forms of cancer, with Australia being a high risk country for cancer, it is considerable that any medication that could combat cancer would be embraced within Australia.

Material has also presented cannabis to be effective in reducing certain side effects of HIV/AIDS. By increasing the bodies’ appetite, cannabis is presented to be an effective tool in combating the weight loss symptoms that frequently accompany the HIV illness (Gowing, et al. 1998, 447). Cannabis is also presented as a key suppressant of vomiting; vomiting is often presented as another side effect of HIV/AIDS (Smith 2013, 57). The *Clinical Science Journal* also presents research that
suggests cannabis is beneficial for HIV/AIDS sufferers, trials were taken out on HIV/AIDS patients that revealed cannabis to be effective in increasing appetite and vomit suppression (Haney, et al. 2007, 545). This information suggests that cannabis can be an effective medicine for HIV/AIDS sufferers.

Nausea is a further illness that has been suggested to be suppressed when treated with cannabis, the efficiency of cannabis in its relation to suppressing nausea is supported when a trial presented that 86% of the participants saw a reduction in nausea once they had consumed cannabis (Swift, Gates and Dillon 2005, 5).

As mentioned, cannabis has been demonstrated in numerous materials to have ‘positive effect appetite and food intake’ (Smith 2013, 56). Cannabis is said to produce hunger in the brains feeding receptors, therefore increasing the food intake of cannabis users (Australia. National Cancer Institute 2014, par.11). The Cancer Council NSW Factsheet has highlighted cannabis as being particularly effective for patients suffering “weight loss and muscle wasting” (Cancer Council NSW 2012, 2). Being presented in the Fact Sheet of the Cancer Council NSW, medical cannabis is visibly gaining professional attention in Australia. If Doctors within the Cancer Council have already advocated for the legalisation of medical cannabis, it is clear that medical cannabis has a prominent and informed medical backing within Australia.

Sufferers of Multiple Sclerosis or ‘MS’ have also been presented within material to benefit from cannabis use. Cannabis is reportedly able to “alleviate an entire range of symptoms associated with MS” (Smith 2013, 57). It has been suggested in the 1998 American Drug and Alcohol Review that ‘spasms associated with MS may be relieved once the patient has used cannabis’ (Gowing, et al. 1998, 447). It has been suggested that cannabis is such an efficient medicine for MS that even the placebo of using cannabis has been presented in certain cases as being beneficial in MS patients (Thomas and Reiman 2013, 5).

The medicinal properties of cannabis are also presented to be productive in combatting the main effects of epilepsy. The effectiveness of cannabis in regards to treating epilepsy is notable in the case of an unnamed West Australian youth. The youth went from ‘being unable to efficiently walk and talk, to being able to run and
string full sentences together, after just one week of cannabis treatment’ (Murray 2014, 37). Epilepsy and cannabis have had a long historical correlation; in 1878 the U.S.A published the first medical journal which confirmed that cannabis is an effective tool in reducing epileptic fits (Phillips 2014, par.16). In 2003, the British Medical Association concurred that cannabis is effective in combating epilepsy; they approved a cannabis based drug for use on certain epileptic patients (Phillips 2014, par.5). It has been cited that certain epileptics in Australia have resorted to dangerous and illegal methods to gain cannabis, methods such as associating with ‘underground drug networks’ (Murray 2014, 37). It is a concerning fact that epileptic patients in Australia disregard their own safety in order to obtain cannabis, cannabis that would be available to them legally if they lived in a ‘medical cannabis country’ such the Netherlands or Czech Republic.

Seizures are commonly associated with epilepsy; however they can emerge from many numerous medical conditions. Within Australia there have been certain cases of cannabis being successful in reducing seizures; one example is the case of Tara O’Connell. Tara used to suffer up to 200 seizures a day, since Tara started using oil made from cannabis her “seizures have stayed away” (Su 2014, par.7). A second example of cannabis aiding epilepsy can be seen in the case of a British infant who was “convulsing almost constantly” (Phillips 2014, par.1). The Doctor administered the child with cannabis oil and supposedly “stopped the seizures almost immediately” (Phillips 2014, par.3). Material has presented there are certain cases which have highlighted the positive effect medical cannabis has on reducing seizures, therefore seizures are another condition that could be medicated if Australia legalised medical cannabis.

Strokes are another condition which have been reported as treatable when exposed to cannabis. THC has been presented in certain cases by the US Department of Health and Human Services to protect the brain from strokes, it does this by reducing the likelihood of ‘low blood flow to the brain’ (Allen 2014, par.1). If research by the US government has revealed a positive relationship between cannabis and the reduction of strokes, why has the Australian government not considered these findings?
Cannabis has also been suggested to be beneficial to sufferers of arthritis; tests carried out at London Imperial College showed the inflammation of arthritis sufferers can be decreased by up to 50% when cannabinoids were administered (Reichard 2012, par.12). With positive British results in regard to cannabis’ effect on arthritis, Australian researchers should also have ground to test the efficiency of cannabis on arthritis.

Cannabis has also been presented as being effective in reducing the likelihood of diabetes; research has suggested that cannabinoids can reduce the likelihood of diabetes by up to 58% (Torres 2014, par.36). One research carried out on experimental mice, presented that only 30% of the mice which had been using cannabis showed signs of diabetes, compared to a 90-100% rate of diabetes within mice that were not provided cannabis (Reichard 2012, par.13). International material has revealed a correlation between cannabis use and the reduction of diabetes, therefore diabetes is yet another example of an illness that could be addressed, if medical cannabis were to be legalised in Australia.

Hepatitis-c is a further illness that cannabis has been presented to be successful in reducing; the Wyoming Institute of Technology conducted supporting research that presented results which supported cannabis’ efficiency in combating hepatitis-c. In human trials on Hepatitis-c sufferers, 99.8% of the subjects were cured of the illness; the remaining 0.2% showed advanced signs of hepatitis-c reversal (Stone 2013, par.3). This research by a respectable institution enforces the view that cannabis has a potential to reduce hepatitis-c. With a presented cure ratio of nearly 100%, there should be grounds for an Australian study on cannabis’ medical potential in relation to hepatitis-c.

Individuals who suffer from sleeping problems such as insomnia are also presented to benefit from cannabis use; this is simply because sleep is often found to increase with cannabis use (Ware, et al. 2003, 211). Research published in the International Journal of Drug Policy has cited cannabis to be an effective medicine for patients who have trouble sleeping (Walsh, et al. 2013, 511). A survey of 127 insomnia patients revealed that 86% had seen an improvement in their sleeping pattern once they were provided cannabis (Swift, Gates and Dillon 2005, 5). Cannabis could
possibly help a range of Australian insomniacs which include shift and FIFO (fly-in fly-out) workers with sporadic work schedules. Being a non-fatal illness, insomnia can also offer Australian researches a vital chance to study the long term effects of cannabis use on humans.

Post-Traumatic Stress Disorder (PTSD) is yet another illness that cannabis has been presented to be effective in addressing. The *Journal of Psychoactive Drugs* has put forward that during a test on 80 participants with PTSD, 75% of the participants had showed improvement once they were provided cannabis. The journal came to the conclusion that cannabis is directly associated with a reduction in PTSD (Greer, Grob and Halberstadt 2014, 73). This evidence is reinforced in the case of US Army veteran Matt Kahl who declared ‘cannabis to be the only medication that allows him to control his PTSD’, Kahl admitted that he went from being ‘suicidal to stable, once he was provided cannabis as a medication’ (Dinte 2014, par.5).

The cannabinoid, cannabidiol (CBD) has been credited in a publication by the *Drug Testing and Analysis Journal* as being highly effective towards reducing psychosis. The journal states that CBD has non-psychoactive properties that help the brain reduce the likelihood of psychosis (Deiana 2012, 46). With mental health being an ongoing issue within Australia, it may be beneficial for the country to invest in studies which analyse the relationship between cannabis and psychosis.

Still on the topic of mental health, cannabis has also been presented to have a positive effect on sufferers of depression. Denson and Earleywine put forward in their article *Addictive Behaviours*, those cannabis users often “had less depressed mood, more positive effect, and fewer somatic complaints than non-users” (Denson and Earleywine 2005, 1). The same article researched the benefits of recreational cannabis use compared to medical cannabis use, it was discovered that recreational smokers tended to be less depressed than medical users. This research suggested that it was most likely the individual’s illness, not the cannabis use that was catalyst to their depression. One of the key concerns in regards to medical cannabis being legalised is the view that cannabis can increase the likelihood of psychosis; however this article has suggested this opinion to be generally incorrect.
Conventional anti-psychotic medication has been noted to frequently have little effect on schizophrenic patients, for this reason cannabis has been suggested to be an appropriate alternative to generic schizophrenia medications (Deiana 2012, 46). Further research from Canada has again suggested that cannabis does not have a negative effect on schizophrenic patients (Morris 2014, par.1). This suggests it may be possible for the Australia to consider treating schizophrenic patients with cannabis, if their conventional medication is not working.

Certain material has presented cannabis to be effective in reducing the negative side effects of spinal cord injury. The spasticity, spasms and pain that prominently accompany spinal cord injury are suggested to be relieved if cannabis is used (Gowing, et al. 1998, 447). With Australia being a keen participant of contact sport such as rugby and AFL, there is a high probability that spinal damage will be an ongoing problem within Australian society. Therefore medical cannabis should be researched within Australian sport science.

Research has presented cannabis to be effective in reducing neuronal damage also known as neuro degeneration; in 2001 the Dutch Journal of Neuroscience published results that supported these findings. The journal suggested that THC was successful in reducing neuronal damage by up to 36% within only 7 days (Van Der Stelt, et al. 2001, 6475). The neuropathic properties of cannabis have also been presented within the Australian Drug and Alcohol Review of 1998 when it was suggested that cannabis ‘has the ability to reduce neuro pain’ (Gowing, et al. 1998, 451). Having been cited in the Australian Drug and Alcohol Review as holding therapeutic value almost 17 years ago, it is surprising that Australia still lacks professional research regarding medical cannabis’ medical potential.

Further material has suggested cannabis could benefit certain individuals prone to heart attack by reducing blood flow, cannabinoids are suggested to reduce the probability of heart attacks by up to 66% (Torres 2014, par.21). Heart attacks are genetic, so theoretically cannabis could be used as a preventative medicine to reduce the likelihood of heart attack. Unless Australia changes its cannabis policy, preventative cannabis use for heart attack prone individuals will stay theoretical.
It has been put forward in the *Journal of Gastroenterology and Hepatology* that cannabis ‘is effective in reducing inflammatory bowel disease (IBS)’. The journal states that in a human study, 5 out of 11 IBS sufferers experienced complete remission, and 10 out of 11 saw improvement once provided with THC (Naftali, et al. 2013, 1276). Having personally witnessed a series of IBS adverts on Australian Free to air television, it is clear that the illness is not an irrelevant issue in Australia. If Australia legalised medical cannabis, cannabis could be used as a natural alternative to current IBS medications.

The vision impairment Glaucoma is the final condition presented within this thesis to be respondent to cannabis treatment; by reducing the blood flow to the eye, cannabis has been shown to be effective in clearing the ‘blurry’ vision of glaucoma sufferers (Gowing, et al. 1998, 448).

![Figure 7](image)

Figure 7 (Colorado Department of Health and Environment 2014) highlights the symptoms that Colorado, U.S.A medicates with cannabis.
The ‘discontinue’ rate of medical cannabis supports its reputation as a useful medicinal product, only 10% of medical cannabis users surveyed in the U.S.A have discontinued use (Mather, et al. 2013, 760). The fact that only a small percentage of medical cannabis users decide to discontinue use, suggests that users of cannabis are reporting a medical improvement. The American Medical Association supports that cannabis is a legitimate medicine; in 2009 the association added the substance to their list of approved prescription drugs (Mather, et al. 2013, 759). This raises the debate, why to date has Australia ignored the medicinal properties of cannabis presented by the U.S.A?
Chapter 2 Conclusion

It has been suggested through an array of material in this chapter, that cannabis can be used to address numerous illnesses in Australia. Ranging from cancer to MS, this chapter has presented multiple conditions that have been treated internationally with cannabis. This chapter has presented the general controversies in regard to cannabis use, followed by numerous ingestion methods that are available for cannabis. This thesis suggests that Australia would benefit from researching the medicinal effects of cannabis, throughout new research the Australian government could discover certain capabilities of cannabis that were not recognised in past trials.
Chapter 3: Political and Socio-Economic debates for the Australian implementation of medical cannabis.

Chapter 3 Introduction

Throughout the duration of this chapter, the current legal status of medical cannabis in Australia is discussed. Presented within this chapter of the thesis are the economic and social advantages that can accompany legalising medical cannabis. The political, social and organisational acceptance of medical cannabis within Australia and internationally are also discussed.

This chapter will start by presenting the current legal status of cannabis in Australia. The social, organisational and political acceptance of cannabis in Australia is then discussed. The chapter concludes by presenting the social and economic advantages that have been presented to accompany the implementation of medical cannabis.

Discussion

3.1 The current legal status of cannabis in Australia

Currently Australia does not legally allow the use of cannabis in its Therapeutic Goods Administration (Baxter, Baker and Reece 2013, 1). Cannabis was originally banned in 1925 following the result of a League of Nations summit; Victoria was the first state to outlaw cannabis in 1928. However the League of Nations ban did not take full effect in Australia for another three decades (Mather, et al. 2013, 759). On the back of limited research, cannabis was categorised as harmful as cocaine, heroin and morphine then therefore made illegal (Fitzgerald 2013, par.16). Following the League of Nations ban, cannabis was categorised as illegal in Australia and internationally. 89 years after the 1925 League of Nations summit on cannabis, countless numbers of individuals have been jailed due to cannabis use and millions in government capital has been spent on enforcing the cannabis ban.

Australia is signatory to numerous international agreements that restrict the use of cannabis in any form (Australia. NSW Parliament 2014, 8). For instance, Australia is signatory to the 1961 United Nations Single Convention on Narcotic Drugs, this bans the use of medical cannabis (Australia. NSW Parliament 2014, 8). The 1988 UN
Convention against Illicit Traffic in Narcotic Dangerous Psychotropic Substances also restricts Australia from being able to import cannabis (Australia. NSW Parliament 2014, 8). There are also numerous Commonwealth laws that restrict the use or importation of cannabis in Australia. Such laws as the 1995 Criminal code Act, 1901 customs Act, 1956 Customs (Prohibited Imports) Regulations, 1967 Narcotic Drugs Act, 1989 Therapeutic goods Act and the 1990 (Traffic in Narcotic Drugs and Psychotropic Substances) Act all ban the use of cannabis (Australia. NSW Parliament 2014, 8-9). Clearly Australia is signatory to numerous agreements that restrict the use or importations of cannabis within the country, these mentioned laws are the key reason that medical cannabis is illegal in Australia.

‘As mentioned, there are ‘international legal obligations’ that currently prohibit Australia from using medical cannabis, these obligations mean that citizens found in possession of small amounts of cannabis can receive large fines (Topp 2006, 13). Australia is signatory to further international treaties which makes it illegal to sell, use or produce any cannabis product such as the 1995 Commonwealth Criminal Code section 307.5-307.7 which outlines how it is illegal to import or export any form of cannabis, and section 307.1-307.4 that highlights how it is also illegal to possess any form of cannabis (Australia. NSW Parliament 2014, 22). According to current Australian law, cannabis is a class 9 illicit drug, which puts it in the same category as heroin and LSD (acid) (Smith 2013, 56).

Drug laws within Australia are primarily enforced on the state level, however in Australia cannabis comes under a full national restriction (Smith 2013, 56). In the Australia Capital Territory (ACT), South Australia (SA) and the Northern Territory (NT) cannabis has been decriminalised, this means although still illegal, the repercussions for having cannabis are smaller in these states. In the ACT if someone is caught with up to two cannabis plants or 25 grams of dried cannabis they can receive a $100 fine, In SA individuals with100 grams of cannabis or one plant can receive a $50-$150 fine and in the NT 50 grams of cannabis or two plants could bring an individual a $200 fine (National Cannabis Prevention and Information Center 2013, 1).
In contrast to the ACT, SA and the NT, cannabis is completely illegal in the remaining states of Australia. This means individuals found in possession of cannabis can endure much more detrimental penalties than those in the decriminalised states of ACT, SA and NT. In New South Wales, cannabis possession of 15 grams is given two cautions before criminal charges may be placed. Victoria allows up to 50 grams of cannabis but only offers two cautions before charges are placed. Tasmania offers three cautions of up to 50 grams, while Queensland only offers one caution of 50 grams. Western Australia could be seen to have the strictest penalties, any individual found with 10 grams of cannabis are automatically made to face a criminal charge, fine or “cannabis intervention session” (National Cannabis Prevention and Information Center 2013, 3). The cannabis intervention session is a rehabilitation program that aims to assist offenders in quitting cannabis use.
3.2 Political, Social and Organisational Acceptance of Cannabis

Cannabis has been reported as being the world’s most frequently consumed illicit drug (Hall 2000, The cannabis policy debate: finding a way forward, 1690). That statistic does not differ in Australia, the Cancer Council New South Wales has reported cannabis as being the most commonly used illicit drug within the country (Cancer Council NSW 2012, 1). In 2010, the Cancer Council reported that 1.9 million adults within Australia have tried cannabis (Cancer Council NSW 2012, 1). Research has calculated that 40% of the country has tried cannabis, including 300,000 Australians that use cannabis daily (Smith 2013, 56). The consumption of cannabis within Australia is much higher than the average country, Australia and their geographical neighbours New Zealand are cited as being the countries with the most prevalent cannabis use (Baxter, Baker and Reece 2013, 1). In summary, certain
material has presented a significant percentage of the Australian population to find cannabis an accepted and frequently used substance.

Illicit substances such as opium are frequently used as ingredients in modern medical products. This concern was raised in Australia when Premier Campbell Newman questioned ‘why is opium currently used in medical practice yet cannabis is not’ (Vogler 2014, par.4)? This concern is again expressed when it is quoted by Murray that “We grow opium poppies in Australia in secure locations for their accepted use in our most effective painkillers...[S]urely we can do the same with marijuana” (Murray 2014, 37).

Cannabis has been presented to hold similar painkilling attributes as opium. Cannabis being a less addictive substance than opium would mean that the implementation of cannabis in opium’s place could reduce the likelihood of opium dependence or withdrawal symptoms becoming problematic for patients (McGowan 2014, 70). It appears possible to consider the use of cannabis in circumstances where opium addiction has been problematic. The use of cannabis in place of opium seems possible due to the similarities between cannabis and opium, the possibility that cannabis might be less addictive than opium can also be seen as being advantageous.

Former NSW Premier Bob Carr is a passionate campaigner for medical cannabis implementation in Australia (Hansen 2014, par.12). In 2003, the Carr government announced its intention to introduce a four year medical cannabis trial; however cannabis supply issues prevented the trial from ever taking place (Australia. NSW Parliament 2014, 5). Australia had another chance to change their law on medical cannabis in 2013 when a New South Wales Parliament Committee put forward an amendment to facilitate terminally ill patients the right to possess up to 15 grams of cannabis for medical purposes (Coultan 2013, par.1). However, this proposal was denied by the New South Wales Government, it was denied due to a ‘lack of evidence supporting cannabis, and its relation to pain relief’ (Hawke 2013, par.13). Australian politician MP Kaye was quoted as being ‘disappointed’ with the conclusion to the 2013 New South Wales amendment, similarly former Australian MP O’Grady was also said to be correspondingly dejected. O’Grady suggested that
‘good policy is evidence based’ and a medical cannabis trial needed to have been performed before the amendment was denied (Hawke 2013, par.9). This thesis believes processes such as the bills from the O’Grady and Carr governments’ are the most ethical way of approaching legalised medical cannabis. In order for medical cannabis to be implemented there must first be ethical bills presented to the Australian government that entail professional research and analysis on medical cannabis.

Political support of medical cannabis’ implementation in Australia is again visible in the forms of medical cannabis bills being drafted by John Kaye of the NSW Greens party; this bill will see certified patients legally allowed to possess small amounts of cannabis for medical use. Similarly the NSW Nationals MP Kevin Anderson is also drafting a separate medical cannabis bill; Anderson is quoted to ‘not condone the use of drugs’ (Hansen 2014, par.16) however after researching cannabis’ positive benefits, Anderson decided to pursue the medical cannabis bill (Australia. NSW Parliament 2014, 2). Both Kaye and Anderson’s bills are expected to be released by the end of 2014, so too is a separate Western Australian medical cannabis bill (Washer and Langman 2014, par.4-5).

Green’s Senator Di Natale reinforces her wish to see Australia legalise medical cannabis when she states that ‘it is cruel to deny patient’s medical cannabis, since research has presented its legitimacy’. The same material reiterates this point when it is stated that Liberal co-convenor Stone suggests that ‘Australia join other developed states with the implementation of medical cannabis’ (Sky News 2014, par.8). This acceptance of medical cannabis at a political level in Australia thoroughly enforces the relevance and legitimacy of this overall thesis.

The debate regarding medical cannabis’ implementation in Australia is often prominent in political material. Medical cannabis has been thoroughly promoted by numerous Federal and State politicians in Australia such as: NSW Premier Mike Baird, WA Labor Leader Mark McGowan, MP Mal Washer and MP Melissa Parke (McGowan 2014, 70). Mark McGowan, leader of the Western Australian (WA) Labor Party has supported medical cannabis since 2010. McGowan had a friend that passed away at thirty years of age, Prior to his passing, McGowan’s’ friend’s only
highlight to the day was apparently “when he smoked cannabis in a quiet courtyard to ease his pain” (McGowan 2014, 70). Ever since McGowan’s friend passed away, the leader of the WA Labor Party has advocated for the use of medical cannabis.

With the Leader of the WA Labour Party advocating the use of medical cannabis, it only seems logical that Australia pursues the issue more thoroughly. McGowan adequately summons his view the following quotation: “We need laws to support people with chronic or terminal illnesses who find cannabis relieves their symptoms and pain” (McGowan 2014, 70). A final bill presented by Australian Capital Territory (ACT) MP Rattenbury presented that an overwhelming 70% of Australians support the use of medical cannabis (Rattenbury 2014, 1). Visible in the forms of the multiple medical cannabis bills presented in Australia as well as the advocacy from multiple politicians, it is clear that there is a large amount of political support for medical cannabis in Australia.

There is a vast amount of organisational support for medical cannabis presented from the U.S.A, this is visible in the form of surveys taken out on medical doctors (MD) and police officers in the U.S.A. Revealed within the survey is that, 69% of MD’s believe that cannabis should be available for medical use (Medical Cannabis Australia 2014, New Poll: 69% of Physicians in the U.S. Believe Cannabis Has Legitimate Medical Benefits, par.1). A second survey taken out on 11,000 police officers revealed that 65% of them not only believed cannabis should be available for medical use, but also believed cannabis should be decriminalised or legalised throughout the U.S.A (Medical Cannabis Australia 2014, New survey: 64% of Law Enforcement Officers Want Cannabis Laws Reformed, par.1). It seems logical to at least research medical cannabis within Australia due to the 69% of MD’s and 65% of police officers in the U.S.A that promote the legalisation of medical cannabis. These surveys are not the opinions of biased individuals; they are the opinions of qualified doctors and law enforcement officers. Former US President Bill Clinton clarifies that the U.S.A implemented medical cannabis due to “a lot of evidence that it helped patients” (Edwards 2014, par.3), why has the Australian government not analysed this “evidence” of cannabis being medically beneficial for their selves?
It is not only surveys in the U.S.A that promote the use of medical cannabis; surveys within Australia have presented a 69% support rate for the outright implementation of medical cannabis. Furthermore, 74% of the surveyed individuals were more favourable of a medical cannabis trial prior to a possible implementation (Wodak and Mather 2014, par.5). Similar figures are again supplied by the 2010 *National Drug Strategy Household Survey Report* by the Australian Institute of Health and Welfare; the Survey presented a 70% support rate for the implementation of medical cannabis and a further 75.5% endorsement rate of a trial (McGowan 2014, 70).

Research by Lenton and Ovenden has presented further Australian social acceptance of cannabis, they put forward that 64% of Australians support the use of medical cannabis (Lenton and Ovenden 1996, 790). Yet again, Australian support for medical cannabis can be seen in the form of the Help End Marijuana Prohibition (HEMP) party, the party placed 8th out of a possible 77 registered parties in the 2014 Western Australian Senate election (Green 2014, par.16).

Influential institutions in Australia such as the Cancer Council have recently expressed their support for the implementation of medicinal cannabis in Australia (Godfrey 2014, Growing support for medical cannabis, par.16). The Cancer council NSW has reportedly ‘recognised the medical capabilities of cannabis and has suggested decriminalisation of cannabis to approved patients’ (Cancer Council NSW 2012, 1). Along with the NSW Cancer Council, the NSW Nurses and Midwives Association (NSWMNA) which has over 59 thousand employees (Godfrey 2014, Key nursing union backs medicinal cannabis, par.1) has also “formally endorsed” (Holmes and Kiejda 2014, 1) that Australia decriminalise cannabis for terminally ill patients. The NSWMNA has suggested that the government “support the use of 15g of dry cannabis on patients who have AIDS and other terminal illnesses” (Coultan 2013, par.1).

The Australian Medical Association has recently acknowledged the “therapeutic potential” (Sky News 2014, par.10) of cannabis. The Association has “called for clinical trials on the use of cannabis in order to establish its potential” (Cook and Smith 2014, par.13). The World Health Organization (WHO) is another organisation that supports the decriminalisation of medical cannabis, the WHO has ‘acknowledged the therapeutic capabilities of cannabis in regard to its efficiency in
Michael Leo Hawkins, B.A. 31218899SWM617 Research Thesis 2014 Supervisor: Professor S.Makinda

reducing nausea and vomiting’ (Cancer Council NSW 2012, 5). Material has presented that there are influential medical associations in Australia and abroad that encourage the legalisation of medical cannabis. This promotion of medical cannabis from influential organisations and associations within Australia and abroad, suggest that Australia would benefit from again researching the efficiency of medical cannabis.

An influential actor for the promotion of medical cannabis in Australia is twenty-four year old Daniel Haslam. Daniel has terminal bowel cancer and uses cannabis to reduce his nausea, poor appetite and constant vomiting (McGowan 2014, 70). Nationally, Daniel and his mother have collected over 200,000 signatures advocating the decriminalisation of medical cannabis for the terminally ill (McGowan 2014, 70). Daniel has featured in television programs, newspapers and online articles advocating medical cannabis. It is stories like Daniel’s that are putting pressure on the Australian government to reconsider their stance on medical cannabis. Surveys on over 3,400 Australia citizens present that the 51-65 year old age bracket is the section of the population that are most inclined to embrace the legalisation of medical cannabis (Cook and Smith 2014, par.2). Presented by the statistics, mature adults are amongst the individuals promoting the use of medical cannabis in Australia. It seems unethical to be denying informed individuals the right to be using medical cannabis, if the substance does hold medicinal value.

3.3 Social advantages correlated with the legalisation of medical cannabis

Certain individuals may be critical that the implementation of medical cannabis could have violent or dangerous social side effects. However it has been documented the environment, neighbourhood and social circumstances are the main catalyst to violence in areas where medical cannabis is available. This idea is presented in studies on areas in the U.S.A with ‘cannabis dispensaries’, cannabis dispensaries are businesses where medical cannabis is sold (Williams and Freisthler 2011, 2). Sources of violence in areas where cannabis dispensaries are operational are presented to often suffer from similar catalysts of violence as areas without medical cannabis.
Catalysts of violence in these areas range from: ‘percentage of one person households, unemployment rates’ (Kepple and Freisthler 2012, 527) and “scale of income differences between rich and poor” (Wilkinson 2004, 1). Articles have even suggested that in Colorado where cannabis has recently been legalised, the overall crime rate has decreased by approximately 10.6% (Sarich, Colorado Sells $19 Million in Weed in March: $1.9 Million Goes to Schools and Crime Down 10% 2014, par.5).

Further articles state that Denver, a town in Colorado has seen an estimated 14.6% drop in property crime and a further 2.4% drop in violent crimes since the medical dispensaries opened (Sarich, Colorado Crime Rate Down 14.6% Since Legalizing Marijuana 2014, par.2). An overall drop in crime of 10.6% has been presented in Denver since medical cannabis was legalised (Diente 2014, par.8).

Further material presents that the legalisation of ‘medical cannabis dispensaries can be correlated with a reduction in homicide, assault and other crimes’ (Morris, et al. 2014, 1). The research suggests that the increased security measures within cannabis dispensaries such as: internal and external security cameras, doormen and requirement for all customers to carry valid identification can eventually increase local security. It has been suggested that security upgrades within cannabis dispensaries can inevitably lead to an overall reduction in homicide, assault and burglary crime rates within the vicinity of a medical cannabis dispensary (Morris, et al. 2014, 2). Further material presents cannabis to possibly reduce domestic violence within married couples. During a nine yearlong study that used numerous married couples as test subjects, the study presented that cannabis use was related to a lower level of domestic violence between the tested couples (Hillin 2014, par.2).

Figures’ 12 (Sarich, Colorado Sells $19 Million in Weed in March: $1.9 Million Goes to Schools and Crime Down 10% 2014) illustrates the correlation between medical cannabis implementation and a decreased homicide and aggravated assault rate in Denver, U.S.A.
Although cannabis is illegal in Australia, it has already been presented in this thesis that Australians are some of the largest consumers of cannabis in the world (Baxter, Baker and Reece 2013, 1). However many Australians still fear using cannabis due to its current legal status (Topp 2006, 13), this point is supported when it is stated that many Australian cancer patients fear breaking the law to obtain cannabis (ABC News 2014, The Cancer Council calls for mature debate on cannabis, par.8). 76% of surveyed non-cannabis users in Australia suggested that legal repercussions and fear of arrest currently deter them from using medical cannabis (Swift, Gates and Dillon 2005, 7). Research has presented that 62% of surveyed Australians would use medical cannabis if it were legal (Janichek and Reiman 2012, 1). Accessing illegal cannabis can put a patient in contact with criminal networks (Australian Medical Association 2014, 4); therefore many ill Australians rightfully choose to go without the substance.

![Figure 13](image)

Figure 13 (Diehm and Hall 2013) highlights how implementing medical cannabis may reduce its high prices.

Despite its illegal status, it has been suggested that a large number of Australians would still be inclined to use cannabis for medical reasons if it were not for the high prices of the substance (Topp 2006, 13). 51% of Australians stated that at an average of $25 per gram, cannabis is too expensive to use as a frequent medicine (Swift, Gates and Dillon 2005, 7). If cannabis were to be legalised, it has been suggested that the price would significantly drop from $25 per gram. As presented
in Figure 13 (Diehm and Hall 2013), it has been suggested that cannabis price could fall from $375 dollars per ounce to $38. This drop in price would ultimately mean that more individuals could afford to use cannabis for medical reasons.

Due to cannabis being illegal in Australia, many individuals can and have been arrested for possessing the substance. In a survey of 147 Australians that illegally purchase cannabis to use for medical reasons, it was presented that 27% of the 147 individuals surveyed had been either been “arrested, cautioned or convicted in relation to their cannabis use” (Swift, Gates and Dillon 2005, 7).

An example of Australian’s being arrested for self-prescribing themselves medical cannabis can be seen in the case of Cassie Batten and Rhett Wallace who were taken into custody after being found with small amounts of cannabis oil, the couple had used the oil to treat their own epilepsy (Harrison, Spooner and Donnelly 2014, par.1-2). A similar case of an Australian being arrested for using cannabis for medically is evident in the case of a 59-year-old South Australian man who was suffering leukaemia; he was imprisoned for two years after being convicted of growing cannabis (Wodak and Mather 2014, par.3).

This high level of cannabis related conviction is troubling for many reasons, for example the Australian Medical Association suggests that criminal convictions can often “negatively impact” on an individual’s life, long after their conviction. For example, “a criminal conviction can negatively impact on a person’s employment prospects and their accommodation and travel opportunities” (Australian Medical Association 2014, 4).

Suggestibly there is an ethical debate regarding individuals being arrested for using cannabis for medical purpose. If these imprisoned Australians were citizens of a medical cannabis country such as the Czech Republic or Netherlands, they would be free to use cannabis medically and without imprisonment. (Diehm and Hall 2013)
When 400 Western Australians were surveyed in regard to their opinions on cannabis' legality, it was presented that 2/3rds of the respondents were concerned that cannabis being illegal could eventually overburden the court system with unneeded cannabis cases (Lenton and Ovenden 1996, 783).

Within Evans’ literature, a similar opinion is presented when he puts forward that decimalising cannabis for ill patients could ultimately ‘free up the prison system’ (Evans 2013, 5). It has been presented that decriminalising cannabis could save the government of the U.S.A an estimated 13.7 Billion in prosecutorial, judicial, and correctional and police spending (Evans 2013, 2). If Australia were to follow the path of the U.S.A in respect to medical cannabis, Australia could benefit financially like the U.S.A has.

The Dutch coffeshoppe design is a unique social experiment that has been successful in the Netherlands, the Dutch government made it legal to purchase and consume cannabis in specific “coffeshoppes”. The Dutch government suggested this ‘cannabis friendly zone’ would provide an environment for users of cannabis to use and obtain their cannabis in safety. By providing an environment solely for the purchase of cannabis, cannabis users were able to avoid meeting up with criminal groups or drug dealers to obtain their cannabis. Since there was no longer a required contact with drug dealers, the coffeshoppes were seen to reduce the consumption ‘harder drugs’. It was presented that cannabis users in the Netherlands were no longer as freely exposed to other ‘harder drugs’, because these coffeshoppes only exposed them to cannabis use (MacCoun and Reuter 2011, 69). In theory, a similar policy to the Dutch coffeshoppe design can be a possible way of administering medical patients’ cannabis in Australia. Perhaps it would be possible to construct a medical coffeshoppe that only serves individuals with a valid medical script or card. However if this medical coffeshoppe was to be pursued any further, there would have to be supporting research by the Australian government to suggest medical cannabis is beneficial to these patients.

If medical cannabis were to be pursued in Australia, European trends suggest that the overall number of illegal cannabis crops will decrease (Decorte 2010, 271). This reduction in illegal cannabis crops can reduce the amount of drug dealers and
certain illegal activity within the country. This idea is reinforced by Klofas when he puts forward that in specific cases in the U.S.A, the implementation of medical cannabis has been correlated with a reduction in street, gang and drug crime. Klofas concludes his support of medical cannabis when stating that ‘cannabis purchased within a medical facility is safer than individuals purchasing cannabis from a drug dealer (Klofas and Letteney 2012, 4).

3.4 Economic debates for legalising medical cannabis

A final debate that is presented for the implementation of medical cannabis is the illusive profit local governments can gain from the industry, Klofas calls it a “very influential source of income and wealth” (Klofas and Letteney 2012, 4). In the U.S.A, the Colorado medical cannabis industry generated approximately $1.5 million USD solely in the month of January 2014 (McKay 2014, par.1).

Colorado generated $5.3million USD after three months (McKay 2014, par.1), it has been calculated that Colorado can expect to generate approximately $18million USD from medical cannabis by the end of 2014. (Phillips 2014, Colorado Pulls In Millions In Marijuana Tax Revenue, par.1). In 2011 cannabis totalled as an equitable 11 Billion dollar industry in the U.S.A (Klofas and Letteney 2012, 4), this equitable cannabis industry could financially benefit Australia if they were to industrialise medical cannabis like in case of the U.S.A.

Medical cannabis might not only provide the chance for the Australian government to gain a new lucrative industry, it could also generate careers for many individuals in this new industry. In the cases of medical cannabis being supplied in Canada and certain states of the U.S.A, “there are a wide range of direct and indirect employment gains being measured” (Washer and Langman 2014, par.24). New careers can develop upon medical cannabis becoming implemented such as cannabis trimmers, farmers, journalists and business owners (McKay 2014, par.3). Within the U.S.A, over 2,000 medical cannabis centers employ several thousand employees (Knight and Smith 2014, par.6). In reference to Washington, 10,000 new jobs have arisen due to the legalisation of both recreational and medical cannabis (Sarich 2014, Colorados marijuana legalization creates 10000 new jobs, par.1). Over 2,000 new jobs have been produced within the last few months alone and
Washington has been witnessing one of the lowest unemployment rates in the U.S.A (Sarich 2014, Colorado marijuana legalization creates 10000 new jobs, par.1).

It has been presented in numerous materials that Australia has a perfect climate to grow natural outdoor cannabis. This is supported when Jiggens presents that “In 1964, a massive infestation of wild cannabis was found growing along a stretch of the Hunter River between Singleton and Maitland in New South Wales” (Jiggens 2004, 3). This ability to grow outdoor cannabis is economically advantageous, since certain countries that already have medical cannabis for example Canada, spend “huge energy costs” on sustaining their indoor medical cannabis grows (due to inadequate natural climate for growth) (Washer and Langman 2014, par.21). Due to their frequently cold European weather, it would be fair to assume the Netherlands and Czech Republic would also suffer from the same growing predicament as Canada.

With a climate and farming industry that is prosperous for growing crops (National Farmers Federation 2012, 5), the medical cultivation of cannabis can be seen as smart economics for Australia. Tasmania already has a successful pharmaceutical poppy industry that could make an ideal and secure facility to grow medical cannabis. The Tasmanian farmers lobby have been quoted to have “welcomed the idea of growing medical cannabis in the state” (ABC News 2014, State Health Minister to discuss medical cannabis trials at the University of Tasmania, par.19).

Chapter 3 Conclusion

In summary this chapter has discussed the current legal status of cannabis in Australia, followed by the political, social and legal acceptance of medical cannabis in the country. This chapter has presented medical cannabis to be a substance that can have certain political, social and economic value. Medical cannabis’ implementation can lead to a reduction in crime, increase in economic revenue and increase in job opportunities. Medical cannabis can also reduce government, police and judicial spending. Therefore it has been presented within this chapter that medical cannabis can often be a valuable industry; if implemented correctly a medical cannabis industry could be financially beneficial for Australia.
Chapter 4: The Conclusion

Chapter 4 Introduction

This final chapter will summarise the overall hypothesis of this thesis by concluding that there is abundant evidence to suggest that medical cannabis is an extremely valuable resource both socially and medically. This thesis suggests that due to a lack in solid research on medical cannabis, Australia is lagging behind the numerous developed countries that have already implemented cannabis for medical use.

Discussion

As presented by certain developed states adopting the use of medical cannabis in recent years, medical cannabis has become an increasingly accepted medical tool internationally. Further research on medical cannabis in Australia could finally resolve the issue of cannabis’ legitimacy in medical use. Such a trial could possibly present the Australian government enough information to legalise medical cannabis.

This thesis has presented that medical cannabis use can be an effective way of treating numerous medical conditions. Cannabis has been presented throughout this thesis to be an efficient analgesic (painkiller) for humans, for this reason it has been heavily documented that cannabis can be used as an effective substitute for certain pharmaceutical medications as well as alcohol, tobacco and other illegal drug use. This thesis has presented many alternative methods to cannabis use that do not involve the heavily tabooed act of smoking, methods such cannabis oil, spray, edible foods, tablets and vaporisers are all available.

Unlike many conventional medications, cannabis is suggested to be a fast acting drug; results are often visible within 2-3 days. Also unlike many pharmaceutical drugs, cannabis is unique in the fact that humans are suggested to be unable to overdose from its use, in fact the main side effect to cannabis use if often ‘dizziness’. Another method that suggests medical cannabis to be safe is the fact that cannabis can now be personally tailored to a patient’s needed requirement. This ensures that the patient is neither receiving more or less than their required dose of cannabinoids.
Cannabis has been tested and supplied to many patients internationally for the treatment of numerous illnesses. Internationally, cannabis has already been prescribed to sufferers of: cancer, HIV/AIDS, nausea, ‘MS’, epilepsy, strokes, arthritis, diabetes, Hepatitis-c, ‘PTSD’, psychosis, depression, schizophrenia, spasms, neurodegeneration, heart attack, glaucoma, ‘IBS’, sleeping problems and lack of appetite; not to name them all.

Besides medical advantages, the implementation of medical cannabis within Australia can also provide numerous political and socio-economic advantages. Currently individuals who illegally source themselves cannabis, often run the risk of being jailed or fined if caught by police with cannabis. If medical cannabis were to be implemented in Australia, patients will no longer run the gauntlet of being imprisoned or having to associate with drug dealers to obtain cannabis.

Legalised medical cannabis will provide a safe grade of cannabis, to legitimate patients from a safe and legal environment. Medical cannabis legalisation has been presented within this thesis to correspond with a decreased crime rate and reduced amount of illegal cannabis grows in Europe. Significant research has also presented medical cannabis to be a significant catalyst towards a reduced rate of violence and assault. Further social acceptance of cannabis is evident within Australia, as it is the largest consumed drug in the country. Australian citizens are also cited as being one of the largest consumers of cannabis in the world along with geographical neighbours New Zealand. This thesis has ultimately suggested that the implementation of medical cannabis can assist with numerous social conundrums in Australia.

Legalising medical cannabis could also be an economically advantageous move for the Australian government. As presented by certain cases in the U.S.A, medical cannabis is a multi-million dollar industry which could open many employment opportunities in the country. Presented in certain examples from the U.S.A, by legalising medical cannabis the Australian government could save millions of dollars in prosecutorial, judicial, correctional and police spending. As evident by wild cannabis crops found in Australia, the country has a suitable climate for outdoor
cannabis cultivation; Australia also has a pre-existing, highly functional farming industry that could successfully cultivate medical cannabis.

Possible methods to implement the legal sales of medical cannabis in Australia could come in the forms of decriminalised cannabis use for the legitimately ill, as mentioned in the bills presented by Australian politicians that include Anderson, O’Grady and Carr. Other methods such as a medical coffeshoppe that follows the design of the Dutch coffeshoppe are also possible. However if any of these processes are to occur, Australia needs to hold mature political debate as well as medical research on the topic of medical cannabis. In order to successfully implement medical cannabis the Australian government must change its current drug policy on cannabis. This thesis has presented material which suggests that it is advisable for Australia to consider changing its current legislation on cannabis by first researching the use of medical cannabis.

Chapter 4 Conclusion

The hypothesis of this thesis is that there is abundant evidence to suggest that medical cannabis is an extremely valuable resource both socially and medically. Overall this thesis has provided evidence to suggest that if implemented correctly, medical cannabis can be a valuable resource both socially and medically. In conclusion this thesis has debated that by following the example of countries that have already legalised medical cannabis; the implementation of medical cannabis’ in Australia is not only medically beneficial but also socially, politically and economically beneficial. Therefore this thesis suggests that Australia first research the efficiency of medical cannabis, in order to finally resolve the debates surrounding the implementation of legalised medical cannabis in Australia.
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