Facilitating thinking skills development for improved student well-being and success

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CONTEXT

Two of the UN Sustainable Development Goals are "Good health and well-being" and "Reduced inequalities". This paper seeks to address these goals by first researching the trends in mental health for young people. The paper will also examine these trends in two different nations – Australia because it is the relevant local context, and America, to see if the observed trends are purely local or international in their scope. After documenting these trends the paper will discuss the teaching of evidence based thinking skills as a means for enhancing mental health, study and career success.

PURPOSE OR GOAL

Good thinking skills are crucial for success and long-term well-being. The goal of this paper is to address the research questions: "What strategies can be used to teach good thinking strategies and which strategies are well suited to helping students, especially those who are underperforming due to mental health challenges?"

APPROACH AND METHODOLOGY/METHODS

The data examined will be from the yearly Mission Australia/Black Dog Youth surveys, the Australian Government's Closing the Gap surveys, the Australian YouthSense surveys, US Government CDC surveys and data on mental health and thinking trends in young people from other US and Australian national surveys.

ACTUAL OR ANTICIPATED OUTCOMES

It is anticipated that the observed trends in the Australian data will mirror similar findings in America. Those findings suggest that at risk groups are increasingly suffering more, at least in part, because universities and schools are failing to adequately instruct these groups in sound evidence based thinking processes. Rather they are inadvertently encouraging "reverse Cognitive Behavioural Therapy (reverse CBT)" with their messaging.

CONCLUSIONS/RECOMMENDATIONS/SUMMARY

The paper will provide some teaching practices which promote better thinking processes. These practices will be based around well established evidence based principles.

KEYWORDS
Mental health, Opportunity, Critical thinking

Introduction

Mental health is very important for a person's long-term success, and it is of interest to know how young people in Australia and other countries are travelling in their mental health. This paper will investigate the pertinent trends in both America and Australia. Consider first the American context.

Part 1: The American context.

Figure 1 below shows a historical graph of data on high school student mental health in the US based on data from the CDC (Centers for Disease Control and Prevention).
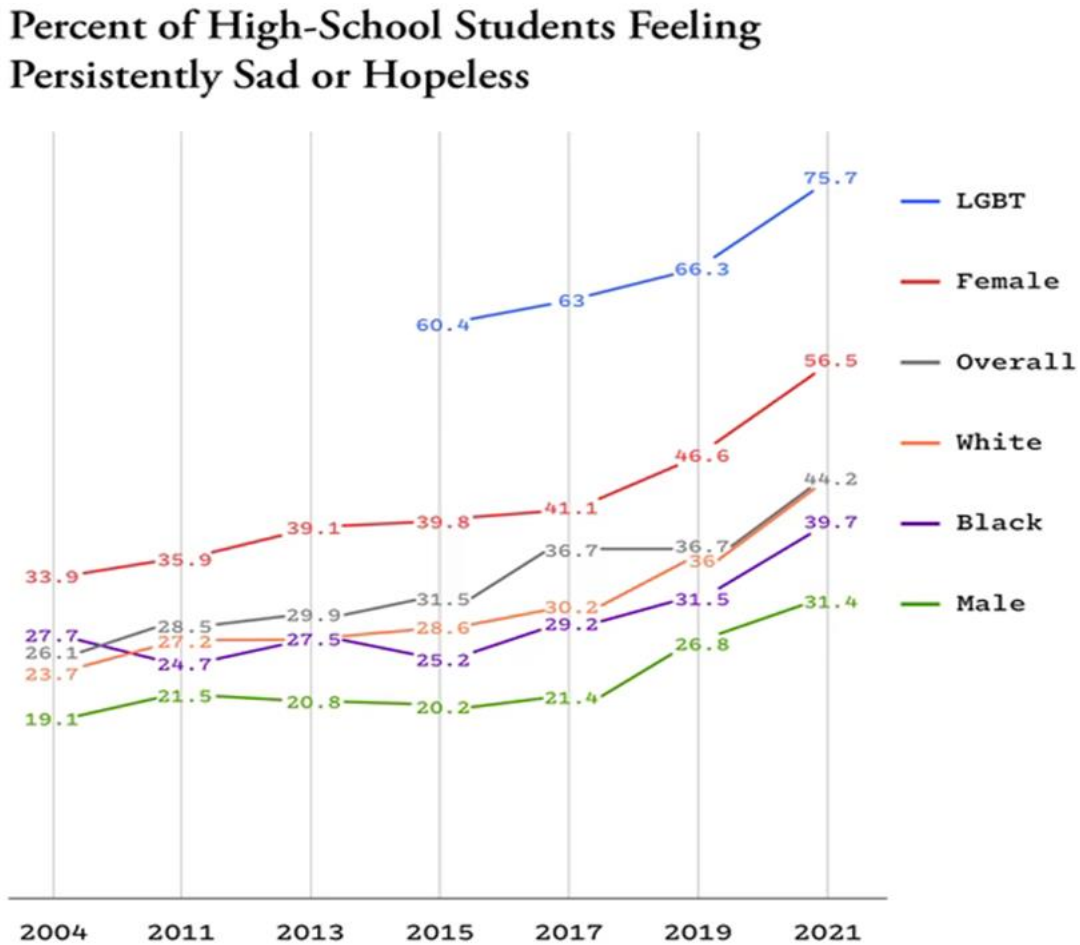

Figure 1. US high school mental health (Credit: Derek Thompson, The Atlantic; data from the CDC)

Figure 1 indicates that arguably the most striking problem is with the LGBT community. This group clearly has major mental health challenges. Comparative data between 2009 and 2017 shows additionally that the community's disparities with peers are increasing, not decreasing, despite the fact that acceptance of LGBT orientations has been steadily increasing. As a result, "Sexual minority adolescents accounted for an increasing proportion of all adolescent suicide attempts" during that time (Liu et al, 2020).

Next consider the female youth. It goes without saying that there is a major problem in America when the majority of female high schoolers report feeling persistently sad or hopeless. The data also reveals that 9% of American high school students attempted suicide during 2019, with suicide attempts being more common among girls (11%) than boys (6.6%) (Ivey-Stephenson et al, 2020). What is concerning is the finding that the rate of completed suicides is increasing more rapidly in girls than it is in boys (Ducharme, 2019).

Next consider indigenous Americans. The suicide rate for indigenous Americans is very high. In 2019 25% of indigenous Americans attempted suicide (Morgan, 2019). The disparity in suicide rates for indigenous and non-indigenous Americans has also been increasing in recent years (CDC, 2019).

Part 2: The Australian context.

As in America, the LGBT community tend to have substantially greater mental health challenges than their peers. LGBTI people between 16 and 27 were found in 2021 to be five times more likely than the general population to attempt suicide (Natbuild, 2021).

The trends in mental health disparities between females and males in Australia is also very concerning. The 2021 Mission Australia Youth Survey reported that (Brennan, 2021):

"The prevalence of psychological distress has increased over time at a proportionally greater rate for females compared to males." Figure 2 from (Brennan, 2021) illustrates this trend.

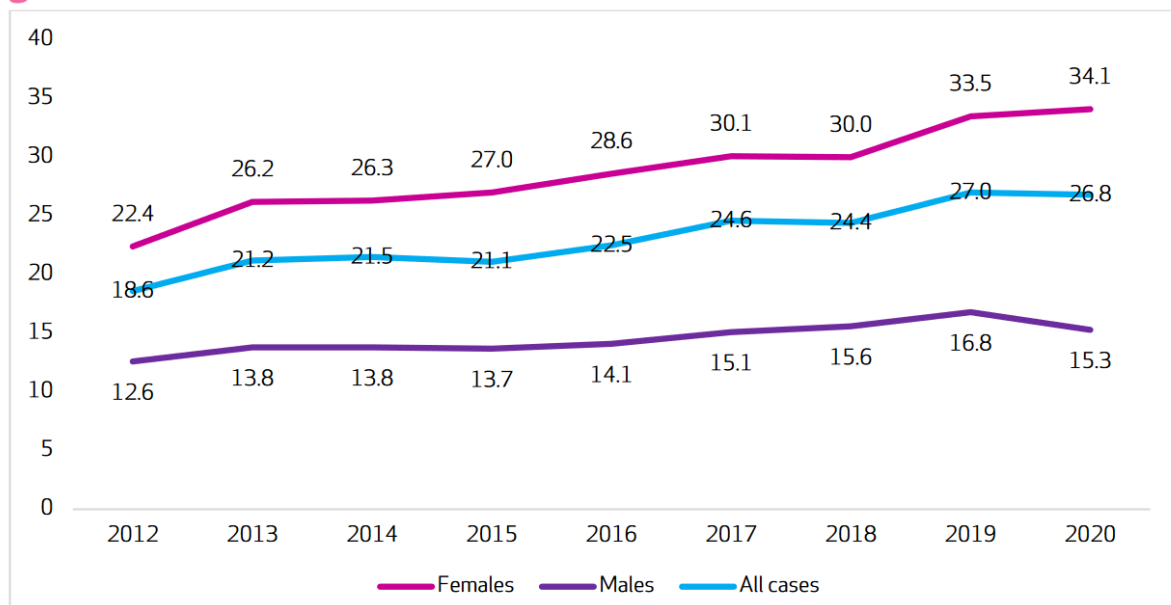**Figure 2: Psychological distress in young people aged 15-19, by gender, 2012-2020**

Figure 2 from (Brennan et al, 2021).

The disparities have continued to increase since 2021. In 2023 females were reporting high psychological distress at a rate of 2.3 times that of males (Callister, 2023).

In Australia there is, as in America, a substantial mental health challenge among indigenous groups. Target 14 of Australia's "Closing the Gap" strategy is "Significant and sustained reduction in suicide of Aboriginal and Torres Strait Islander people towards zero". The Australian Government Productivity Commission declared for this target in 2023 that "Nationally, based on progress from the baseline, the target is worsening. This assessment is provided with a high level of confidence." Furthermore, it is the young indigenous Australians whose mental health is most vulnerable – among all indigenous deaths in the 0-24 age group, 22% were by suicide. Among indigenous deaths in the 25-44 age group, 19.2% were by suicide (AIHW, 2024).

Though the above-mentioned groups in Australia and America are doing much worse in mental health than their peers, their peers are not doing well either. A 2023 study by University of Sydney researchers found that each successive generation of young people since 1950 has been suffering more than the previous one (Botha et al, 2023). In response to these findings, Prof Patrick McGorry, Director of Youth Mental Health at the University of Melbourne and Chair of the

Headspace Board declared that the study "provides really hard data in support of the sense that we're in a global youth mental health crisis … Something's gone very, very seriously wrong with our society and the way we're heading and the way we look after our next generations." (May, 2023). He also stated that it was a "serious threat to the economic future of Australia". Jonathan Haidt, a high profile American psychologist, was quoted making a similar claim in the Wall Street Journal in 2022 (Varadarajan, 2022).

Were these trends predictable? Yes. A number of highly cited and influential psychologists were prescient enough to predict them in advance and warn about them. Martin Seligman and Ed Diener sounded the mental health alarm bell in 2004 (Diener & Seligman, 2004). They noted that between 1950 and 2000 there was a 10-fold increase in incidences of depression in America. Anxiety also increased markedly during that period and these deteriorations were increasingly affecting people at younger ages. Lukianoff and Haidt subsequently addressed this issue in their 2015 and 2018 publications. They found that those who had been most embracing of university Equity Diversity and Inclusion (EDI) messaging were the ones whose thinking and mental health has deteriorated fastest and furthest (Haidt, 2023). Haidt and Lukianoff have argued that this is because universities have inadvertently taught students the principles of reverse CBT through their messaging. Among other problems, they have been promoting a "safetyism" culture in which students must be protected from short-term psychological stress, rather than building up mental toughness and resilience to protect them in the long-term (Lukianoff & Haidt, 2015; Lukianoff & Haidt, 2018). They have provided data to support this notion and that university messaging has been prompting students to embrace an external (rather than internal) locus of control and it has caused them to increase in their feelings of ineptitude (Haidt, 2023).

A perfect storm of mental health problems may well be brewing. There has been a 70 year long trajectory of deterioration in mental health in both Australia and America. In recent times, however, this trajectory has greatly accelerated. As several prominent Australian and American Psychologists and Psychiatrists have warned, the economy is likely to falter as these mental health trends gain traction (McGorry, 2023; Haidt, 2023). Since economic deteriorations themselves precipitate mental health declines, a positive feedback cycle could ensue, inducing a downward spiral.

Instruction in thinking processes

There is clearly a need to address the deteriorations in thinking processes which have occurred for many young people, and for emotionally at risk groups in particular. What does the evidence say, however, about the thinking strategy instruction which should be used? The 75 year Grant Study at Harvard went a significant way to answering this question. It found that all the Grant Study subjects who were unable to establish satisfying careers and flourishing relationships had the same type of dysfunctional thinking – they had a lifelong inability to effectively process their angry thoughts (Vaillant, 2012).

Why would anger have such power? Andrad and Ariely's investigations provided some important insights. Their research found that decisions made in the heat of anger have remarkably long-lasting impact. Poor decisions made in the midst of anger tend to be repeated over and over again, even when anger is no longer present (Andrad & Ariely, 2009). John and Paula Sandford made a similar observation much earlier, and documented it in 1982 (Sandford & Sandford, 1982). The Sandfords explained that in the midst of anger or fear, people tend to make intense inner vows on how they are going to act in the future. After being hurt for example, they might vow to "always control every situation" so they cannot be hurt in the future. In so doing, they become a "control freak". They might alternatively vow to "always avoid conflict" and thereby become a "doormat". What is especially problematical about these vows is that they eventually operate at a subconscious level so that the maker of the vows is unaware of what is driving their decision making.

John Sanford's insights came in no small part from his experiences as a member the American indigenous community, Osage Nation, which was the subject of Martin Scorcese's Oscar Nominated movie, "Killers of the Flower Moon". The Osage community was living in a barren part

of the US when they discovered oil. Enticed by the lure of great wealth, unscrupulous white American men insinuated themselves into relationships with the Osage women and then killed them or otherwise mistreated them in order to acquire their assets. While the white American men were eventually brought to justice, the trauma affected the Osage people's thinking and had an ongoing negative impact on succeeding generations of their community. John Sanford's own negative life outcomes impelled him to find a solution to the ongoing problem and devised new thinking and behavioural patterns that eventually arrested the patterns of dysfunction in his family and community. He documented his strategies in books which became international bestsellers. The strategies he outlined in his books anticipated the evidence which would appear in subsequent decades.

Team Project II in the School of Electrical Engineering and Computer Science at the University of Queensland was chosen to be the place to introduce the instruction on thinking strategies. This subject was designed to mimic real world employment situations, and to that end it incorporates student teams, a project specification, a deadline, a strict budget and formal reporting and evaluation timelines, along with a management structure. The project is very challenging and any team dysfunction exacerbates the level of challenge.

The university mandates that students be given instruction in managing teamwork, and in Team Project II, this has taken the form of instruction in lectures at the start of the semester. A significant part of this material is about the management of anger/fear, with additional advice presented on thinking and behavioural strategies to enhance career success. Before doing Team Project II, students will have done Team Project I (except for a small number with exemptions), and during this pre-requisite subject a substantial number of students have experienced anger towards their team-mate(s). As a consequence, they have generally been found to be responsive in Team Project II to discussions about anger and how to deal with it. It was against the university's ethical framework to only present this material to specific groups, and so it was presented to the whole class. It was hoped, nonetheless, that those most emotionally at risk of mental health problems would readily embrace it, in particular.

What is innovative about this approach is the prompting of students to reflect on and become conscious of the kinds of long-term vows they might have made, and to see how these might affect team dynamics. That is, there is a focus not just on dealing with present anger, but also on behavioural patterns than began with past anger. The practice of analysing behaviour response patterns to anger is a part of CBT based anger management and that process has been well validated by evidence (Henwood et al, 2015). There is thus good reason to believe that this kind of approach might help students.

The unit co-ordinator illustrated the desired type of reflection by discussing a number of previous dysfunctional teamwork scenarios, based loosely on real life situations. One illustrative scenario involved a team with four members, with one member appearing to have made a vow to always control the environment around them. i.e. they were a "control freak". Another of the team members, however, appeared to have made a vow to never allow themself to be controlled. Not surprisingly, the teamwork did not go well. Because of the passion with which these two oppositional vows were acted out, the intense conflict was not resolved during the project. There was, however, some level of reflectiveness from the team members through a post-project moderation process and follow-up.

A second illustrative scenario involved a team with one member who appeared to have made a vow to always get their own way – they were effectively a bully. Another of the team members appeared to have made a vow to always avoid conflict. Again, things did not go well in the team. Some of the decisions made in the group were deeply flawed because the "bully" was able to assert their will inordinately often - the accommodating member also tended to go along with the bully even when the bully told them to do things that were explicitly forbidden in the project specification. At the end of this project, there was relatively little resolution because the accommodating team member was steadfast in avoiding conflict. Even worse, this member blamed the subject, not themselves, for the dysfunction.

It needs to be pointed out that there may be many reasons why team dysfunction commences; it is not always anger issues. The dysfunction may start because of a lack of communication, unequal effort from team members, disrespect, or other factors. Even when the problems start for other reasons, good anger management is needed to manage the emotions which often ensue.

Motivation is critical – students need to believe there is some benefit to modifying their thinking in order for them to engage in change. The author has prompted this engagement by showing that thinking strategies are key to succeeding in careers as well as in team project work at university. To this end the author has compiled an online book detailing the evidence on sound thinking processes along with supporting case studies. Excerpts from this book were presented in class.

Findings

There were various findings of the introduction of the instruction in thinking strategies, which are presented below.

Peer feedback

The instruction was well received by academic peers. As a consequence, the author was invited to give presentations on thinking strategies in another subject within the School of Electrical Engineering and Computer Science, and in a Teaching Focussed Academics' forum.

Student feedback

There was generally positive student feedback on the thinking strategies instruction. One student's comment after reading the book of instructional material was:

> *it was one of the most influential or inspirational books I have ever read. What I really like about the book is that it examines the topic from all perspectives starting from education over psychology and even up to physiological things. I found it really intriguing to find out that every aspect of life and private life is intertwined with success in career. Also, I liked the scientific approach and the detailed explanation, it makes it very comprehensible and also believable to the reader because I think many things that you explained might contradict or at least be new to someone who has never dealt with the topic before. After reading this I did not only get inspired to read a whole lot of other books related to this area but I also now feel aware about the importance of planning, preparation and self-management and also for preparing myself to my job applications and entering job life next year. (Ethics approval number for reporting quote: 2024/HE001932)*

Impact on team conflict:

It is pertinent to know whether or not the instruction in thinking processes had any impact helping teams to function effectively, and if it helped any underperforming students. The answer really appears to be "yes" and "yes". Three pertinent case studies are presented below.

Case Study 1: 'Team 1' had a number of members with very different backgrounds and dispositions, and they experienced a number of serious mishaps throughout the semester. One team member had a history of reacting excessively angrily in difficult team situations - he reported, however, that despite these challenges, he took heed of the anger management instruction given at the start of the semester, which he said proved to be transformational. By the end of the semester he had kept his anger in check, made himself vulnerable and developed warm relationships with the others in the team. He claimed that despite having an extremely poor team there was an unprecedented positivity in his experience.

Case study 2: 'Team 2' had one team member with a disability. About halfway through the semester one of the team members visited the unit co-ordinator's office and lamented that this student was not performing. This kind of visit and comment was common, and the co-ordinator assumed that as usual, there would be a request that the rest of the group not be made to suffer because of one person's poor performance. This request was different, however. The student instead said that he wanted to know how best to help the student who was struggling. The unit co-

ordinator gave some advice and the student left. At the end of the semester, the struggling student reported in his final reflection that he mismanaged himself and had fallen into a mental health lull. His team members, however, had rallied around him and this had given him the courage to pull himself together and he was able to complete his work by the end of the semester. The team performed relatively well in the final analysis.

Case study 3: 'Team 3' had some individuals who were not performing at the end of the semester when it was critical to integrate all the project components. One of the performing students reported in his final reflection that he became extremely angry. He reported, however, that he stopped short of acting out his anger when he recalled the early instruction on dealing with anger. He soberly faced the fact that if he remained in his anger he would be dis-empowered and the situation would become worse. He therefore put his negative emotions aside and worked on progressing the project to the best of his ability. The other team members eventually started performing in time to produce a sound project outcome.

Conclusions

The data indicates that the mental health of youth has been steadily worsening for several decades. Importantly, as well, the disparities in mental health between the emotional haves and have nots have been widening in recent times. There is a significant need among the youth for improved training in thinking processes which can diminish the severity of mental health problems.

The evidence points to the fact that anger and fear management is particularly important for averting and/or diminishing mental health issues. Since team projects often occasion the onset of anger/fear in students, the commencement of these projects would seem an appropriate time to give young people the relevant instruction on managing anger. This paper has reported on a strategy for teaching some anger management strategies at the beginning of their team projects. A number of case studies have been reported in which students reported that the instruction at the start of the semester helped them to navigate their teamwork challenges.

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