

# CANNABIS...ITS A MIND GAME!

Sara-Jayne Lind

***“Is there a relationship between cannabis use and psychosis in adolescents?”***

Cannabis is one of the most abused, illicit drugs taken globally, and throughout New Zealand (MOH, 2018). Over the past few years, there has been much debate and media attention, around legalising cannabis for medical reasons in New Zealand. However, the misuse of this drug has drawn attention to adolescents use of cannabis as it has the potential to cause psychotic mental illness in their lives (Fergusin, & Boden, 2011). Psychosis is a loss of reality and has an impact on everyday function (MOH, 2018).

## RISK TO ADOLESCENTS

Cannabis poses a psychosis risk to adolescents who take the drug regularly, as cannabis increases dopamine in the brain (Brisch, Saniotis, Wolf, Biellau, Bernstein, Steiner, & Gos, 2014). The cannabinoids in cannabis act on the endocannabinoid system which has dopamine neurons causing dopamine to hyperactivate. Adolescence is a crucial phase for brain development, so any changes to the endocannabinoid activity caused from cannabis can result in altered behaviour and brain function (Malone, et al, 2010). Cannabis plays a role on the reward pathway in the brain, increasing the pleasurable feeling after taking this drug, therefore being a risk factor for substance misuse and addiction by adolescence into adulthood (Brisch, et al, 2014).

## PREDISPOSITION

Cannabis has the ability to increase the onset of schizophrenic symptoms and even worsen the effects of schizophrenia in an adolescent if they are predisposed (Malone, et al, 2010). Predisposing factors for schizophrenia include; past family history of schizophrenia, traumatic childhood, head injury as a child, Maori ethnicity, and being of a young age (Dean, & Murray, 2005). Schizophrenia is predominantly a younger person's condition.

**70% of cases have an onset between the ages of fifteen to eighteen,** which is often the age range where individuals go through the most emotional and psychological changes (Dean, & Murray, 2005).

## IN NEW ZEALAND:

In 2014, 8,030 people were diagnosed with schizophrenia and 15% of cases were caused from using cannabis regularly (Khan, & Akella, 2009). In New Zealand, 11% of people aged 15 years and over have used cannabis in the last 12 months, and shockingly 34% of those cannabis users reported using cannabis weekly (NZ Drug Foundation, 2013). A New Zealand study showed those who consumed cannabis heavily before the age of 18 had an increase risk of 10.3% for schizophrenia, compared to those individuals who used heavily after 18 years, only having 4.7% risk. (NZ Drug Foundation, 2013).



## IMPLICATIONS

***Increases the demand on New Zealand healthcare resources:***

Over \$350 million is spent each year to address problems relating to drug use and \$100 million on schizophrenia as an illness in New Zealand (MOH, 2018).

***Increase demand on New Zealand Mental Health Nurses:***

Only 7.7% of registered nurses identify themselves as mental health nurses. This becomes concerning as there is such a small number of nurses in the mental health field, yet the demands for these nurses are increasing with the effects of cannabis use to adolescents (MOH, 2018).

***Lack of prevention and education to those most susceptible to developing psychosis:***

3.6% of cannabis users who wanted help did not actively go out and seek it within New Zealand. There is also a lack of school based targeted prevention programmes that helps to bring awareness to the negative effects of cannabis use (NZ Drug Foundation, 2013).

## RECOMMENDATIONS

***Accessibility:*** Have emotional and medical supports readily available in the community for adolescents. This will help increase prevention and timely interventions to adolescents beginning to show self induced psychosis (MOH, 2018).

***Cultural safe information:*** Educate adolescents on the risks of taking cannabis, ensuring it is presented in an appropriate way to the adolescent audience. Nurses must have a person centred approach and work in partnership with Maori (NZ Drug Foundation, 2013).

***Effective screening methods:*** Taking a substance history from adolescents in the clinical setting to identify adolescents in the community who use cannabis regularly. Collaborative approach with other healthcare professionals, schools and parents to target adolescents and increase prevention methods (NZ Drug Foundation, 2013).

**Nurses need to continue taking action and bringing about awareness to the potential of psychosis, if cannabis becomes accessible to a young person. Nurses have the opportunity to educate and assist those most vulnerable to psychosis, so that we can see the rates of mental health lower in our country and for our country's future generation.**

## REFERENCES

- Brisch, R., Saniotis, A., Wolf, R., Biellau, H., Bernstein, H., Steiner, J., & Gos, T. (2014). *The Role of Dopamine in Schizophrenia from a Neurobiological and Evolutionary Perspective: Old Fashioned, but Still in Vogue*. *Frontiers in Psychiatry*, 5. doi:10.3389/fpsyt.2014.00110
- Dean, K., & Murray, R. M. (2005). *Environmental risk factors for psychosis*. *Dialogues in Clinical Neuroscience*, 7(1), 69–80.
- Fergusson, D.M., & Boden, J. (2011). Alcohol use in adolescence. In OPMSAC (Ed.), *Improving the transition - Reducing social and psychological morbidity during adolescence* (Vol. 235-256). Wellington: Office of the Prime Minister's Science Advisory Committee.
- Khan, M. A., & Akella, S. (2009). Cannabis-Induced Bipolar Disorder with Psychotic Features: A Case Report. *Psychiatry (Edgmont)*, 6(12), 44–48.
- Malone, D.T., Hill, M.N., & Rubino, T. (2010). Adolescent cannabis use and psychosis: Epidemiology and neurodevelopmental models. *British Journal of Pharmacology*, 160(3), 511–522. doi:10.1111/j.1476-5381.2010.00721.x
- Ministry of Health. (2018). *Schizophrenia*. Retrieved from: <https://www.health.govt.nz/your-health/conditions-and-treatments/mental-health/schizophrenia>
- NZ Drug Foundation. (2013). *Research links cannabis with psychosis*. Retrieved from: <https://www.drugfoundation.org.nz/news-media-and-events/research-links-cannabis-use-with-psychosis/>

I was able to use the PECOT framework to refine my broader research question; ‘The effects of drug misuse on young people’ to ‘Is there a relationship between cannabis and psychosis in adolescents’ (Whitehead, 2013).

PECOT Category:	Information relating to question:	Explanation:
Population:	People between the ages of 13-18 years displaying psychosis due to the effects of cannabis (also known as marijuana) misuse. Irrespective of gender, country or ethnicity.	An age restriction between the years of 13-19 was selected as this is considered the traditional stage from childhood to adulthood. It is also the age period that is the most critical stages for brain development, so the effects of illicit drug misuse could be more impacting on their health. Gender, country and ethnicity will remain open to ensure that there is not an extreme limitation on studies available, however I will be relating it to New Zealand’s statistics and practice.
Exposure (Intervention):	Adolescent patients who have been exposed to or exposed themselves to cannabis, which has resulted in psychosis symptoms in the individual.	To understand if there is a relationship between cannabis use and psychosis in adolescent, particularly mental health patients. Furthermore, I want to discover what the long term affects of cannabis use has on adolescent psychotic states as a result of misusing this drug.
Comparison/Control:	The rate of psychosis in adolescents who use cannabis compared to those adolescents who do not.	To see if there is a relationship between cannabis and psychosis and if so the level of its influence that it has on an adolescents psychosis illness.
Outcome:	To reduce the rate of psychotic mental illness in adolescents and prevent cannabis misuse that could potentially lead adolescents to being diagnosed with a psychotic illness.	By reviewing a range of literature around the relationship between cannabis and psychosis in adolescents, I hope to encourage nurses to educate adolescents on the risk of cannabis misuse to prevent further psychosis in young people especially in New Zealand.
Time:	N/A	N/A

**Rationale:**

I have chosen to present my findings in a poster format as I believe a poster is an effective way to inform both health professionals and the general public on the effects of cannabis. A poster is an affordable way to create awareness around cannabis as a health issue and can target many people within a community, by simply showcasing summarised findings that are easily accessible. Posters create discussion points and makes more nurses aware of the current issues we are facing in New Zealand, so they can adapt and improve their practice. Information on the poster is cohesive, so it is able to get the message across to the public efficiently and can foster collaboration with schools, doctors or in the community where is is displayed (CIRT, 2017). A poster is found to be an effective tool for knowledge transfer as the visual imagery can engage and draw the attention of the viewer (Rowe& Ilic, 2009). I am a visual learner myself, so I find the use of colour and design eye catching, making me interested in the information that is displayed. I hope to achieve this with the poster I have created about cannabis use.

**References:**

Center for Innovations in Research and Teaching (CIRT), 2017. *Effective Poster Presentations*. Retrieved from: <https://cirt.gcu.edu/research/developmentresources/tutorials/posterpresent>

Rowe, N., & Ilic, D. (2009). What impact do posters have on academic knowledge transfer? A pilot survey on author attitudes and experiences. *BMC Medical Education*, 9, 71-78. doi:10.1186/1472-6920-9-71.

Whitehead, D. (2013). *Nursing and midwifery research methods and appraisal for evidence-based practice* (pp.35-56). Sydney, Australia: Mosby.