Promoting positive mental health in adolescent boys: Actions to tackle suicide in Australian secondary schools

Sheridan Leone Carey
Queensland University of Technology, Australia

Suicide is one of the leading causes of death in Australian adolescent males and rates are gradually increasing. Prompt attention to this issue is needed to stem the rising rates and prevent young boys from taking their lives. School based programs are an obvious place for prevention to occur as they have the capacity to impact a majority of students. However, there is insufficient evidence to show that prevention programs focusing specifically on suicide are effective. Research suggests schools that prioritise, develop and implement consistent programs focusing on the mental health of young people are more likely to reduce suicide. For these programs to be successful, risk and protective factors need to be examined and considered. This review examines factors present in secondary school contexts that will assist educators in developing pastoral care programs. School personnel are in an ideal position to recognise risk factors and schools have the capacity to employ protective factors through mental health programs. Schools that are proactive in tackling this issue have the potential to improve the mental health of all students and reduce the numbers of adolescent males who commit suicide.

Introduction

> In the eighties, Australian youth ran away from home when problems seemed too great. In the nineties, Australian youth kill themselves when problems seem to great (Fuller, 2003, p. 132).

There is concern about the prevalence and escalation of suicide among Australians males (Milner & Page, 2017). According to the Australian Bureau of Statistics (2018), suicide is the second leading cause of death in adolescent Australians outranked only by motor vehicle traffic accidents. In 2017, suicide was the foremost cause of death in children aged 5-17 with 98 deaths occurring in this age group, representing a 10.1% increase from the previous year (Australian Bureau of Statistics, 2018). To put the issue in context, over the last decade more young people died from suicide than cancer, heart disease, birth defects, diabetes and other medical conditions combined (Australian Bureau of Statistics, 2018; Miller, Eckert & Mazza, 2009). Of all deaths in Australia, intentional self-harm is only attributed to a relatively low 1.9% (Australian Bureau of Statistics, 2018). However, since close to one third of deaths in young people is by suicide (Australian Human Rights Commission, 2018), it accounts for a high proportion of deaths in this age group, thus making it a significant public health issue that cannot be ignored.

Suicide has a high gender disparity with males three times more likely to commit suicide than females (World Health Organisation, 2017) (refer also to Figure 1), with deaths by suicide exceeding female numbers in every age group (Milner & Page, 2017). Australian adolescent males are three times more likely to commit suicide than females (Amitai & Apter, 2012; Australian Bureau of Statistics, 2018), with the rate of this age group and gender increasing four and a half fold over the last thirty years (Beautrais, 2000; Fuller,

2003; Ploeg, Ciliska, Dobbins, Hayward, Thomas & Underwood, 1996; Holland, Vivolo-Kantori, Logan & Leemis, 2017). While boys are the focus of this review, statistics and information pertaining to youth of both genders is presented in some available research and is used in circumstances where evidence specifically relating to males was limited.

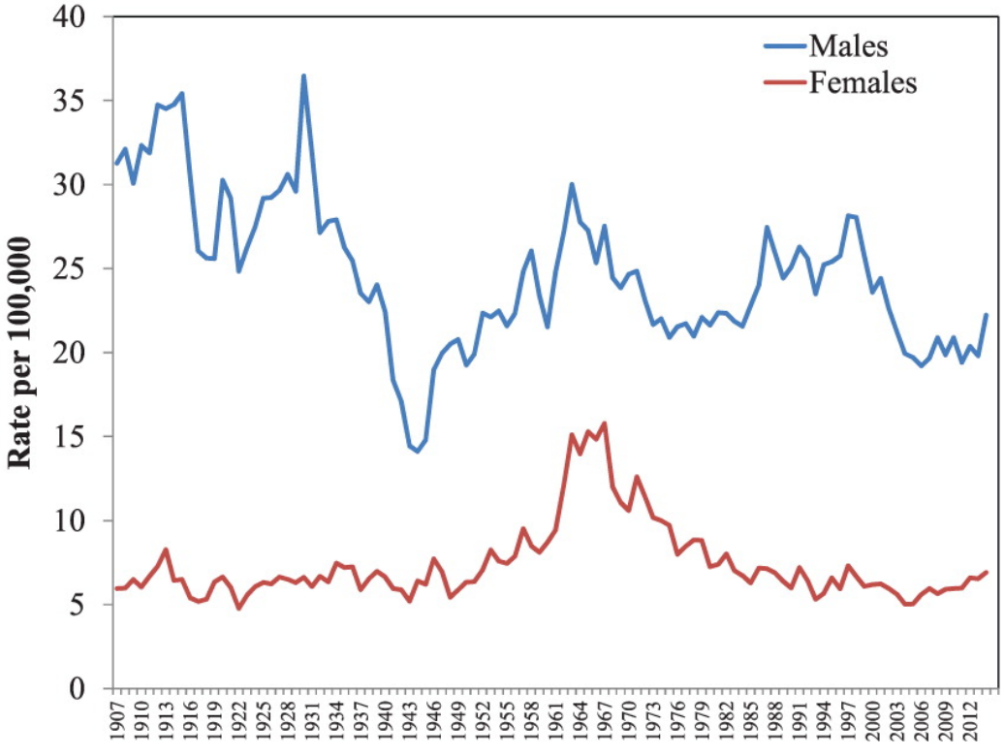

Figure 1: Australian suicide rates 1907 - 2014 by gender
Source: Milner & Page (2017)

The high suicide rates of males in Australia is alarming, and consequently, there is a need for more investigation and research on the mental health of the young men in this country. Schools are an ideal place to foster positive development necessary for the prevention of suicide, due to the fact children spend significant amounts of time there, and in some occasions, is the only access they have to mental health care (Australian Human Rights Commission, 2018).

While school-based suicide prevention programs have potential, research shows there is not enough evidence related to significant outcomes from approaching prevention this way (Das et al., 2016; Fuller, 2003; Katz et al., 2013; Miller & Eckert, 2009; Miller, Eckert & Mazza, 2009; Wells, Barlow & Stewart-Brown, 2003). Therefore, support cannot be given to the implementation of programs that focus on suicide due to insufficient evidence. Whole school programs and strategies that promote mental health and wellbeing are considered the most effective way of preventing suicide (Das et al., 2016; Katz et al., 2013; Miller & Eckert, 2009; Miller, Eckert & Mazza, 2009; Wells, Barlow & Stewart-

Brown, 2003). Due to high rates of suicide in Australian youth (Young, Sweeting & Ellaway, 2011) schools must pay more attention to this issue and implement preventative measures that are proven to be effective.

Therefore the goal of this review is to examine these school-based intervention methods that decrease the risk factors, and promote development of protective factors that can stem the rising rates of suicide amongst adolescent boys. For prevention programs to be successful in schools, risk factors need to be identified and incorporated into the program's development. High rates of suicide in Australian youth provide a rationale for action in schools (Young, Sweeting & Ellaway, 2011). It is argued in this review that schools and school personnel have the capacity to recognise risk factors, employ protective factors, and provide effective programs and strategies to promote mental health and potentially reduce suicide rates in adolescent males.

Method

Literature searches comprised systematic reviews that examined evidence from studies about the effect that primary prevention interventions have on suicide and suicide related outcomes. Reviews were selected that identified interventions that minimise the risk factors and maximise protective factors. While boys are the focus of this review, statistics and information pertaining to youth of both genders is presented in some available research and is used in circumstances where evidence specifically relating to males was limited or non-existent.

The review consists of three major sections: risk factors, protective factors and prevention programs in secondary schools. The first section highlights the problems or risk factors that occur along a socio-ecological continuum that incorporates individual, relationship and environmental factors (Breux, Boccio & Brodsky, 2017; Bronfenbrenner, 1994). The second section identifies protective factors along the same social ecology continuum. Both risk and protective factors are examined through an educational lens. The final section highlights the most effective school prevention programs and presents strategies that promote mental health with the aim to reduce suicide. The paper concludes with recommendations for future research and implications for practice.

Risk factors

Understanding the problems or risk factors that affect young males is a starting point to understanding the complexities of suicide (Wyman, 2014). For suicide prevention to be effective, risk factors need to be identified and schools must try to implement interventions that have the potential to decrease these factors putting young males at risk (Berman, 2009).

Being a male increases the risk of suicide (Australian Bureau of Statistics, 2018) as does being an adolescent. This time period has the highest rates of attempted suicides which in turn increases the risk for future attempts and death by suicide (Holland, Vivolo-Kantori, Logan & Leemis, 2017; King, Foster & Rogalski, 2013). Adolescence is a developmental

life stage that is linked with factors that increase the risk of suicide in males such as puberty, increased stress and impulsivity (Berman, 2009; Holland et al., 2017; Young, Sweeting & Ellaway, 2011). This reiterates why secondary boys' schools are the focus of this review.

There are several reasons why suicide rates are higher in males than females. In an educational context, major issues have been identified surrounding adolescent boys who are twice as likely to be unhappy and disillusioned at school than girls (Allen, 2007). Girls are outperforming them academically, with a decline in achievement levels for boys in a range of subjects over the past ten years and lower literacy levels than girls (Australian Bureau of Statistics, 2006; Fuller, 2003; Hartman, 2006). Boys are six times more likely to be suspended or drop out of the schooling system and they are more likely to be identified with behavioural problems and special needs (Buckingham, 2004; Goldstein & Brooks, 2007; Prideaux, 2005). Factors in educational contexts such as academic failures, academic capacity and learning disabilities put boys at a higher risk for suicide (Allen, 2007; Edgar, 2006).

Risk factors for youth suicide can be broken up into three areas: those involving the individual, those relating to the family and other relationships, and those relating to the community or environment (Allen, 2007; Bronfenbrenner, 1994; Holland et al., 2017). Adolescent males who commit suicide are influenced by a range of factors that can change, such as drug abuse, or cannot change, such as a family history of mental illness (Breux, Boccio & Brodsky, 2017; Headspace, 2019).

Individual

Individual factors include a person's psychological, biological and social history and can include matters such as mental disorders, anxiety, impulsive responses to stress, poor coping skills and substance abuse (Allen, 2007; Breux, Boccio & Brodsky, 2017; Brodsky & Biggs, 2013; Miller, Eckert & Mazza, 2009). Adolescents who have an existing mental health problem, particularly depression, are more at risk for suicide (Das et al., 2016; Miller & Eckert, 2009; Reivich, Gillham, Chaplin & Seligman, 2013), with an estimated 90% of youth who commit suicide experiencing at least one mental disorder at the time of death (Miller, Eckert & Mazza, 2009). Common mental health problems such as anxiety and depression are experienced by almost 20% of young Australians by 18 years of age (Werner-Seidler, Perry, Calear, Newby & Christensen, 2017), however most of them fail to receive appropriate interventions (Greenberg, O'Brien, Zins, Resnik & Elias, 2003). Adolescence is also the peak period for the onset of poor mental health with 17% of children and adolescents aged 5-17 years' experiencing at least one mental disorder (Cahill, Beadle, Farrelly, Forster & Smith, 2015) or mental distress in a given year (Poole & Grant, 2018).

Possible explanations for poor mental health could be due to a number of reasons. In an extensive research project on the social and emotional health of Australian students, Thomas (2008) found four in ten students worry excessively, three in ten students experience nervousness and stress, and four in ten have poor resilience. These results

indicate an alarming decrease in the mental health of Australian students. Issues in society such as poverty, family breakdowns, conflict and misuse of technology pose significant challenges that impact their mental health and wellbeing (Levin & Nolan, 2014). Higher rates of depression in youth (Fuller, 2003; Prideaux, 2005), prevalence of anxiety in children at earlier ages (Australian Bureau of Statistics, 2018), a rise in drug and alcohol abuse amongst minors, disruption to family life and an increase in social stressors in the family environment (Ploeg et al., 1996; Thomas, 2008), all have widespread consequences on the mental health of young people.

Poor coping skills are another individual risk factor. Boys are less likely to seek or receive help when faced with problems and find it difficult to communicate personal issues they are experiencing (Amitai & Apter, 2012; Gijzen et al., 2018). This could be due to continued pressure for boys to suppress their feelings and emotions so as not to seem weak and sensitive. The pressure for them to remain stoic when problems arise could explain the reluctance for them to express themselves and accept help when it is needed (Hartman, 2006). The fact that males are three times more likely to commit suicide than females, yet only attempt a third of the time (Berman, 2009), indicates they engage in higher fatal behaviours and have more intent than females. It is vital that ways are found to encourage males to ask for help and receive it so that there can be a shift in behaviour.

Boys are more likely to be involved in aggressive behaviour and criminal activity, are killed more frequently in road and drowning accidents and they are more inclined to partake in risky behaviour such as drug and alcohol abuse (Costello, 2007; Edgar, 2006). Males are more likely to engage in behaviours that are painful and confronting (Van Orden, Witte, Cukrowicz, Braithwaite, Selby & Joiner, 2010), which could explain why they are more likely to be involved in physical fights, use firearms, be expelled from school and commit suicide (Fuller, 2003). Adolescence is a period where hormonal changes can influence brain function (Cameron, 2004). The primary male sex hormone testosterone is increased ten times in adolescent boys (Cameron, 2004) and this onset of puberty could account for the changes in social and risk-taking behaviours.

Greater exposure to these risk factors and the fact males are less likely to employ protective behaviours such as seeking help are attributed to the higher rates of male suicide; that is three male deaths for every female death in the 15-17 age group (Australian Bureau of Statistics, 2018; Costello, 2007; World Health Organisation, 2017). It is clear more attention to mental health is required for this critical stage of life.

Relationship

Risk is also influenced by family and peer relationships and factors on this level can include family stress, social rejection of peers, bullying and relationship breakup or loss (Fuller, 2003; Breux, Boccio & Brodsky, 2017). Bullying is a major social problem in Australian schools with one in five students affected at any one time (Prideaux, 2005), with boys experiencing it more than girls (Fuller, 2003). Bullying or difficulty with peers brings about feelings of low self-esteem, worthlessness and hopelessness, which lead to isolation and a lowered sense of belonging (Lohre, Moksnes & Lillefjel, 2014; Wyman,

2014). This is reflected in research where youth who were bullied and victimised by their peers had a higher risk of mental health problems and poor psychosocial adjustment (Lohre, Moksnes & Lillefjel, 2014). These factors significantly increase the risk for suicide in adolescent males (King, Foster & Rogalski, 2013).

Another relationship factor in males is gender identity. While more evidence is needed due to the limited number of studies that specifically target the mental health of LGBTI (lesbian, gay, bisexual, trans and intersex) people and inaccurate youth suicide rates specific to this population (Miller & Eckert, 2009), evidence shows young men who fall into this group are at greater risk of mental health problems and suicide (Fuller, 2003; National LGBTI Health Alliance, 2016). This can be explained because of the stigma, prejudice, discrimination, victimisation and abuse experienced by people who identify as LGBTI (National LGBTI Health Alliance, 2016).

Navigating the school environment can be a challenging and distressing task, particularly for adolescents who are trying to deal with the ever-increasing social demands occurring at this time. Young children and adolescents often refer to friendships as one of the most important factors in their emotional life (Pianta & Walsh, 1998), and when these friendships or relationships break down it can be devastating for young people and ultimately affects their wellbeing (Lohre, Moksnes & Lillefjel, 2014).

Environmental

In the final phase of the continuum is environmental risk factors which can include poor social cohesion, suicide contagion, lack of community resources and easy access to means for suicide (Bronfenbrenner, 1994; Breux, Boccio & Brodsky, 2017). Poor neighbourhood support and poverty, community violence and diminished opportunities for youth place them at a higher risk for suicide (Wilkins, Tsao, Hertz, Davis & Klevens, 2014).

Suicide contagion or imitation can be attributed to exposure to violent acts on social media or other media platforms (Holland, Vivolo-Kantori, Logan & Leemis, 2017), and there is evidence to suggest media coverage of suicide can encourage suicidal behaviour (Greenberg, O'Brien, Zins, Resnik & Elias, 2003). Australian adolescents are one of the highest users of technology with 79% of youth aged 5 to 14 having access to the Internet and 76% of 12 to 14-year olds owning a mobile phone (Australian Bureau of Statistics, 2018). Adolescent boys are more likely to have excessive use of screen time and fail to obtain enough physical activity that is required for good mental and physical health (Lubans et al., 2015). The increasing availability of technology and its subsequent use in schools continues to escalate due to the ever-changing existence of the Internet and the use of electronic devices, which impacts students' social connectedness and interactions with peers (Norrish, Robinson & Williams, 2011). Suicide prevention in adolescents involves understanding and exploring the interplay of these risk factors in conjunction with protective factors and, fortunately, schools have great capacity to provide a source of protection for youth.

Protective factors

Promoting the development of protective factors is an important goal of suicide prevention (Beaton, 2012; Fuller, 2003; Katz et al., 2013; Miller, Eckert & Mazza, 2009; Wyman, 2014). Protective factors can reduce the impact of risk factors (Pianta & Walsh, 1998) and can act as a 'protective shield' to help students navigate the school environment. Preventative work that increases protective factors on the social ecology continuum; individual, relationship and environment (Breux, Boccio & Brodsky, 2017), can help young males at a vulnerable stage in their lives.

Individual

> The development of resilience, emotional intelligence and social competencies in young people is not only linked to long term occupational and life success but it is also associated with the prevention of substance abuse, violence and suicide (Fuller, as cited in Allen, 2007, p. 3).

Resilience, good problem-solving skills and school success are major protective factors at an individual level for young people at risk of suicide (Berman, 2009; Breux, Boccio & Brodsky, 2017; Fuller, 2003; Hartman, 2006; Prideaux, 2005). Resilient adolescents who have solid problem-solving skills and positive coping strategies have an enhanced ability to cope with stress and anxiety on a daily basis (Greenberg, O'Brien, Zins, Resnik & Elias, 2003; Reivich, Gillham, Chaplin & Seligman, 2013), with these traits acting as a buffer against mental health problems.

Resilience is the most important protective factor (Berman, 2009) and can be defined as a child's ability to recover from stress in their lives, despite adversity (Benard, 1993; Goldstein & Brooks, 2006; Rolfe, 2002). Pearce (2011) argued every child experiences adversity on some level and no child is immune from the pressures that exist at school. Starting at a new school, learning new content or skills, academic failure or dealing with conflict amongst peer groups are a few examples of the pressures that exist, and it is critical for students to cope with these challenges and display resilience. Being resilient allows them to overcome failure and frustration and persist in the face of such adversity, factors that are characteristic of healthy social and emotional development (Rolfe, 2002).

Research consistently shows that schools, and particularly teachers, have the power to "turn a child's life from risk to resilience" (Benard, 2004, p.65). In their study of resilience in children, researchers Werner and Smith (1992) found by the age of thirty-two, two thirds of children who displayed developmental problems during adolescence transitioned to successful adulthood. This promising research reveals children exposed to risk factors can and do overcome adversity, especially if there are protective factors evident in a school setting.

Youth who demonstrate problem solving skills are resourceful and can utilise age-appropriate strategies to regulate their emotions when difficult situations arise (Rolfe, 2002). Resilient adolescents possess attributes of social competence, problem solving

skills, autonomy and a sense of purpose and future (Benard, 1993; Rutter, 1985) and have good mental health. A mentally healthy child has empathy, a strong moral compass and an ability to develop and sustain friendships (Benard, 1993; Rutter, 1985), all of which equate to success during and post school.

Students who experience success academically and personally, often have high resilience (Benard, 1993). Achieving success academically is good for self-esteem, particularly those suffering from mental health problems (Department for Education and Skills, 2001). For those students who are exposed to risk factors in their lives, demonstrating resilience allows them to become competent young adults, and for boys, is an important developmental task on the path to manhood (Hartman, 2006).

During secondary school, adolescent boys can experience "intense sadness, vulnerability, and a troubling sense of isolation, disconnection and despair" (Goldstein & Brooks, 2006, p.67). Daily pressures at school, alongside society's expectations for boys to 'act tough' and embody a code of masculinity which leads to them hiding their emotions, means it is imperative that all boys, not just those deemed 'at risk', increase their capacity to be problem solvers, and to be resilient.

Relationship

According to Wyman et al. (2010), suicidal adolescents have fewer close, positive relationships with their peers, family members and adults other than parents. Strong connections with friends and teachers, and ongoing support and engagement from at least one parent or caregiver promotes their sense of belongingness and acts as a protective factor for adolescents at risk of suicide (Holland, Vivolo-Kantori, Logan & Leemis, 2016; Miller, Eckert & Mazza, 2009). Doll and Lyon (1998) argued having a supportive relationship with an adult is the single most effective protective factor in a child's quest to overcome adversity and develop into a competent and productive adult. Klein, Kufeldt and Rideout (2006) reiterated this and found just one strong relationship can positively alter the life course of a child.

If young men have positive connections with their teachers, they will be more comfortable in communicating their problems and anxieties, and more likely to seek help. Programs that encourage adolescent boys to ask for guidance and support from professionals or other adults enhance their coping skills and strategies (Gould et al., 2004) and are therefore more likely to be effective.

In addition to this, having access to mentors and role models can protect against suicide (Breux, Boccio & Brodsky, 2017). Mentors play a critical role in supporting youth who are at risk of substance abuse and other difficult life events and can be a powerful influence in the difficult transition into adulthood (Costello, 2007; Klein, Kufeldt & Rideout, 2006). Male *and* female role models are needed in the education of boys to support a positive male identity. The fact that male teachers only account for 30% of all staff in Australian schools (Australian Bureau of Statistics, 2012) is cause for concern. For some boys, male teachers can be their only source of gender identity, due to a lack of male influence in

their lives. It is important that schools foster these relationships and support the positive development of male identity so that these boys can have access to balanced role models (Hartman, 2006).

Environmental

School and family connectedness are key environmental factors that promote protection from suicide (Fuller, 2003; Young, Sweeting & Ellaway, 2011). Alongside these factors, access to health care that effectively caters to youth experiencing mental, physical and substance abuse disorders and consistent community services also protect against suicide (Breux, Boccio & Brodsky, 2017). A recent study by Holland, Vivolo-Kantori, Logan & Leemis (2016), found suicide victims experienced a lack of connectedness with their peers and the school.

Adolescents, who are already at risk for developing depressive disorders, are more at risk if they are alienated from their families and disengaged from the school community. A dysfunctional home and community have a significant impact on the emotional and academic needs of boys (Fuller, 2003), and schools must address these needs and work to fill the void.

School connectedness is a powerful protective factor against involvement in substance abuse, delinquency, truancy, school failure, depression and suicide (Benard, 1993; Miller, Eckert & Mazza, 2009). Allowing students to be active participants in activities and roles within the school, problem solving, planning, decision making, goal setting and helping others gives them opportunities to be a part of the institution in a meaningful way (Victoria State Government Education and Training, 2019) and provides them with a sense of purpose and belonging. Students are more inclined to care more and study harder when they belong to a tightly networked school community (Goldstein & Brooks, 2007), which is protective against adolescent boys who attempt suicide (Reivich, Gillham, Chaplin & Seligman, 2013; Young, Sweeting & Ellaway, 2011). While family stability is critical for prevention of suicide, school connectedness and engagement can act as a buffer and fulfil the intrinsic, human need to belong, to bond, to participate, and to have a sense of control over their education, and life. Schools that successfully accomplish this have increased student wellbeing, engagement and accomplishment in important life fields (Greenberg, O'Brien, Zins, Resnik & Elias, 2003) as schools

> ... can create a coherent environment, a climate, more potent than any single influence teachers, clan, family, neighbourhood – so potent that for at least six hours a day it can override almost everything else in the lives of children (Edmonds, 1986 as cited in Benard, 1993, p.14).

How to tackle suicide prevention in secondary schools

Schools are an ideal place to foster positive development necessary for the prevention of suicide due to the fact youth spend significant amounts of time there and is why they are considered the "optimal site to influence the child" (Goldstein & Brooks, 2006, p.360).

Schools have a duty to "promote the psychological, social, and physical health" (Goldstein & Brooks, 2006, p.360) of children reared in difficult circumstances or those classed as 'at risk' (Pianta & Walsh, 1998). Schools can provide opportunities and develop programs for children to deal with daily stressors, which in some cases are the only access students have to mental health care (Werner-Seidler, Perry, Calear, Newby & Christensen, 2017), and for some students, school is the only source of stability in their lives. Students can also form strong connections with their peers and trusted relationships with teachers or other adults in school environments. Another cause for school-based prevention programs is that teachers are well placed to observe students and possibly identify at-risk behaviour (Breux, Boccio & Brodsky, 2017).

Relevance of secondary schools

Implementing programs in secondary schools is logical for many reasons. Attempted suicide rates among Australian secondary school students have been estimated as high as 11% (Fuller, 2003). Almost 80% of suicides in youth were in the 15-17 age bracket compared to 21.2% of suicides aged between 5-14 (Australian Bureau of Statistics, 2018). Roughly one out of every thirteen secondary school students report that they have attempted suicide more than once and one out of fifty required medical care due to injury sustained by a suicide attempt (King, Foster & Rogalski,2013; Wasserman & Wasserman, 2009). These statistics show that urgent attention is needed for the mental health of the student population, however there are many barriers to schools successfully developing and implementing programs.

Case studies that examined the impact of suicide prevention programs in schools had mixed results. Some reported harmful side effects due to the implementation of the program, while others reported students benefited from being involved. Research suggests school-based suicide prevention programs cannot be supported due to a lack of evidence of their effectiveness (Berman, 2009; Das et al., 2016; Fuller, 2003; Gould et al., 2004; Harrods, Goss, Stallones & DiGuiseppi, 2014; Headspace, 2019; Katz et al., 2013;Miller & Eckert, 2009; Miller, Eckert,& Mazza, 2009; Oliver et al., 2008; Ploeg et al.,1996; Wells, Barlow & Stewart-Brown, 2003). There are several factors or barriers that may be accredited to this evidence.

While educational institutions are an ideal place for focussed suicide prevention, they are not always effective. Although suicide is a leading cause of student death (Australian Bureau of Statistics, 2018), the majority of students who completed suicide did not tell an adult about their thoughts and had never sought help or participated in counselling services at school (Amitai & Apter, 2012; Harrod, Goss, Stallones & DiGuiseppi, 2014; Werner-Seidler, Perry, Calear, Newby & Christensen, 2017). This shows a disconnect between schools and the most at-risk students and can be explained in part because of the stigma attached to seeking professional help about mental health issues (Gijzen et al., 2018). Boys who left the class to see a psychologist or school councillor felt embarrassed in front of their peers, avoided the situation to prevent peer reaction (Amitai & Apter, 2012; Costello, 2007), and therefore did not seek help. Moreover, strategies that encourage adolescent males to communicate their problems and anxieties and overcome social

norms by seeking help from relevant school personnel need to be the foundations of suicide prevention programs in schools.

In addition to this, there is the belief that suicide awareness programs can have harmful effects on students that can result in serious consequences, especially among males (Ploeg et al., 1996; Harrod, Goss, Stallones & DiGuiseppi, 2014). Fuller (2003) found male students who had previously attempted to commit suicide had a negative reaction to suicide prevention programs in schools. In their feedback and critique of the program, boys revealed they would be less inclined to reveal suicidal thoughts, nor did they believe a mental health professional would help as a result of attending a session. The boys also reported an increased sense of hopelessness.

Another barrier to schools effectively implementing suicide prevention programs is staff reluctance to organise and engage in activities that surround the sensitive and distressing topic of youth suicide (Berman, 2009; Gould et al., 2004). Causation factors could be teachers feeling underprepared, uncertain and without adequate training for a complex issue such as suicide (Breux, Boccio & Brodsky, 2017; Department for Education and Skills, 2001). As suicide can bring about socially contagious behaviour (Gould et al., 2004), particularly among adolescents (Beautrais, 2000), care must be taken to avoid misleading impressions about suicide; that it is more widespread than it actually is or that it is simply a 'teen culture norm'. This can make suicide a more acceptable option to a distressed young male with suicidal thoughts.

Limited resources in schools to support prevention efforts that have unsubstantiated results are another limit (Berman, 2009, Miller & Eckert, 2009). It is recommended staff focus on relationships with their students in order for them to be more attuned to emotional turmoil and symptoms of depression (Gijzen et al., 2019) rather than formal training of suicide intervention (Fuller, 2003). Research therefore indicates that better programs need to be developed in our secondary schools to combat the incidence of suicidal behaviours in early adolescents, particularly males.

Mental health and wellbeing programs

Recent research suggests programs and policies that promote general mental health and wellbeing are more effective (Education Queensland, 2019; Headspace, 2019; The Suicide Prevention Hub (n.d.).; Victoria State Government Education & Training, 2019), therefore any approaches to suicide prevention in schools need to remain grounded within mental health promotion activities.

Mental health programs that focus on social emotional learning, particularly self-regulation, and building resilience in students are more likely to decrease suicide rates (Breux, Boccio & Brodsky, 2017; Gijzen et al., 2018; Miller, Eckert & Mazza, 2009; Suicide Prevention Hub (n.d.); Victoria State Government Education & Training, 2019; Wyman, 2014). Mental health underpins all health and wellbeing (Allen, 2007) and helps us communicate more effectively with others, regulate our emotions and sustain

relationships (Thomas, 2008), therefore suicide prevention efforts that relate to mental health are generally more effective.

Universal (Tier 1) as opposed to targeted approaches (Tier 2) to intervention that are provided continuously and for more than a year (Wells, Barlow & Stewart-Brown, 2003) are considered more effective (Werner-Seidler, Perry, Calear, Newby & Christensen, 2017) due to the fact it is delivered to all students and addresses the awareness, coping skills and connectedness of the whole school population (Breux, Boccio & Brodsky, 2017; Victoria State Government Education & Training, 2019). Changing the culture of a school so it is inclusive, emotionally intelligent and resilient can be a challenging task. However, it is necessary if adolescent boys are going to be more motivated to ask for help when it is needed; a key factor for preventing suicide.

Pastoral care programs that aim to enhance resilience and interpersonal relationships reduce bullying and harassment (Lohre, Moksnes & Lillefjel, 2014) and create school environments that are positive and safe for students (Wasserman & Wasserman, 2009). Appendix 1 provides links to providers of mental health resources for secondary school students, including specific lesson design information for classroom use, focusing on protective factors against mental health problems.

A program initiated by The Australian Government Department of Health, Headspace (2019), found little 'robust' evidence to run suicide prevention initiatives in secondary schools due to a lack of significant outcomes and concern over potential harm. It found reasonable evidence to support the implementation of the five major categories; gatekeeper training, screening, indicated interventions and postvention programs, however, it proposed the most effective model for youth suicide prevention is a "whole-school approach to mental health and well-being" (Headspace, 2019).

The Queensland Government shares this approach and emphasises the mental health and wellbeing of students in an effort to improve educational outcomes. Resources that are appropriate for the entire school population are recommended and include programs that support teachers to embed social and emotional learning practices with the aim of maximising resilience in young people to reduce the risk of future mental health issues (Education Queensland, 2019). Programs that focus on anti-bullying (*Bullying. No Way!*) are also prioritised. Under 'Suicide Prevention' in Education Queensland's student health and wellbeing policy statement (Education Queensland, 2019), staff are advised to take the following actions if a suicide attempt has occurred:

- the student is not left alone;
- their safety and the safety of other students and staff is maintained;
- students receive appropriate support immediately;
- parents are advised;
- all actions are documented and reported.

Strategies for boys

The aforementioned wellbeing programs need to be personalised to benefit boys. Table 1 presents a number of strategies that can be used by educators to engage boys in the curriculum and extend their social and academic learning.

Table 1: Strategies to engage boys in educational context

Strategy	Rationale	Examples
Modelling male behaviour	Strong, sensitive male role models	▪ Male teachers in non-traditional roles where possible
Understanding boys' needs	Understand the emotional and learning needs of boys and incorporate into curriculum	▪ Check points along the way to provide structure and ensure boys are on track ▪ Open ended assignments of high interest that involve real life situations ▪ High levels of technology ▪ Activity based learning
Building relationships	Making connections with boys through respectful relationships where they feel listened to and cared about	▪ Basing discipline on respect and hearing a boy's story before passing judgment, as boys have such a strongly developed 'fairness gene'. ▪ High expectations that are clearly articulated
Giving boys a voice	Doing this in terms of decision making and problem solving empowers students and gives them a sense of control over their education	▪ Let boys choose their own topic of interest in an assessment piece ▪ Give assessment that is clear and fair
Encouraging youth leadership	A vital component for boys	▪ Mentoring programs (Senior boys with Junior boys) ▪ Peer support programs
Providing social and spiritual development	Foster a philosophy where boys work with and for the community	▪ Allow boys to drive and organise a community aid project of their choice
Creating multi-layered involvement	Encourage helping others and involving boys in certain running of programs in the school	▪ Ensure participation and involvement in Swimming/Athletics Carnivals to strengthen school connectedness
Discussing issues	Encourage open dialogue and communication	▪ Hold regular classroom meetings which allows boys to comfortably express an opinion and contribute as valued members of the classroom
Promoting gentler qualities	Model, discuss and promote gentler skills	▪ Focus on gratitude and forgiveness in pastoral care sessions
Encouraging the arts	Promoting arts curriculum that encourages creativity and artistic ability	▪ Artist in residence programs (that feature writers, sculptors and former male dance teachers)

(Costello, 2007; Edgar, 2006)

Recommendations

Research questions

High priority research questions most relevant for the secondary schools' sector are as follows;

1. Why are suicide rates higher in adolescent males than females?
2. What factors in a school environment put adolescent males at risk of suicide and what protective factors may reduce the risk?
3. Why focus on mental health programs as opposed to suicide prevention programs?

Given that one of the leading causes of death in adolescence is suicide, programs in a school environment are the most logical and effective way to tackle suicide. Nevertheless, there are many obstacles secondary schools will need to overcome for suicide prevention programs to be a success. Turning a blind eye due to the sensitive nature of the issue is not an option, as it creates a 'culture of silence' and further isolates youth that are desperate and in need of help (Breux, Boccio & Brodsky, 2017).

Research overwhelmingly suggests mental health programs are the most appropriate and effective way of targeting vulnerable youth at risk of suicide. For this reason, future research in suicide prevention should focus on literature that incorporates mental health promotion and mental health needs of adolescents. Anti-bullying programs or physical health programs are recommended alongside programs that are designed to increase students' school connectedness.

Due to the fact adolescent males are significantly more likely to commit suicide than adolescent females, case studies that focus primarily on how to prevent suicidal behaviour among adolescent males would be beneficial. Research is lacking in this area and more attention needs to be given to address the gender disparity of youth suicide. Specifically, studies that investigate the impact of mental health programs of adolescent males over a one-year period is recommended. Identification of priority groups and regions was beyond the scope of this review, however, region-focused research, such as Indigenous youth suicide 'hot spots', warrants attention in future studies.

Due to the gravity of this issue, schools and school personnel are increasingly being asked to take a more active role in the prevention of suicide in youth (Gould et al., 2004). They not only have an ethical obligation to do so but are able to identify risk factors and employ protective factors, due to their positions in schools. School leaders must tailor programs that suit the culture and readiness of their school, while considering available resources. It is recommended clear policies and procedures on suicide are created so that staff can respond appropriately to the issue, and better recognise and respond to the needs of young males. Schools need strong leadership and support from administration if prevention programs are going to be implemented in an already overcrowded curriculum. School personnel who understand the necessity of mental health programs and have the

motivation to develop, implement and sustain these programs, are crucial in efforts to tackle adolescent suicide.

Conclusion

Suicide in male adolescents is a significant health issue in Australia. The financial, social and psychological toll adolescent suicide has on the school community is substantial and action must be taken to prevent this issue so the trend of rising rates in Australian adolescent males does not continue. Schools have a responsibility to prevent suicide where possible and are the most important site for learning about coping with life situations and relationships with peers outside of the home (Fuller, 2003). Furthermore, schools have the potential to decrease the existence of school related risk factors and promote the development of protective factors for young people at risk.

There is much to learn in our understanding of youth suicide, and research has revealed there is little evidence for intervention programs that work. Support for prevention efforts that focus on mental health and wellbeing in all students appears to be the best method to tackle suicide in secondary schools. Universal programs that promote the psychological wellbeing of students, thereby creating a positive school culture, have the potential to increase help seeking from young males; a key factor in the prevention of suicide (Gould et al., 2004). Current educational trends can be dominated by adherence to data and test results, however schools do not measure their success purely based on academic outcomes. Producing students that are mentally healthy, socially competent and well-adjusted considers the broader educational agenda.

Being connected to a family, school or group of people is the strongest antidote to suicidal feelings and behaviour and this requires social continuity, unity and cohesion which schools and staff can provide in daily interactions with students. When the mental health of young men is prioritised, more effective suicide prevention efforts can occur in Australian secondary schools. It is imperative prevention efforts be grounded in the promotion of mental health so that the young men in Australian secondary schools can achieve at school, enjoy their life and not turn to suicide "when their problems seem too great" (Fuller, 2003, p.132).

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Appendix 1: Mental health resources for secondary school students

Education Queensland (2019) has recommended a range of mental health resources for secondary schools, listed below.

Organisation	Resource	Available from
Beyond Blue	Secondary school program for years 8-10	https://www.beyondblue.org.au/healthy-places/secondary-schools-and-tertiary/secondary-schools-program
Headspace	Resources for educators about suicide prevention and suicide response	https://headspace.org.au/schools/headspace-in-schools/
Black Dog Institute	Educational resources developed for teachers about mental health and wellbeing education	https://www.blackdoginstitute.org.au/education-training/community-and-schools/free-school-resources
ReachOut.com	Classroom resources, teaching programs, information and support	https://schools.au.reachout.com/
SmilingMind	Professional development, student workshops, classroom resources and apps for educators to improve student wellbeing	https://www.smilingmind.com.au/education
Children's Health QLD	Mental health services for Teens (aged 12+)	https://www.childrens.health.qld.gov.au/chq/our-services/mental-health-services/for-teens/
Safe Schools	Training and resources to reduce bullying and harassment	https://www.education.vic.gov.au/about/programs/Pages/safeschools.aspx?Redirect=2#link29

The resource bank outlined in Appendix 1 provides free programs, activities, lesson plans, practical support, helpful contacts and key information for teachers that may decrease the risk of suicide. Protective factors such as coping skills, problem solving, social skills, strategies to reduce the use of drugs and alcohol, ways to identify and alleviate depression, and enhancement of students' social support and school connectedness to promote their sense of belongingness are considered, along with resources to assist educators with building mental health and wellbeing education into daily lessons.

Sheridan Leone Carey has over 15 years' experience working in secondary schools and is currently completing her Masters in Leadership and Management at Queensland University of Technology. Her research interests include the mental health of adolescents, particularly boys, and she is eager to raise awareness of suicide rates in boys and assist teachers in dealing with this sensitive issue.
Email: sheridancarey@gmail.com

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