CAN IT BE DONE? AN EVALUATION OF STAFF PERCEPTIONS AND AFFORDABILITY OF A SCHOOL-BASED MULTI-COMPONENT INTEGRATED INTERVENTION FOR IMPROVING THE RESILIENCE OF ABORIGINAL AND TORRES STRAIT ISLANDER BOARDING STUDENTS

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Abstract

Internationally, schools have recognised the need for supporting and improving the resilience of students, particularly those facing a multiplicity of challenges. However, social and emotional learning programmes, including those aimed at enhancing resilience, are often not evaluated thoroughly nor detail process and economic evaluations. This paper evaluates a multi-component integrated intervention designed to strengthen the resilience of remote-living Aboriginal and Torres Strait Islander students attending boarding schools. This evaluation is largely process-based, focussing on the acceptability, feasibility, preliminary outcomes and affordability of implementation of the intervention. Fourteen boarding or teaching staff members, eight female and six who identified as Aboriginal, were interviewed. The interviews were conducted with staff members at eight Queensland boarding sites where the intervention was delivered. Qualitative inductive thematic analysis was used to evaluate feasibility and acceptability and outcomes described by staff. A descriptive analysis of the costs (AU$ 2018) was performed in Microsoft

Excel 2013. This evaluation identified multiple major themes around feasibility and acceptability, including sharing experience across sites, staff knowledge, attitudes and behaviours, and perceived student achievement, leadership and relationships. Implementation of the resilience intervention was considered feasible and affordable, and embraced by boarding providers. School-based participatory action research interventions aimed at improving culturally appropriate support structures for Indigenous boarding students are achievable with the appropriate resourcing and time to implement and embed change.

Background to Intervention

For over 5000 Aboriginal and Torres Strait Islander (hereafter respectfully termed Indigenous) adolescents living in remote or very remote communities in Australia, leaving home for approximately 40 weeks per year, is their pathway to completing secondary education (Australian Government, 2017). These young people attend boarding schools, or residential facilities offering students from remote regions of Australia access to educational and social opportunities that are unavailable or limited in their home communities. The experience of boarding school for these young people coincides with the onset of adolescence, a time of considerable biological growth and major social role transitions, with students as young as 11 years old transitioning to boarding in Queensland (Sawyer, Azzopardi, Wickremarathne, & Patton, 2018).

Enhancing adolescent resilience can contribute to both physical and mental health and wellbeing and may help Indigenous boarding students through this complex transition. Schools are increasingly being ideally placed to implement programmes aimed at strengthening resilience and supporting youth at risk. However, for boarding schools aiming to support the resilience of remote-living Indigenous students, there is little reported evidence to help in this endeavour. Evidence for what programmes and strategies work and how best to implement them in these types of environments is critical to inform boarding schools across Australia in their efforts to support the resilience of Indigenous students who are attending boarding schools or otherwise studying away from home (Australian Government, 2017).

Resilience in School Settings
Schools are important environments for supporting and developing the resilience of children and adolescents for several key reasons. First, students spend a significant amount of their time in a school environment: an environment requiring high levels of personal developmental skills including task management, emotional regulation, cognitive focus, and navigation of relationships with peers and adults (Jones & Bouffard, 2012). For boarding school students this time is increased as they also spend their recreational time either at their school or associated residential sites such as boarding houses or colleges. Second, integrating resilience programs into formal schooling and education can improve students' capacity to learn and strengthen student mental health. Studies demonstrate outcomes such as improvement in academic achievement and student health and wellbeing (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Murray, Low, Hollis, Cross, & Davis, 2007), as well as decreased likelihood that psychosocial distress will progress to mental illness (Kalra et al., 2012). Third, beyond individual student impacts, school resilience programs have also shown positive impacts on the school environment - through improving the culture, values and environments of schools, and the quality and nature of relationships between students and teachers, and students with peers (Heyeres et al., 2017). Nurturing environments and healthy relationships can in turn influence students' sense of belonging and willingness to engage in their schooling (Flook, Repetti, & Ullman, 2005). Last, both nationally (Worsley, 2014) and internationally (Banerjee, Weare, & Farr, 2013), resilience

programs in schools offer significant returns for resource and time investment and have demonstrated sustained effects. An Australian whole of school program, for example, resulted in increased resilience for students experiencing depression, anxiety and emotional difficulties beyond the life of the program (Worsley, 2014).

Resilience is defined here as the confluence of an individual's ability to find and use the resources that support their wellbeing, and the ability of their environment to offer those supports and resources in culturally meaningful ways (Ungar, 2008). Resilience, according to this definition, requires individuals to be able to access *culturally relevant* resources to maintain their social and emotional wellbeing (Ungar, 2008). Thus, schools and boarding houses need to be able to support students in culturally appropriate ways, an aspect particularly important for students who come from backgrounds that do not match the dominant culture within their school settings. Building relationships of trust and support with culturally competent and caring adults through monitoring, modelling, coaching and countering adolescent stereotypes, has been linked to resilience (Wexler, Dam, Silvius, Mazziotti, & Bamikole, 2016). Yet relationship development, particularly across disparate cultures, takes skills, time and resources (Hodges, Sheffield, & Ralph, 2016). Benveniste, Guenther, Dawson, and King (2019) found that while boarding staff may have training or skills in youth work or teaching in general, specific skills and contextual understanding for enhanced engagement with the individual Aboriginal students and families was needed. Therefore, appropriate training and support for staff is an important element in efforts to build student resilience.

An American study found that when teachers attended resilience training or implemented more units of Social and Emotional Learning to help build resilience, their students (from various ethnic backgrounds) had better social and emotional competence (Reyes, Brackett, Rivers, Elbertson, & Salovey, 2012).   While the importance of culturally-informed resilience strategies in schools is becoming increasingly evident, teachers typically do not receive any training on how to build culturally competent relationships (Beadle, 2009; Hodges, Sheffield, & Ralph, 2016), or how to support students to develop resilience skills, manage peer conflict, or address culturally diverse resilience (Jones & Bouffard, 2012; Lopes, Mestre, Guil, Kremenitzer, & Salovey, 2012). The literature about development of staff capacity to meet the needs of Indigenous students is both scarce and non-specific (Heyeres, McCalman, Bainbridge, & Redman-MacLaren, 2017), seldom reporting that schools have designated programs in place but rather that learning together on the job is practiced.

Integrating Resilience Interventions in Schools
School-based interventions are highly variable and have proven difficult to link findings across program evaluation research (Jones & Bouffard, 2012). Understanding how implementation affects programme outcomes is also problematic, with a key meta-analysis conducted by Durlak and colleagues in 2011 finding that only 57% of studies on Social and Emotional Learning strategies in schools reported any implementation data. What we do know, however is that school-based programs are generally designed to be implemented *in addition* to academic curriculum, rather than integrated into everyday school life. Research shows that resilience programs have common barriers to implementation and sustainability including funding, time and curriculum constraints (Durlak & DuPre, 2008; Maras, Thompson, Lewis, Thornburg, & Hawks, 2015). Dynamic and demanding teaching and administrative contexts limit schools' ability to implement set resilience programmes into regular school practice (Humphrey, Lendrum, & Wigelsworth, 2013; Rowling, 2009) and staff feel pressured by perceived expectations of solving many of society's issues (Rowling, 2009). Manning, Homel, and Smith (2010) found that programs targeting mental health in at-risk adolescents were more likely to be effective if they lasted more than three years, compared to programs that ran for one year or less. However, such integrated programs are rare and evaluation of such programs, particularly those including a component of building capacity in cultural competence, is scarce (Jones & Bouffard, 2012).

Study Aim

This paper evaluates a unique multi-component integrated resilience intervention tailored to the specific cultural context and needs of Indigenous Australian boarding students. The intervention was implemented as part of a five-year Australian National Health and Medical Research Council funded project which investigated the psycho-social resilience and wellbeing of remote-dwelling Indigenous boarding students in Queensland. The project worked in partnership with the Queensland Department of Education Transition Support Service (TSS), a service which provides support to students from Cape York and Palm Island who attend boarding schools. Previous publications have outlined the development of a resilience survey instrument (McCalman et al., 2017), pilot study results (Redman-MacLaren et al., 2017), validation of the student resilience measure (Langham et al., 2018), and student views on the TSS (Redman-MacLaren et al., 2019). Further, a detailed description of the Participatory Action Research process and development of the resilience intervention components is provided in Rutherford and colleagues (in press). This paper extends this work through a process evaluation investigating the feasibility, acceptability, and cost of implementing the intervention.

Evaluation of the Intervention

Intervention Components

A multi-component integrated intervention was co-designed with study participants and implemented with 8 boarding providers across Queensland. A detailed description of this strategy, its strength-based and Participatory Action Research (PAR) principles and framework of six resilience domains, is provided in Rutherford et al. (under review), and on an online resource developed through the project https://resiliencebuildingtoolkit.com.au/. Overall, the aim of the intervention was to identify, build and enhance culturally appropriate strategies to foster a boarding and school environment that supports and strengthens the resilience of remote-based Indigenous boarding students. The resilience intervention ran across two school years, and consisted of three components:

1. *STEP UP plans (Strengths-based, Tuned- in, Evidence-focused, Plan-is-measurable, Understanding, Partnerships)*

STEP UP plans were developed with each individual school identifying strengths-based strategies that either built on current strategies, targeted them further to the needs of remote Indigenous students, or added additional strategies aimed to enhance their resilience.

2. *Online professional development and sharing platforms:*

These forums were delivered by expert facilitators, and covered topics such as trauma informed care, Social and Emotional Wellbeing in Cape York community contexts, and emotional regulation. Participants could attend online live, or access recordings at any time. Online sharing platforms (via the same conferencing platform) were also organised for school and boarding sites to share their resilience-building practices with each other.

3. *Schools and Communities meeting:*

The Schools and Communities Meeting was an annual two-day face-to-face conference held in Cairns, where boarding and school staff, students, community members from students' home communities, TSS staff, and research facilitators came together to connect, share practices and learn from each other.

Table 1 identifies descriptive characteristics of the eight participating boarding school sites, coded numerically, such as the school cohort (single-sex or co-educational) and the percentage of Indigenous student enrolments. Examples of STEP UP activities are detailed further in

Rutherford et al. (under review), however this table indicates the range of participation in each element of the intervention seen across each of the sites.

Methodology and Design
This evaluation design is based on the New South Wales Government Program Evaluation Guidelines (NSW Government, 2016). The Guidelines recommend that program evaluation is most effective when it assesses specific aspects of an intervention including: process (was the program implemented as intended); outcome (did the program achieve its intended outcome); and economic (what resources are being used in a program and their costs, direct and indirect, in relation to outcomes). Within the process evaluation, feasibility (whether staff were able to implement STEP UP activities and access elements of the intervention) and acceptability (what staff engaged with and found useful from the program, did this influence practice) were assessed. The outcome evaluation at this stage is only from the perspectives of staff, as to their perceptions of impact on their own practice as well as to student outcomes.

Boarding sites: Eight boarding school sites were randomly selected from Queensland TSS partner boarding schools to take part in the intervention. These sites differ in various ways including student demographic, geographic location, staff experience, Indigenous specific programs and educational experiences offered. Geographically, the sites were in FNQ (n=2), NQ (n = 2), CQ (n = 1) and SEQ (n=3). Seven of the sites were either Independent, Catholic or Lutheran secondary schools with residential facilities attached, while one site was an independent residential facility operating under the auspice of a sports club. Students from this site attended various secondary schools during the day and returned to the residential facility after school (author names removed for review). Four sites offered co-education, the other four offered single-gender education (three male-only, and one female-only). In terms of the proportion of Indigenous enrolments, one site had 100% Indigenous enrolments, one site had greater than 75%, and the remaining six had less than 25% Indigenous enrolments.

Participants: Fourteen staff members across eight boarding sites were interviewed. Examples of their roles included student wellbeing coordinators, principals, heads of boarding, Indigenous student support or liaison staff, school psychologists and teaching staff. Six staff identified as being Indigenous. To protect anonymity, staff roles and cultural identity are not indicated in quotations used throughout the results.

Ethics approval was attained from university and Department of Education Human Research Ethics Committees as part of the broader study (Central Queensland University- H16/01-008, James Cook University - H6295, and Education Queensland - 550/27/1646). Informed consent for the qualitative interviews with staff was also provided prior to conducting interviews.

Procedure:

1. *Intervention feasibility and acceptability:*

Interviews were conducted with staff members working across eight boarding sites. A semi-structured interview guide (see Appendix A) was used by 1-2 staff members who had been closely involved with the Resilience interventions (boarding schools and residences that had Indigenous students who were supported by the Queensland Education Department's TSS). Not all staff members who had been involved in the intervention were available or able for interview. Staff were unavailable due to a range of factors, such as staff turnover or school and boarding staff not having matching time availabilities. Inductive thematic analysis of staff interviews was conducted with the assistance of NVivo qualitative data analysis Software (QSR International Pty Ltd. Version 12 pro) to inform the process, outcome and economic evaluation.

2. *Intervention cost:*

The incremental costs of the intervention per student were estimated using a three-step procedure: the identification of resource items; measurement of resource quantities; and assigning of unit costs. Resources included those directly and indirectly (staff time provided in-kind) expended by participating schools and TSS, including planning and review sessions, webinars and online professional development forums, Schools and Communities Meetings, resilience strategies and STEP UP activities, in addition to their routine practice. Three resilience strategy activities (leadership camp, cultural awareness program and Yarns for Life staff training) incurred additional costs to routine practice and were included in the costing analysis. All costs were measured in 2018 Australian dollars (AU$) from the perspective of the Department of Education. No discounting was necessary because the study period was one year. A descriptive analysis of the costs was performed in Microsoft Excel 2013. Results were expressed as mean (range) cost per student.

Results

Findings overall suggest that integrating resilience strategies in schools in this context is possible and that implementation strategies such as peer-to-peer learning and face-to-face meetings with is beneficial and valued. Positive outcomes were seen for both staff and students. However, time, resources and leadership support remain issues schools continues to grapple with.

Process: Feasibility and Acceptability of the intervention
The major themes identified through the process evaluation are outlined in table 1 below. Further description and participant quotes are provided for each theme.

Table 1: *Process evaluation themes and sub-themes*

	Major themes	Sub-themes
Feasibility of intervention	Enablers	Support and resourcing from leadership
		Staff and teamwork
		External supports
	Challenges	Availability of time
		Competing priorities
Acceptability of intervention	Sharing effective strategies	Online Sharing Platform
		School and Community Meetings

Feasibility (Enablers): Feasibility of the intervention focused predominantly on in-school activities and whether these were able to be implemented as intended by boarding providers.

1. *Support and Resourcing from Leadership:*

When thinking of what enabled the implementation of resilience strategies in their schools, school staff commonly referred to support from their leadership team, principal or site manager. For newer staff, top-down support allowed them to see value in and persevere with identified resilience strategies:

> *Every time that we have a new person, [name of leadership position] is always involved in their conversations so that they can pass it to the leadership team. (Site 5)*

In turn, changes in staff or leadership positions created large impacts on school or boarding practices. Yet, site 7 described how clear communication of roles and transparency across the system facilitated the smooth operationalisation of workforce changes. Allocating resources to resilience strategies was also an enabling factor in successful practice:

> *We're finally becoming a well-resourced school, and everybody has the same agenda and that's to do the best by these girls, to set them up for success (Site 8)*

Therefore, interventions aimed to develop resilience-building environments require top-down, coordinated support with clear role definitions and resourcing.

2. *Staff and teamwork:*

It was clear that not only resourcing and leadership enabled successful practice, but that having a team of staff members who were *'open to different ideas and very supportive of Indigenous kids'* (site 6) was effective. Staff at school sites spoke of becoming pro-active about selection and balancing of staffing, particularly in the boarding house. For example:

> *We've done a lot of work in the last five years on getting the right staff. And I think that's a key protective factor - when I have kids in trouble, I'll ask them, 'which staff do you feel you can talk to?' They'll always name one, two or three (Site 4)*

While the above indicates the flow-on benefit to students, another site described how the process of identifying the right staff impacted the whole culture of the boarding site:

> *That I think is the biggest difference in the school – the culture is changing. Boarding is changing. We've got people who are willing to be part of what's going on rather than people who come in and just open the doors and turn the lights on and turn the lights off (Site 8)*

Furthermore, the process of implementing the STEP UP component helped sites *'pull together as a team with a focus'* and that rather than one staff member being responsible for supporting Indigenous students, everyone now had a *'role to play'*.

3. *Accessing external supports:*

While several school sites were able to implement their plans as a team and through support from their leadership, others also discussed the importance of the external TSS staff in planning and supporting resilience activities such as providing links between schools and students' home communities.

> *That's a key part of [the students'] pastoral care plan. They [TSS] are very good in that they can give you all the extra information of how to contact, who to contact, who are the people in community, all of that stuff. Now we'd have none of that without them (Site 4)*

The TSS staff members' relationship and experience with the communities was also viewed as important as they had the *'language skills or the knowledge to ask the right questions in relation to that particular community or kid' (Site 3).* Therefore, by working with TSS on developing and implementing their resilience interventions, boarding school sites were able to harness and extend external supports to create strategies within the school to support student resilience.

Feasibility (Challenges): It is vital to recognise and explore where schools found challenges in implementing resilience activities as well as the enablers. These are described below.

1. *Availability of time for implementing activities:*

While many of the sites focused on the domain of staff capacity development in their STEP UP planning (component 1), there were constraints in being able to implement training or staff

capacity initiatives for several reasons. Some training courses, for example Trauma Informed Practice Training, took several days. It was difficult for staff members to accrue this time commitment during term, especially for boarding staff, who often worked extra hours to allow for time off during the school holiday periods. It was also difficult to get all staff members together for training at the same time. One site also indicated that conflicting staff schedules impacted the ability for all to be present during planning sessions:

> *Time! And opportunity for us all to be available to meet to talk (Site 8)*

While all sites had ideas to implement strategies across the domains, some strategies took longer or were more difficult to start than others:

> *Oh, nothing happens in a hurry! And everything just seems to take time. It just can be a bit frustrating but it's - because it's such a big place, you can't just change things along the lines of programs. It's difficult (Site 5)*

A benefit of participating in the resilience intervention overall, as indicated by the staff member below, was that it did provide an external driver to find some time to sit down and discuss strategies with each other.

2. *Competing Priorities:*

School sites did not seem to find any difficulty in identifying ideas or strategies that would support Indigenous students. However, the funding to implement them was not always available or able to be negotiated.

> *[One of the challenges is] Finances. The school saying, 'okay well we'd love you to do that. [But] Where do we get the money to do that?' (Site 7)*

Challenges were faced particularly by sites that were geographically further removed from students' home communities. Despite staff members recognising the value of working on improving relationships with students' families by travelling to remote communities, and having the intention to visit, some flights were estimated to cost more than one thousand dollars (per person) one-way. Allocating funding to resilience activities was particularly a challenge for schools that had Indigenous boarders as a small percentage of a large and diverse student population. One site noted that while the intervention was '*really powerful*' to their personal understanding, that knowing what needed to happen was also '*frustrating*' due to '*all these reasons why you can't, like conflicts' (site 4)*.

Acceptability (Sharing Effective Strategies): Acceptability of the intervention was assessed in how staff perceived the components of the resilience intervention, what they engaged with (accepted) and found useful. While the intervention incorporated research-based staff capacity building components, it was intentionally structured to encourage peer-to-peer learning. Both the online and face-to-face components of the intervention were considered extremely effective, there were some differences identified amongst their benefits.

1. *Online sharing platforms*

The online sharing platforms were valued for their capacity building, educative aspect that could then be shared and discussed with own school colleagues and TSS staff. While attempts were made to schedule the online webinars and sharing practices at a suitable time for as many staff and schools as possible, not all staff members were available to be online to listen to the presentations live. However, the availability of recordings of the webinars meant that staff were able to watch the recording later, and still found them extremely useful:

It was fabulous… I think it should be like all staff should watch that coz it was just amazing. And not just relevant for Indigenous students.… It didn't matter watching the recording. It was just as good honestly, like it was so good and information was so useful that I don't think it matters' (Site 4)

For others, the information from webinars was relayed to them indirectly through other team members or TSS staff.

2. *School and communities Meetings*

It was clearly indicated that connecting with other schools face-to-face at the Schools and Communities Meeting was the most valuable component of the intervention.

I'm more of a people person so I really got a lot out of the workshop – out of the [Schools and Communities] Meetings. I thought that was invaluable (Site 7)

This was particularly important for staff who were newer to the context:

Oh we loved it! We learnt a lot from people who had been doing this role for [a long time] and just little things that we could start doing here at school that aren't going to be a big production, just little changes that we could put into place (Site 8)

Finding a point of connection with other schools also helped staff to recognise what were common concerns and challenges across sites, and what might be unique to their site. This often helped to identify where to place their focus for intervention strategies:

The fact that the problems were common across all the schools and there was so much being done in other schools, like massive amounts of work and the numbers of staff they employ all that sort of stuff. The people talking about letting the kids take ownership of the space and that was really powerful and I think that's something you can do more of (Site 4)

Other sites found that it helped encourage their current practices, feeling *'affirmed in who we are and what we are trying to do' (Site 1).*

Outcomes of Resilience intervention
The thematic analysis of outcomes described by staff led to identification of themes within two broader categories of staff and student outcomes. These are outlined in the table 2 below and described further in the following text.

Table 2: *Outcome evaluation themes and sub-themes*

	Major themes	Sub-themes
Outcomes of intervention	Staff knowledge, attitudes and behaviours	Increased awareness
		Changes to practice
		Clarifying and improving practice
	Student outcomes	Leadership and pathways
		Relationships and connections

Staff knowledge, attitudes and behaviours: The resilience intervention saw positive responses from staff around the impact the intervention had on their awareness, practice, and promotion and refining of current practices.

1. *Increased awareness*

One of the key ways the intervention was able to influence participant practice was through raising awareness of boarding staff both to the resources and strengths possessed by remote-dwelling Indigenous students, such as their peer support, mentoring and leadership abilities, as well as those resources they require access to, such as English-as-second-language classes.

> *I think the awareness is a good thing. I think the fact that our staff are now taking a particular interest in not only Cape [York] kids, but all Indigenous kids (Site 1)*

Staff from other sites talked about how they may have been aware of the importance of resilience and wellbeing before, but that the externally-driven resilience intervention made them feel more accountable and encouraged the resilience issues to be brought to the forefront of their minds:

> *Just to really think about student wellbeing. Connecting boarding and school and home, the difference that can make … (Site 8)*

For some sites, reflection was a key part of the benefits - to recognise their own strengths and the practices that have been working well, and to share these with other schools.

2. *Changes to practice*

Improvements, additions or reinforcements of school-based practices aimed at improving support for students were identified in interviews.

> *I think it's probably made additions to our practice. Like it's just really- if you say before we were working on a basic model, now we're working on a more informed, broader model (Site 1)*

Improvements to practice also came about through co-operating with other schools they had connected with, for example through collaborating around students' travel arrangements to and from their home communities. Collaborating with other schools also identified valuable opportunities for changes to practice that some schools were previously unaware of. One example was making the most out of available national education boarding travel policies, which enabled staff visits to communities during the start and end of term with students. The impact of these visits was seen almost immediately:

> *The staff have been going to visit communities – part of Abstudy travel at the start and end of the term, which has just opened their eyes! It has meant that they're getting to know people in the communities which is good… and on the other end as well, parents are more confident and more comfortable calling if there's issues (Site 1)*

3. *Clarifying and improving current practice*

One of the major outcomes for sites was the process of reinforcing or clarifying the purpose of their current student support practices. School staff at the eight sites talked about the opportunity to have time to sit down and articulate their plans, having the space to focus purely on Indigenous student wellbeing and support, and the benefit of being able to transfer this to leadership or the broader school community.

> *So they are all those little things that come with the STEP UP program but then we were looking at we've been doing that for ten years, now okay, where's our let- down? Where are we needing to lift our game? (Site 5)*

I don't think we've really replaced anything. … I think the more you sort of go through it [the STEP UP plan], the more you go, 'oh we could probably do that a little bit better' or… trying to sort of update staff from where our kids are at. And that's through various P.D.'s [professional development] and things like that (Site 4)

Having the planning tools to draw upon and to come back to throughout the year was also beneficial, as one site described:

It's always in the back of our mind that we're working towards this, so when things crop up we go 'hey that will be great for the STEP UP plan' (Site 7)

Others spoke of how it can be difficult to evaluate some of the practice changes, because these are more implicit (for example working on relationships) than explicit. This was particularly the case when staff reflected on student outcomes they had seen from the intervention.

Student Outcomes: While much of the foci of the intervention was on building the capacity of boarding providers to be able to support remote-living Indigenous students in appropriate ways, some schools described impacts of actioning strategies identified in the STEP-UP component for students directly.

1. *Leadership and pathways*

Sites that focused on developing cultural leadership with their Indigenous students saw its impacts for natural leaders.

We had our annual Indigenous Leadership Camp this year. We had a few who we thought would make good leaders and it really bought the best out in them and so now they've stepped up into that role. (Site 1)

Other sites described a more indirect approach of encouraging and building positive belief and confidence in Indigenous students, and the impact this had on them wanting to become leaders:

I think it's made a difference to the kids going for leadership positions at the end of last year. Like I don't know - I think it built their courage. (Site 4)

The importance of recognising realistic and relevant goals for their Indigenous students was also highlighted as an impact of the resilience intervention.

I suppose the other thing I'm really trying to push at the moment is providing more sort of pathways for our Indigenous kids such as VET (Vocational Education and Training) (Site 6)

The flow-on effects of students stepping up and having the courage to apply for and take up leadership positions within the school, positively impacted the confidence and the aspirations of other students. The encouragement and belief that students have in each other appears to influence their own self-belief:

I think [student name] just loved it, seeing all the other kids … encourage her to have you know, aspirations and goals. (Site 4)

2. *Relationships and connection to school*

Positive impacts on relationships were seen by staff both between Indigenous students, and in their interactions with the broader student population as well:

Australian identity was the [topic in English] and even some of the non-Indigenous girls had a lot of really good conversations with the Indigenous girls about cross-cultural

backgrounds... the way that they had some of those conversations and shared - it was really beautiful. (Site 8)

Connection to their school and positive identity were also seen as outcomes for students through the resilience strategies.

There were Indigenous kids here [before] obviously, but they were not a voice, they were just here and they were floating by and you know, they were just part of the crowd. But now I feel like they have more of an identity and they're more willing to speak up. Their grades are improving, like they seem to be existing here in a lot more positive way rather than just being here, so I think that's because of what we've been doing (Site 7)

Other practices that were implemented through the resilience intervention, such as altering the structure of dormitories to allow for peer-to-peer mentoring was seen to have a flow-on effect to retention in boarding:

A lot of our junior kids we've managed to retain which I think sort of goes against what we're used to. And it's a good thing (Site 1)

Table 3: *Cost per student per intervention components, AU$ (2018)*

Intervention component	Description	School (*n*=8)	TSS	Cost per student (range)
Planning and review sessions	Planning (3h) Review (1.5h) 8 sessions	Staff time (in-kind)	Staff time (in-kind)	—
Webinars and online professional development forums	Webinar via Zoom (3x1h) PD online forum (4x1h) 7 sessions	Staff time (in-kind)	Webinar recording $250/h x 1 facilitator x 3h	$0-5
Schools and communities' meetings	2 face-to face meetings x 2 days	Travel (1-3 staff member per school) x 2 days =$10,500-$12,082 x 2 times	2 times x (Venue hire $7900; facilitation $400; consumables $2,819)	$300-322
School-based resilience strategies:				
Leadership camp	1 camp x 2 days	Travel; consumables; facilitation	—	$100-150
Cultural awareness program for staff members	1 day	Facilitation; consumables; 192 per staff x 15-20 staff members x 8 schools	—	$160-213
Staff training Yarns for Life (suicide prevention training) for staff members	1 day	Facilitation; consumables; $80 per staff x 5-10 staff members x 8 schools	—	$22-44

STEP UP activities	1 day	E.g. NAIDOC celebrations; Welcome to Country; paints/food	—	$0 - 100
TSS supported students				144
Cost per student				*$709 ($582-$835)*

Cost of the Intervention

Table 3 provides a summary of resources used and their unit costs. The minimum (indirect) exposure of students to the resilience intervention was through the planning and review sessions, webinars and online professional development forums, and Schools and Communities Meetings (site 3), at a minimum cost of $300 (range $300 -$327) per student. The maximum exposure was to these activities plus school-based resilience activities of leadership camps, cultural awareness for staff, and STEP UP activities (site 7), at a maximum cost of $790 (range $560 to $790) per student. If a school was to implement the full suite of resilience intervention activities, it would cost an average of $709 (range $582 - $835) per student to improve support for Indigenous students in boarding schools.

Discussion

While evidence for the importance of school-based interventions for the mental health and wellbeing of adolescents is increasing, previous research largely revolves around descriptions of programs rather than evaluations of process, outcome and economic elements of interventions. This study aimed to address this need, by investigating the acceptability, feasibility, outcomes and costs of a resilience intervention aimed at improving resilience in remote Indigenous boarding school students in Queensland.

Re-affirming results in previous school-based interventions (Durlak & DuPre, 2008; Maras, Thompson, Lewis, Thornburg, & Hawks, 2015), this study found that key within-school enablers for implementation of the resilience intervention are advocacy and promotion of the resilience approaches by school leaders, an engaged team approach and the allocation of resources, including time, to the resilience strategies. Conversely to the enablers, lack of time to plan and implement long-term resilience strategies, or difficulty securing resources from overloaded and diverse school contexts made it difficult for staff to communicate the benefits or implement strategies that they learned from webinars or other schools. These challenges also mirrored findings from previous research, however highlighted the unique challenges seen by boarding schools with remote Indigenous students such as connection to their home communities requiring significant resourcing, and for schools with smaller cohorts of Indigenous students, the difficulty in advocating for competitive resources.

Sharing effective strategies across boarding sites was deemed extremely beneficial, as was access to online resources in the form of webinars. Strengthening or innovating resilience strategies appropriate to students in this context resulted from building connections and interactions between boarding providers, creating networks of practice. As predicted in establishing the design (Rutherford et al., in press), the PAR approach appears to have been extremely beneficial in this context, as it fosters sustainability, builds mutual trust and respect in relationships, creates partnerships, encourages ownership and empowerment throughout the research reprocess (Israel, Schulz, Parker & Becker, 1998; Minkler & Wallerstein, 2008).

Our results indicate that staff knowledge, attitudes and behaviours were impacted by the resilience intervention. Increased peer-to-peer learning and awareness of resilience strategies,

leading to identifying new or improved changes in practice, was evident across many sites, as was strengthening relationships between schools and communities. Participating in the intervention encouraged and reinforced the process of reflecting on and evaluating the possibility of additions and reinforcements to practice, allowing sites time to sit and plan around what currently works in their site and where feasible adjustments or improvements could be made.

Staff perceived improvements in student outcomes from the resilience intervention. Encouragement and support for Indigenous students to celebrate and develop their cultural leadership skills revealed benefits not only for individuals, but for their peers as well. The impact of finding a stronger identity within the school also saw positive effects on school grades, student retention and relationships with non-Indigenous peers.

The resilience intervention proved to be affordable (depending on the activities schools engaged with or implemented themselves), yet even at the higher end could be resourced reasonably easily. While resourcing of the intervention components such as the webinars, planning sessions and the schools and communities' meetings were resourced by the project thus far, this economic evaluation provides a useful guide for future planning and sustained practice. It is difficult to compare this with other interventions, however, as few to none report on economic components.

Developing resilience is a dynamic process that takes time. Therefore, it should be emphasised that these findings represent what is likely to be a starting point for schools aiming to build support for and strengthen the resilience of these students. The more we understand and identify strategies to support adolescent resilience across diverse contexts, and the more we understand what schools need to implement and sustain such supports, the more likely schools will achieve their goal of helping these adolescents develop into strong and healthy adults. While the final outcomes and impacts of the project will be assessed upon completion of the 5-year project, this process evaluation has demonstrated the feasibility, acceptability, and affordability of culturally based integrated resilience interventions within boarding school settings.

Study Limitations
Studies have shown that significantly changing resilience levels is a slow process taking multiple years (Manning et al., 2010). This time factor was known and planned for in the initial development of this project. As such, evaluating the outcomes of the intervention over the full life of the project, particularly in measuring student resilience and risk factors, is a vital next step to this research. Once data collection and analysis for the five-year study are complete, integrating quantitative measures of student resilience and risk, and educational outcomes will also provide a more comprehensive understanding of the impact of the resilience intervention. Additionally, as social and emotional skills develop across many contexts, consideration of how resilience occurs across micro-contexts within schools, boarding houses, and students' home communities would also add valuable information to improving understanding of such a complex process. Further limitations exist in that interviews were not able to be conducted with all staff who had been part of the resilience interventions, due to some staff turnover and availability for interviews. Student perspectives on impact on their school environment and relationships would also further strengthen the ability to evaluate this intervention.

Implications for Policy and Practice
Initial training is an important strategy associated with high levels of program implementation, but studies demonstrate that ongoing support beyond an initial training process (e.g., coaching, follow-up training, on-the-job collegial support) enhances both the quality of teacher-student relationships, school culture and student performance. School-wide factors also influence the implementation of evidence-based programs. When school leadership and colleagues support

high-quality implementation of SEL strategies, the impact of evidence-based programs is strengthened (Durlak et al., 2011), a finding supported by this research. Administrators and policymakers can support the effective implementation of resilience programs by setting high expectations, allocating resources for programming (Sarra, Spillman, Jackson, Davis, & Bray, 2018). Further, as our findings suggest, supporting initiatives aimed at building cultural capacity and sharing context-specific strategies through collective learning and relationship building with other schools and community members is effective. Sites that continue the support for resilience strategies beyond single planning meetings and beyond single-site initiatives, are likely to be more successful in their implementation and impact on resilience.

Conclusion

This evaluation has found several key enablers and inhibitors to enacting integrated change efforts across boarding school settings to support the resilience of remote Indigenous Australian students. It indicated that attempts to build and strengthen resilience strategies and interventions in these sites were effective in shifting staff attitudes and enhancing supportive practices, and that often these practices are at no or minimal cost. However, like add-on programmes, the evaluation also found that finding the time to build capacity and plan activities remained problematic and that leadership support was vital in these efforts. The cost estimate provides policy relevant information by identifying resources required to transfer the intervention to other remote locations. It also can be used to support future comparative cost and outcome analyses and add to the evidence base around cost-effectiveness of resilience programs.

What is now important is that boarding school sites continue to make time to plan and implement resilience strategies for their students; and that boarding school sites, remote communities and TSS continue to build connections and relationships and communities of practice through a face-to-face model such as an annual meeting or conference. To support such activities, leadership and funding bodies need to provide sufficient resourcing to support key resilience building activities and prioritise these as core components of practice if they have remote Indigenous students in their cohort. Finally, further research is needed to investigate the longer-term impacts and systematic influences on resilience interventions to strengthen the understanding of findings reported here.

Appendices
Appendix A: Interview guide for staff

1. What is your role?
2. Do you identify as Aboriginal or Torres Strait Islander?
3. Did you participate in any of the following last year?
    a. Accessing workshops
    b. Online knowledge sharing platform
    c. School/ Community meeting
4. What was the focus of your Step-up plan?
5. Was the Step-up plan implemented by the whole school or only those who attended the meetings?
6. Have the Step-up plans changed anything at your school? Has there been any benefit?
    a. Has the step-up plan made *additions* to your practice, or have they *replaced* some components of practice?
    b. How many people were involved in making or implementing those changes? (and who were they [level, salary estimate])
    c. How much time did it take to make those changes?
    d. Were there any barriers to implementing changes to practice? What were they?

7. Several domains were identified as important by schools/ families/ students - do you think any of these have changed since the Step-up plan has been introduced?
    a. Student voice/ leadership
    b. Family/ community relationships with schools
    c. Social and emotional development
    d. Staff capacity and development
    e. Academic skills
8. What do you think the biggest issues faced by TSS students at your school are?
    a. Do you think any particular age group / gender is a priority?
    b. Do you think your Step-up plan is targeting these issues?
9. Did the results of last year's surveys influence your practice at all?
10. Overall, do you think your TSS students are prepared for boarding?
    a. How could they be better prepared?
    b. How can boarding schools better support transitions?
11. Is there anything that you think should be added to your plan?

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