Orygen
The National Centre of Excellence in Youth Mental Health

Referral Characteristics and Service Accessibility of Youth Residing in a Rural Setting: A Clinical Audit of Youth Access Clinic Files

phn GIPPSLAND
An Australian Government Initiative

Executive Summary

The project reported here has been conducted to better understand the mental health needs of young people living in Gippsland. The purpose of gaining this understanding is to better inform future service development and provision. This report is one of two reports prepared by Orygen, The National Centre of Excellence in Youth Mental Health for Gippsland Primary Health Network. This report provides a background on youth mental health and some of what is already known about youth mental health in rural areas. Following this we provide the results of a file audit study that was conducted on 200 files from four Youth Access Clinics (Leongatha, Foster, Korumburra and Wonthaggi).

What the Previous Literature tells us:

Youth in Rural Settings are more likely to be:

- at significant risk of developing mental illness
- suffering from suicidal ideation
- engaging in self-harm
- exposed to family conflict and trauma
- participating in substance misuse and unsafe sexual practices

Research has also found rural environments have high numbers of single parent households and larger quantities of females accessing care over males.

The primary aim of the study reported here was to characterise the referral population and reasons for referral for young people residing in a rural setting accessing the four Youth Access Clinics (YACs) in Gippsland. A secondary aim was to highlight the challenges faced in the clinical care of young people in environments where there are fewer options for specialist referral or significant barriers in accessing specialist services. The sample

comprised of 200 file audits, 50 files from each YAC with service engagement between 2017 and 2018 and 587 consults which occurred during January-June 2018 across all YACs. Descriptive statistics were conducted to analyse the data and identify themes.

The results showed that young people presenting for care to the YAC clinics in Gippsland:

- Are young, with a mean age of 16 years
- Present with high levels of self-harm, mental ill-health, suicidal ideation, family conflict, exposure to trauma, and alcohol and substance misuse
- engage in sexual behaviours at a young age
- Are witness to, or experience, interpersonal violence
- Are experiencing or are part of families that are experiencing, financial struggles
- Come from a variety of living situations with a large number of single parent families
- And that males are less likely to access care than females

The current study highlighted the complex needs of young people presenting for care in Gippsland. A consequence of the complexity of presentations is a need to consider the service responses to these needs. Consideration of these needs requires innovation in service delivery as has been demonstrated by the establishment of the YACs. However, future innovation needs to consider how to increase access, particularly for young males. Accessibility also needs to take into account structural barriers such as opening hours, limited public transport and geographical distance from care. There is also a need to understand and respond to the smaller nature of rural communities and provide a service response that addresses a need for actual and perceived confidentiality. A further area requiring consideration given the complexity of the presentations is the workforce required to respond to the level of need in the community. This workforce must not only possess the skills to respond to the complexity

but also have the capacity to provide a duration of care sufficient to address the presenting problems. There is little evidence that the services and interventions trialled and proven in urban environments translate seamlessly to areas with less dense populations. Any service initiative implemented needs to be accompanied by a comprehensive evaluation strategy to ensure that it is meeting the needs of young people, their families and communities.

Chapter 1

To date most of the research around health system reform has concentrated on high density urban centres with plentiful workforce, specialist on-referral pathways and low geographical barriers to access [1-3]. Rural settings are faced with a different set of contingencies and yet there is no reason to assume that young people living in rural settings have fewer mental and other health needs. The extra barriers faced by young people in rural areas include a lack of access to community care and professional assistance, fear of stigma associated with accessing support and isolation resulting in potential family enmeshment [1-4]. Therefore it is important that the health needs of young people residing in rural settings are understood as well as highlighting barriers to accessing youth services.

Over the last decade four communities in Gippsland developed Youth Clinics with the clinics forming a network in 2016. This has been a unique and local development in answer to the perceived youth needs in their communities. This research will start by examining the challenges faced in the clinical care of young people in environments where there are significant barriers in accessing specialist services; as well as characterise the referral population, reasons for referral and referrals to other services for young people residing in rural settings. This research will be followed by a second report presenting the results of a study which focused on developing an in-depth understanding of the establishment of Youth Access Clinics (YAC) in rural settings as well as identifying the factors that have allowed these clinics to become sustainable. This second study will include the insights of both young people and professionals on barriers and enablers to accessing care and provide recommendations for service improvements.

Chapter 2

Referral Characteristics and Service Accessibility of Youth Residing in a Rural Setting: A Clinical Audit of Youth Access Clinic Files.

Adolescence is a time of immense change, transition, formation and development. Being characterised by three stages, early, middle and late adolescence, a young person's smooth journey through these stages allows for the creation of a secure identity, emotional wellbeing and provides the framework for a safe trajectory into healthy adulthood [5,6]. The rapid transformation in adolescence, is not only categorised by physiological growth, but incorporates intellectual, emotional and social development [7-9].

McWilliams [10] described this period as the "… hormonal assault of puberty" and the "… stormy consolidation of all early challenges and resolutions" (p.75). Based on Freud's work on sexuality, McWilliams highlights the potentially stressful and emotional journey faced by young people. In Freud's work on sexuality, he concluded that adulthood is reached when a young person is able to consolidate their oral, anal and oedipal issues and form a loving, secure, safe and sexual relationship with another individual [10,11]. Erickson, also discussed pubescence as physical growth, genital maturity and sexual awareness, however his theory on Identity Development postulates Ego Identity formation as a key component in forming adult maturity [12]. Although differing in their perspectives on adolescent development, Freud focusing on sexuality and Erikson on Ego Identity formation, both theorists acknowledge this developmental period as being an important gateway into healthy adulthood [10-12]. This gateway represents a young person's journey from dependence in childhood to independence in adulthood [7,11-13].

The following section provides a detailed picture of this gateway utilising a biopsychosocial perspective on adolescence. This section will also include information

surrounding the risks and challenges faced by young people in the formation of their identity. After which, an analysis will be provided to highlight the complexities of living in a rural setting and the impact that this environment can have on a young person's journey through adolescence.

Stages of Adolescent Development

Adolescence occurs between the ages of ten and twenty-four and can be divided into three stages: early, middle and late adolescence [5,6,8,14-16].

Early adolescence takes place between the ages of ten and fourteen and encompasses significant physical, cognitive and social/emotional development [5,6,15-18].

- Physical changes: Puberty (i.e. growing body hair and increased perspiration); considerable physical growth in height and weight; increased sexual awareness; development of breast and menstruation; growth of testicles, penis and deepening of the male voice.
- Cognitive changes: Increase capacity for abstract thought; focused on present or near future; broadening of intellectual interests.
- Social-Emotional changes: Struggle to create a sense of identity; emotional dysregulation (moodiness); desire for independence; friendships increase importance; begin to separate from and identify limitations in parents; child-like behaviour when stressed/emotional; increased interest in privacy; limit testing and experimentation.

Middle adolescence takes place between the ages of fourteen and eighteen and has the following physical, cognitive and social/emotional changes [5,15-17].

- Physical changes: Puberty comes to an end; female growth slows down; males continue to grow in height and weight.

- Cognitive changes: Continued increase capacity for abstract thought; contemplation of the meaning of life; anxiety surrounding school, academic ability, body image; moral reasoning; broadening of intellectual interests.
- Social-Emotional changes: Continued independence and separation from parents; self-involvement, conflict between high expectations of self and fear of failure; adaptive problems with body image and questioning normality of body changes; peer and status orientated; increased sexual awareness, love and passion, anxiety surrounding appearance and attractiveness.

Late adolescence takes place between the ages of eighteen and twenty-four and is characterised by the following physical, cognitive and social/emotional changes [5,15-18].

- Physical changes: Females have reached physical maturity; males continue to grow in height, weight, and body hair and muscle development.
- Cognitive changes: Increased focus on future, life roles and goal setting; enhanced communication abilities; ability to observe and process internal experiences, increased capacity to delay gratification and contemplate ideas, focus on work roles.
- Social-Emotional changes: Secure sense of self/identity; self-reliance; ability to compromise with others; increased affect regulation and emotional intelligence; increased aptitude to accept and follow societal norms and cultural values; capacity to form secure, loving, sexual relationship; increased ability to empathise/sympathise with others.

The Adolescent Brain

Over 95% of the brain structure formation occurs by the age of six [18,19]. During early childhood the brain grows by overproducing neurons and synapses, however by the age of three, the brain starts to prune away synapses in order to consolidate learning [18]. Recent

research has shown a second period of brain growth occurs prior to puberty in the frontal cortex region [18-21]. In adolescence, the grey matter of the brain is reduced through pruning of synapses and reinforce others through myelination. It is this process that is essential in the development of social connectivity, cognitive processes, behaviours and emotional intelligence [18,22].

As the frontal cortex is still developing in adolescence, a young person's thought processes, decision making and emotional regulation are guided by the amygdala [22-24]. The amygdala forms part of the limbic system and plays a crucial role in controlling emotion, creating memory, understanding of social cues, risk taking, impulsive behaviours and motivation [25,26]. The dominance of this structure in adolescence highlights the potential risk for young people when making decisions and participating in negative behaviours.

The brain's reward centre, known as the ventral striatum, is also activated differently in an adolescent brain [19,21]. Previous research has shown that due to hypoactivation of the ventral striatum young people may report less reactivity towards rewarding stimuli, which can induce high risk behaviours or negative decisions through greater reward seeking [20,27]. More recent studies, however, have shown that it is actually the hyperactivation of the ventral striatum that leads to a young person exhibiting greater reward seeking behaviours. These studies also highlighted increased activation in adolescence when compared to fMRI (functional magnetic resonance imaging) of children and adults [19,28].

Hyperactivation of the ventral striatum produces larger quantities of dopamine which can direct young people into seeking additional rewards [28,29]. This reward seeking can either be focused at negative activities such as drug and alcohol consumption and sexual promiscuity or targeted towards positive activities such as sports, school and prosocial

behaviours. Thus hyperactivation of the ventral striatum can represent both vulnerability as well as protection for a young person [19,29].

As stated above adolescence is defined by the reduction of grey matter and the increase of white matter in the brain. In particular, the pre-frontal cortex in an adolescent is not completely developed until the age of twenty-five [18-20]. When developed, the prefrontal cortex in an adult's brain, is used to make decisions, control impulses, understand others, recognize consequences and react to situations with sound judgement [18,29]. It is the immature prefrontal cortex and the reliance on the amygdala that places young people at risk of negative behaviours, emotional disturbance and irrational judgements.

Pruning of synapses in a young person's brain starts from the back of the brain and moves forward, with the prefrontal cortex being the last to mature [21]. This stage of development is extremely important as it is defined as the 'use it or lose it' period [18]. For example, a young person who focuses on learning a musical instrument will strengthen these synapses whereas another person who focuses on videogames will strengthen those synapses. Successful pruning and myelination leads to integration within the brain which allows people to self-regulate thoughts, behaviours, moods, social interactions and attention [20,30].

Daniel Siegel [30] proposed that when problems occur during the pruning and myelination process, a young person is susceptible to psychiatric disorders such as schizophrenia, depression and anxiety. Research has found that stress during adolescence can increase the production of myelin and cause an excess of white matter in the brain. This excess has been shown to impact on a person's ability to process information and regulate emotions [31-34]. Furthermore, neuroimaging studies have shown that the development of white matter in adolescence can change the communication between neural regions associated with

emotional processing and regulation [34]. Thus potentially causing ongoing changes in the function of the neural systems and increasing the risk of mental illness [30,34].

Research using electroencephalograms (EEG) further showed a significant reduction in the delta phase of sleep (stage 3) in young people between 9 and 18 years of age [35,36]. These studies found that adolescents have a decrease in deep sleep by 50% (stage 4) and a reduction in peak delta waves by up to 75% [36]. Sleep stages 3 and 4 are associated with pruning of synapses, recuperation, information processing, memory consolidation and dreaming. These stages are also characterised by healing properties such as low heart rate, reduced blood pressure and slow breathing [35]. Failure to reach deep sleep stages 3 and 4 can lead to a young person suffering from manic behaviours similar to those exhibited by a person suffering with Bipolar Disorder [36,37].

Adolescence is also known for changes in circadian rhythms, where a young person's sleep/wake cycle alters rendering it harder for them to fall asleep before 11pm. This change to night alertness impacts on their ability to obtain required sleep and to reach the already declining sleep stages stated above for synaptic pruning [35-37]. Conway [37] used the terms 'sleep bulimia' and 'binge sleeping' to explain these changes in circadian rhythms. She explained that young people often binge sleep on weekends and struggle to adjust to demands of school routine on Monday mornings. She argued that this process can have the similar impact on a young person as jetlag has on a traveller [37].

The increase in stimulation, communication and social interactions through technology and social media during the night creates a conflict between stimulus seeking and sleep deprivation [36,37]. This conflict causes poor sleep hygiene and is believed to motivate young people into taking greater risks to meet reward stimulation [36,37]. The immaturity of the prefrontal cortex, hyperactivation of the ventral striatum, reduced delta sleep and changes in

circadian rhythms all impact on a young person's ability to make sound decisions, regulate affect and perceive risk associated with their behaviours [20,30,36].

Perhaps a new and interesting way to understanding affect regulation within a young person is through the Polyvagal theory [38]. This theory provides an explanation of the evolution of the autonomic nervous system and the development of three distinct sub-systems, the Dorsal Vagal Complex (DVC), Sympathetic Nervous Systems (SNS) and the Ventral Vagal Complex (VVC) [38,39]. The DVC is part of the parasympathetic nervous systems which slows the heart and causes freeze and immobility responses within a person. The SNS system increases heart rate variability and creates fight/flight behaviours. The VVC is also a part of the parasympathetic nervous system and is associated with social engagement and understanding of others. These systems help provide information surrounding a young person's behaviours and the physiological/anatomical structures behind the behaviour. The theory suggests that when faced with a situation, the VVC is activated and if this system is ineffective in dealing with the situation, the SNS is then activated, followed by the DVC, if the SNS is also unsuccessful. Functional difficulties in the VVC can place a young person at risk of fluctuating emotions and lead to mental illness, avoidance and reactive behaviours [39]. Previous research has found that SNS activation is found in angry, hostile, anxious and depressed individuals [38,39]. This research also showed that successful activation of the VVC allowed young people to show empathy for others, engage socially and reduce internalising and externalising problematic behaviours.

Summary

Our modern, biologically based understanding of adolescence is one in which it extends until approximately age 25. While physical maturation is often complete years before this, the brain continues to mature until this age. As with any organ, the brain is at increased

vulnerability during periods of transition. In particular the developing brain is vulnerable to any variation in the normal development process (such as over-pruning), or to exposure to adverse environmental stimuli (trauma, stress, substances etc.). Further, because of the order of brain maturation, the higher order executive functioning areas of the brain, which allow for the perception of risk, weighing of consequences and judgment, develop last. This leads to adolescents often encountering environmental challenges which can precipitate mental ill-health. Finally, as demonstrated via the polyvagal theory, there is still an unfolding of our understanding of the way that humans react to environmental stimuli and the ways in which this can lead to mental stress or illness.

Environmental Influence: Family, Social and Community

Risk taking behaviours and poor judgements are not only predicted by biological factors, there are a number of environmental influences which impact on a young person's cognitive and emotional processes, judgements and behaviours. These environmental impacts include family dynamics, social interactions and community influences [40,41]. Bowen's Family System theory posits that each family member is emotionally connected and independent [42]. Hence the way a parent perceives adolescent behaviour can significantly impact the young person's thoughts, feelings and behaviours. For example, research has shown that parents who have pro-alcohol views significantly influence a young person's attitudes towards, and likelihood of, drinking [43]. Furthermore, a study conducted by Fulu, Miedema, Roselli, McCook, Chan, Haardorfer, Jewkes [44] showed that violent and harsh parenting styles were predicative of high levels of aggression and violent behaviours in adolescence.

Research into adverse childhood experiences has shown exposure to these events can have a significant impact on a young person's biopsychosocial development [45,46]. These adverse experiences a child may be exposed to include things such as household-dysfunction,

psychological, physical and sexual abuse, single parenthood (divorce/separation), substance abuse, mental illness, family violence, criminal behaviour and neglect [46,47]. These adverse childhood experiences have a significant relationship with health behaviours and outcomes in adulthood. For example, the higher the exposure to adverse childhood experiences the more likely the individual will experience negative health outcomes such as alcohol abuse; depression; substance abuse; heart or liver disease; risk for family violence; multiple sexual partners; sexually transmitted diseases; smoking; suicide attempts; early participation in sexual activity; and adolescent pregnancy [46,47].

Bright, Knapp, Hinojosa, Alford, Bonner [46] further stated that parenting styles, coping strategies and connections to community and social support can influence the relationship between adverse childhood experiences and health outcomes. In particular a child or young person can have poor health outcomes through severe discipline or harsh parenting styles or parent mental illness. These adverse childhood experiences have been linked to adolescent psychopathology.

Attribution theory also highlights that a parent's perception of adolescent behaviour significantly influences their treatment and discipline of the young person [48]. Carpentier, Mullins, Wolfe-Christensen, Chaney [49] defined two types of attributions, the self-focused (child behaviour is because of me) and the child-centred parental attribution (the child is at fault). Thus if the parent has a limited understanding of the biological components of adolescence, they are more likely to see the young person's behaviour as purposeful and use harsher discipline techniques. This child-centred parental attribution can in turn amplify the young person's behaviours [44,50]. Parent stress levels also play a significant role in the parenting of a young person and determination of attributions for behaviour [51]. Bradley, Deighton, Selby [52] further added single parents have elevated stress which can impact on a young person's identity formation.

For a young person to successfully transition into adulthood and form a secure sense of identity, secure attachments with family and friends are essential [53,54]. It is a complicated process for parents to allow for their young person's independence whilst providing a sensitive, secure, reliable, and responsive attachment [55]. Successful transition through this period and the strength of attachment has shown to reduce mental illness and the likelihood of a young person participating in risk taking behaviours [53,55].

Erikson [12] theorised that young people either lacked or rejected older generation role models and hence turned to their peers for recognition, normality and insight. Peer relationships are extremely important as a young person moulds their identity around these relationships. Peer pressure and conformity can lead to negative life choices and place the young person at risk [43,53,56]. Peer group cohesion can also cause conflict within other groups, lead to rejection of the young person and create bullying behaviours [56]. These friendships when based on positive similarities can offer the young person new social and recreational activities as well as create interpersonal safety and protection for the young person [52,55,56]. Choice of friendships and influences during adolescence can cause both positive and negative outcomes. Negative attachments made during this life stage can have a detrimental impact on adult life and health behaviours, especially as adolescence is known as the 'use it or lose it' phase and repetitive negative choices can be reinforced in the brain [20,21]. A study conducted by Dulmus, Theriot, Sowers, Blackburn [57] showed that 82.3% of young people (school years 3-8) residing in a rural setting disclosed being bullied at least one time within the last three months. These findings are alarming as being bullied can significantly impact on identity formation, socialising and the development of mental illness [57,58].

The community's ability to understand adolescence and the need to provide a welcoming and supportive environment is essential in the transition from adolescence to adulthood [52,59]. Research has shown that social capital is derived from the time a young

person and their family have spent in the community [54,60]. The more time associated with community activities the higher the likelihood of a young person succeeding in university and employment. Positive place attachment provides young people with safe environments to build, explore and form their personal, social and community identity as well as enhance their self-esteem and independence [59]. Community attachment has also been shown to reduce crime rates, build identity, enhance responsibility within a young person and reduce delinquent behaviour [59,61]. A negative attachment can place a young person at risk of poor decision making, increase vulnerability to crime, feelings of isolation and judgement. Conversely individuals who are too cohesive with the community may miss out on opportunities due to being sheltered from experiences and people. This cohesiveness can foster feelings of responsibility, duty and fear of rejection from their community [59,61].

Without secure attachments to family, peers and the community a young person can feel isolated and alone in their journey of identity formation [53,62]. Coupled with the complexities of neurological development, it is essential that risk factors for adolescence are understood in order to reduce preventable youth fatalities and injury [63,64].

Youth at Risk

As shown above successful transition through adolescence into adulthood is complicated and without support and guidance, decisions made by young people during this period can have detrimental effects on the rest of their lives. The World Health Organisation (WHO) reported that in 2015, 1.2 million adolescents died, which equated to 3000 young people per day [63]. The main cause of death for young Australians is suicide. This is true for both males and females aged 15 – 24 (as well as for those aged 25-44) [65](Australian Institute of Health and Welfare, 2018). This disturbing fact highlights two important points. Firstly,

mental ill health can be fatal and secondly that there is a strong need for high quality early intervention for young people.

A report completed by Hodges, O'Brien Matthew, McGorry Patrick [14] showed that 14% of young people aged between 12 and 17 years old have a mental health condition. This prevalence increased to 27% in individuals aged between 18 and 24. The most prominent mental health conditions in this age group included substance abuse and dependence, depression, anxiety and eating disorders [14,52]. This report further highlighted that Australia has the highest rate of youth suicide in the world, with the death rate increasing in risk with remoteness. Clarke, Kuosmanen, Barry [54] study supported these results by saying that 10-20% of youth suffer from a mental illness.

Despite these alarmingly high levels of risk, very few mental health services are designed with young people in mind and consequently there is a reluctance exhibited by youth to access support. Gulliver, Griffiths, Christensen [66] showed that only 18-34% of young people suffering from anxiety and depression accessed help. Additionally these researchers' reported that only 25% of young people with a mental health diagnosis accessed support within the last six months. Other studies conducted by Aisbett, Boyd, Francis, Newnham, Newnham [67] and Sawyer, Arney, Baghurst, Clark, Graetz, Kosky, Nurcombe, Patton, Prior, Raphael, Rey, Whaites, Zubrick [13] also report low rates of access to care. Slade, Johnston, Teesson, Whiteford, Burgess, Pirkis, Saw [68] further reported gender differences in this age group accessing support with only 13% of males compared to 31% of females. This difference was accounted for due to masculine norms such as decreased ability to acknowledge the psychological problem and self-reliance.

Elevated Risks for Youth in Rural Settings

Current research into risks associated with young people and their transition into adulthood, have shown that adolescents living in rural areas are faced with significant barriers which directly impact their safety, biopsychosocial wellbeing and ability to access support [4,14]. Curtis, Waters, Brindis [7] research into youth residing in a rural setting found that the average age of first sexual intercourse was 14.6 years; 42% of young people 12-17 years of age consumed alcohol, this number increased to 60% in young people over 17; 40% of youth reported depressive symptoms, with a peak in symptoms occurring at 14-15 years of age; the study also showed an increase in obesity and reduction in physical exercise.

Numerous studies have shown that rural youth exhibit higher levels of depression, alcohol and substance abuse, risk taking behaviours, suicidality and self-harm, anxiety, psychiatric disorders, difficulties with stress and coping, school dropout, bullying, isolation, poverty and single parenthood and teenage pregnancy [9,57,67,69-72]. Chan, Leung, Quinn, Kelly, Connor, Weier, Hall [43] supported these findings and added that alcohol consumption in youth increases with remoteness with 16.7% of urban youth drinking compared to 35% of rural youth consuming alcohol. Curtis, Waters, Brindis [7] further added that young people in a rural environment are subjected to health risks such as unsafe sex practices, motor vehicle accidents, traumatic events (including environmental) and interpersonal violence.

Aisbett, Boyd, Francis, Newnham, Newnham [67] highlighted that the increased prevalence of risk taking behaviours, mental health problems and substance abuse in rural settings occur due to the delay in help seeking behaviours in rural adolescent. This notion has been supported by Kilkkinen, Kao-Philpot, O'Neil, Philpot, Reddy, Bunker, Dunbar [73], Black, Roberts, Li-Leng [4] and Brown, Rice, Rickwood, Parker [74]. Furthermore research into help seeking behaviours in rural adolescents has identified that young people often rely on

themselves or family/friends for support, this reliance can lead to negative health outcomes [74,75]. This need to access formal supports can cause conflict for young people who identify as Aboriginal or Torres Strait Islander as it is culturally appropriate to rely on informal support networks such as family, friends and community elders [74].

Barriers and Enablers to Accessing Care

Extensive research has been conducted into barriers preventing young people from accessing care in rural environments. In particular research has focused on difficulties such as geographical isolation, financial hardship, low levels of education and employment opportunities, inadequate resources, limited access to services, stigma, social isolation and reliance on immediate family for support as well as environmental extremities (fire, drought, and flood). All of which impact a young person's ability to access care [4,7,9,13,74,76].

Young people are faced with many challenges when attempting to access services. Geographical isolation is particularly concerning, as rural environments are known for limited services and lack of health practitioners, minimal after-hours care, reliance on parents for transport and/or limited public transport options, mental health practitioners travelling long distances to provide care and long waiting lists [7,9]. Aisbett, Boyd, Francis, Newnham, Newnham [67] reported that geographical isolation has led to families moving to urban settings to access support for their young person. The study also stated that young people have engaged in high risk behaviours such as self-harm in order to be eligible for a mental health service.

Sadly geographical isolation isn't the only cause of young people not accessing supports. Instrumental barriers such as limited finance, low number of youth focused mental health services and lack of knowledge of health care services all impact service accessibility [52,77]. Attitudinal barriers further impact through perceived inexperienced health professionals,

lack of treatment success and the belief that the problem will go away on its own [14,77]. Hodges Craig, O'Brien Matthew, McGorry Patrick [14] and Ervin, Phillips, Tomnay [8] add to this list by stating a lack of anonymity, confidentiality and stigma (embarrassment, shame, discrimination, stereotypes, judgement) significantly impact a young person's ability to access support.

Boyd, Aisbett, Francis, Kelly, Newnham, Newnham [9] reported on rural youth perspectives when accessing support. The main barriers identified were confidentiality, lack of knowledge of services, lack of female general practitioners, lack of bulk billing/free services, limited choice of health practitioner, long waiting lists and transport. Young people also highlighted concerns surrounding parent consent and embarrassment when parents became involved in their treatment. Black, Roberts, Li-Leng [4] supported these youth perspectives by adding that young people exhibit depression related to long waiting lists and lack of mental health professionals. However, he questioned whether this perception was related to poor mental health literacy and knowledge of how to access a service.

The importance of confidentiality is widely reported by young people when discussing barriers to access services [13,14]. Social proximity in rural environments creates concerns for confidentiality due to neighbours and society members often having intimate knowledge of the young person and their family [67]. This concept can be either a protective factor for a young person (early detection of behaviour change) or a negative (breach of confidentiality, discrimination). The fear of social gossip and social visibility when accessing help or deciding to continue with treatment is also a concern for young people who reside in a rural environment [67,69].

Despite the abundance of research highlighting barriers within a rural environment, studies have also shown that residing in a rural community can also provide protection for a

young person [14]. As stated above social proximity can help provide safety measures and early detection of mental health symptoms displayed by a young person. Social proximity can also create a sense of belonging and connectedness as well as provide role models and informal supports outside of the family unit [52]. This is especially important as a study conducted by Boyd, Francis, Aisbett, Newnham, Sewell, Dawes, Nurse [71] found that young people waited to be approached by someone before they accessed care. Thus having safety within the community and social proximity can enhance a young person's willingness to accept support and access care.

A study on quality of life among rural adolescents showed that a sense of belonging to the community, plays an important role in emotional development and healthy adjustment [78]. Edwards, Theriault, Shores, Melton [79] found that community support for young people is essential as it can provide community-based assistance, create partnerships and provide funding to enable youth-based programs. Furthermore when faced with a traumatic event, such as motor vehicle accident or environmental trauma (e.g. fire, flood), rural communities band together and provide a supportive and cohesive network [69] . Rural communities can also take the initiative to develop supportive programs for young people such as the Communities that Care Project which aimed at creating change through partnerships [70]. This project identified the need for champions within the work force to commit and follow through on service delivery.

Overall, understanding the social, psychological and neurobiological changes that occur through adolescence, the impact of family, social and community influences coupled with the complexities of rural living, allows for policy makers and service providers to create programs that can best assist young people to navigate the difficulties that they encounter in transitioning to adulthood. Seeking feedback from young people surrounding these policies/ services will help gain further insight into what young people want, need and see as useful.

The Gippsland Youth Access Clinics (YAC) based in Foster, Korumburra, Leongatha and Wonthaggi have responded to the needs of young people and developed four independent YAC services aimed at reducing barriers, enhancing access and improving care to all young people.

The aim of the present study was to provide the first overall characterisation of the young people seeking help from the network of YAC clinics. This will include demographics about the referral population, presenting issues, and referrals to other services for young people residing in a rural setting and accessing the four YACs in Gippsland. A secondary aim of this study is to highlight the challenges faced in the clinical care of young people in environments where there are fewer options for specialist referral or significant barriers in accessing specialist services.

Method

Participants

The sample comprised the files of 200 young people from four YACs based in South Gippsland. Fifty files were audited from each of the four YACs: Foster, Wonthaggi, Leongatha and Korumburra. The file audit was based on young people who accessed the YAC services between January 2017 and January 2018. The mean age of the sample was 16.60 years, with a standard deviation of 2.73 years. The sample consisted of 57 males and 143 females. Only 2% (n = 4) identified as Aboriginal or Torres Strait Islander, however 149 cases were missing data on this topic.

A 6-month report for the YACs dated January 2018 - June 2018 was provided by the South Coast Primary Care Partnership. This report was based on 587 consults. The most common age group for young people accessing YACs in this report was 16-18 years. This sample consisted of 428 females and 200 males. There were no significant differences between samples on age, income, gender or marital status.

Materials

Through consultation with the YAC consortium (YAC clinics, Victorian Department of Education and the South Coast Primary Care Partnership) a file audit tool was developed (Appendix A).This audit tool collected both quantitative and qualitative data on the following topics: demographics; reason for consultation; medical conditions; HEADS assessment (health education/employment; diet; activities; drugs and alcohol; and sexuality, suicidality, self-harm and safety practices); grief and trauma; psychological conditions and referral to mental health practitioners; number of sessions; and symptoms of common adolescent mental illnesses (depression, psychotic disorders, borderline traits, anxiety, trauma related). The file audit pertained to the initial consult. However, it contained questions to provide information

on the number of services, assessments and type of intervention provided during the period of care.

Additional data was collected from the YAC Survey Monkey Questionnaire. This questionnaire was developed by the YAC consortium and consists of 13 questions. The questionnaire gathered information pertaining to demographic data, reason for consultation and mental health presentation. The YAC questionnaires were completed by YAC staff at the time of consultation with a young person.

Please refer to Appendix B for YAC Survey Monkey questionnaire.

Procedure

Ethics approval for the study was obtained from the University of Melbourne Human Research Ethic Committee (Appendix C). This approval was provided to each YAC clinic.

The file audit tool was used to extract and code data from the files of 200 cases. Each clinic provided relevant client lists to the researcher. These lists included clients seen at each YAC, client age and gender. This list was stratified by gender and age (15-18 years, 19-21 years and 22-25 years). Stratification by age and gender ensured each age group and gender was equally represented in the file audit. Following stratification, the list, along with an allocated participant number, was entered into Excel for random sampling. The top 50 files of each clinic from the Excel random sample were selected for coding.

The South Coast Primary Care Partnership provided a 6-month report created in Survey Monkey for the YAC Questionnaires dated January 2018 - June 2018. This report was based on 587 consults which occurred in above 6-month period. Data from this report was summarized by the researcher and placed in the results section of this report.

Method of Data Analyses

For analysis purpose, demographic file audit data was translated to numerical values and qualitative data was entered into SPSS for further analysis.

Results

Statistical computer package SPSS Version 22.0 was used to analyse the data. Analysis of Cook's distance did not reveal any influential cases or outliers that could affect the results**.** There were no significant differences between samples on age, income, gender or marital status.

Internal Consistency

In order to ensure inter-rater reliability of the file audit tool, two senior researchers independently audited fifteen files (10 for senior researcher one and 5 for senior research two). The independent audit of the file audit tool showed almost perfect inter-rater agreement.

Descriptive Statistics

As Table 1 and Figure 1 showed, the mean age for young people accessing YAC was 16.60 (*SD* = 2.73), the age of young people ranged 15 years with the youngest being 12 years of age and the oldest being 27 years old. The mean age for Foster YAC was 15.77 (*SD* = 1.89), with the age ranging from 12 years to 22 years old. Leongatha's mean age was 18.22 (*SD* = 3.54). Out of all the four YAC clinics Leongatha had the eldest young person attend. The age ranged in this clinic from 13 years to 27 years of age. Korumburra's mean age was 14.84 (*SD* = 1.67), with a range from 12 years to 19. Wonthaggi's age ranged from 14 to 25 years of age and had a mean age of 17.54 (*SD* = 1.47).

Table 1

Means and Standard Deviations for YAC Client Age

	M	*SD*	*N*	*Range*	*Minimum*	*Maximum*
Total YAC	16.60	2.73	198	15	12	27
Missing data			2			
Foster YAC	15.77	1.89	48	10	12	22
Missing data			2			
Leongatha YAC	18.22	3.54	50	14	13	27
Korumburra YAC	14.84	1.67	50	7	12	19
Wonthaggi YAC	17.54	1.97	50	11	14	25

Figure 1

Mean Age for YAC Clients by YAC Clinics

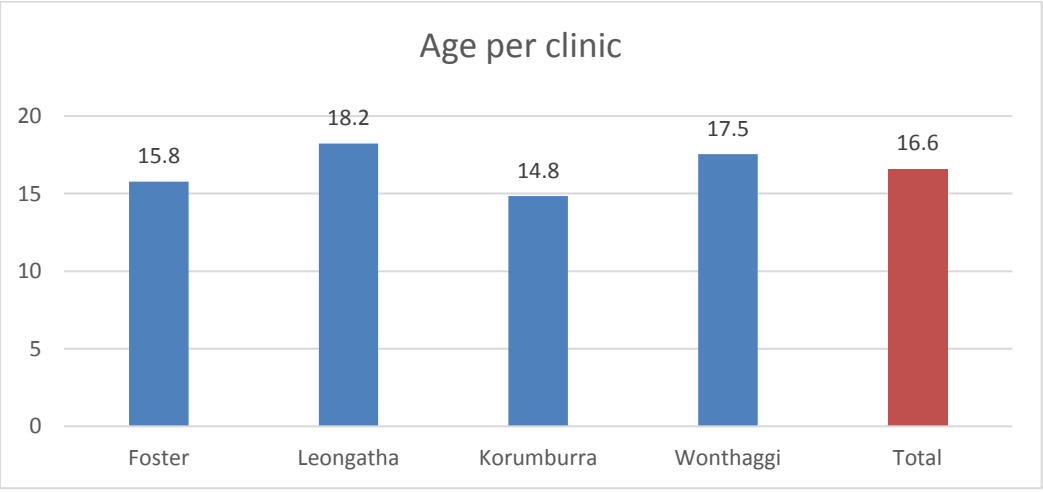


Table 2 and Figure 2, show the male to female ratio of young people accessing YACs. Across all four YACs, 71.5% of young people were female. In Foster, a total of 36 (72%) females attended the clinic compared to only 14 males (28%). Leongatha showed a similar ratio with 34 (68%) females attending compared to 16 males (32%). Korumburra also had 67% (n = 34) females and 32 % (n= 16) males attend the YAC clinic. Wonthaggi had the

greatest difference between male and female attendees, with 78% (n = 39) females compared to 22% (n = 11) males.

Table 2

Frequencies and Percentages: Gender of YAC Participants

	Frequency	*Percent*	*N*
Total YAC			
Male	57	28.5%	200
Female	143	71.5%	
Foster YAC			
Male	14	28%	50
Female	36	72%	
Leongatha YAC			
Male	16	32%	50
Female	34	68%	
Korumburra YAC			
Male	16	32%	50
Female	34	68%	
Wonthaggi YAC			
Male	11	22%	50
Female	39	78%	

Figure 2
Gender Frequency and Percentage for YAC Participants

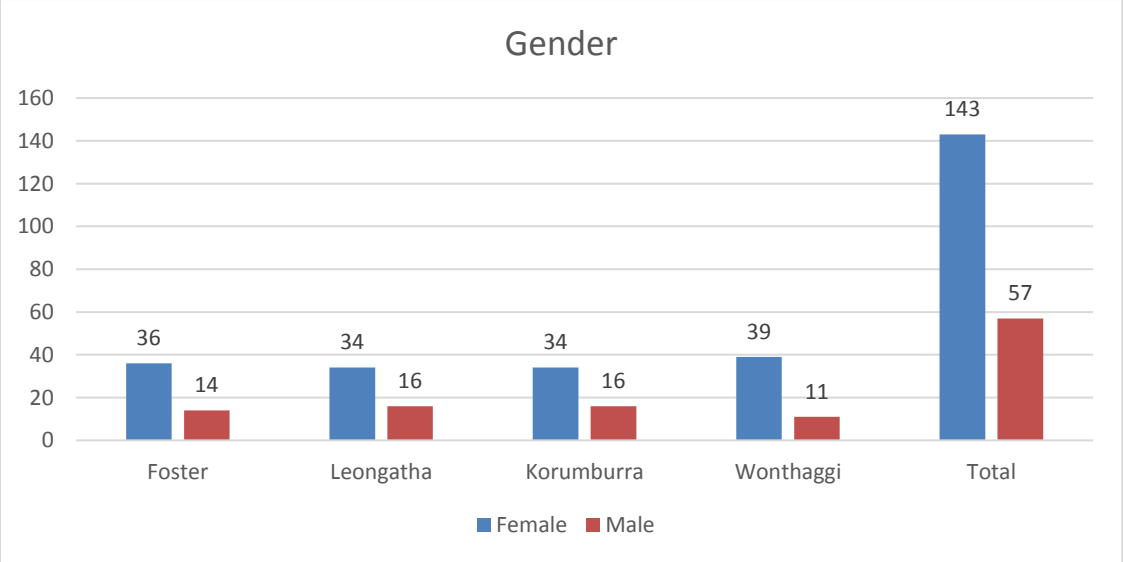


Table 3 and Figure 3 show the percentages and frequencies of young people participating in education and/or employment. In the 200 cases audited there were 57 files which did not report education or employment details. Overall 51% (n = 102) of young

people were enrolled in school, with 5.5% (n =11) employed, 12% (n = 24) in both school and employment and 3% (n = 6) in neither (that is not in education, employment or training (NEET)). In Foster the highest number of young people were enrolled in school with 24 attending (48%), followed by education and employment with 14 (28%) and only 1 young person being employed (2%). Leongatha showed similar numbers of young people being enrolled in school with 22 (44%), however less young people were attending both school and employment 6 (12%). Leongatha did show a higher number of young people with employment 6 (12%) and 2 (4%) as NEET.

Korumburra had a total of 70% attending school (n =35), however it did not report any cases of employment, education and employment or NEET. Wonthaggi's results showed that most young people attended school, 21 (42%), 4 were employment (8%), 4 attended both school and employment 4 (8%) and 4 identifying as NEET (8%).

Table 3

Percentages and Frequencies of Young people in Education or Employment

	Not reported	Enrolled in school	Employed	Both school and employment	NEET
Total YAC					
Frequency	57	102	11	24	6
Percentage		51%	5.5%	12%	3%
Foster					
Frequency		24	1	14	0
Percentage		48%	2%	28%	0%
Leongatha					
Frequency		22	6	6	2
Percentage		44%	12%	12%	4%
Korumburra					
Frequency		35	0	0	0
Percentage		70%	0%	0%	0%
Wonthaggi					
Frequency		21	4	4	4
Percentage		42%	8%	8%	8%

Figure 3

Frequencies and Percentages: Education and/or Employment

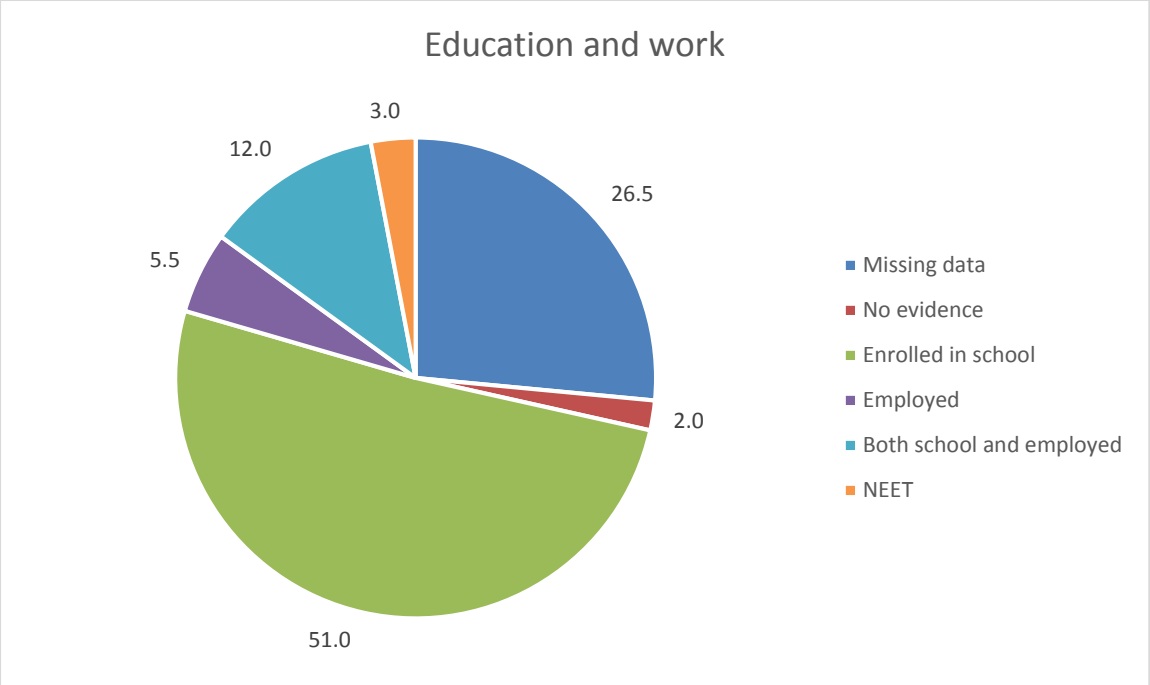


Figure 4 shows the relationship status of young people accessing YAC. 49% of YAC cases did not record relationship status (n = 98), however, 24.5% recorded as single/never married (n = 49), 18.5% were partnered more than 3 months (n = 37), 7% as partnered for less than 3 months (n =14), .5% were married/de facto for more than 2 years (n = 1) and .5% were separated/divorced (n =1).

Table 4 provides details surrounding referral sources for YAC. Self-referral was the highest with 153 young people self-referring to the YAC service, followed by parent referrals (n = 18), school referrals (n = 8) and friend referrals (n = 5). Other referral sources included counsellor (n = 2), Doctor (n = 1), Allied health professional (n = 1), support worker (n = 2), family (n = 2) and other (n = 1).

Figure 4

Percentages: Relationship Status

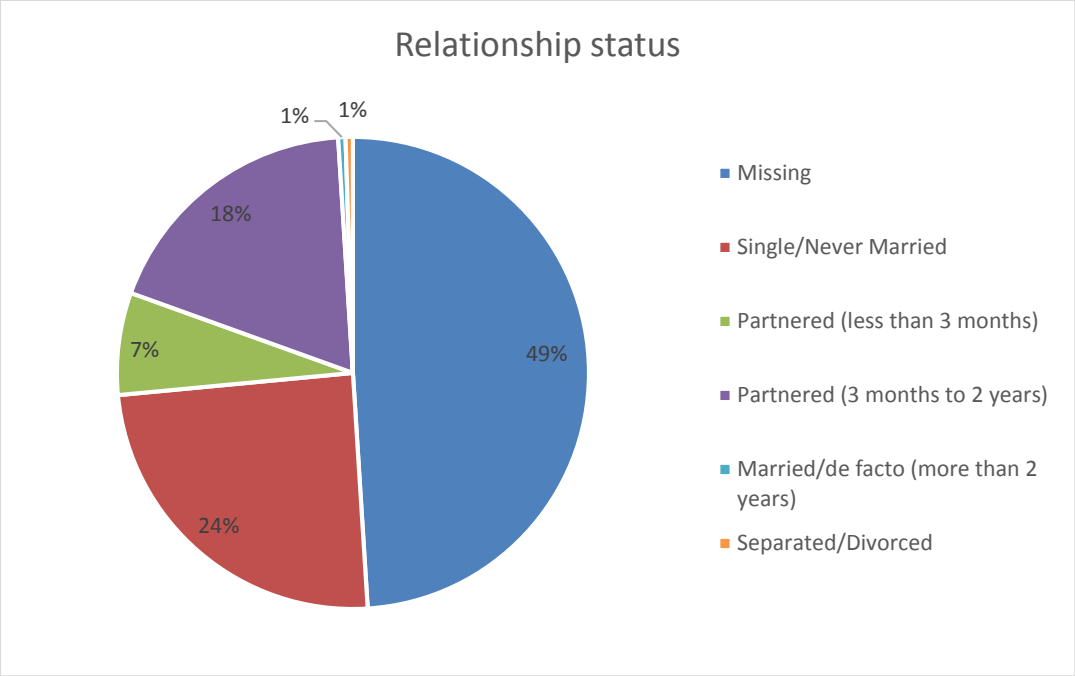


Table 4

Percentages and Frequencies of Referral Sources

Referral Source	Foster	Leongatha	Korumburra	Wonthaggi	Total
Missing	0	0	5	0	5
Self	42	42	26	43	153
Friend	4	1	0	0	5
School	0	1	7	0	8
Parent	1	6	7	4	18
Counsellor	0	0	1	1	2
Doctor	0	0	1	0	1
Allied Health Provider	0	0	1	0	1
Support Worker	2	0	0	0	2
Family	0	0	1	1	2
Other	1	0	1	1	3

Figure 5 shows the current living arrangement for young people accessing YAC. 27% of clients resided with both parents (n = 54), 32% lived with their mother only (n = 64) and 36.5% lived in 'other' living arrangements (n = 73). Only 4% lived with their father only (n = 8) and .5% lived on their own (n = 1).

Figure 5

Frequencies: Total YAC Home Environment

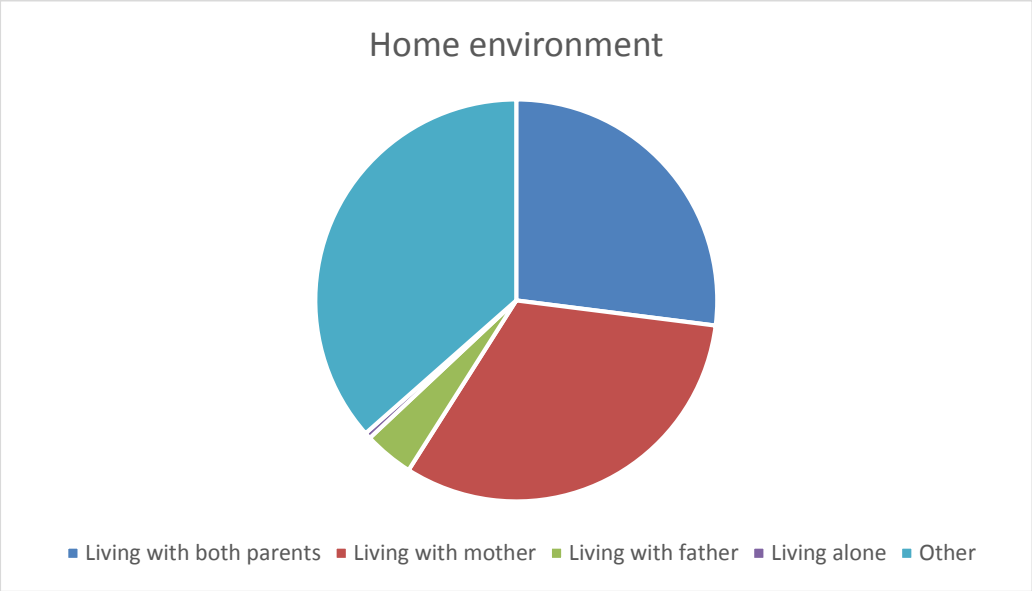


Figure 6 provides further information surrounding living arrangements for young people by dividing the data into the four YAC regions. In Foster, 30% of young people lived with both parents, 38% lived with their mother only, 2% lived with their father only and 30% lived in other living environments. Leongatha showed similar percentages of young people lived with both parents (34%) and lived with their mother only (32%). Leongatha also showed that 4% lived with their father only and 30% lived in other environments. In Korumburra 30% of young people lived with both parents, 30% lived with their mother only, 4% lived with their father and 36% lived in other settings. Wonthaggi had the least young people living with both parents with only 14% residing in this setting. 28% of young people

from Wonthaggi YAC lived with their mother only, 6% with their father, 2% lived alone and 50% lived in other settings.

Figure 6

Frequencies: Home Environment per Region

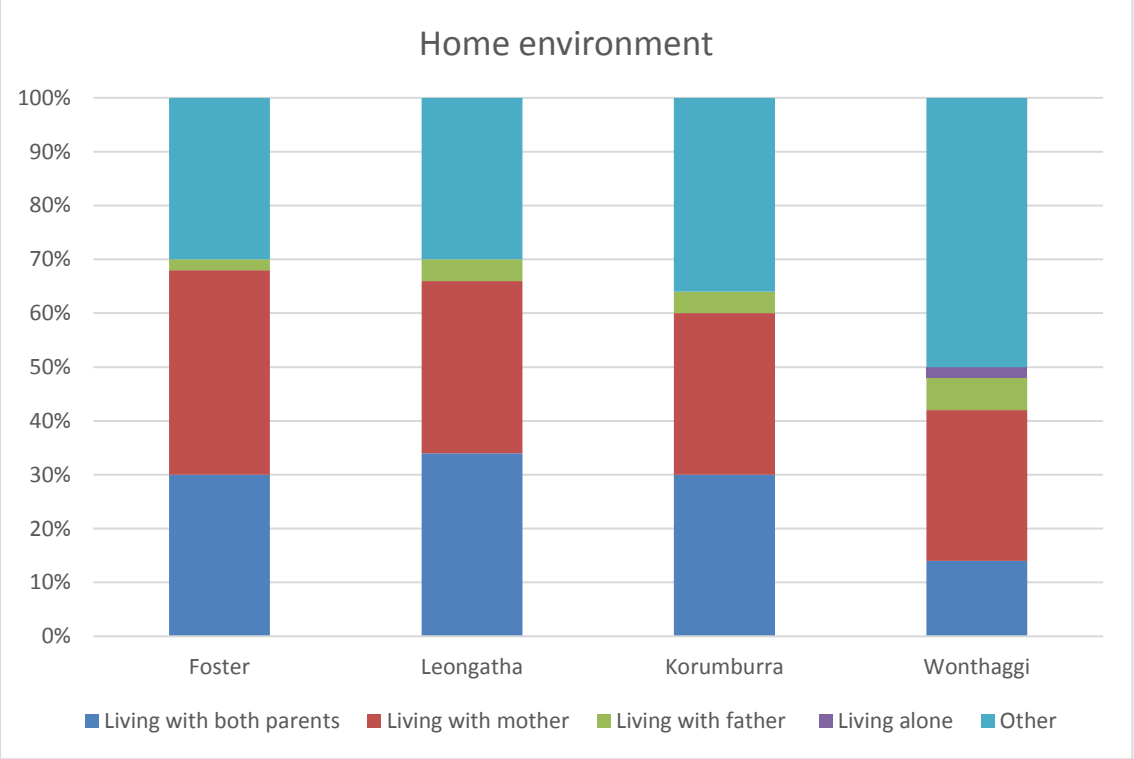


Table 5 and Figure 7 highlights the number of services provided to young people who attend YAC. The mean for services provided across all four YACs was 8.25 (*SD* = 10.44). The maximum number of sessions provided was 89 with a minimum of 1. In Foster the mean number of sessions provided was 8.48 (*SD* = 16.51), Leongatha's mean was 6.56 (*SD* = 5.22), Korumburra had a similar mean with 6.92 (*SD* = 4.27) and Wonthaggi had the highest mean of sessions provided with 11.04 (*SD* =10.44).

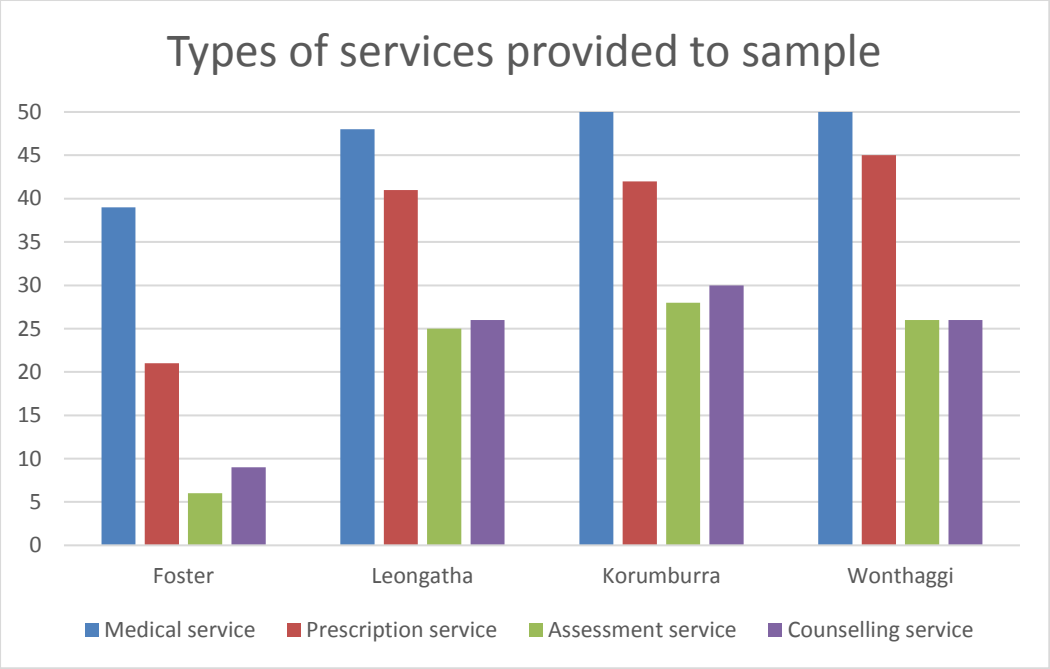
Table 5
Number of Services Provided: Means and Standard Deviations

	Mean	*Standard Deviation*	*N*
Total YAC	8.25	10.44	200
Foster YAC	8.48	16.51	50
Leongatha YAC	6.56	5.22	50
Korumburra YAC	6.92	4.27	50
Wonthaggi YAC	11.04	10.58	50

Figure 7 shows the types of services provided by each YAC. It is divided into four types of services, medical, prescription, assessments and counselling. In Foster, young people predominately attended the clinic for medical reasons (n = 39) and prescriptions (n = 21). Other reasons for consultation were assessment (n = 6) and counselling (n =9). Leongatha also showed high numbers of young people accessing medical (n = 48) and prescription services (41), however it also recorded high numbers for counselling (n = 25) and assessment services (n =26). Korumburra similar to Leongatha reported high number of medical (n = 50), prescription (n =42), assessment (n =28) and counselling (n =30). Wonthaggi also showed consistent numbers of young people accessing medical (n =50), prescription (n =45), assessment (n =26) and counselling (n =26).

Figure 7

Types of Services Provided



The following figures describe health risk factors for young people. Figures include data on exposure to trauma, sexual health, substance abuse, family violence, suicidal ideation, self-harm, eating disorders and mental health. Figure 8, provides information on exposure to trauma. It is important to note that a number of files did not record information on this topic which could lead to an underestimate of the prevalence of exposure. At least 27.5% (n = 55) of the total sample were exposed to trauma. Foster recorded highest number of young people being exposed to trauma with 38% (n = 19) out of the four clinics. Korumburra also reported high numbers of trauma exposure with 36% (n =18), followed by Wonthaggi 20% (n = 10) and Leongatha 16% (n = 8).

Figure 8

Health Risk Exposure to Trauma

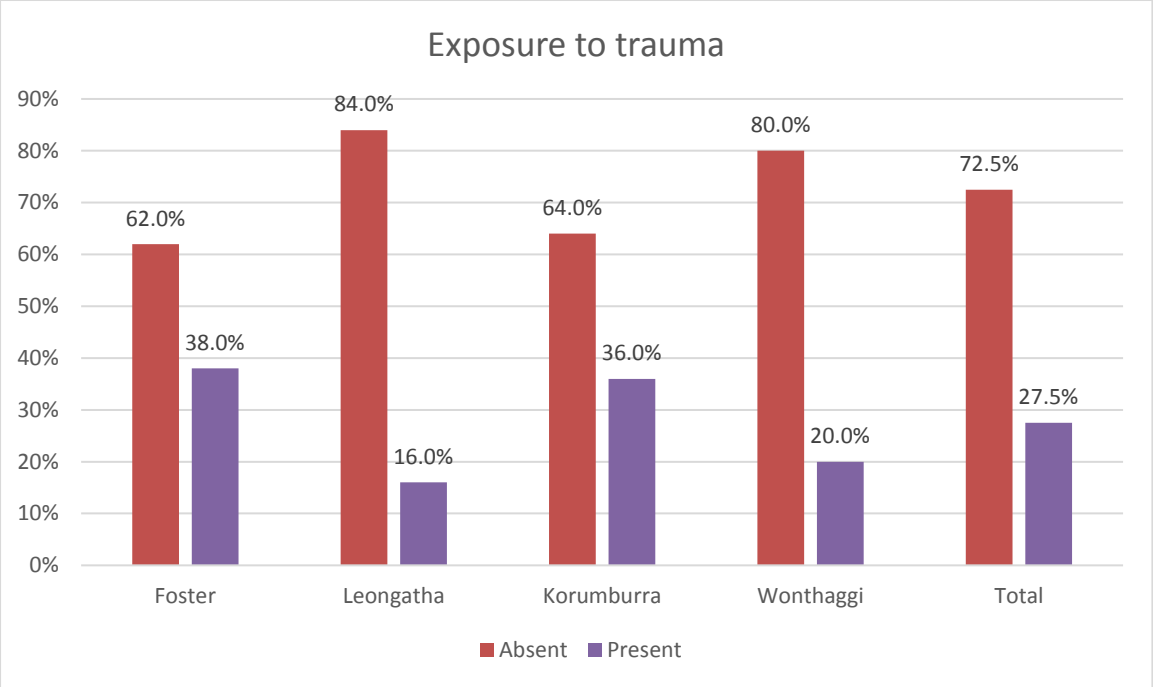


Figure 9 represents data on young people seeking sexual health support. This figure captures information such as requesting contraceptive pill, pill prescriptions, Sexually Transmitted Infection checks or the morning after pill. 28.5% of the total YAC population studied accessed sexual health support.

Figure 9

Seeking Sexual Health Support

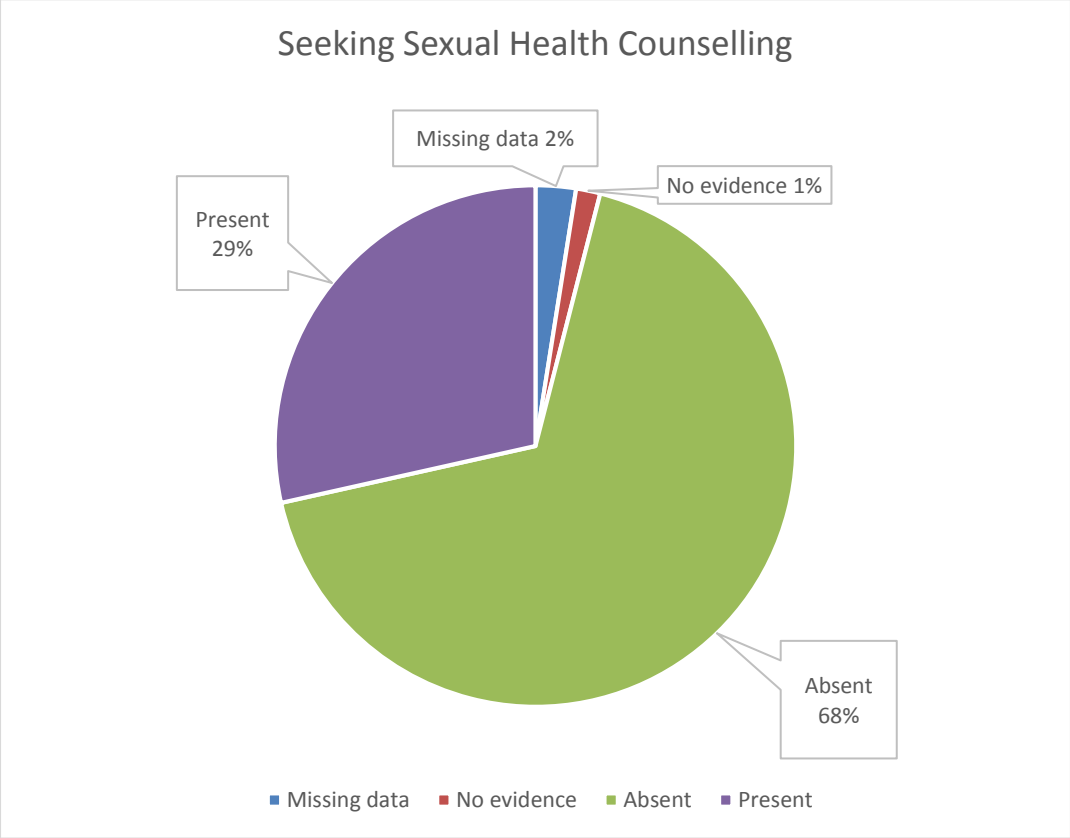


Figure 10, highlights substance abuse amongst young people accessing YAC. 17% of the total sample were recorded as participating in substance misuse. However, Figure 11 shows Leongatha, Korumburra and Wonthaggi had a number of cases where this data was not reported. Hence this could mean that the 17% is an underestimate of the YAC population. Foster and Wonthaggi recorded the highest rates of substance abuse, Foster showed 38% abuse and Wonthaggi recorded 26%. Leongatha only showed 4% substance abuse and Korumburra did not report any substance abuse.

Figure 10

Substance Abuse across all YAC Clinics

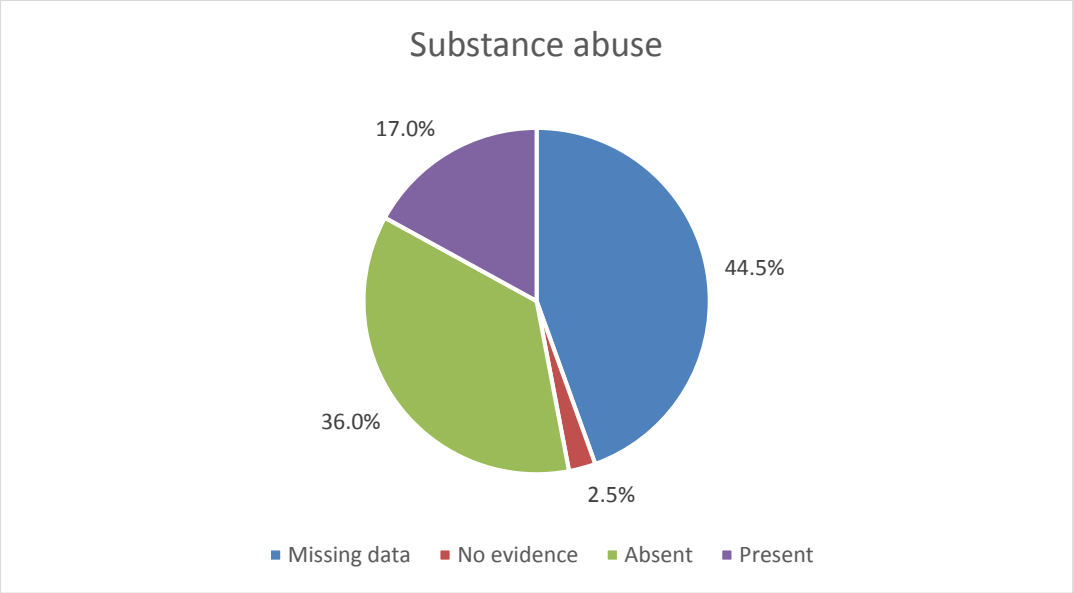


Figure 11

Substance Abuse: Foster, Leongatha, Korumburra and Wonthaggi

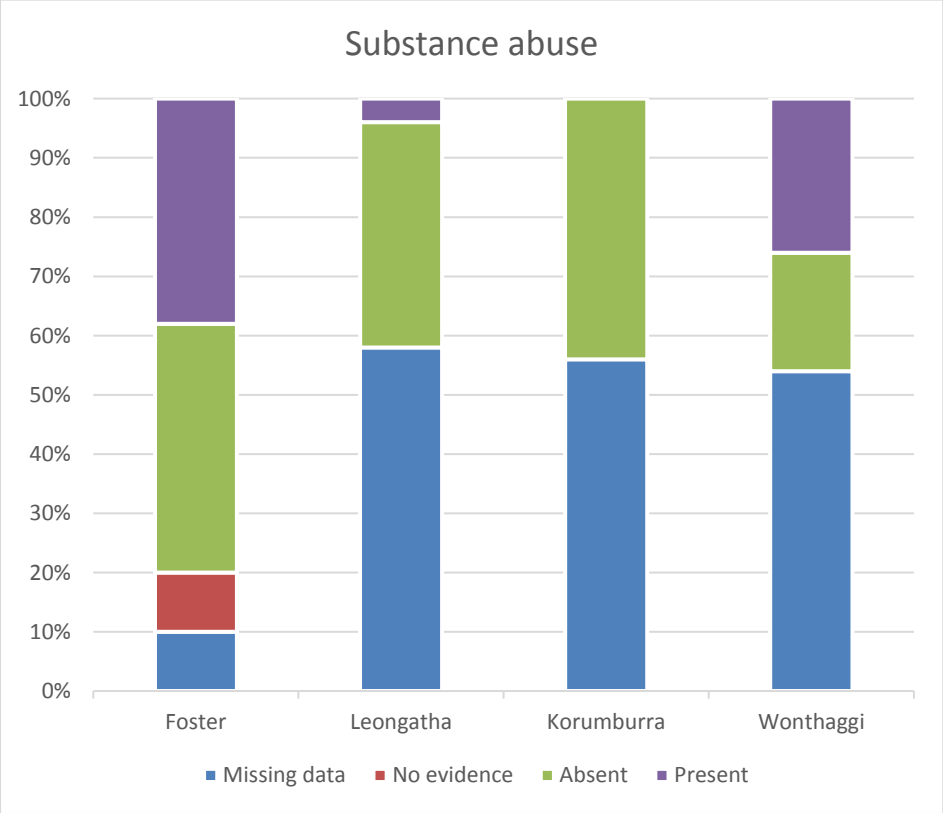


Figure 12, represents the number of young people who presented with family violence issues. Lack of data recorded on this topic might represent an underestimation of the occurrence of family violence. However a total of 11% presented with family violence themes. Table 6 shows Foster recorded the highest rate of family violence with 18%, followed by Korumburra and Wonthaggi, both at 10%, and Leongatha recorded 6%.

Figure 12

Family Violence across YACs

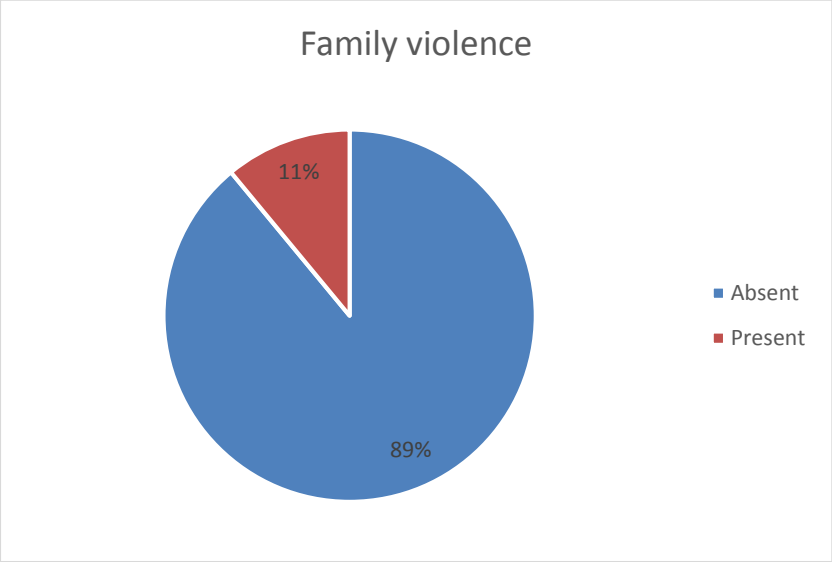


Table 6

Family Violence Frequencies and Percentages

	Frequency	*Percentages*	*N*
Total YAC	22	11%	200
Foster YAC	9	18%	50
Leongatha YAC	3	6%	50
Korumburra YAC	5	10%	50
Wonthaggi YAC	5	10%	50

Table 7 provides information on the frequency and percentage of young people presenting with suicide ideation. 48% of cases did not record information on suicidal ideation. Despite this potential underestimation, 23% of the total YAC sample reported having suffered from suicidal ideation. 28% of Korumburra's YAC files recorded young people presenting with suicidal ideation, Foster had the second highest rating with 26%, followed by Wonthaggi 20% and with the least recorded Leongatha at 18%.

Table 7
Suicidal Ideation

	Frequencies	*Percentages*	*N*
Total YAC	46	23%	200
Foster YAC	13	26%	50
Leongatha YAC	9	18%	50
Korumburra YAC	14	28%	50
Wonthaggi YAC	10	20%	50

Figure 13, shows a pie graph of suicidal ideation across all four YAC sites.

Figure 13

Suicidal Ideation across YACs

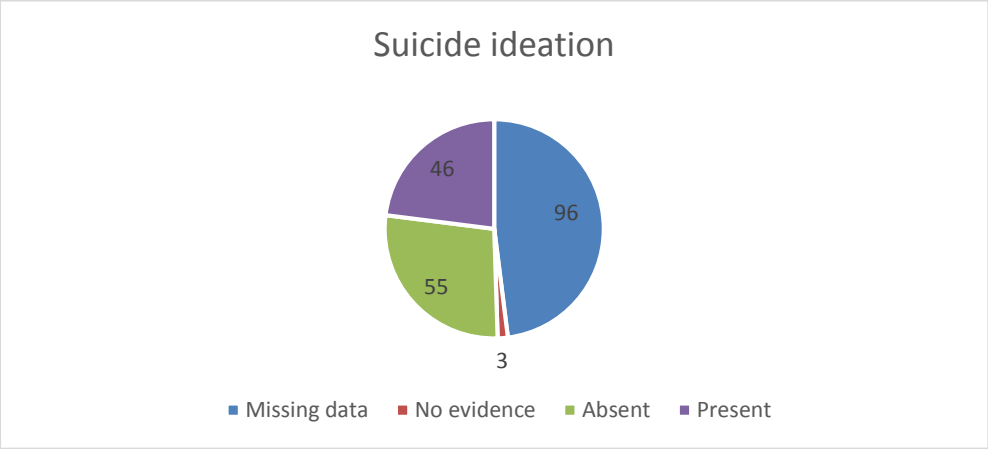


Table 8 records the number of young people who have self-harmed across all four YAC clinics. A total of 17% (n = 34) reported to have self-harmed. Foster has the highest rating of self-harm with 26% (n = 13) of young people engaging in this behaviour, Korumburra recorded 18% (n = 9), Wonthaggi 14% (n = 7) and Leongatha recorded 10% (n = 5) of young people who had engaged in self-harming behaviours.

Table 8
Self-Harm

	Frequencies	*Percentages*	*N*
Total YAC	34	17%	200
Foster YAC	13	26%	50
Leongatha YAC	5	10%	50
Korumburra YAC	9	18%	50
Wonthaggi YAC	7	14%	50

Figure 14 shows the rate of self-harm across all four YACs.

Figure 14

Self-Harm across YACs

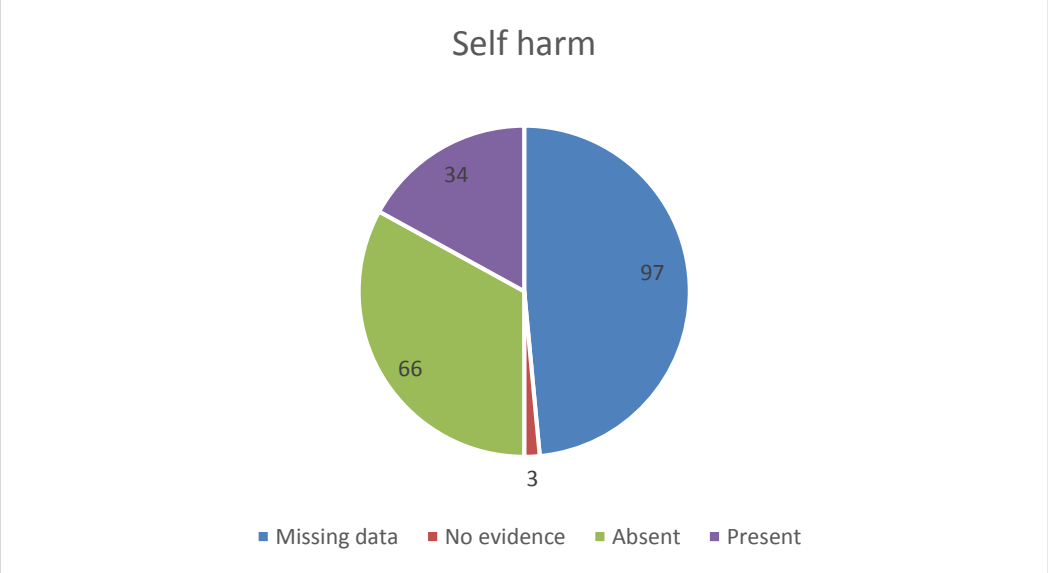


Figure 15 shows the rate of eating disorders across all four YAC sites. A number of client files did not have information recorded on eating disorders and hence the percentages shown in the pie graph might not accurately represent the sample population. Figure 15 shows a total of 8.5% of young people presenting with eating disorders.

Figure 15

Eating Disorders across YACs

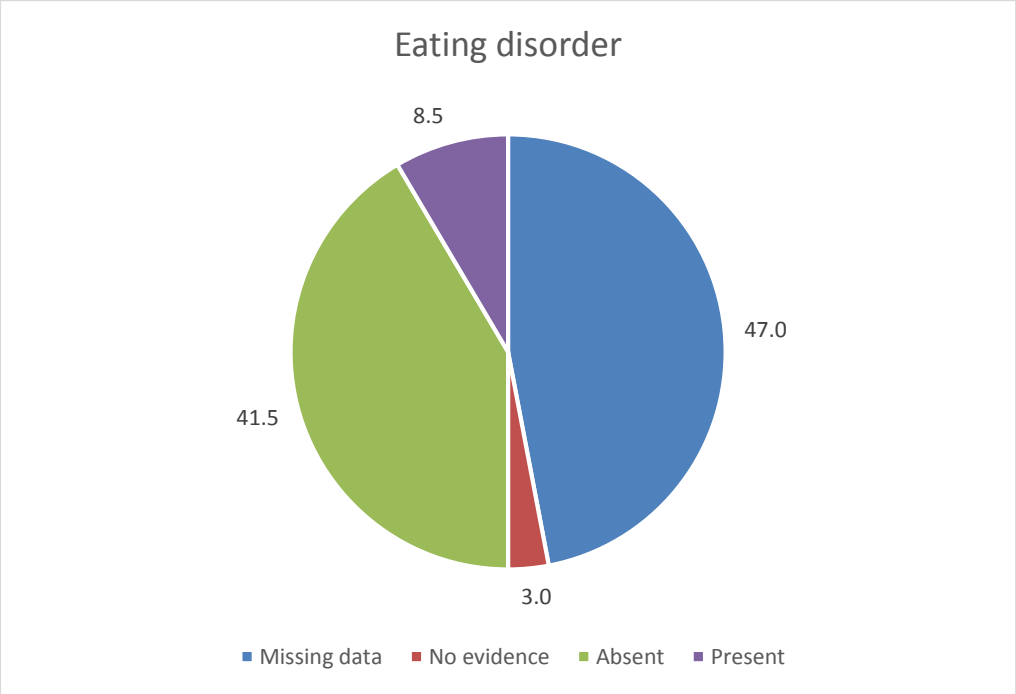
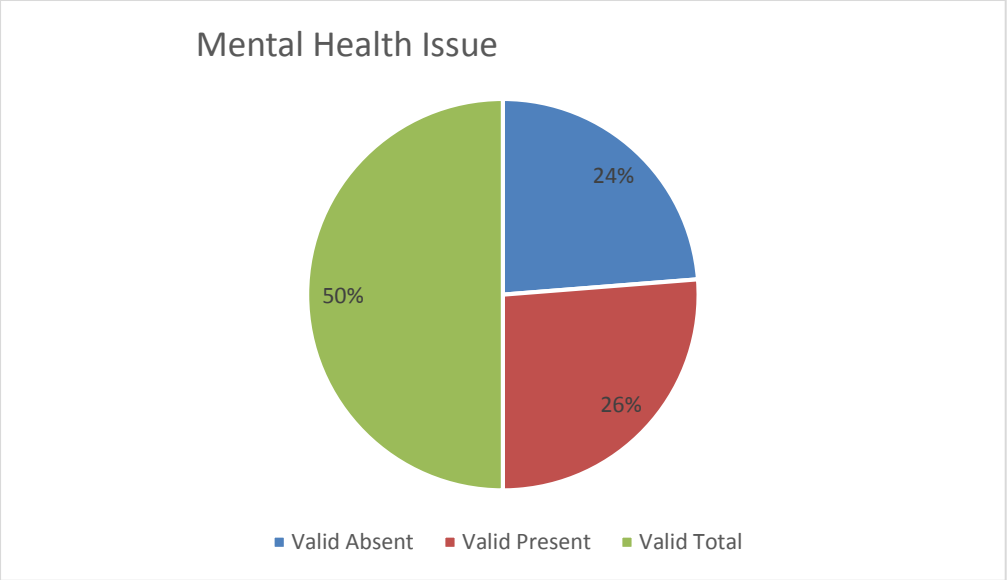


Figure 16 shows the rate of mental health issues across all four YAC sites. Some client files did not have information recorded on mental health and hence the percentages shown in the pie graph might not accurately represent the sample population. Figure 16 shows a total of 53% (n = 105) of young people presenting with mental health issues.

Figure 16

Mental Health across YACs



The following figures were created from the YAC Survey Monkey Questionnaire and are based on data collected during the period of 1st January to 15th June 2018.

Table 9 highlights a total of 587 consults were performed by YACs during the first six months of 2018. The only clinic that consulted with young people in January 2018 was Korumburra, with a total of 3 young people. The highest rates of consults occurred in May with a total of 187. Wonthaggi (n = 57) and Foster (n = 56), were the busiest clinics during this period. Foster had the highest number of consults over the six months with 205, followed by Wonthaggi (n = 172), Korumburra (n = 140) then Leongatha with a total of 70 consults.

Table 9

Monthly Consults

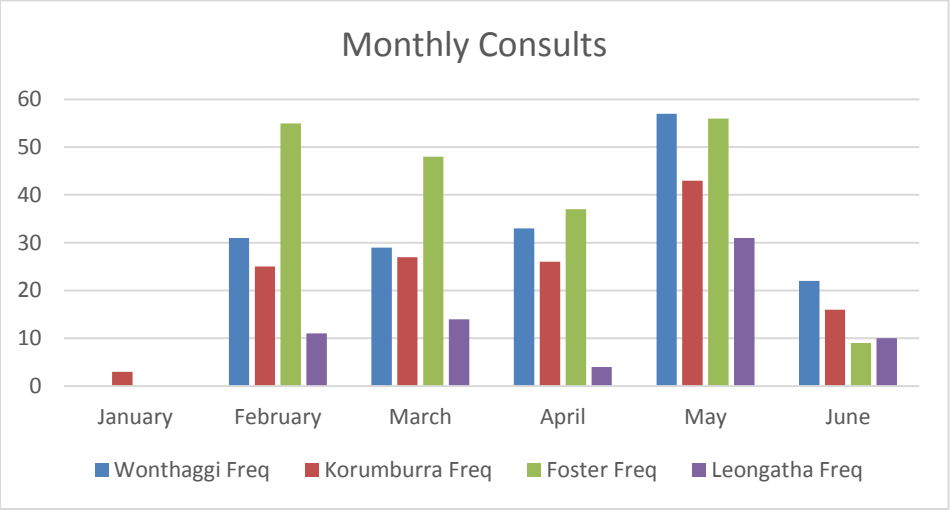


Figure 17 provides information pertaining to the gender ratio of young people accessing the YACs from January to June 2018. During this period no young person identified as CALD, lesbian, gay, bisexual, transgender, queer, intersex or asexual. Only one young person who accessed YAC in this time identified as Aboriginal or Torres Strait Islander and this young person was seen at Wonthaggi. Figure 17 shows an uneven gender ratio with 428 females attending YAC compared to 200 males.

Figure 17

Gender across YACs

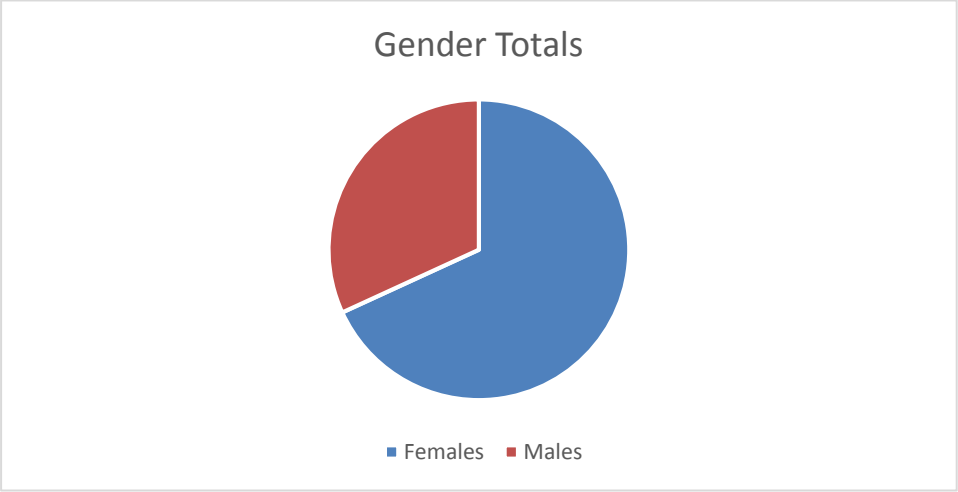


Figure 18, shows the gender ratio of young people within each YAC clinic. Wonthaggi (139:33), Korumburra (103:37) and Foster (137:60) all have a larger female to male ratio, Leongatha however shows the opposite trend with 70 males compared to 49 females.

Figure 18

Gender within YACs

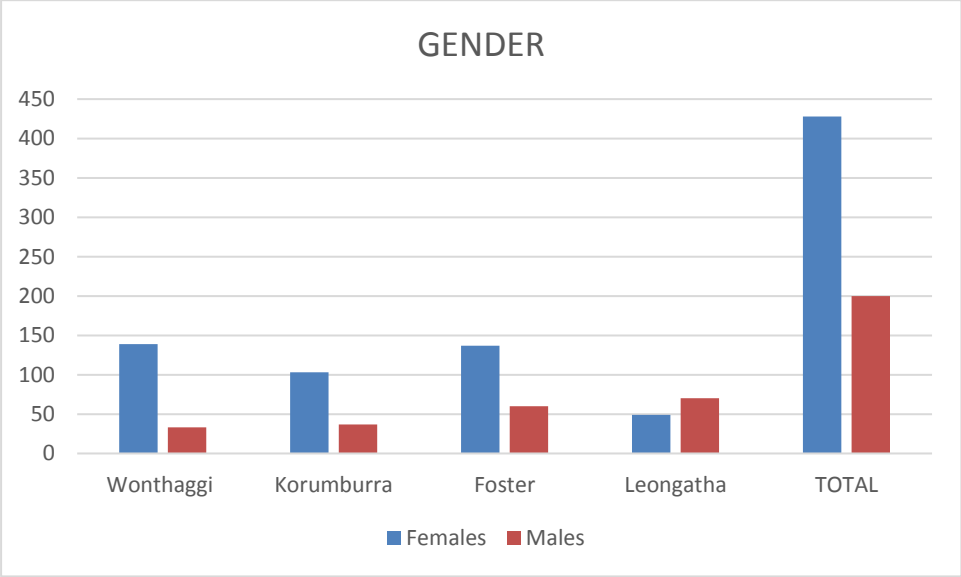


Figure 19 shows the age of young people accessing YAC during the six month period from January to June 2018. Across all four YAC clinics, young people aged 16-18 years were the most common to use the service with a total of 252. Foster however had the largest number of 14-15 year olds accessing the service (n = 93) when compared to the other clinic. The lowest aged bracket to access the YAC service across all sites was 12-13 year olds, followed by young people aged 22+ years.

Figure 19

Age of Young People Accessing YACs

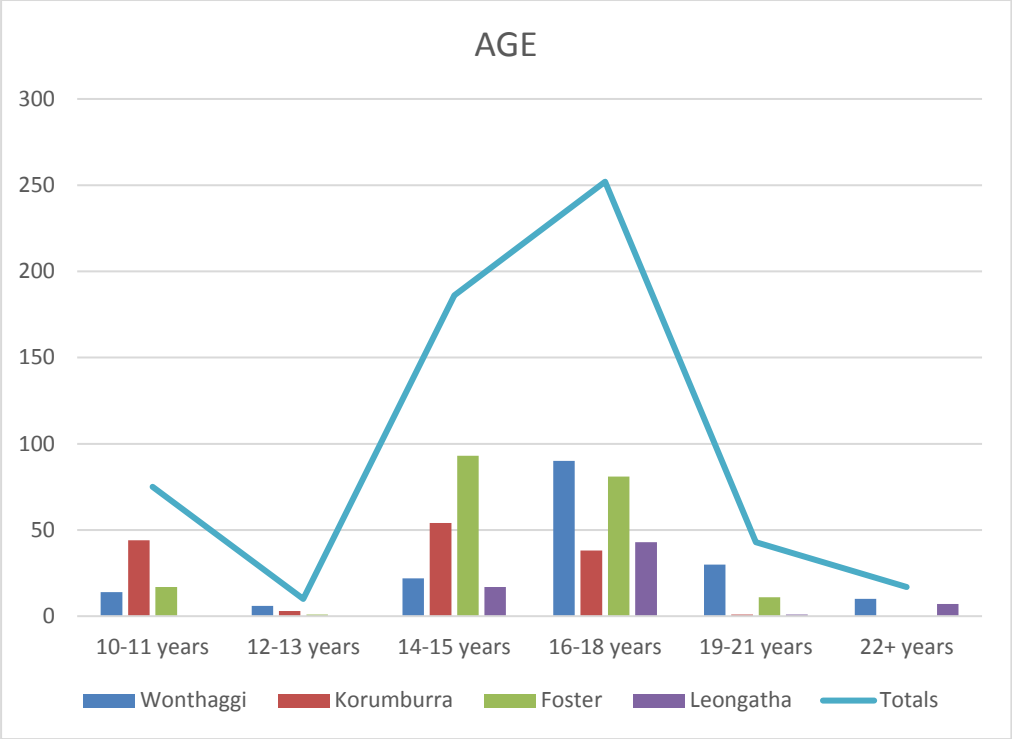


Figure 20 provides a summary of presenting issues for young people accessing YAC. The most common presentation was mental health consults (n = 288), followed by general health (n = 285), sexual health (n = 91), situational (n = 77), drug and alcohol (n = 8) and other (n = 6). The highest mental health consults were recorded for Foster (n = 116) and Wonthaggi (n = 68). Korumburra (n = 107) and Leongatha (n = 40) on the other hand provided more general consults over mental health.

Figure 21 highlights the metal health conditions which young people are currently presenting with. Across all YACs anxiety was the most common mental health problem (n = 227), followed by depression (n =178), other (n = 43), self-harm (n = 29), anger issues (n = 24), eating disorders (n = 19), personality disorders (n = 14), alcohol and substance abuse (n = 11), suicide ideation (n = 8), bipolar (n = 2), gender dysmorphia (n = 2), suicide attempt (n = 1) and family violence (n = 1).

Figure 20

Presenting Issues YACs

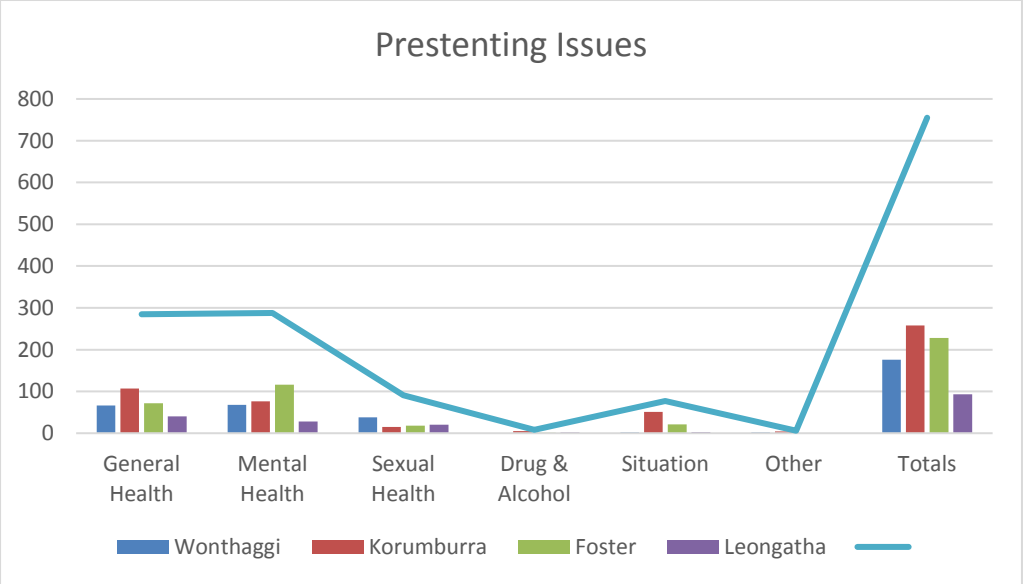


Figure 21

Mental Health YACs

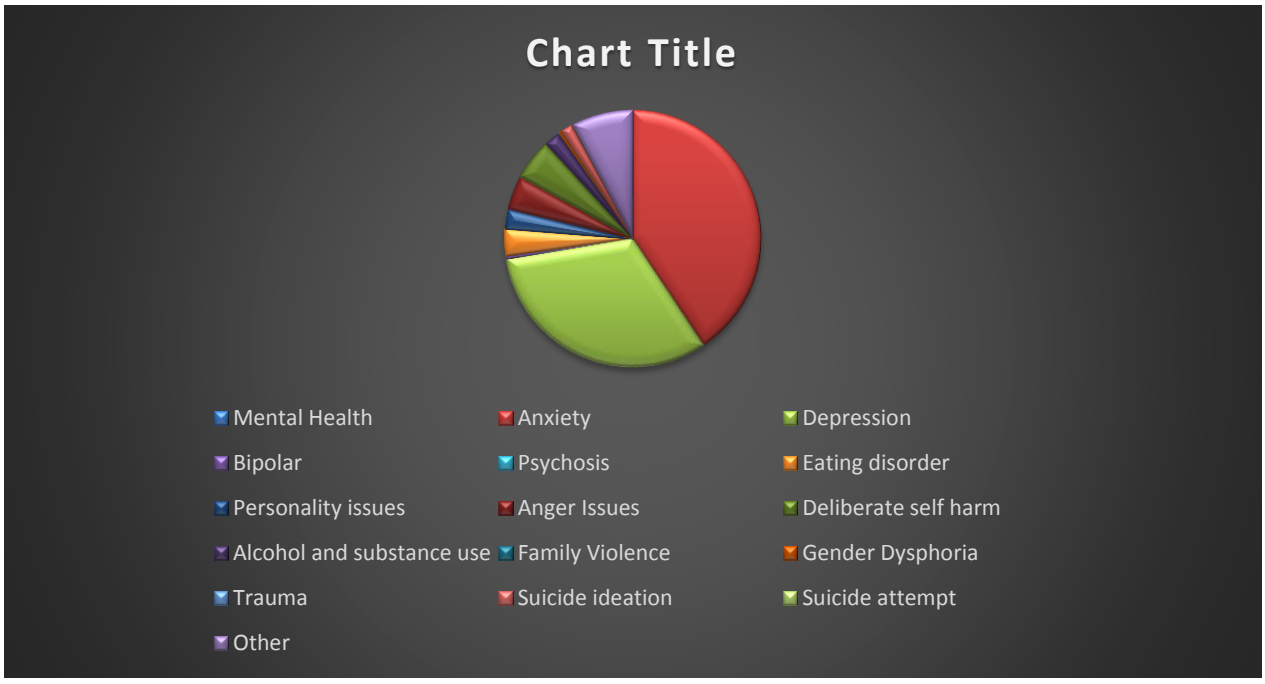


Figure 22, provides information surrounding the sexual health needs of young people accessing YACs. Contraception (n = 73) and STI testing (n = 51) were the most common sexual health need for accessing YAC, followed by gynaecological (n = 33), sexual health consult (n = 31) and pregnancy tests (n = 9).

Figure 23 shows the situational problems young people are experiencing. The most prominent situational concern is conflict within the home (n = 157) and financial problems (n = 137). Family violence (n = 63), bullying at primary school (n = 58), risk/homelessness (n = 45) and other (n = 40) were also highly reported by young people. The least reported were bullying at high school (n = 9), financial (n = 4), sexual assault (n = 3), psychological violence (n = 3), physical violence (n = 2) and sexual abuse (n = 2).

Figure 22

Sexual Health YACs

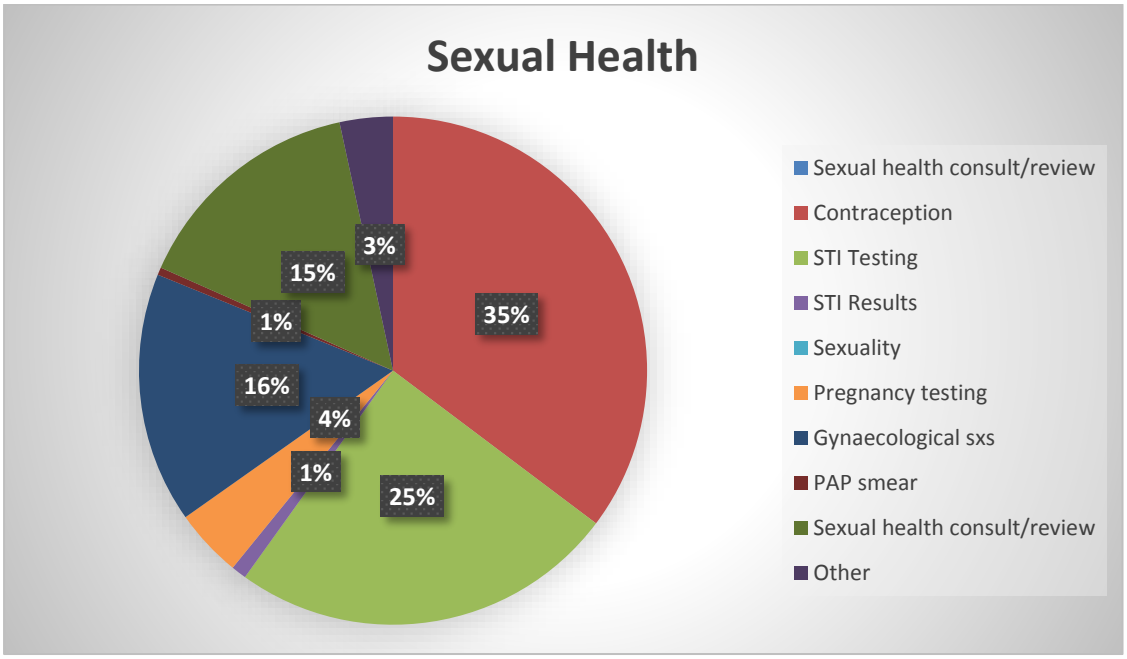
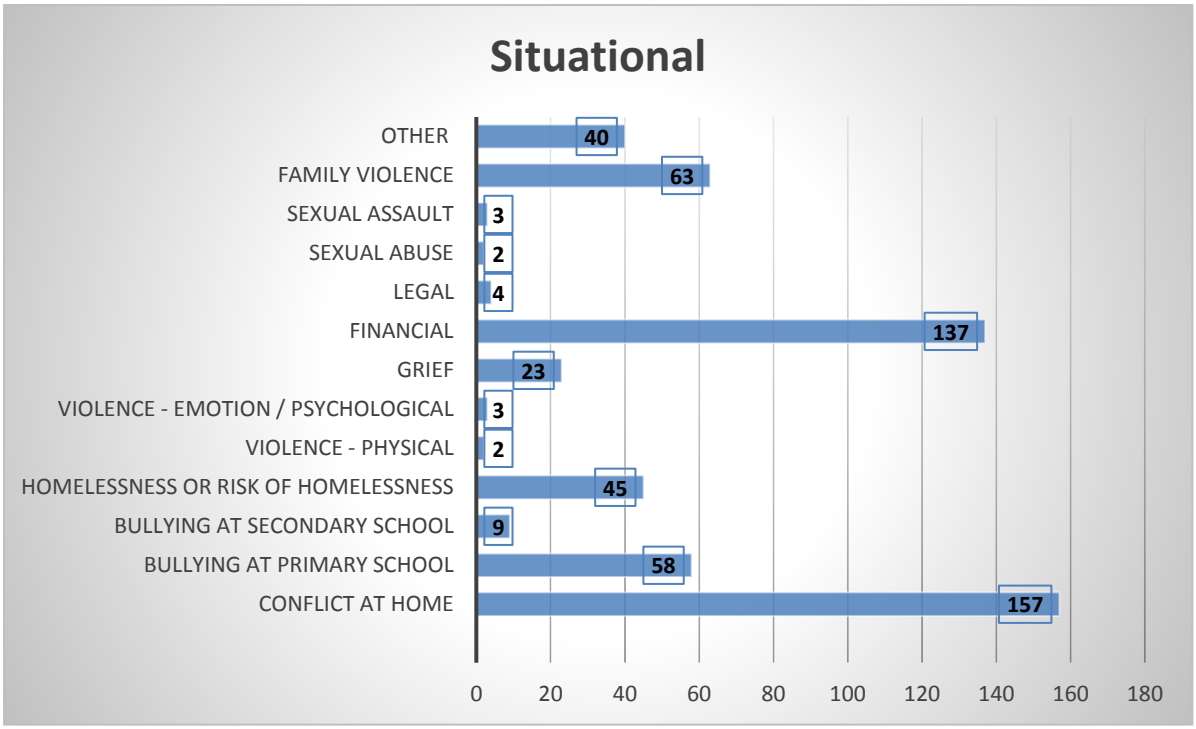


Figure 23

Situational Concerns YACs



Discussion

The aim of the current study was to examine and categorise the referral population, presenting issues, demographics and referrals to other services for young people residing in a rural setting accessing the four YACs. A secondary aim of this study was to highlight the challenges faced in the clinical care of young people in environments where fewer options for specialist referral or significant barriers in accessing specialist care.

The first aim was achieved, with the findings confirming that young people residing in a rural setting have high levels of mental health, self-harm, suicide ideation, family conflict, high number of adverse childhood experiences, alcohol and substance misuse, engage in sexual behaviours at an early age, interpersonal violence, limited finances, large number of broken families and single parent households, and a greater ratio of females accessing care over males. As for the second aim, the above analysis of presenting issues,

demographics and themes provides insight into the needs of young people and the highlights the large amount of young people needing access to specialist care. These themes included:

- The highest number of young people accessing YAC are aged between 14-18 years.
- Almost three times as many females as males are accessing YACs.
- Most young people accessing YACs are engaged in high school and/or both school and employment.
- The highest amount of young people reported to be single or in a relationship for over 2 months.
- Most young people self-refer to YACs.
- Greater numbers of young people reported living with both parents, however single parent households (mother) and other living environments were also extremely common.
- The mean number of services provided to young people was 8.25 sessions.
- Mental Health and general medical consults were the main reasons for young people accessing YAC, followed by prescriptions.
- At least 27% of young people were exposed to trauma (adverse childhood experiences and other trauma such as sexual assault).
- A high number of young people reported being sexually active and utilised YACs for contraception, sexual health consult and STI checks.
- 17% of young people reported substance misuse issues.
- Large number of young people reported family violence and conflict in the home.
- At least 23% of young people had suffered from suicidal ideation.

- Over 17% of young people had engaged in self-harm.
- More than 8.5% of young people reported an eating disorder.
- The most prevalent mental health diagnoses/symptoms were anxiety and depression.
- Bullying in primary school was reported more often (almost 6 times more) than bullying in high school.

The current study's finding that more females access support than males is consistent with previous research conducted by Slade, Johnston, Teesson, Whiteford, Burgess, Pirkis, Saw [68]. In their research, Slade, Johnston, Teesson, Whiteford, Burgess, Pirkis, Saw [68] proposed that the difference in help seeking behaviours is due to masculine norms of self-reliance and struggle to identify symptoms. Furthermore, past research has shown that young people residing in a rural environment tend to rely on themselves for support and wait until they are approached by another person before accessing care [71]. These findings differ to the current study which showed a majority of young people self-referred to the YAC services. This high level of self-referral suggests that young people have a sense of connectedness and positive social proximity to the YAC program [52,78,79].

The current study's level of self-referral counteracts Black, Roberts, Li-Leng [4] notion of young people having poor mental health literacy and knowledge of how to access support. The findings also challenge Valleley, Kosse, Schemm, Foster, Polaha, Evans [77] attitudinal barriers which indicate young people possess the idea that the problem will go away on its own and treatment is not successful. Perhaps the availability and community support for YACs in Gippsland has helped create a safe, understanding and supportive environment for young people [52,59]. Furthermore, it appears to have provided a positive community attachment

which helps a young person build independence, access role models and support and reduce the urge for risk seeking behaviours [1,59].

The findings of the current study that young people residing in a rural setting present with high levels of mental ill-health is consistent with previous research [14,52]. In particular, the present study's result that 26% of young people suffer from mental illness supports both Hodges, O'Brien, McGorry [80] findings that 27% of young people aged between 12 and 24 presented with a mental health condition, and that the most common reasons for youth presentations at headspace centres is mental health [81].

Bradley, Deighton, Selby [52] and Hodges, O'Brien, McGorry [80] found that the most prominent mental health conditions were substance abuse, anxiety, depression and eating disorders, these findings are similar to the current study showing anxiety and depression as the main presenting issues for young people. Hodges, O'Brien, McGorry [80] reported higher rates of suicide in rural areas. Consistent with this the current research found that young people in Gippsland suffered from suicidal ideation and participated in self-harm as opposed to attempting suicide. The high level of anxiety, depression, self-harm and suicidal ideation reported by young people are important themes which need to be addressed by services, school, community and families in order to reduce the prevalence of mental illness in young people.

Similar to Curtis, Waters, Brindis [7] and Boyd, Aisbett, Francis, Kelly, Newnham, Newnham [9] studies, the current research found young people residing in a rural setting have high exposure to trauma, substance misuse issues and family violence. In particular, conflict within the home was the most common cause of distress in young people. Carpentier, Mullins, Wolfe-Christensen, Chaney [49] believed that conflict arises within the family environment due to child-centred parental attribution. Thus without interventions focusing on

biopsychosocial education of parents and young people, parents may be at risk of misinterpreting their adolescents behaviour as purposeful and potentially causing harm [44,51]. Fields [31] and Sheikh, Joanisse, Mackrell, Kryski, Smith, Singh, Hayden [33] further reported that stressors such as family conflict can increase the production of myelin and cause an excess of white matter in the brain. It is this increase that theorists believe may causes mental health conditions and emotional dysregulation in adolescence [30,34].

These finding are concerning as past research has shown the impact of adverse childhood events on young people have detrimental effects on outcomes in adult life [46,47]. These outcomes can include alcohol and substance misuse, smoking, suicide attempts, depression, heart or liver disease, risk for family violence, early participation in sexual activity and teenage pregnancy. The present study showed concerning numbers of young people reporting adverse childhood events such as family violence and conflict as well as negative health behaviours such as substance misuse, risk taking behaviours and early participation in sexual activity. Without appropriate youth friendly services and interventions aimed at reducing adverse childhood events, this cycle of trauma exposure, affect dysregulation and negative coping strategies continues to burden individuals, families, and society [45].

Curtis, Waters, Brindis [7] found that young people residing in a rural setting have sexual intercourse at a younger age then their urban counterparts. The current study showed large numbers of young people accessing YACs for sexual health consults, contraceptive pill, STI checks, pregnancy testing and issues surrounding sexuality. The main reasons for young people accessing YACs were contraception and STI checks. These results are encouraging as they indicate pro-health behaviours to prevent unplanned pregnancy and an awareness of sexually transmitted diseases. The high numbers of sexual health consults indicates a willingness of young people to move beyond barriers such as stigma, attitudinal barriers and

social proximity and access the support needed [8,80,82]. However, the number of STI checks performed by YACs also provides evidence for Curtis, Waters, Brindis [7] findings that young people in a rural setting engage in unsafe sex practices, which can cause significant sexual and emotional health risks.

A large number of young people in the current study reported living in a single parent household (mother only). Research into adolescents residing in a rural environment highlighted problems with identity formation in young people residing in a single parent household [52]. Issues such as financial difficulties, parent stress and potential family conflict can significantly impact on the young person's ability to successfully transition into adulthood [45,46]. Furthermore, as living in a single parent (divorced/separated) household may be an adverse childhood event, the current study's result of high numbers of young people living in a single parent household (mother only), indicates potential elevated risk for young people in a rural setting.

The current study found that adolescents residing in a rural environment reported high levels of bullying in schools, with a majority of the bullying occurring in primary school. This result is consistent with Dulmus, Theriot, Sowers, Blackburn [57] which showed 82.3% of young people residing in a rural setting disclosed being bullied. In particular, Dulmus, Theriot, Sowers, Blackburn [57] study was based on children and young people in grades 3-8, which further supports the current finding that young people reported more bullying in primary school. Nawaz [56] highlighted the importance of positive peer relationships as it moulds a young person's identity. Furthermore, these negative social interactions can significantly impact on the functioning of the Ventral Vagal Complex (VVC) and lead to Sympathetic (SNS) or Dorsal (DVC) dominance [38,39].

The analysis and findings reported here may have been compromised by the small sample size [83]. However, as the current study is based on descriptive statistics and had 200 participants in the file audit and 587 consults in the YAC Survey Monkey Questionnaire, it easily met Bordens, Abbott [84] recommendation to have 30 or more participants in the research design to perform more complicated analyses such as inferential statics. Nonetheless, the findings of the present study must be used and interpreted with caution as the results may not accurately represent the population in question [83,84]. Taking these points into consideration the design of the current study could be improved by using a larger sample size, which could potentially eliminate problems with small sample sizes. It is also important to note that there were age and gender disparities. As stated there were not equal numbers of females to males, with 428 females in the YAC survey monkey questionnaire compared to only 200 males. Furthermore, the majority of young people accessing YACs were aged between 16-18 years. This uneven sample may have further impacted the results of the study [83].

There were a number of problems associated with the file audit component of this study, some of which are specific to this study, and some of which are more generally associated with this type of research. These problems included missing data in the files, different file management systems (i.e. computer vs. paper file), experience of clinicians and social proximity [52,80]. A number of files, both paper and computer copies, did not include HEADS assessments which impacted on data reporting of home environments, education and eating habits, drug and alcohol use, sexual activity and suicide/self-harm and safety. Hence, it is likely that the file audit component of this study has underestimated the prevalence of problems arising under these headings. This is concerning as the current descriptive statistics already show high occurrence of adverse childhood events, drug and alcohol use, sexual activity, suicidal ideation and self-harm.

Although it is best practice, for pragmatic reasons many general practitioners, nurses and psychologists do not gather comprehensive information from a variety of sources when reporting mental health diagnoses [85]. Thus, the present study did not obtain an independent opinion of mental health diagnoses for young people accessing YACs. Rather the data is based on self-report of the young person and/or the view of the practitioner consulting with the client. Future research could include mental health data gathered from a variety of sources to help confirm and identify the prevalence of mental illness in rural areas. Furthermore, a young person's safety to disclose information pertaining to mental health symptoms, adverse childhood events, sexual activity, drug and alcohol use, suicidal ideation and self-harm is dependent on the young person's view on social proximity to the safety of the YACs. The current study's lack of data concerning views on social proximity and past research highlighting the negative associations in rural areas could further indicate that the results of the current study underestimated the prevalence of the above issues [52,67]. Future research could consider gathering information surrounding safety, disclosure and perceived social proximity.

The results of the current study along with Hodges, O'Brien, McGorry [80] and Bright, Knapp, Hinojosa, Alford, Bonner [46] showed that young people residing in a rural environment reported significant mental health issues, high risk behaviours, lack of resources and increased exposure to adverse childhood events. These results imply that the biopsychosocial needs of young people in rural settings are not being adequately met, thus placing these young people at greater risk of mental illness and long-term health problems in adulthood.

Research has shown that young people residing in a rural environment have limited access to services, rely on family and friends for support and have limited opportunities for social development [30,38,74]. This reliance on family and friends and lack of community and

professional supports is concerning as the current study showed young people regularly reported conflict within their family home, family violence, bullying in school and potential homelessness. It is therefore imperative that a support system is developed for young rural people that is capable of addressing their psychological, social and medical needs.

The present study showed high prevalence of suicidal ideation, self-harm, substance misuse and eating disorders. As Casey, Jones [20] defined adolescence as the 'use it or lose it' phase, the use of these affect regulation strategies are likely to be reinforced as default coping methods. In turn, without addressing these issues, there is likely to continue to be a high rate of suicide completion in rural Australia. Even where people do not engage in suicidal behaviours, the high prevalence of these associated issues increases the likelihood of mental illness and significantly impacts on a young person's healthy development into adulthood.

Another implication of the present study is that rural youth are subjected to high numbers of adverse childhood events. With 27% of young people in the current study disclosing traumas and a large number coming from separated/divorced households, it is highly likely these young people, due to their exposure to adverse childhood events, will develop chronic health conditions such as heart or liver disease, substance misuse, family violence and alcohol misuse in later life [45,46]. Breaking this cycle through early intervention, therapeutic treatment and creating community awareness will aid in a young person's ability and willingness to access support. Enhancing mental health literacy within a young person through service and school based interventions can influence the reluctance of a young person to access support as previously reported by Aisbett, Boyd, Francis, Newnham, Newnham [67] and Gulliver, Griffiths, Christensen [66].

The current study supported the implications presented by Slade, Johnston, Teesson, Whiteford, Burgess, Pirkis, Saw [68] research that masculine norms influence a male's

awareness to access support. With almost three times as many females accessing YACs in Gippsland, it is essential for service providers to provide specific interventions focused on young males. Having an approach that took into account a staging model of mental illness [86] that posits earlier intervention can be more general and less burdensome, some of the required interventions may be as simple as psychoeducation surrounding early warning signs of mental illness. This would allow males to identify symptoms and seek early help. This has important clinical implications for clinicians working in a rural environment, as self-reliance is not only a problem for males, it impacts both genders living in a rural setting. The key is for clinicians to be mindful of previous research which highlighted that young people in rural environments wait to be approached before accessing care [13,66]. A simple question such as 'I have noticed you haven't been yourself lately, are you ok?' would open pathways for young people to access supports needed.

As stated above, community connectedness and positive social proximity allows young people to feel safe accessing support and breaking the silence of stigma [8,80]. The current study has positive implications for community connectedness and social proximity for YACs as it had a high rate of self-referral and disclosure by young people. Creating safe, inclusive, free and easy to access services which promote confidentiality and independence for young people are essential in producing community connectedness and meeting the biopsychosocial needs of adolescents. Approaching the treatment of young people inclusive of the community, not only increase acceptability of accessing services but also directly impact of the Ventral Vagal Complex by providing opportunities for social development [38,67,79]. Furthermore, positive community connectedness and role modelling can lead to young people accessing activities outside of the YACs, such as sports, recreational activities and community groups [78,79].

The present study has described the many problems that young people are presenting with in Gippsland. In addition, the review of the literature has shown that there are extra barriers faced by young people in rural areas, which include lack of services, fear of stigma and isolation resulting from negative social proximity [1-4].

The positive message from this research study has been the way in which the four YACs have been able to engage with a group of complex young people. The model that they have established is providing care to a large number of people. Importantly with an average number of 8 sessions, there is evidence of good engagement and an assumption that young people are seeing that the clinics are able to address their needs. This will be further explored in the report of the qualitative study to follow.

Research into the creation of the four YACs will provide information surrounding the unique and local development of services in answer to the perceived need of young people in their communities. This study will also identify the factors that have allowed these clinics to become sustainable as well as produce knowledge of how small communities can establish and maintain a service response to these needs. Thus making contributions to mental health care, service planning and policy.

In conclusion, the present study revealed that young people in rural settings are exposed to higher levels of mental ill-health, self-harm, suicidal ideation, family conflict, adverse childhood events, substance misuse, early sexual activity, interpersonal violence, financial difficulties, broken families and greater barriers to access services. As demonstrated by this study, the relationship between residing in a rural setting, brain maturity, family dysfunction/conflict, social proximity and barriers to access support is complicated. There is a need to comprehensively understand this relationship and create interventions which aim at

reduce stressors, isolation, enhance communication and identification of early warning signs, increase opportunities for social interaction and focus on removing barriers to access care.

Furthermore services need to be inclusive of all parts of a young person's system focusing on not only the adolescent, but their parents and community as well. Specific interventions focused on psychobiological education of young people and parents must include topics such as sleep hygiene, social interactions, brain development, mental health literacy, sexual health and service accessibility. Without these interventions the unmet biopsychosocial needs of young people are likely to continue and place tremendous burden on young people, adults and rural communities.

Appendix A: Clinical File Audit

Date of Assessment	__/___/__	Participant Initials	___	Participant ID	

1. Date of Birth	__ __ /__ __ __ /__ __ Age (calculated):_____years
2. Gender	☐1 Male ☐2 Female ☐3 Transgender ☐4 Genderqueer/gender nonconforming ☐5 Intersex ☐6 Prefer not to say ☐7 Other, specify: _____ ☐-9 Missing *Select all that apply* Sex assigned at birth: ☐1 Male ☐2 Female ☐3 Prefer not to say ☐-9 Missing *Select only one*
3. Referral source	☐1 Self ☐2 Friend ☐3 School ☐4 Parent ☐5 Counsellor ☐6 Doctor ☐7 Allied Health Provider ☐8 Support Worker ☐9 Family ☐10 Other, specify:_____ ☐-9 Missing *Select only one*
4. Country of birth	☐1 Australia ☐2 New Zealand ☐3 Africa ☐4 Asia ☐5 Central America ☐6 North America ☐7 South America ☐8 Europe ☐9 Oceania ☐10 Middle East *Select only one of the above and then complete the following specifiers* 11 Aboriginal or Torres Strait Islander? ☐0 No ☐1 Yes ☐2 Does not know ☐-3 N/A 12 If NOT Australia or New Zealand, specify country: _____ ☐-3 N/A 13 If NOT Australia, specify age arrived in Australia: _____years ☐-3 N/A ☐-9 Missing
5. Language spoken at home	☐1 English ☐2 Other, specify:_____ ☐-9 Missing *Select only one*
6. Command of English	☐1 Native language ☐2 Second language ☐3 No English (an interpreter is needed) ☐-9 Missing *Select only one*

Date of Assessment	__/___/__	Participant Initials	____	Participant ID	

7. Current relationship status	☐1 Single/Never married ☐2 Partnered (less than 3 months) ☐3 Partnered (3 months to 2 years) ☐4 Married/*de facto* (more than 2 years) ☐5 Separated/Divorced ☐6 Widowed ☐7 Other, specify _____ ☐-9 Missing *Select only one*
8. Sexual orientation	☐1 Straight (attracted to a different sex) ☐2 Gay or Lesbian (attracted to the same sex) ☐3 Bisexual or pansexual (attracted to more than one sex) ☐4 Undecided, not sure or questioning ☐5 Prefer not to say ☐6 Other, specify _____ ☐-9 Missing *Select only one*
9. Number of children	_____ ☐-9 Missing
10. Current accommodation	☐1 House/flat with family of origin ☐2 Rented room ☐3 Rented flat/house ☐4 Owned flat/house ☐5 Boarding house/hostel ☐6 Homeless or couch surfing ☐7 Other (specify) _____ ☐-9 Missing *Select all that apply*
11. Person(s) with whom living	☐1 Alone ☐2 Both parents ☐3 Mother only ☐4 Father only ☐5 Sibling(s) ☐6 Partner ☐7 Son(s)/daughter(s) ☐8 Friend(s) ☐9 Other (specify) _____ ☐-9 Missing *Select all that apply*

Date of Assessment	__/___/__	Participant Initials	____	Participant ID	

12. Post code	_____ ☐-9 Missing

Unless otherwise indicated, this form was completed by:
Signature: ***Date:*** DD/MMM/YY

Assessments	Information (include comments where necessary)
Date assessment commenced	
Date assessment finalised	
Service commencing assessment	
Reason for Consultation	
Medical Conditions	

Date of Assessment	__/___/__	Participant Initials	____	Participant ID	

DETAILS (supplemented from elsewhere in file where appropriate)	
Home Environment Including who, where, recent moves, relationships, violence	
Educational history/employment Including where, attendance, year, performance, relationships, supports, recent moves, bullying, disciplinary actions, future plans, and work details	
Eating Including weight (heaviest, lightest, recent changes), dieting, exercise and menstrual history. Eating disorder?	

Date of Assessment	__/___/__	Participant Initials	____	Participant ID	

Activities/Peers Outside of school, including sport, organised groups, clubs, parties, TV/ computer use	
Drugs Including cigarettes, alcohol and illicit drug use by friends, family and the patient. Enquire into patterns & frequency of use & about any regrets from using these substances. Also ask about how use is financed and about negative consequences.	
Sexuality Including close relationships, sexual experiences, number of partners (total and in the last 3 months), gender of sexual partners (don't assume sexual preferences), uncomfortable situations/ sexual abuse, risk of pregnancy and previous pregnancies (relevant to males as well as females),	

contraception, condoms and STIs	
Suicide Presence and frequency feeling down or sad as well as current feelings eg. "How do you feel in yourself at the moment on a scale of 1 to 10?" Actions when down, supports. Self-harm-thoughts and actions. Suicide risk- thoughts, attempts, plans, means and hopes for future.	
Safety Including serious injuries, use of safety gear for sports and seatbelts for cars, riding with an intoxicated driver and exposure to violence at school and in neighborhood. For high risk youths ask about carrying or use of weapons and other criminal behaviours/ incarceration of youth or family/ friends.	
Forensic involvement	

Date of Assessment	__/___/__	Participant Initials	____	Participant ID	

Grief Trauma	
Diagnoses	
Follow up/Referrals/Services offered	Accepted ☐ Rejected ☐
Call services provided Number of services ____	Counselling Y/N Assessment Y/N

Date of Assessment	__/___/__	Participant Initials	____	Participant ID	

	Medical Advice Y/N Prescription Y/N			
Symptomatology	Symptom			Comments
	Present	Absent	No Mention	
Depressive				
-Depressed mood				
-Anhedonia				
-Changes in sleep				
-Changes in appetite/weight				
-Psychomotor retardation or agitation				
-Loss of energy or fatigue				
-Difficulty thinking, concentrating or indecisiveness				
-Feelings of worthlessness or inappropriate/excessive guilt				
-Suicidal thoughts/plan/attempt				
-Feelings of hopelessness				
-Low self esteem				
-Other (list)				
Psychotic				
-Delusions				
-Hallucinations				
-Disorganized speech				
-Abnormal motor behaviour or catatonia				

Date of Assessment	__/___/__	Participant Initials	____	Participant ID	

-Negative symptoms				
-Other (list)				
Borderline Personality				
-Efforts to avoid abandonment				
-Unstable and intense interpersonal relationships				
-Identity disturbance				
-Impulsivity				
-Suicidal or self-mutilating behaviour				
-Affective instability- reactive mood				
-Chronic emptiness				
-Anger				
-Stress-related paranoid ideation or dissociation				
Anxiety				
-anxiety surrounding separation				
-specific fear situation or object				
-anxiety about social situations				
-panic attacks				
-Agoraphobia i.e. public transport, open spaces, enclosed spaces, being in a crowd, outside of home alone				
-excessive anxiety/worry				
-OCD				

Date of Assessment	__/___/__	Participant Initials	____	Participant ID	

Trauma Related				
-Consistent pattern of inhibited emotionally withdrawn behaviors to caregiver				
-PTSD symptoms ASD				
-Adjustment symptoms				
Other (list) ADHD, CD, ODD, gender Dysphoria				

HONOSCA (15 – 17 years old)

Reason for assessment:

Scoring: 0=No problem 1=minor problem 2=mild problem 3=moderate problem

4=severe to very severe problem 9=unknown/not applicable

Items 1-9 = Most severe for rating period		9. Problems with emotional and related symptoms	
1. Disruptive, antisocial or aggressive behaviour		**Items 10-13 = Most frequently occurring for rating period**	
2. Problems with overactivity, attention or concentration		10. Problems with peer relationships	
3. Non-accidental self-injury		11. Problems with self-care and independence	
4. Problems with alcohol, substance or solvent misuse		12. Problems with family life and relationships	
5. Problems with scholastic or language skills		13. Poor school attendance	
6. Physical illness or disability problems		**TOTAL**	
7. Problems associated with hallucinations, delusions or abnormal perceptions		14. Problems with lack of knowledge or understanding about the nature of the child or adolescent's difficulties	
8. Problems with non-organic somatic symptoms		15. Problems with lack of information about services or management of the child or adolescent's difficulties	

CGAS:

Principal Diagnosis:

Date of Assessment	__/___/__	Participant Initials	____	Participant ID	

Additional diagnoses:

HONOS (18+ years old)

Reason for assessment:

Scoring: 0=No problem 1=minimal problem 2=moderate problem 3=moderate problem

4=severe problem 9=unknown/not applicable

HONOS		7) Problems with depressed mood	
1) Overactive, aggressive, disruptive, agitated behaviour		8) Other mental and behavioural (above) Letter:	
2) Non-accidental self-injury		9) Problems with relationships	
3)Problem drinking or drug taking		10) Problems with activities of daily living	
4) Cognitive problems		11) Problems with living conditions	
5) Physical illness or disability problems		12) Problem with occupation ad activities	
6) Problems associated with hallucinations/delusions		**TOTAL**	

Focus of care (circle):

1) Acute
2) Functional gain (improve functioning)
3) Intensive extended (prevent deterioration)
4) Maintenance (maintain level of functioning)

Principal diagnosis:

Additional diagnoses:

Date of Assessment	__/___/__	Participant Initials	____	Participant ID	

Have you checked and recorded?

Registration form: Yes No

Assessment Form: Yes No

HONOS/HONOSCA: Yes No

Any relevant screens: Yes No

The patient alert form for recording of intellectual disability: Yes No

Psychosocial recovery service referrals/reports and individual service plans: Yes No

Number of hospitalizations: Yes No

Any further comments?

Appendix B: YAC Survey Monkey Questionnaire

Q1: Consult month of year

Q2: How do you identify

Q3: Age (client age bracket)

Q4: Presenting Issues: General health, mental health, sexual health, drug and alcohol, situational, other

Q5: Primary presenting issues: General health

Q6: Primary presenting issue: Mental health

Q7: Primary presenting issue: Sexual health

Q8: Primary presenting issue: Alcohol and other drugs

Q9: Primary presenting issue: Situational

Q10: Demographics: Education/employment

Q11: Main services provided: Referral to psychologists, referral to psychiatrist, referral to specialist, medication initiation, vocational referral-Centrelink/bullying, general medical referral, nurse review, pathology/review

Q12: Presented to: General practitioner, youth clinic nurse, mental health nurse, other

Q13: Housing: Living with guardian, independent living, out of home care, homelessness, other

Appendix C: Ethics Approval

16 January 2018

Prof E.J. Killackey

Centre for Youth Mental Health
The University of Melbourne

Dear Prof Killackey

I am pleased to advise that the Centre for Youth Mental Health Human Ethics Advisory Group has approved the following Minimal Risk Project.

Project title:	**Referral Characteristics, Service Accessibility and Outcomes of Youth Residing in a Rural Setting: A Clinical Audit of Youth Access Clinic Files.**
Researchers:	**Ms M Shearer, Prof E J Killackey, Dr K Allott, Mr M Hamilton, Mrs E Dolan**
Ethics ID:	**1750779**

The Project has been approved for the period: **16-Jan-2018 to 31-Dec-2018.**

It is your responsibility to ensure that all people associated with the Project are made aware of what has actually been approved.

Research projects are normally approved to 31 December of the year of approval. Projects may be renewed yearly for up to a total of five years upon receipt of a satisfactory annual report. If a project is to continue beyond five years a new application will normally need to be submitted.

Please note that the following conditions apply to your approval. Failure to abide by these conditions may result in suspension or discontinuation of approval and/or disciplinary action.

(a) **Limit of Approval:** Approval is limited strictly to the research as submitted in your Project application.

(b) **Amendments to Project:** Any subsequent variations or modifications you might wish to make to the Project must be notified formally to the Human Ethics Advisory Group for further consideration and approval before the revised Project can commence. If the Human Ethics Advisory Group considers that the proposed amendments are significant, you may be required to submit a new application for approval of the revised Project.

(c) **Incidents or adverse affects:** Researchers must report immediately to the Advisory Group and the relevant Sub-Committee anything which might affect the ethical acceptance of the protocol including adverse effects on participants or unforeseen events that might affect continued ethical acceptability of the Project. Failure to do so may result in suspension or cancellation of approval.

(d) **Monitoring:** All projects are subject to monitoring at any time by the Human Research Ethics Committee.

(e) **Annual Report:** Please be aware that the Human Research Ethics Committee requires that researchers submit an annual report on each of their projects at the end of the year, or at the conclusion of a project if it continues for less than this time. Failure to submit an annual report will mean that ethics approval will lapse.

(f) **Auditing:** All projects may be subject to audit by members of the Sub-Committee.

Please quote the ethics registration number and the name of the Project in any future correspondence.

On behalf of the Ethics Committee I wish you well in your research.

Yours sincerely

A/Prof Frances Kay Lambkin
Centre for Youth Mental Health Human Ethics Advisory Group

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