An SMS a day keeps attrition at bay. Preliminary findings from an intervention using SMS with first year students from a regional Australian university.

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Retention and attrition in first year students at university are burgeoning issues for educational researchers, as are the rising number of students experiencing significant mental health issues. A study, adopting the salutogenic theory of wellbeing, is currently underway using mixed methods to investigate the impact of an emotional fitness intervention (Mytern) on the emotional health and resilience of students in a compulsory first year course in a regional Australian university. Findings from the qualitative component of the study are discussed in this paper. Quotes from students are used to illustrate such changes as lowering stress levels, improving quality of life, engendering a sense of control and choosing to remain at university; with perhaps the most profound impact being that of saving a student's life. Interventions such as Mytern appear to support first year students' emotional well-being and resilience, improving their physical and psychological health.

Introduction

When first year students say in an unsolicited statement, that if it hadn't been for the daily SMS sent to their mobile phones they would have left university or even committed suicide, then one becomes aware of the power that an apparently simple intervention can have on the lives of students. This paper approaches the problems of first year experience and issues of retention and attrition from a salutogenic perspective; it reports on findings from a large study of first year students at a regional Australian university that was concerned with emotional health and resilience. The findings showed that these issues clearly impacted on students' decisions to either leave or stay. The study focuses on one particularly effective strategy that students reported as having a major positive influence on both their university experience and their overall life, by documenting the impact that a daily SMS intervention had on first year students' emotional health and resilience.

The rising prevalence of mental distress and mental illness in student populations may influence the attrition rates of first year university, due to increasing numbers of students reporting mental health problems (Stallman & Shochet, 2009; Wong, Cheung, Chan, Ma, & Tang, 2006). The Australian National Survey of Mental Health and Wellbeing (2008) reported that the prevalence of 12-month mental disorders was higher in younger age groups (16-24). As 75% of the first year population at most universities are in the 16-24 age group, it can be assumed that a majority of students may be particularly at risk (Price, McLeod, Gleich & Hand, 2006; Wong, et al., 2006). Stallman (2010) found that 84% of the student population surveyed had elevated levels of stress compared to 29% of the general population. Bouteyre, Maurel, & Bernaud (2007) collaborated on a French study which supported these figures reporting that 41% of the first year students surveyed had depressive symptoms

whose levels were medically significant. Cooke, Berwick, Barkham, Bradley and Audin (2006) found that these elevated levels of stress continue to increase in second and third year, never returning to the base-line measured prior to the students attending university. These findings suggest that, as a consequence of poor mental health, a high proportion of first year students may neither reach their academic potential nor enjoy a positive quality of life, and often find themselves unable to positively contribute to the world (Wong, et al., 2006).

Following the Ottawa Charter for Health Promotion, and based on implications from research (Pimentel & Cova, 2011; Potvin & Jones, 2011; Stallman, 2011), it appears that embedding mental health promotion programs within the curriculum may be one of the more sustainable ways to address problems related to the first year experience in Australian universities. Therefore, a strategy to enhance resilience and emotional wellbeing throughout the tertiary learning experience appeared critical and timely.

An emotional fitness and resilience building intervention was created, underpinned by research literature into resilience, positive emotions, and psychological well-being. Research into resilience has increased due to its relevance for mental health (Waugh, Fredrickson, & Taylor, 2008). Hartley (2012) argues that in the context of university, if tertiary students use protective factors that are the by-products of resilience, all college students would have the opportunity to achieve success. Evidence has supported the views that: resilience is open to development (Bonnano, 2005; McAllister & Lowe, 2011); it can be enhanced by interventions (Connor & Davidson, 2003; McAllister & McKinnon, 2009) and can be learnt by anyone (Newman, 2005; McAllister & McKinnon, 2009). Tugade and Fredrickson (2004) found that individuals with high resilience experience positive emotions even within stressful situations.

Positive emotions help buffer against stress (Folkman & Moskowitz, 2000), depressed moods (Davis, Nolen-Hoeksema, & Larson, 1998) and can increase psychological well-being and health (Affleck & Tennen, 1996). Fostering emotional intelligence in students can also be seen as an investment in their academic success (Sanchez-Ruiz, Mavroveli, Poullis, 2013). Three studies have shown that emotional health produces a flourishing state of well-being that is sustainable over time (Algoe & Fredrickson, 2011; Fredrickson & Losada, 2005; Seligman, 2011) and one has shown that interventions that promote positive emotions are beneficial to both physical and psychological health outcomes (Tugade, Fredrickson, & Barrett, 2004). Therefore, by combining the concepts of emotional health and resilience in an emotional resilience building intervention, this study aimed to contribute to a broader understanding of mental health problems experienced by first year tertiary students, and their possible impact on attrition.

The study took place in one Australian regional university. With attrition rates in the first year being amongst the highest in Australia (10% above the national rate), and with 51% of students first in their family to participate in tertiary education, it appeared to offer the appropriate environment for trialling an emotional resilience building intervention. The intervention that was implemented and evaluated in this study was positioned in the area of health promotion; was low cost and proactive rather than reactive. Health promotion is partly about people gaining control over their health determinants, thereby improving their health in order to be able to lead an active and productive life (Lindstrom, Eriksson, & Wikstrom, 2011). Importantly, the study was built around a salutogenic framework, an approach that focuses on factors that can create health and wellbeing in populations. The aim was not to seek ways to eliminate stressors from the participants' lives, but to help them strengthen and create health whilst still being under these everyday stressors. As a result, the intervention under study focused on the creation, enhancement and improvement of emotional resilience and well-being within first year tertiary students (Eriksson & Lindstrom, 2006).

Methods

The methods outlined here are the qualitative component of a larger quasi-experimental study involving 1,350 students across two compulsory, similarly sized first year courses, attracting students from many degree programs. Students in one course were the control group, while those in the other were the intervention group. The overall study evaluated the implementation of an intervention named Mytern; the sections below focus on just one aspect of the study, providing a daily SMS to voluntary participants.

Participants. One hundred and sixty undergraduate students from a regional Australian university participated as volunteers in the SMS trial which introduced and then reinforced daily an emotional resilience building skill, *Mytern*. Participants' ages ranged from 17-61 (F = 60% and M = 40%) with over 85% of the participants being from the first year cohort. Fifty-three percent of the participants were the first in their family (FIF) to attend university, reflecting the FIF percentages of the university as a whole. These data had been collected at the point of participation.

Intervention Procedure. Students in the intervention group were introduced to the *Mytern* program via a four minute DVD shown during the first tutorial of the course. The intervention was tailored to align with existing course content, with the intention of enhancing the subject matter of the course. At the conclusion of the DVD presentation, students were invited to take part in a daily SMS trial. A Project Information Sheet was distributed, along with a consent form which provided a section where individual students could write in their mobile number and elect to receive the texts. The students were also informed that they could stop the texts at any time, simply by replying to the SMS and texting 'stop'. Out of the 238 students who attended the first tutorial, nearly 70% elected to receive the daily SMS.

Mytern (an acronym for Take Emotional Responsibility Now) is an emotional fitness program based on a driving metaphor, which is age and gender neutral and is common to all students. It teaches that each student is a driver and that they have control of the steering wheel, similar to the responsibility that they assume when driving a car. Emotions represent different roads and there can be no blame for which road a student chooses to drive down, as only they have control of the steering wheel. It also teaches that some of these roads help to increase health, whereas other roads assist in developing levels of resilience.

Commencing in week 3 of the teaching semester, a daily *Mytern* SMS was sent to participants from Monday to Friday (excluding mid-semester break). The daily timing of the text was random (between 10am-5pm) so that the participants did not know when to expect them. After eight weeks, the participants were informed that the research period had come to an end. However, the majority elected to continue receiving texts until the end of semester. An example of an SMS illustrates the metaphor within the message:

> Have you looked at your GPS today? What road are you on? You may not be able to change the circumstances, but you always have the option to change the way you feel. Remember, only you have control of your steering wheel ☺

Data Collection

At the conclusion of the Mytern SMS trial a detailed interview protocol was developed and administered involving five phases. The first phase of the interview asked about participant's reaction to *Mytern* generally and whether they were aware of any changes that may have taken place as a result of the intervention. The second phase explored the student's response to the initial DVD presentation and the *Mytern* Mini Manual. This was followed by questions

relating to the text messages and the extent of their impact. The fourth phase asked students if they had passed the program onto others and prompted them to provide examples. The final phase of the interview gave students the opportunity to provide both positive and negative feedback in relationship to the program.

In week 12, participants who had volunteered to participate in an interview on the original consent form were invited to organise an interview time. Many students replied apologising that they were incredibly busy, as it was near the end of semester but the majority of these gave feedback via text. Eleven students agreed to be interviewed, which was considered a representative sample of the whole group who participated.

In addition to the data collected in the interviews, many students also sent unsolicited feedback about the intervention via SMS. As requested by the University's HREC, students were not encouraged to reply to the texts during the intervention; however some felt compelled to reply when the text had made a significant impact. Finally, at the conclusion of the intervention, a text was sent to participants asking for any voluntary feedback relating to the SMS service. They were encouraged to write both positive and negative comments.

Data Analysis

Methods associated with grounded theory were used for the analysis of the qualitative data, involving Miles and Huberman's (1994) three phases. These were data reduction (coding), data display (*per* NVivo) and drawing conclusions. The first round of coding involved categorizing students' responses into relevant subject matters. Codes were then grouped into themes for higher levels of abstraction which were subsumed into two major categories: personal challenges and personal support.

Findings from the Interviews

The major themes that emerged from the interview analysis fitted into two categories: personal challenges and perceptions of *Mytern* (Table 1).

Personal challenges	Students who commented (%)	Personal support	Students who commented (%)
Anxiety	42%	Friend/connection	90%
Bullying	25%	Motivational	92%
Depression	33%	Positive Reinforcement	92%
Suicide	25%	Positive Change	100%
Stress	80%	Stress release	70%
Workload	67%	Reminder/Reflection	100%
Vulnerability/Isolation	90%	Kept them at uni/Retention	25%

Table 1 Themes, categories and instances emerging from data

Personal Challenges

Personal challenges stood out as a major category from the initial stages of analysis. Many of the challenges that students faced seemed to come from within (feeling alone, hating themselves, not fitting in, feeling overwhelmed, vulnerable and not in control) and these appeared to manifest in negative emotional states such as feelings of anxiety and depression, with some even progressing to suicide. The extent of the students' emotional fragility was unexpected.

Anxiety, bullying, depression and suicide. First year students can arrive at university with conditions that have arisen as a result of their prior experiences, as well as experiences of loss

in the context of change (Rowling, Weber, & Scanlon, 2005); almost half the students referred to anxiety; a quarter of the students talked about being bullied at school; a quarter spoke of their suicide attempt(s) and a third of them shared their story of depression. All these students demonstrated their emotional fragility and their feeling of powerlessness to change circumstances. One student spoke of the anxiety that she had suffered as a result of bullying at school and her subsequent suicide attempt, reflecting the depth of some of the students' emotional problems.

> I actually tried to commit suicide six months ago, well yeah, just under six months ago now. Even with that ... the resilience and starting back at uni, starting to make - moving as well, starting to meet all new people, not knowing anybody, no familiar faces and all the rest of it....stress with everything and it's just a lot and just couldn't be bothered any more. It was just like, I've had enough, I don't want to deal with anything. (Student 1)

Stress.   The majority of the interviewees spoke about the high levels of stress that they had experienced. The stress was not just coming from workloads and academic challenges, but from their personal relationships. Many of the students expressed the levels of stress created as a consequence of feeling that they had little or no support in their lives, and not just at university. Again, emotional fragility and lack of resilience came through. Student 2 expressed the stresses and challenges of being a first year student:

> Yeah you don't know what to expect and everything is just so different. It's like having a hot shower and jumping out into the cold snow outside. It's so different and just - you're struggling trying to find your way around and you don't have any support, you don't know anyone, you don't know what you're supposed to do. (Student 2)

Vulnerability and isolation.   Another recurring theme was the students' feeling of vulnerability and isolation, which can be emotionally challenging. Many students were not accustomed to the solitary life of study, which student 3, for one, found very isolating.

> Because you feel so alone sometimes in your studies, especially when you're at home all day. I don't like being isolated but you have to, because you have to do your study and you have to do your assignments. (Student 3)

These feelings of isolation, along with high stress levels and feelings of anxiety, depression and suicide portrayed some of the challenges of the first year student and the detrimental effects that they can have on students' emotional states. In contrast to the negativity behind the students' personal challenges were the students' powerful reactions to the anonymous *Mytern* texts.

Personal Support

Findings reveal that the positive impact that the daily Mytern SMS had on the students' emotional states was profound. They felt that there was an anonymous friend out there, supporting them and caring for them. The Mytern SMS motivated them to keep on track, prompting them that they were in control of their lives, their feelings and their emotional state. Relating the SMS to the metaphors of the steering wheel and roads enabled the students to take control of their wheel figuratively and steer down that better road. This ability to be in control in turn appeared to increase their resilience to the personal and emotional challenges outlined before.

Friend, supporter, motivator. When asked in what way they felt that the SMS had had such a positive impact on their lives, the majority said that receiving the texts was like having a friend, a supportive influence, who was objective and always there for them. All except one commented that it didn't matter that the sender was anonymous. Quotes from students 2, 4

and 5 are reflective of what all the participants felt about the friendship and support that developed between the anonymous SMS and the student.

> There's someone else out there that isn't here with me right now, who cares, doesn't even know me, but still - that's how Mytern can make you feel, so that's good. It makes you feel someone's out there caring. (Student 4)

> You just know that someone's on your side and you feel like when you get the text it feels like you can relate. Just to know that somebody's on your side every day. Just to remind you, give you a bit of confidence. Make you feel a little bit of hope, a bit of happiness, getting that text and seeing and reminding you that you can change your life. (Student 2)

> Oh, there's my friend - an anonymous friend that just prompts me along the way, but I just don't have to explain anything back to it. I just received it and it prompted me and it allowed me to have the responsibility - the onus of responsibility was on me to sort it out, not to go seek somebody else's advice. It made me stronger. (Student 5)

The motivational impact of the SMS also emerged from the analysis. Students spoke about the SMS's motivating them to stop and change the way they were thinking and feeling; to keep them working; to reinforce that they can do this; and that they can take control of their life. Three recurring words in the interviews were 'control', 'power' and 'motivation'. Quotes from student 6 and student 7 (an international student) sum up the common sentiments expressed by the participants.

> It is our only power...and it's wonderful. It's a lovely analogy, that steering wheel thing I think because you think about it driving around in your car and you think I have got power. Who else has got power over me except me really? Nobody can tell you really what to do, or what to feel. That's brings you back to the point, to you yourself, into your body, I'm here now and I've got to get hold of that steering wheel again. (Student 6)

> So much - it mean something. It's brilliant. It's meaningful and it can give you some motivation. Yeah. It make me think. It did. Just no - sometimes when we get busy with something and I read these texts, it give you so much motivation. That's power, that's energy. So I do love these texts. When I was working on some papers and I read these texts, I feel more power. I feel more energy. It helps me with the whole semester - the attitude. (Student 7)

Positive change. All the students who talked about their experience with the Mytern SMS included examples of the positive changes that had occurred in their whole life, not just in their lives at university. The regular texts helped them reframe their thinking; and by being aware of their emotions and building emotional resilience, enabled them to bring about changes in their life. Some of the changes included; being able to make better choices regarding friendships; recognising the anger within and being able to modify it; becoming more productive regarding university work; gaining confidence; being able to deal with relationships in a better way; and hating themselves less. A common realisation expressed was the establishment of control over how they thought and felt, strengthening their ability to focus and perform. A statement from student 1 illustrates this growth, as well as the effect that positive emotions can have on academic success:

> Now I can look at myself and say, in these four months I've come from that little sprout of a tree to a big blossom tree. Mytern gave me a positive outlook on life. At first I kinda thought that it wasn't going to do anything for me, but after a while, when I was thinking and feeling positive, my marks went up. I was getting distinctions and HD's as well. (Student 1)

In response to what impact the Mytern SMS's had on her first year experience, student 2 replied:

> I didn't know how anything worked and I think that the texts really helped. It didn't tell me where the toilets were but it gave me the support to find my way basically. (Student 2)

Staying at university. The findings from the study suggest that student problems associated with their emotional and mental fragility are among the reasons for them considering leaving university. Here student 2 points out that before receiving the texts and understanding the *Mytern* skill, she probably would have chosen to drop out of university.

> It did, yeah. It gave me confidence. It did. I don't think - I'd still be working there if I didn't get that text. I think it's completely changed me - I probably would have dropped out of uni because I couldn't have juggled both of them at the same time…and I'm so glad. I'm loving uni. (Student 2)

Mytern also influenced students' choice to focus on and remain at university.

> It's so easy to get side tracked and socialise and do other things like that and just walk away. At the end of the day, Mytern teaches you that you are the one that you can put the blame on. So it's important to check in regularly- which is what Mytern does- to make sure you're on your road and not getting influenced by someone else. That's why I'm still here at uni. (Student 8)

> I have read and constantly reread the Mytern texts before uni sessions to pick me up when I am feeling that questioning feeling, should I be here? Being 49, sometimes I question whether what I am doing is the right thing to do. (Student 9)

> Instead of just stressing about it thinking, why did I do this, why did I choose to come to uni? I should just leave now. Just got to stop and just take a look at why you did it. Weigh the pros and cons and the texts remind you of doing that. (Student 10)

The support provided by the SMS appears to have had a positive impact on the negative repercussions that being overwhelmed can produce.

Findings from the unsolicited feedback

Although the participants were not encouraged to reply to the SMS, some felt compelled to provide unsolicited feedback. The majority of the replies indicated the timing and appropriateness of the message, as well as providing a feeling of support. A few examples include:

> Love these messages. It is uncanny how they come at a precise time in my day! They have come at an important time for me not only with in regard to Uni but in my personal life too.

> The mytern messages are great! After a few weeks I noticed my attitude had improved and eventually my attitude wasn't as affected by things that happened in the day and the text messages helped support that change. Thanks!

> I love these texts. They are a breath of fresh air within my day. A reminder that all is well.

At the completion of the intervention, of the 169 participants who initially volunteered, 82% were still receiving the daily SMS; the majority of which chose to keep receiving the texts until the end of semester. At the conclusion of the intervention (end of week 8) an SMS was sent to the participants informing them that the trial was ending. Quotes such as these reflect the students' response:

> Awesome service. Please continue texts if possible

> Please keep the texts going. They are really helpful

> I want them to keep going. What can I do to help?

> I've loved getting your texts this semester and it'd be great if they continue. Some days they are just the little boost needed ☺

> These daily texts have been really beneficial to keep me centred and in the present moment, to focus on the things in my life that are good and to be grateful for. I would love to have texts like this throughout life. Please keep them going. Thank you ☺

As a result of this unsolicited feedback, participants were asked to text back 'continue' if they wished to receive texts until the end of the semester, 'or stop'. Ninety-eight per cent chose to continue.

Discussion

Daily communication with students via SMS, centred on the *Mytern* program, demonstrates the positive impact they may have on student's emotional health and level of resilience. The findings of this study supports existing evidence that positive emotions can buffer against stress (Folkman & Moskowitz, 2000) and depressed moods (Davis, et al., 1998), improve academic performance (Hartley, 2012; Sanchez-Ruiz, et al., 2013), benefitting the students physical and psychological wellbeing (Tugade, et al., 2004). A further significance of this study was its ability to bring together these separate domains in the one study, as the Mytern SMS intervention impacted each of the above domains.

The study also revealed that students' emotional capital may be just as significant in their ability to transit into first year university as other forms, such as Bourdieu's 'cultural capital' (1973), as there appeared to be a continuum of emotional capital in first year students. Adam, Hartigan and Brown (2010) mentioned the benefit of developing skills for those students with less 'social capital' than their traditional counterparts to help with assimilation/integration. Trait resilient individuals, as found in other studies (Tugade, et al., 2004), demonstrated positive emotions during stressful situations, yet this study showed that those characteristics of engaging positive emotions in stressful situations may also be able to be taught. The students realised that they couldn't change some circumstances at university (such as four assignments to be handed in on the same week) but they always had the power to change the way they felt about it and so felt confident to approach the problem, positively impacting their physical and psychological health. Through adopting a salutogenic framework, the study was able to focus on creation, enhancement and improvement of emotional resilience and well-being within first year tertiary students.

Tinto (1993) presented attrition in terms of failure to integrate into an institution's social and academic systems. The findings from this part of the larger study add a new dimension to this: the failure to integrate emotionally. If students are able to integrate emotions (both intra- and inter-personal), become capable of taking responsibility for their emotions and have control over how they feel, this will assist with their integration into a bigger institution such as university. The majority of students coming into university are in either an identity formation stage (18-24 years of age) or in a transition of identity stage (24 years or older). Emotions and emotional resilience are likely to play a key role in the formation of a healthy identity during higher education years and in the prevention of attrition. A study examining students experiences over six universities showed that one of the major reasons for attrition in years 2 and 3 at uni were negative expectations (Willcoxson, Cotter, & Joy, 2011). In other words, students lacked internal confidence in their ability to succeed and also lacked confidence in themselves. It is likely that the lack of confidence could be exacerbated by the university experiences (making and breaking relationships, new stressors, assessment feedback, etc), unless the students are provided tools and encouragement to build their internal resources (i.e. emotional fitness/resilience).

Conclusion

The paper may conclude best in the words of two students whose comments epitomise the links between the SMS and its potential impact on the emotional health and resilience of first year university students.

> I was at a really bad place at the beginning of the year. Everything just seemed really dark and really down. I was at rock bottom. I felt like I was dead. I was numb every day. I was just taking life as it passed me by. But then when I started Mytern things got better. The texts just reminded me that I was in control, that my life was my life. It reminded me why I was here. It changed everything. . Now I'm at a really good place. It's.... amazing! Mytern has completely changed everything. It's changed my way of thinking; how I view every day, how I see people. Instead of seeing everything in black and white, everything is in colour and I'm so grateful. (Student 2)

> Last semester I was in a pretty dark place. So dark that I actually tried to commit suicide. Ended up in hospital and I was at really rock bottom. Ended up moving to the sunshine coast and started uni here. From there Mytern actually helped me because during this semester I went through big family dramas and it was pretty unbearable for me cos it was to do with my dad. Basically I was a mess again and I started to go down that path where I didn't want to live any more. With Mytern I was able to turn that around and I really did bounce back up and I'm probably the happiest I've been for a very long time. (Student 1)

A Mytern SMS a day not only kept attrition at bay for the students mentioned, but also became an anonymous supportive friend; helping students at the right time, providing a reorienting perspective and perhaps, most importantly, helping keep at least two students alive.

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