Australian Rural & Remote
Mental Health Symposium

Book of Proceedings

Adelaide Convention Centre, Adelaide SA

28 – 30 October 2019

Contents

ISBN: 978-1-922232-76-2

Publisher Details
Publisher: Australian & New Zealand Mental Health Association Inc.
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Promoting Positive Development:

Coaches as Trainers in Sport-Based Resilience Program

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[2]**Citation:** Varela, S. M., DeCano, P., Hanrahan, S. J., Cook, C., Barrett, P. (2019) 'Promoting Positive Development': Coaches as Trainers in Sport-Based Resilience Program' *Australian Rural & Remote Mental Health Symposium* Adelaide (SA), 28 – 30 October.

Paper Presented at the

Australian Rural & Remote Mental Health Symposium

Adelaide (SA), 28 – 30 October 2019

Promoting Positive Development:

Coaches as Trainers in Sport-Based Resilience Program

ABSTRACT: *Although the train-the-trainer model has been used extensively for the delivery of psychological skills programs, there is little research that has investigated its effectiveness for the delivery of these types of programs. This presentation will focus on two projects that investigated the efficacy of a train-the-trainer approach for delivering a youth sports-based resilience program. The first project compared an expert-led resilience program delivery with a coach-led resilience program delivery in a sample of state representative youth footballers. It was expected that the coach-led delivery would demonstrate more significant outcomes. Results only partially supported this hypothesis, with the coach-led program showing significant increases on the individual and contextual subscale scores of the Child and Youth Resilience Measure-28, but not on the full-scale score. Interestingly, when the program was expert-led there were significant increases on the care-giver subscale and on the full-scale score, but not on the individual or contextual subscales. Consistent with previous research, these differences may be attributed to trainer confidence (in delivering a resilience curriculum) and availability of coaches (to caregivers). The second project investigated the influence that coach self-reported resilience and self-reported confidence (in delivering a resilience curriculum) had on program outcomes for youth from a community rowing program. As expected, coach self-reported resilience levels had a positive relationship with coach self-reported confidence in teaching resilience skills. Unexpectedly, youth self-efficacy ($p = .00$, $d = .37$) and satisfaction with life ($p = .01$, $d = .31$) scores were significantly higher at post-intervention than they were at pre-intervention, independent of coach resilience and confidence. The outcomes of these projects have implications for delivery of psychological programs, particularly for service providers and clinicians in rural and remote regions, where access to expert-led programs is often difficult.*

Keywords: train-the-trainer; resilience; sports-based programs; youth; coaches

Introduction

Despite a train-the-trainer (TTT) model being used widely for the delivery of group programs in the health and education fields, there is little research that has investigated its efficacy as a general approach or clarified the conditions under which it is effective or ineffective (Orfaly et al., 2005). Some of the main criticisms for using a TTT approach are that level of knowledge of the trainers is basic when compared to an expert, the limited transfer of knowledge to participants, and the lack of investment in processes and procedures that provide support and enable the monitoring of program adherence (e.g., Hahn, et al., 2002).

Arguably these disadvantages are outweighed by the key advantages of utilising a TTT model: it is cost efficient once the program is established; it can be delivered by non-experts in contexts where an expert is not readily available (such as rural and remote locations); and it enables the building of knowledge and identity resources in the target community (refer to Figure 1 for details). The knowledge and identity resources can then be used for the benefit of the community as a whole through sharing or transference to individuals within the community (Falk & Kilpatrick, 2000).

Figure 1: Building knowledge and individual resources within a community setting. Adapted from "Model of Building and Using Social Capital" by Falk & Kilpatrick (2000), p. 101.

In the context of sports programs, the TTT model would enable coaches to develop the knowledge and skills to implement a youth resilience program in their sporting team, also creating an investment in identity resources through the process. This article presents two research projects that investigated the efficacy of coaches as trainers, and the conditions under which a TTT model may be successful when applied within a sport context and discussed the implications of this research for the rural and remote context.

Project 1: Comparison of an Expert-Led and Coach-Led Resilience Program

The first project investigated the feasibility of teaching a resilience program within a sporting context using an expert-led model and a TTT model across two time periods. The differences in outcomes will be discussed in the context of the conditions under which a TTT may be effective or ineffective.

Methods

Participants

Expert-led program. Participants were 28 male youth from an U16 state representative AFL team aged 15 years (*n* = 13) and 16 years (*n* = 15). Participants identified as White or European (*n* = 26); Aboriginal (*n* = 1); and mixed race (*n* = 1; White or European and Asian).

Coach-led program. Participants were 30 male youth from an U16 state representative AFL team aged 15 years (*n* = 11) and 16 years (*n* = 19). Participants identified as White or European (n = 23), Aboriginal/Torres Strait Islander (n = 3), African (n = 2), Asian (n = 1), and Latin American (n = 1). Coaches (N = 11) were aged between 24 and 55 years of age. The majority of the coaches were male (*n* = 10) and had more than five years' experience coaching junior AFL.

Design

A mixed methods quasi-experimental design was applied, with a pre-post comparison. The expert and TTT program comparisons were conducted across two separate time-points using purposive sampling to take advantage of an existing naturally formed group (i.e., members of a state

representative football team; Creswell, 2007). Within subject analyses were conducted using a two-tailed dependant samples t-test at a .05 criterion of statistical significance, with resilience the targeted dependant variable. Qualitative data were analysed using a nomothetic approach.

Measures

Child and youth resilience measure-28 (CYRM-28). The CYRM-28 was administered at pre and post intervention. The CYRM-28 is a 28-item resilience scale that measures resilience as a multidimensional construct (Ungar & Liebenberg, 2005, 2011). Participants are asked to what extent the statements describe them, using a 5-point Likert scale (from "not at all" to "a lot"). The CYRM-28 consists of three subscales: individual, relationship with caregiver, and context. In the current sample, the CYRM-28 had good internal consistency, with Cronbach's alpha coefficients ranging from .83 to.85 for the expert-led program and .88 to .92 for the coach-led program.

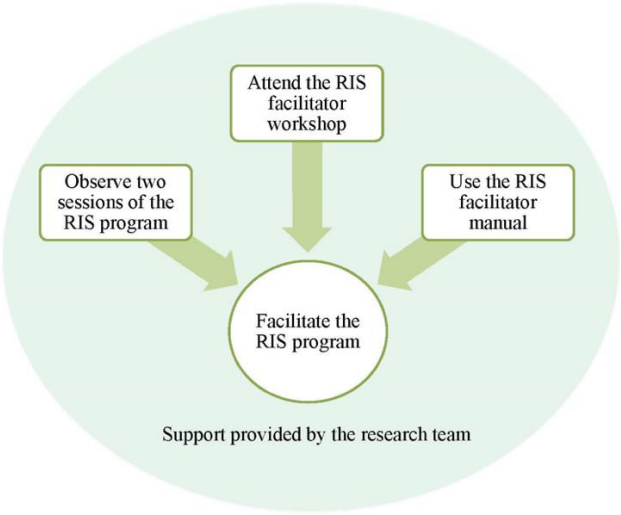
Program experience measure (PEM). The PEM was administered after the intervention to measure program acceptability (Barrett & Pahl, 2006). It also examined participants' perceptions of the usefulness of skills taught in the program. In the current sample, the PEM demonstrated good internal consistency, with Cronbach's alpha coefficients ranging from .85 to .89 for the expert-led program and .94 for the coach-led program. Open-ended questions were also included: What did you like most about the program?; What did you like least about the program?; and Do you have any suggestions for improving the program?

Intervention protocol

Expert-led program. The Resilience in Sport (RIS) program was adapted from the FRIENDS for Life program developed by Barrett (2004, 2005). The RIS program consisted of 10 x 30-minute sessions. Each session involved teaching one key skill area with the expectation this skill would be the focus of training for that week. The key skill areas were: group skills, physiological awareness and health, self-awareness and emotion regulation, mindfulness and relaxation, values and goals, attention skills, imagery skills, role models and community, conflict resolution, and preparing for the unexpected.

Coach-led program. A TTT model was applied, with the U16 state representative coaching team administering the RIS program using the developed RIS facilitator manual after having attended a facilitator workshop. An overview of the TTT process for the RIS program is provided in Figure 2.

Figure 2: An overview of the TTT process developed by the research team for the RIS program



Based on feedback from the expert-led program, the RIS program was also extended from 10 x 30-minute sessions to 10 x 45-minute sessions to allow more time for the coaches to deliver the program. A refresher session was also delivered during the national competition to help reinforce and review key skills at a critical time in the sports season. The targeted skills for each session remained unchanged.

Program integrity. In the expert-led program the RIS program trainers were two postgraduate sport psychology students who completed a half day workshop focused on delivering the RIS program content; whereas, in the coach-led program the RIS program was delivered by members of the coaching team. After each session trainers were required to complete a session checklist indicating compliance with session content and to ensure the integrity of the program.

Procedure

Ethical clearance was obtained from The University of Queensland Research Ethics Committee. Informed consent was obtained from participant athletes and caregivers. Participation in the study was voluntary. All participants and their parents/caregivers agreed to be part of the study. Coaching team members who participated in the coach-led program also provided informed consent. The RIS program was delivered before each training session to enable modelling of skills by the coaching team during the training session. All team members participated in each session.

Results

Data screening and attrition

Data were screened for completeness, the presence of outliers, and violations of the assumptions of a dependent *t*-test. All assumptions were reasonably met (Boneau, 2006). A *t*-test is more suited to smaller samples than other tests as long as the assumptions are met (de Winter, 2013). For the expert-led program a sample loss of four occurred due to injuries or the player not being selected for the final team. For the coach-led program a sample loss of seven occurred due to team positions being cut.

Resilience

Results for the two-tailed paired samples *t*-test of the CYRM-28 for the coach-led and expert-led program deliveries are summarised in Table 1. A significant increase was identified post-intervention for the total score and the caregiver-relationship sub-scale score for the expert-led program, and for the individual and contextual sub-scales for the coach-led program.

Table 1: Resilience: Means, Standard Deviations, Paired Samples t-Tests, and Effect Sizes

Scale	Pre-test	Post-test	*t*	*p*	*Cohen's d*
		Expert-led Program			
Total	110.90 (10.19)	115.40 (10.48)	2.75	.01*	.60
Individual	46.04 (4.52)	46.78 (3.42)	-1.13	.27	.62
Caregiver-relationship	27.67 (3.85)	32.85 (4.15)	6.58	.00**	1.43
Context	35.75 (4.86)	36.33 (4.72)	-.72	.48	.16
		Coach-led Program			
Total	109.89 (14.53)	106.47 (9.34)	.721	.48	.21
Individual	39.89 (7.06)	46.37 (3.39)	-3.17	.01**	-1.01
Caregiver-relationship	28.47 (4.70)	30.00 (3.76)	1.25	.28	.34
Context	31.63 (3.77)	40.00 (4.70)	-4.93	.00**	-1.71

Note. Standard deviations appear in parentheses below the means. Cohen's *d* recommended effect size interpretation = .2 (small), .5 (moderate) and .8 (large). ** = $p \leq .05$, ** = $p \leq .001$*.

Program experience

For the expert-led program, the program acceptability means ranged from 4.22 to 4.95 on a 6-point scale, and the attitude towards program means ranged from 3.96 to 4.13 on a 7-point scale. For the coach-led program, the program acceptability means ranged from 4.52 to 5 on a 6-point scale, and the attitude towards program means ranged from 4 to 4.29 on a 7-point scale.

A nomothetic approach was applied (using triangulation between two raters) because it was appropriate for a group level analysis in a mixed methods quasi-experimental design (Smith & Eatough, 2008). For the expert-led program, participants reported they enjoyed the skills and discussion but found the program sessions too short and didn't allow enough time for sharing. A summary of the themes for the expert-led program is shown in Table 2.

Table 2: Athletes Reported RIS Program Experiences in Expert-Led Program

Topic area	Theme	Feedback	Number endorsed
Liked about the RIS program	Highlights of program	Enjoyed learning new things	19
		Helpful information	19
		The food was great	6
		Relaxing [with peers]	5
		Fun activities	7
		The thinking involved	4
	Skills I enjoyed the most	Physiological awareness	19
		Feelings/Self-awareness/Awareness of mind (defusion)	19
		Imagery skills	12
		Relaxation skills	14
		Mindfulness/Breathing skills	10
		Discussing Role models	2
	Thoughts about peer learning model	Loved sharing with team mates	16
		Enjoyed team building / bonding	16
		Liked group activities	10
		Liked working together	7
		Loved the trust that was developed	6
	Liked about the program	Practical exercises were helpful for sport and school	15
		Enjoyed process over outcome focus	3
		Easily relatable and very helpful	2
Disliked/Needs improvement	Program content and design	Would have liked more time for activities	18
		Would have liked more small group activities and longer sessions	15
		Liked everything about the program	12
		Would have liked more examples	5
		Would have liked shorter sessions	4
		Less facilitator talking	3

For the coach-led program, participants reported that they enjoyed the skills practice and group sharing, with only one person reporting they struggled to remember the skills outside of training (refer to Table 3).

Table 3: Athletes Reported RIS Program Experiences in Coach-Led Program

Topic area	Theme	Feedback	Number endorsed
Liked about the RIS program	Enjoyment of program	Really enjoyed it/good fun	12
		Helped develop a strong mindset	6
		Well-structured/practical exercises were helpful	3
		Liked that the coaches were teaching us	1
	Skills used the most in sport and in life	Mindfulness/relaxation	15
		Attention training/ Noticing (observing self)	9
		Self-awareness	7
		Problem-solving and goal setting	7
		Imagery	5
		Role models	5
		Preparing for the worst but expecting the best	2
	Loved group learning and coach experiences	Coaches sharing their experiences and skills	3
		Team building/group activities/peer sharing	3
Disliked/Needs improvement	Skill development issues	Felt I had most of these skills	1
		Difficult to concentrate	1
		Hard to remember skills	1

Feedback from the coaches in the coach-led program suggested the facilitator resources were helpful but there was a need for more detail in some areas to help support the teaching of the skill, and a need for a longer training workshop for coaches to feel competent in teaching the skills. Common themes identified in coach feedback were appreciation for learning of new strategies and

knowledge, anticipation of expected benefits, clear and concise implementation strategies, anxiety about delivering the content and the need for more sports-based example for implementation.

Discussion

Overall, the RIS program was found to be acceptable to young people in both studies, with the skills being taught viewed favourably. In the expert-led program, results from the CYRM-28 indicated significant increases post-intervention for overall reported resilience, and for the relationship with caregivers subscale, with medium to large effect sizes suggesting that these results demonstrate practical significance (Cohen, 2013). The relationship with caregivers subscale measured individuals' perceptions of the psychological and physical care they receive from their caregiver; whereas the total score also included individuals' perceptions of their personal skills, peer support, social skills, and contextual factors such as spiritual, educational, and cultural. Feedback from participants suggested the short length of the sessions (30 minutes) was insufficient to teach the skills for each session. Another factor that may have influenced results was that a refresher session was not provided in the expert-led program due to time constraints and access to athletes. The skills not being reinforced or reviewed during a critical time in the sports season (competition) may have affected program skills retention and application.

In the coach-led program significant increases on the CYRM-28 were only found on the context (spiritual, education, and cultural; $p = .01$, $d = -1.01$) and the individual subscales (personal skills, peer support, and social skills; $p = .00$, $d = -1.71$). The significant increase on the individual subscale may be attributed to the changes made to the RIS program after the feedback from the expert-led program, such as increased session length and more discussions and activities, increasing athletes' opportunities to benefit from peer learning. However, it could also be argued that a TTT model of delivery provided more opportunities for incidental learning and positive role modelling of the targeted resilience skills during training and competitions, demonstrating the positive effect coaching climate and coaching attitudes can have on resilience and positive youth development (e.g., Holt et al., 2017).

Another explanation for the significant increase on the individual subscale of the CYRMS-28 may have been the addition of a refresher session that was administered during the national competition. This session gave athletes and the coaching team an opportunity to reflect on the skills learnt and to reinforce those skills within a competitive context, which has been found to be beneficial for skill retention and transference (e.g., Holt et al.; 2017). Interestingly, the significant increases reported for the CYRM-28 total score in the expert-led program were not found in coach-led program, despite the coach-led program having higher acceptability and attitude scores than the expert-led program.

It is possible that that knowledge transference (teaching the skills to the participants) was affected by the expertise of the trainer (Hinds et al., 2001). Certainly, the feedback from the coaches suggested that the duration of the RIS facilitator training workshop was too short, and that it didn't adequately prepare them for running the program with young athletes. If we are to better understand if a TTT model would be appropriate for coach-led resilience programs in a rural and remote context trialling a TTT in a community sport setting would be important. Future research should also focus on understanding the coach's level of knowledge and confidence in teaching a resilience curriculum, their reported resilience levels, and how this might influence outcomes for young people completing the RIS program through a TTT model.

Project 2: The Effectiveness of the TTT model in Coach-Led Group Programs

In the first project, support was found for the claim there needs to be investment in resources and knowledge building for TTT programs to result in knowledge transference and confidence in teaching skills (e.g., McLaren et al., 2015). Fletcher and Scott (2010) suggested psychological stress could play a moderating role on resilience and outcomes in coach-led TTT programs, where role burnout could occur. To test these claims, the second study aimed to answer several questions. Does the revised TTT workshop positively influence coaches' attitudes (towards teaching a resilience curriculum), knowledge acquisition and reported resilience levels? Does the reported resilience levels of coaches affect outcomes for youth completing the RIS program, or is coaching level a better indicator?; and does stress mediate the relationship between resilience, measured indirectly through self-efficacy and quality of life, and outcomes? Measuring resilience indirectly through self-efficacy and quality of life is supported from earlier research (e.g., Abolghasemi & Varaniyab, 2010; Proctor et al., 2009).

Method

Participants

Coaches. Male (n = 5) and Female Coaches (n = 6) from a community rowing club in Seattle participated in the TTT training program. Coaches ages ranged from 23 years to 38 years (M = 27.86). In terms of experience coaching or working with young people, 57% of coaches reported they had four or more years' experience (n = 8). Only 28% of coaches (n = 4) had previous experience with a resilience curriculum.

Athletes. 40 male rowers and 46 female rowers, aged between 13 to 18 years (M = 15.88), participated in the RIS program through a Seattle (USA) community-rowing club. Of the 46 female participants, 37 were participating in the varsity girls' teams, and 9 were participating in the novice girls' team. Of the 40 male participants, 33 were on the varsity boys' team, and 7 were on a novice boys' team. Each of these four rowing levels (i.e., varsity boys, varsity girls, novice boys, and novice girls) worked with a coaching team that consisted of a head coach and four assistant coaches. Ethnicities reported included African American (n = 1), Asian (n = 6), Israeli (n = 1), Lebanese-American (n = 1), Mixed/Other (n = 5), Native American (n = 1), Romani (n = 1), Latino/White (n = 2), and American/White (n = 68).

Measures

Coaches. Resilience was measured using the revised Resilience Scale (RS; Wagnild & Young, 1993). In the current sample, the scale had good internal consistency, with Cronbach's alpha coefficients ranging from .81 to .93. The RS contains two factors: personal competence (α = .93; 17 items; e.g., "I am determined") and acceptance of self and life (α = .80; 8 items; e.g., "I do not dwell on things"). Respondents indicate the degree to which they endorse each statement on a 7-point Likert scale, from "strongly disagree" (1) to "strongly agree" (7). A total resilience score is calculated by summing all of the responses. The total score is then organised into the following resilience levels: low (score = 25-115); moderate-low (score = 116-130); moderate (score = 131-144); moderate-high (score = 145-160); and high (score = 161-175). The RS was reported to have good construct validity and content validity by an independent review (Windle et al., 2011).

Knowledge was measured using a Knowledge Questionnaire (KQ) developed for this study. The results are presented across the three subscales: general knowledge (knowledge of resilience

concepts and skills), participants' attitudes to teaching resilience skills, and participants' confidence in teaching resilience skills. In the current sample, the KQ had good internal consistency for the three subscales, with Cronbach's alpha coefficients ranging from .81 to .86. In the current sample the PEM had excellent internal consistency, with Cronbach's alpha coefficients ranging between .94 and .98.

Athletes. Stress was measured using the 10-item Perceived Stress Scale (PSS-10; Cohen & Williamson, 1988). Participants were asked to report on perceived stress during the past month. Items were scored on a 5-point Likert scale from 0 (never) to 4 (very often). In the current sample, the scale had good internal consistency that ranged from .71 to .83.

Self-efficacy was measured using the Athlete Self-Efficacy (ASE) scale. The ASE scale was adapted from the General Self-Efficacy (GSE) scale (Schwarzer & Jerusalem, 1995). Participants were asked about their ability to stay calm in the face of challenges, stay focused to accomplish goals, and deal with sports related stress. The ASE scale is a 10-item scale that uses a 4-point Likert scale, from 1 (not at all true) to 4 (very true). In the current sample, the scale had good internal consistency with a Cronbach's alpha coefficient of .70.

Life satisfaction was measured using the Satisfaction with Life scale (SWL) scale. The SWL scale is a 5-item scale that measures the judgement component of subjective wellbeing (Pavot & Diener, 2007). Participants are asked to respond on a 7-point Likert scale, from 1 (strongly disagree) to 7 (strongly agree). In the current sample, the scale had good internal consistency with Cronbach's alpha coefficients ranging between .79 to .83.

In the current sample the PEM had a good internal consistency, with Cronbach's alpha coefficients ranging between .75 and .93.

Protocol

TTT Workshop. The original TTT workshop was extended from a 3-hour format to a 12-hour format. The increase in time was supported by feedback from the first project and from the literature (Falk & Kilpatrick, 2000). The revised RIS facilitator workshop included four 3-hour sessions that covered two key areas: foundation knowledge (youth development, resilience, and teaching skills in the sporting context) and program content (a walkthrough of the RIS program, including practical demonstrations of key activities).

RIS Program. Rowing coaches delivered the RIS program before each training session, with a refresher session offered prior to a major carnival. Participants received a workbook that summarised the skills being taught. Coaches completed a session checklist, indicating compliance with the manual content of each session, to ensure the integrity of the program.

Procedure

TTT Workshop. This study was conducted in partnership with The University of Washington (UW). Ethical clearance was obtained from the UQ Research Ethics Committee. Participants were informed their participation in this research was voluntary. Participants completed an additional 90-minute refresher session immediately prior to administering the RIS program for the first time. All participants were provided with a RIS facilitator manual, a RIS participant workbook, and a RIS facilitator workshop handout. The workshop was designed to help participants become familiar with the content of the facilitator manual and the RIS participant workbook. Post training, facilitators were provided with the contact details of a member of the research team for ongoing support.

RIS Program. Ethical clearance for this phase of the research was obtained from the Institutional Review Board (IRB) at UW. Consent forms were collected and co-signed by parents/caregivers and participants. Prior to seeking informed consent, the research team presented a parent and participant information session to introduce the concept of resilience and outline the rationale of the RIS program. Participants were made aware that they could choose not to participate in the research while still being able to participate in the rowing program. The RIS program was delivered during the season, on a weekly basis (10 x 45-minute sessions). All skills were modelled, reviewed, and embedded in coaches' training and competition routines. This approach ensured that participants would receive the RIS skills as a part of their sport experience, and that influential adults (i.e., coaches) would model the skills during training. A recharge session was also administered prior to a major sports competition (4-6 weeks following the completion of the RIS program). All athletes participated in each session.

Results

Data Screening

Data were screened for completeness, the presence of outliers, and violations of the assumptions of a dependent t-test. All assumptions were reasonably met (Boneau, 2006). A missing values analysis was conducted using Little's MCAR test indicated the data were missing completely at random.

Coaches. At pretesting resilience levels ranged from moderate-low/moderate (n = 8) to moderate-high/high (n = 3). At post-testing resilience levels ranged from moderate-low/moderate (n = 4) to moderate-high/high (n = 7). Resilience scores remained stable between pre- and post-testing with no significant changes in reported scores. As expected, significant increases were found in general knowledge and confidence in teaching the RIS program skills after completing the TTT workshop.

Interestingly there were no significant increases in coach attitude towards teaching a resilience curriculum after completing the TTT workshop, possibly because of the high scores at pre-testing (M=16.36 out of a possible 18). When coaches were grouped by reported resilience levels, significant changes in confidence were only found for coaches who reported moderate-high to high levels of resilience at post-testing. All coaches had significant increases in general knowledge.

Program acceptability means on the PEM ranged from 5 to 5.55 on a 6-point scale, and the attitude towards program means ranged from 4.82 to 5 on a 7-point scale. A nomothetic approach was applied to the qualitative data because it was appropriate for a group level analysis in a mixed methods quasi-experimental design (Smith & Eatough, 2008). Coaches reported they enjoyed learning about the RIS program skills and increasing their knowledge of teaching a resilience curriculum and youth development. The main dislikes reported were terminology usage and the delay between the TTT workshop and delivering the RIS program for the first time. All coaches were able to provide examples of how they would apply their new knowledge in their work and coaching activities.

Athletes. The following analyses are based on the full sample (N = 86) at post-testing. Only significant results are reported. No evidence was found to support the hypothesis that reported resilience levels of coaches affect outcomes for youth. For this reason, results are reported under coaching groups (i.e., rowing levels) rather than coaches' resilience levels. The varsity-level coaching group consisted of five coaches, four males and one female. Two coaches were aged between 27 and 30 years old, and three were aged older than 30 years. All coaches had five or more years' experience coaching young people, and two had reported previous experience with a resilience

curriculum. Coaches in this group had low-moderate/moderate resilience (n = 2) and moderate-high/high resilience (n = 3). The novice-level coaching group consisted of five coaches, one male and four females. Four were aged between 23 and 26 years old, and one was aged older than 30 years. Three coaches had less than three years' experience with young people, and none had reported previous experience with a resilience curriculum. Coaches in this group had low-moderate/moderate resilience (n = 2) and moderate-high/high resilience (n = 3). One coach had a management position.

Correlations

Pearson product moment correlations were conducted to assess the strength and direction of the relationship between the scales pre- and post-intervention. As expected, reported scores on the Perceived Stress Scale (PSE) were negatively correlated with reported scores on the Satisfaction With Life (SWL) scale and the Athlete Self-Efficacy (ASE) scale at both time points. Reported scores on the SWL scale and the ASE scale were positively correlated at both time points, with only some of the correlations significant (refer to Table 4).

Table 4: Correlations Between Key Outcome Variables: Pre- and Post-Intervention

Measure	1	2	3	4	5	6
1. Pre-ASE	_	.27*	-.22*	.38**	.11	-.07
2. Pre-SWL		_	-.49**	.28*	.71**	-.32**
3. Pre-PSS			_	.19	-.35**	.76**
4. Post-ASE				_	.17	-.25*
5. Post-SWL					_	-.30*
6. Post-PSS						_
M	31.71	25.00	18.71	33.14	26.16	17.68
SD	3.28	5.65	6.88	3.34	5.67	5.02

*Note: * = p ≤ .05; ** = p ≤ .01.*

T-test analyses. The following analyses were conducted using two-tailed *t*-tests at a .05 criterion of statistical significance. Effect sizes were calculated using Cohen's *d* statistic, while correcting for dependence (refer to equation 8 in Morris & DeShon, 2002).

Athlete self-efficacy

Increases in athlete self-efficacy were significant at the sample level and for both rowing levels, with only low to moderate effect sizes (refer to Table 5).

Table 5: Athletes' ASE Scores: Means, Standard Deviations, Paired Samples t-Tests, and Effect Sizes

	Pre-test	Post-test	*t*	*p*	*Cohen's d*
Sample level					
Athlete self-efficacy	31.75 (3.43)	33.14 (3.34)	3.13	.00**	.37
Rowing level split					
Varsity level: athlete self-efficacy	31.84 (3.46)	32.98 (3.31)	2.33	.02*	.30
Novice level: athlete self-efficacy	31.20 (3.43)	34.10 (3.51)	3.18	.01**	.04

Note: Standard deviations appear in parentheses below the means. Cohen's *d* recommended effect size interpretation = .2 (small), .5 (moderate) and .8 (large).

** = p ≤ .05; ** = p ≤ .01.*

Satisfaction with life

Increases in satisfaction with life scores were significant at the sample level and at the varsity rowing level with only low to moderate levels of significance (refer to Table 6).

Table 6: Athletes' SWL Scores: Means, Standard Deviations, Paired Samples t-Tests, and Effect Sizes

	Pre-test	Post-test	*t*	*p*	*Cohen's d*
Sample level					
Satisfaction with life score	24.84 (5.67)	26.16 (5.67)	2.53	.01**	.31
Rowing level split					
Varsity level: satisfaction with life score	25.13 (5.02)	26.52 (5.31)	2.43	.02*	.32
Novice level: satisfaction with life score	22.89 (9.09)	23.78 (7.66)	.69	.51	.25

Note: Standard deviations appear in parentheses below the means. Cohen's *d* recommended effect size interpretation = .2 (small), .5 (moderate) and .8 (large).

** = p ≤ .05; ** = p ≤ .01.*

Perceived stress

Decreases in perceived stress scores were significant at the sample level and at the varsity rowing level with only moderate-high levels of significance (refer to Table 7).

Table 7: Athletes' PSS-10 Scores: Means, Standard Deviations, Paired Samples t-Tests, and Effect Sizes

	Pre-test	Post-test	*t*	*p*	*Cohen's d*
Sample level					
Perceived stress score	19.07 (3.43)	17.68 (3.34)	-2.48	.02*	-.59
Rowing level split					
Varsity level: perceived stress score	19.02 (7.13)	17.70 (5.13)	2.32	.02*	.33
Novice level: perceived stress score	19.40 (8.49)	17.50 (4.53)	-.91	.39	.34

Note: Standard deviations appear in parentheses below the means. Cohen's *d* recommended effect size interpretation = .2 (small), .5 (moderate) and .8 (large).

** = p ≤ .05.*

Program experience

Mean program acceptability scores ranged from 3.61 to 4.23 on a 6-point Likert scale. Attitudes towards the program ranged from 3.96 to 4.13 on a 7-point Likert scale.

Discussion

There was partial support for the hypothesis that the RIS facilitator workshop would significantly increase coaches' general knowledge, positive attitudes towards teaching resilience skills, and confidence in teaching resilience skills. Significant increases in general knowledge and confidence in teaching resilience skills were reported with large to very large effect sizes; however, there were no significant increases in attitude towards teaching resilience skills, which remained stable across both time points. Although it could be argued that attitude scores didn't change significantly post-workshop because the pre-mean scores were at the high end of the scale, high pre-mean scores were also evident for confidence in teaching resilience skills, which did show a significant change post-workshop. It is more likely that there was no change in attitude scores because attitude was not directly related to an increase in knowledge; whereas, confidence scores were.

As expected, there were differences in outcome for coaches with perceived low-moderate/moderate levels of resilience and those with perceived moderate-high/high levels of resilience post-workshop. Both resilience groups had significant increases in knowledge, with very large effect sizes; however, only those who identified as having moderate-high/high levels of resilience reported a significant increase in confidence in teaching resilience skills. The large effect sizes reported for this sample suggested these findings have practical significance. These outcomes are consistent with previous research that suggested resilience can be a buffer for role stress, and positively influence coaches' psychological functioning (e.g., Marchant & O'Conner, 2012; McLaren et al., 2015).

Coaches who reported moderate-high/high levels of resilience were the primary facilitators of the RIS program. It was predicted that self-efficacy and satisfaction with life would significantly increase post-intervention (Pavot & Diener, 2007). A correlational analysis provided support for the hypothesis that perceived stress has an inverse relationship with self-efficacy and satisfaction with life. A significant positive relationship was also found between satisfaction with life and self-efficacy at both time points.

Further, at the sample level significant increases in self-efficacy and satisfaction with life scores were reported post-intervention, and significant decreases in perceived stress scores were reported post-intervention. These results were consistent with previous research and show support for coach-led resilience programs being effective in community settings (e.g., Lee et al., 2012; Tsang et. al., 2012). The implications for rural and remote settings where expert-led programs are not as readily available should be considered in future research.

General Conclusions

Findings from these two projects indicate that coaches can play an important role in teaching resilience skills to young people. This research attempted to identify if a coach-led resilience program can be an effective way to teach resilience skills to young people and understand how a coach-led program can influence outcomes. Outcomes from the first project suggested that coach-led programs may target different areas of resilience to an expert-led program because of differences in confidence and knowledge.

The second project targeted confidence and knowledge through a TTT workshop and asked whether coaches resilience or experience (as a coach) affected outcomes for youth. There was no support for coach-resilience levels influencing outcomes for youth, but there was strong evidence for coaching experience influencing outcomes, perhaps due to the coaches in the more experienced group feeling more confident in modelling the resilience skills during coaching sessions. Overall, there is support for investing in a TTT delivery of a resilience skills program within a sports context, with caution given to investing in the training and support of the coaches.

For the rural and remote context, the outcomes presented in this paper suggests that investment into coach-led resilience programs (including training and support) would be valuable and may make these programs more accessible and affordable for rural and remote communities. It would be important to extend on the current research and compare outcomes for delivering these programs in rural and remote contexts when delivered by parents-as-coaches in local sports clubs and teachers or paid coaches as access to professional-level sports programs is reduced in rural and remote regions.

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Perinatal Mental Health: Supporting Migrant and Refugee Women in Rural Areas

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Paper Presented at the

Australian Rural & Remote Mental Health Symposium

Adelaide (SA), 28-30 October 2019

Perinatal Mental Health: Supporting Migrant and Refugee Women in Rural Areas

ABSTRACT: Migrant and refugee women in rural areas face multiple disadvantages accessing a range of health services compared to their metropolitan counterparts. In addition, for migrant and refugee women, access to mainstream services do not always provide the culturally appropriate care women need (Multicultural Centre for Women's Health, 2017).

The Multicultural Centre for Women's Health (MCWH), in collaboration with rural and regional organisations and community groups, are conducting a research and education initiative to engage directly with migrant and refugee women living in rural areas about their challenges, barriers and support for accessing a range of health services. Access to perinatal mental health services in regional and rural areas is one of the key areas of focus for this research. Perinatal mental conditions are a major public health issue and can have serious health consequences for the mother, baby and other family members (Shafiei et al, 2018). The Victorian Inquiry into Perinatal Services noted the adverse impact that cuts to services and the ad hoc funding to perinatal mental health services are having on women, their babies and their families, particularly in rural areas (Parliament of Victoria, 2018). Available research also shows that migrant women, especially women who do not speak the dominant language of their new country, are at higher risk of experiencing mental health issues in the weeks immediately before and after giving birth (Shafiei et al, 2018).

This paper presents our preliminary findings from engaging with women in their communities. Drawing from the stories and experiences of migrant and refugee women, we outline barriers and challenges to access, highlight support and enablers and make recommendations to improve equitable access to perinatal mental health services in rural areas.

Keywords: culturally and linguistically diverse, women, perinatal mental health, service delivery, access, migrants and refugees

Introduction

The Multicultural Centre for Women's Health (MCWH) is a national women's health organisation established in 1978 that works both nationally and across Victoria to promote the health and wellbeing of migrant and refugee women through advocacy, social action, multilingual education, research and capacity building.

MCWH works across Victoria to provide research, expert advice and professional development to key stakeholders on improving the health and wellbeing of migrant and refugee women. It does this through research, publication, participation in advisory groups and committees, written submissions, training and seminar programs and presentations of our work.

MCWH also works directly with women in the community providing capacity building and multilingual education on women's health and wellbeing, across a wide range of issues and topics, through the use of trained, community-based bilingual health educators.

This paper discusses some of the findings of the CASPA research project conducted by MCWH on the topic of reproductive health in rural and regional areas. The paper focuses in particular on the findings related to perinatal mental health. It reviews existing literature on the increased risk of perinatal mental health conditions for migrant and refugee women, outlines the preliminary findings from the CASPA project on the experiences of migrant and refugee women accessing mental health support during the perinatal period, and makes preliminary recommendations based on existing literature and the initial findings of the project, to improve access to culturally and linguistically appropriate perinatal mental health support for women in rural and regional areas.

The CASPA Project

The CASPA research project examines the challenges and facilitators experienced by migrant and refugee women in accessing specific reproductive health services in regional and rural Victoria. CASPA stands for:

- Contraception;
- Abortion;
- Stillbirth support;
- Perinatal mental health services; and
- Antenatal care.

The CASPA project aims to:

- Foster strategic collaboration and partnership by developing, enhancing and nurturing strategic partnerships that will result in positive outcomes for migrant and refugee women's health and wellbeing;
- Conduct, contribute to and communicate influential research by encouraging, conducting and contributing to high quality research to inform best practice approaches to improving migrant and refugee women's health and wellbeing;
- Create transformative, social, cultural, policy and structural change by bringing lasting benefit to migrant and refugee women's health and wellbeing through strategic evidence-based advocacy; and
- Facilitate women-led advocacy and research by creating opportunities for migrant and refugee women to actively participate in, guide and lead research and advocacy about their own health and wellbeing.

(also refer to Multicultural Centre for Women's Health, 2016b)

The CASPA project is a research and education initiative focusing on the Loddon Mallee region of Victoria. The Loddon Mallee region includes the local government areas of: Buloke, Campaspe, Central Goldfield, Gannawarra, Greater Bendigo, Loddon, Macedon Ranges, Mildura, Mount Alexander and Swan Hill (Department of Health and Human Services, 2014). The region is predominantly rural but also includes the regional centre of Bendigo to rural and remote areas of Mildura and Swan Hill. The output of the project is to produce an evidence-based positon paper

drawing on the stories and experiences of migrant and refugee women that MCWH will use to communicate and influence key policies on the provision of reproductive health services in rural and regional areas. This initiative is being conducted in partnership with Women's Health Loddon Mallee (WHLM) and Loddon Campaspe Multicultural Services (LCMS).

According to the Her Health Matters report, the population of the Loddon Mallee region is estimated at 324,124 with women comprising just over half of the population. Approximately 20 percent of the population were born overseas and the region is diverse in language, culture and religion (Women's Health Loddon Mallee, 2018). The CASPA research highlights the Loddon Mallee region as a case study to examine the challenges, barriers and facilitators to migrant and refugee women's access to contraception, abortion, support for stillbirth, perinatal mental health services and antenatal care.

When it comes to accessing healthcare, those living in rural and regional areas face challenges related to the availability of services, confidentiality and lack of choices that are specific to living in an area with smaller populations and fewer health resources (Women's Health Loddon Mallee, 2018; Rural Services of the Women's Health Association of Victoria, 2012). In the context of women accessing reproductive health services, these challenges include:

- Complexity of accessing timely and impartial information about reproductive health services;
- Access to GPs willing to support or refer women seeking abortion services;
- Weather having an impact on fly-in-fly-out health services;
- Service providers knowing client personally through social or family networks;
- Availability of backfill for health services staff to access professional development; and
- Lack of public transport availability – public transport will sometimes only be available to take women to a 'big town' for appointments but will not be available to bring her home on the same day.

(Rural Services of the Women's Health Association of Victoria, 2012)

As a result, women living in rural and regional areas experience poorer health outcomes than women living in metropolitan areas (Dobson et al, 2011).

There are also a number of groups of women who experience various forms of discrimination based on race, culture, ability, sexual orientation or gender identity and who experience additional barriers when it comes to accessing health services:

- Aboriginal and Torres Strait Islander women (Australian Institute of Health and Welfare, 2018);
- Women from migrant and refugee backgrounds (Hach, 2012);
- Women living with a disability (Women with Disabilities Victoria, 2019); and
- Women who identify as LGBTQI (Leonard et at. 2012).

While the CASPA project focusses on migrant and refugee women's access to reproductive health services – in particular for this paper, support for perinatal mental health issues – it is important to note the women from migrant and refugee backgrounds are a diverse group with different social, cultural and economic circumstances (Chen, 2017). The intersections among these categories, along with power relations and experiences mean that migrant and refugee women face barriers and challenges additional to those specific to living in a regional or rural community (Chen, 2017). These barriers can include gender and race discrimination as well as structural barriers such as a lack of services and information available in their preferred language.

In addition to examining the challenges, barriers and facilitators to migrant and refugee women's access to reproductive health services, the CASPA project also aims to highlight women's stories and experiences to make recommendations and advocate to improve access to health care in regional and rural Victoria. MCWH recognises that community health and multicultural organisations in rural and regional areas provide vital services and links to local communities. Recognising their local expertise and with the hope that research we produce will also benefit existing advocacy and support being conducted locally, we are working towards forming partnerships with more organisations in rural and regional areas as the project progresses.

Perinatal mental health services in rural and regional Victoria

The barriers and challenges to women in Victorian rural and regional areas in accessing perinatal mental health services have been documented by the Parliament of Victoria's (2018) parliamentary inquiry into perinatal services.

Research into the perinatal mental health needs of migrant and refugee women in Victoria found that while there are specific perinatal mental health services and programs in most Victorian metropolitan areas, services are limited in rural and regional areas (Shafiei, 2018). Services and programs combining a focus on perinatal mental health and migrant and refugee communities are even more limited, with only one service in the rural area of Swan Hill available in the Loddon Mallee region (Shafiei, 2018).

From 2008 to 2013, the National Perinatal Depression Initiative (NPDI) aimed at the prevention, early detection and treatment of perinatal mental health conditions operated across Australia (Department of Health, 2013; Parliament of Victoria, 2018). In Victoria, the Perinatal Emotional Health Program (PHEP) was a key component of the Victorian NPDI response. The PHEP included free assessment, screening, referral, outreach or clinic based appointments as well as education for families and healthcare workers about perinatal mental health (Parliament of Victoria, 2018).

The PHEP was particularly successful in regional, rural and remote areas due to the lack of availability and access to psychologists and mental health services for the general population, let alone mothers experiencing perinatal mental health conditions. Even though women in rural and regional communities have risk factors that increase the prevalence of poorer mental health outcomes, including social isolation and higher levels of socioeconomic disadvantage, Commonwealth funding for the NPDI was discontinued in 2013 which led to the reduction of PHEPs and gaps in the provision of specialist perinatal mental health services, particularly in rural and regional communities (Parliament of Victoria, 2018).

Increased risk of perinatal mental health conditions for migrant and refugee women

While there has been limited research conducted into the perinatal mental health needs of migrant and refugee women in rural areas, in recent years, there has been a growing body of research that demonstrates that migrant and refugee women are at an increased risk of developing perinatal mental health conditions (Shafiei et al, 2018; Bandyopadhyay et al 2010; Nithianandan et al, 2016; Small et al, 2003).

The Australian Clinical Practice Guideline for mental health in the perinatal period defines the perinatal period as "the period from conception to the end of the postnatal year" (Austin et al, 2017, p.13). What for many women and their families is a period of great happiness, the perinatal period – pregnancy, childbirth and the first year of parenting – has also come to be associated with a significant increase to the risk of onset or relapse of mental health conditions (Austin et al, 2017). Mental health conditions during the perinatal period range from the more common depressive and anxiety disorders, to less common occurrences of severe mental illness including schizophrenia, postpartum psychosis and bipolar disorder to borderline personality disorder and emotional dysregulation (Austin et al, 2017).

Perinatal mental health conditions have been termed a major public health issue, not just in Australia but globally – with potentially serious consequences for mother, baby and family (Shafiei et al, 2018; Nithianandan et al, 2016; Fellmeth, 2018). In Australia, approximately 22 percent of new mothers experience symptoms of depression and/or anxiety six months after childbirth (Shafiei et al, 2018). Migrant women form a significant proportion of the childbearing population in Australia – out of the approximately 310,000 women giving birth in Australia annually, 33 percent of these women were born overseas (Shafiei et al, 2018).

While the biggest risk factor for the onset of perinatal mental health conditions is a previous history of mental health issues, certain groups of women are also at particular risk, such as those experiencing isolation with limited emotional and social support; women who have undergone stressful life events or losses either prior to or during pregnancy; and women experiencing socioeconomic disadvantage (Austin et al, 2017; Hach, 2012).

Perinatal depression and other perinatal mental health conditions occur across all cultures, however, the Common Threads report found that migrant and refugee women have greater risk of developing perinatal mental health conditions in part due to the stress and challenges associated with the migration and settlement process (Hach, 2012). Other factors that can increase migrant and refugee women's risk of perinatal depression and other mental health conditions include:

- Availability – or lack thereof – of social, family and community support networks;
- Little to no specialist mental health services available for them;
- Limited availability of culturally and linguistically appropriate support and resources from health care professionals; and
- Reluctance to express mental health concerns due to the fear of stigma.

(Hach, 2012; Multicultural Centre for Women's Health, 2019)

For migrant and refugee women living in rural and regional areas, risk factors can be compounded by geographic and social isolation (Multicultural Centre for Women's Health, 2017).

A comparative study of the experiences of Australian-born and migrant women from non-English speaking backgrounds found that migrant mothers with limited English language skills had a higher prevalence of depression during the perinatal period (Bandyopadhyay et al, 2010). The comparative study also found that migrant mothers were more likely to report wanting more practical and emotional support, were more likely to have no 'time-out' from baby care and to report feeling lonely and isolated compared to Australian-born mothers (Bandyopadhyay et al, 2010).

The Mothers in a New Country (MINC) study of Vietnamese, Turkish and Filipino women's experiences found that the issues most commonly identified by women surveyed as contributing to depression were: isolation and homesickness; lack of support and marital issues; family-related issues; and baby-related issues (Small et al, 2013). Similar themes of depression, isolation and a lack of support were also identified in a study of migrant Afghan women's emotional health and wellbeing after childbirth. Further, the study of migrant Afghan women also found that some women were reluctant to discuss their depressive symptoms and concerns with health professionals as they did not expect that health professionals could necessarily provide the support they needed (Shafiei et al, 2015)

Preliminary CASPA research findings on perinatal mental health support for migrant and refugee women

Objectives and goals

The objectives of the research are to:

- Conduct a review of existing literature on women's access to reproductive health services in rural and regional areas, including access to perinatal mental health services.
- Engage directly with women in the community by conducting focus groups in their preferred language to collect information on barriers to access, supports for access and recommendations for improving access to reproductive health services, including perinatal mental health services. These research focus groups will also include a health education component.
- Formulate a position paper drawn from the stories and experiences of migrant and refugee women to advocate for better access to health services in regional and rural areas, including specialist perinatal mental health services.

Throughout the CASPA project migrant and refugee women's voices are placed at the centre and provide the starting point for the transformative social, cultural and policy change needed to improve access to reproductive health services in rural and regional areas.

Method

To recruit research participants and utilise local expertise, the research method uses a cross-sectional, collaborative approach seeking partnerships with rural and regional community health and multicultural services providing services to community groups so that there are established relationships of trust and rapport.

The research uses qualitative methods of gathering information by conducting small focus group sessions based on a language cohort, with approximately ten to twenty women in each group. Each focus group session is facilitated by an MCWH bilingual health educator in the preferred language of the group. Educators use discussion points and key words to prompt discussions and conversations about women's experiences accessing reproductive health services in their local area. In the context of perinatal mental health services, the discussion points centre around three main themes:

- Challenges and barriers to accessing information and support for mental health issues experienced during the perinatal period;
- Support systems for accessing information and support for mental health issues experienced during the perinatal period; and
- Recommendations from women to improve access to support services.

Focus groups will be held over a number of weekly sessions to build rapport and trust within the groups. The aim is to hold a minimum of four focus groups in rural and regional areas. The project will then validate findings by conducting interviews with stakeholders working in women's health in rural and regional areas.

Preliminary Findings

MCWH has conducted a series of research focus groups with migrant and refugee women between the ages of 21 to 60 years old. Some of the women have spent time in refugee camps prior to settlement in Australia, some are newly-arrived and some have been in the region for a number of years. The majority have limited English language skills.

During the focus group discussions, women were asked a range of questions to prompt conversations about perinatal mental health issues. These questions included:

- Are you aware of perinatal mental health issues and/or perinatal/postnatal depression?
- Are you aware of support for perinatal mental health issues, perinatal/postnatal depression and/or baby blues in your local area?
- Have you or do you know anyone who has experienced accessing mental health services? What was your/their experience with it?
- Do you think there needs to be specialist mental health services in your area?
- Can you tell us about any challenges you have experienced trying to access mental health services during pregnancy or after childbirth? (e.g., language, availability, travel)

- What helped or supported you during this time?
- What are your suggestions to improve access to mental health services?

While we are still in the early stages of gathering data, the women surveyed identified a number of barriers:

- Lack of transport options to attend appointments;
- Lack of services available in their preferred language; and
- Little to no prior knowledge that depression, anxiety or other mental health conditions can develop or be exacerbated during the perinatal period.

While none of the women surveyed disclosed needing perinatal mental health services, a number of themes emerged during discussions – themes also found in the MCWH Common Threads report:

- Limited English-language skills can make it very difficult for women to verbalise symptoms of depression and anxiety.
- Reluctance to articulate mental health concerns. Some women interviewed reported not having prior knowledge that mental health conditions can develop or be exacerbated during the perinatal period. Some reported not knowing where to seek medical or professional help.
- The importance of social and community networks for women's mental health was highlighted with a number women reporting receiving emotional and practical support from their partners, family and community members during the perinatal period, rather than from health professionals.

(also refer to Hach, 2012)

Despite the barriers that emerged from the focus group discussions, the women reported receiving a range of supports and facilitators that enabled greater access to a range of health and community services. Transport to and from a range of community initiatives are provided by a local community organisation – this provided practical support to get to and from playgroups and English-language classes. Some women also reported receiving support from other community members for transport and interpreting assistance to attend antenatal care and other medical appointments.

These preliminary findings demonstrate the importance of supports such as:

- Social and community networks.
- The provision of interpreters and bilingual health workers and professionals.
- The availability of multilingual resources, including information on how to reach healthcare facilities.
- The option of home visits by health care professionals.

(also refer to Multicultural Centre for Women's Health, 2016a).

It is noted that these preliminary findings have been gathered from focus group discussions with women in a regional centre, from a cultural group with well-established social and community networks providing valuable emotional and practical support for women and their families during the perinatal period. The sample size and reach of the research to date has been limited by practical and logistical challenges related to accessing and engaging with rural community organisations and groups.

Conducting research into rural populations can present challenges related to geographic accessibility and recruiting appropriate participants (Pierce & Scherra, 2004) and the challenges we have experienced highlight the importance of building relationships with community organisations and groups in rural and regional areas.

Preliminary recommendations for supporting the perinatal mental health needs of migrant and refugee women in rural areas

While care should be taken not to generalise across populations, there are also are a number of 'common threads' to be found in migrant and refugee women's experiences and stories of accessing a range of health services such as reproductive health and mental health services. These 'common threads' cannot be taken in isolation and are the result of migrant women's intersecting experiences of racism, discrimination, gendered roles, geographic location and levels of socioeconomic disadvantage.

To conclude, we make the following preliminary recommendations based on existing research indicating increased risk to perinatal mental health conditions for migrant and refugee women and based on the initial findings of the project. We make these recommendations not only to improve access to culturally and linguistically appropriate perinatal mental health services but also to increase awareness of and decrease the stigma surrounding mental health (also refer to Multicultural Centre for Women's Health, 2019):

Strengthen intersectional policy analysis

Embed a gendered, intersectional framework to examine the impact of policy approaches to migrant and refugee women and families. Analysis and evaluation of perinatal mental health services and delivery options should address the multiple disadvantages and barriers to accessing services experienced by migrant and refugee families (these barriers include racism, discrimination, ethnocentrism in service delivery, and language barriers).

Advocate to funding bodies to increase funding for perinatal mental health services, including specialist services targeted specifically to migrant and refugee women in rural and regional areas

The impact of the loss of Commonwealth funding for the NPDI needs to be mitigated. As noted in the Victorian parliamentary inquiry into perinatal services, the withdrawal of the NPDI along with the subsequent reduction of perinatal mental health programs in rural and regional areas has had particularly negative impacts for women and their families (Parliament of Victoria, 2018).

Facilitate bilingual health education for migrant and refugee communities in rural and regional areas about mental health

The CASPA preliminary findings showed a lack of prior knowledge about perinatal mental health conditions and reluctance to articulate mental health concerns to health professionals. Stigma and lack of awareness about mental health exists across many communities in Australia. Stigma, misunderstanding of and a lack of access to culturally and linguistically appropriate information about mental health and the types of support available can prevent migrant and refugee women from speaking openly about mental health and from seeking assistance from services at an early point, or at all. Research suggests that stigma around mental health can be heightened when it intersects with gender or race inequality (Shafiei et al, 2018; Multicultural Centre for Women's Health, 2019). For migrant and refugee women in rural and regional areas, the experience of social and geographic isolation can further exacerbate mental health risks.

Education about mental health, including perinatal mental health conditions should be delivered to migrant and refugee communities via a mix of media, including in-language group education and community media, with an understanding of the specific cultural and gendered context of mental health issues. Similarly, campaigns or public information about mental health, mental health conditions and mental health services, should be developed in consultation with relevant communities to ensure that both English content and multilingual content are widely accessible, appropriate and that content remains meaningful for all communities.

Develop community-based initiatives to promote the development of social networks within migrant and refugee communities

The CASPA preliminary findings highlighted the importance of social and community networks for women's mental health. Community groups, such as multicultural playgroups that are accessible to migrant and refugee women and responsive to their needs have been shown to reduce the risk of developing mental health conditions (Fellmeth, 2018).

Develop culturally-responsive peer support

In addition to social and community networks, ongoing peer-support that is co-designed and led by migrant and refugee communities should be resourced and promoted.

Develop cross-cultural training for perinatal mental health services staff

Increasing funding for perinatal mental health services, including specialist perinatal services in rural and regional areas needs to meet the support needs of migrant and refugee women. Service delivery must be culturally and linguistically appropriate.

Conduct further participatory action research to increase the evidence-base for migrant and refugee mental health and wellbeing in rural and regional areas

The progress and challenges experienced in the implementation of the CASPA project has highlighted the need for further research into the mental health and wellbeing of migrant and refugee women who may be isolated both geographically and socially. It is important that partnerships and networks be strengthened between community organisations in rural and

regional areas and State-wide and national organisations to share knowledge and resources and to better identify the common threads across regions that can be addressed at a State or national level.

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A Study of Perceived Stress among Indigenous Students at Djarragun College

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Abstract

Stress levels experienced by indigenous students at school continues to be an issue of concern to teachers, parents, school leadership, policy-makers and researchers. Action research was conducted for tby examining the issue from the perspective of the students themselves in the survey they filled out as part of a "Berry Street" lesson. completing a survey on stress which was part of a lesson from a Berry Street lesson The overall findings are that students at Djarragun College do not experience high levels of stress. Results also show that there were no gender-based differences. However, students at higher year levels do experience significant stress due to missing school, falling behind in assignments and not having adults at school they trust. There were other results suggestive only of stress being experienced across genders and year levels due to inability to concentrate in class, noise levels, lack of sleep, lack of involvement of family in their education and external distractions perceived to be more important than schooling and which affect concentration.

Introduction

Early life experience of adverse events and exposure to on-going stressors can negatively affect health and wellbeing and thus negatively impact educational outcomes. Resilience can develop with a degree of exposure to stressful events but frequent or prolonged stressors in childhood can result in dysregulation of the physiological stress response systems. This in turn affects social and emotional wellbeing, behaviour, literacy, and physical and mental health.

Aboriginal and Torres Strait Islander families experience higher rates of stressful events than the general population, particularly those in urban areas, however, many Djarragun students are from rural and remote communities and they do not report experiencing a high degree of stress.

Indigenous male and female students equally experienced an absence of high levels of stress while older students did report statistically significant levels of stress due to missing too much school, getting behind in studies and not feeling positive about their relationship with teachers.

While stress in this study appears to be significant among the older students due to academic reasons only, it cannot be assumed that this is an accurate representation of the wellbeing of the school population overall, due to the unreliable nature of the instrument, the inconsistencies in the study and use of an instrument that has not been validated.

Rationale and significance

The purpose of the study was to discover if "stress" as defined by the Berry Street rating scale, is a significant factor impacting the wellbeing and readiness to learn of students at Djarragun. By investigating student responses to a range of statements covering four life domains, it was hoped that stress levels could be evaluated in order to address those factors contributing to them. The survey statements relating to school, home life, relationships and outside influences cover major areas of concern for young people.

From a reading of the relevant literature, certain questions were suggested as worthy of further investigation. Firstly, do indigenous students at Djarragun experience high levels of stress?

Secondly, does stress affect female students at Djarragun more than male students? Thirdly, do older students experience stress due to academic and social reasons more than younger students? The reason for asking these questions was to help identify stress in the school in order to address it for the purpose of removing obstacles to student progress both personally and educationally.

The survey was also trialled as a possible instrument to test the effectiveness of Berry Street as an intervention to manage stress.

Review of related literature

Mission Australia released the results of a survey conducted in 2017 on the health and wellbeing of 24,000 young Australians including 1,265 young Indigenous people (The Guardian, Oct 2018). They found Indigenous children and youths experienced a "concerning level of despair" beyond that of their peers. Body image, stress and problems at school were the three main concerns for all young people who did the survey, but Indigenous children were far more likely to have fears about personal safety, drugs, bullying and discrimination. In spite of this, Isaiah Dawe, a Murri man, placed in care 17 times as a child, now chair of the NSW youth advisory committee mentoring young Indigenous people, points out the survey showed many young Indigenous were also engaged at school, led healthy and active lives, and had a range of ambitions. According to the chief executive of Mission Australia, James Toomey, "They're keen to work and a high proportion see a future engaging in further education or employment."

Dr Deborah Askew in her extensive study (2013), maintained that Aboriginal and Torres Strait Islander peoples experience higher rates of stressful events than the general population. She

attributes this to the impact of colonisation, intergenerational trauma and ongoing experiences of disadvantage and exclusion. She set out to study the frequency and types of stressful events experienced by urban indigenous children and found about half of the children in the study had never experienced stressful events. No significant differences were seen in the reported exposure to stressful events by individual or familial characteristics. Overall, she found a lower rate of stressful events and the absence of some expected stressors. None of the parents who participated in her study, listed experiences of poverty, unemployment, trouble with police or racism as stressful experiences affecting their children (Askew, D., et al., 2013). A possible explanation she suggested, was that these experiences are so common that they have become normalised and not considered stressful. Additionally, open-ended enquiry type research of this nature has the potential for recall bias and underreporting.

A very different study conducted by Prof Zoltan Sarnyai published in "Scientific Reports," showed an absence of the normal rise in cortisol upon awakening in Indigenous youth (Sarnyai, Z., et al., 2017). It was suggested that previous stress, early traumatic events or even traumas of the past generation may have impaired the negative feedback system so the brain shuts off its own cortisol production after awakening. More importantly, the absence of morning cortisol rise predicts future mental illness.

In terms of gender differences and stress, a 2016 survey reported in WebMed, found teenage girls are generally more stressed than boys (Hayes, 2016). Professor Pat Dudgeon reported in her study that 38.4% of indigenous females experience greater levels of stress than Indigenous males (26.7%) (InPsych, 2017). In a comprehensive government report entitled "The second Australian child and adolescent survey of mental health and wellbeing" (2015), the prevalence of stress-related disorders was given as similar in children and adolescents however, Dowshen (2015) says younger children experience more attachment-related stress while adolescents experience more social and academic stress.

Method

Research design

Action research in schools, refers to a wide variety of evaluative, investigative, and analytical research methods designed to diagnose problems and help educators develop practical solutions to address them. In this case, information was collected to answer several questions suggested for investigation by the literature relating to student wellbeing and stress. Permission was granted by the Principal of the school to use the anonymised data for the purpose of the investigatory study and discussion ensued with the Deputy in charge of student wellbeing.

Information to answer the research questions was sought on a survey students completed as a normal part of a lesson. Teachers were co-opted into making the surveys available to be anonymised and copied. Paper copies were generated without names or other identifying details other than combined or individual year level.. They were not asked to specify if they were day scholars or boarders or provide exact ages or any other background information such as if they were islander or aboriginal or where they came from. As the school is licensed to use the Berry Street materials, copyright was not an issue. Consent already exists as part of student enrolment where activity is undertaken in the school for the wellbeing of students as a whole.

Participants and setting

Djarragun college offers a trauma-informed curriculum, direct instruction, a broad well-being framework and it has recently begun implementing the "Berry Street" Education Model which provides the school with training, curriculum and strategies to engage students more fully in their

learning. It is a positive education framework that supports teachers meet the specific needs of young people affected by trauma. It helps them achieve personal growth and positive educational outcomes through wellbeing practices which reinforce and sustain cognitive and behavioural change, thereby re-engaging young people in learning and advancing academically.

The study was conducted using a sample taken from the campus population of over 300 indigenous ATSI R-12 students of which 80 are boarders from remote communities and the remainder local/day students. The survey on stress was part of a normal classroom undertaking involving teachers and students generally so there was no change to normal classroom procedure in gathering the data. A sample size of 73 was drawn from a range of classes with mixed gender, mixed ability, and mixed ages. The cohorts were made up of 14 Yr 5/6s, 15 Yr 7/8s, 18 Yr 11/12s, 11 Yr 9s, and 15 Yr 10s. These numbers represent the students who attended class on the day that the survey was being conducted by their teachers as part of the weekly "Berry Street" lesson.

Instrument

The Instrument consisted of the "What Makes Me Stressed" survey, 4-point likert rating scale (1 not at all, 2 a little bit, 3 quite a bit, 4 very much) (p.20, The Berry St Domain 1 "Body": Berry Street Education Model Curriculum and Classroom Strategies Manual). It consists of 28 items under 4 headings: school (14 items), family/carers and home life (6 items), friends and relationships (5 items), and other outside-school stuff (3 items). Items were negatively scored where stated in the positive to ensure consistency when analysing data. The 28 items were categorised into four major dimensions: School, Family/Carers and Home Life, Friends and Relationships, Other Outside-School Activities.

<u>School:</u> (Items 1-14)

I like coming to school I

enjoy learning

My family helps me do well at school

Maths is easy

Fun things happen at school

If I work hard, I can do well at school

There are adults I can trust at school

The lessons at school are difficult

It is difficult to concentrate in class

I have missed a lot of school

I get stressed when people make noise

I have too many assignments/too much homework to do

Writing and reading stresses me out

It is hard to ask for help

Family/Carers and Home Life: (Items 15-21)

I enjoy being at home

I have an adult I can talk to about anything

People at home make me feel loved

I get lots of sleep

I always have enough to eat

I always have a uniform ready

Friends and Relationships: (Items 21-25)

I have great friends who really understand me

I enjoy coming to school to see my friends

I don't have enough friends

I worry people won't like me

I feel lonely at school

Other Outside-School Activities: (Items 26-28)

Things happening outside school make it hard to concentrate Other things are more important than school

School won't affect my future

Procedure

The survey was administered by teachers to their home classes and completed during the weekly Berry Street lesson. Teachers were to explain the items to students, check their comprehension and guide them in completing the survey as routine practice. There was no interruption to the normal flow of lessons nor any imposition on the part of the researcher who was not present when the surveys were completed.

Results

5% of items were not responded to at all. 5% of responses contained an instance of double rating for the same item. 20% of respondents omitted their gender and the 3 students who ticked every response as "not at all" were not included in the overall sample number. Apart from absentees, the 5% who contributed no responses at all on the survey paper, were not included in the overall sample. Results have been divided into three headings.

1. Stress

The first research question was to ascertain overall stress and to compare stress in each of the four categories.

Table 1: Means and Standard Deviations (SD) for each item (n=73)

Item Number	Mean	SD
Item1	2.14	1.00
Item2	2.31	.91
Item3	2.15	.87
Item4	2.37	.99
Item5	2.17	1.07
Item6	2.63	1.15
Item7	2.35	1.16
Item8	1.54	.912
Item9	2.07	1.17

Item10	2.14	1.05
Item11	1.99	.98
Item12	1.96	1.05
Item13	2.10	1.15
Item14	1.83	1.08
Item15	2.07	1.11
Item16	2.11	1.19
Item17	1.97	1.15
Item18	2.25	1.14
Item19	1.87	1.08
Item20	1.58	.92
Item21	1.93	1.12
Item22	1.72	1.08
Item23	2.01	1.14
Item24	2.10	1.21
Item25	1.83	1.06
Item26	2.51	1.22
Item27	2.21	1.20
Item28	1.86	1.02

All 28 items in the survey were grouped into four major dimensions as below: Table

2: Grouping items analysis

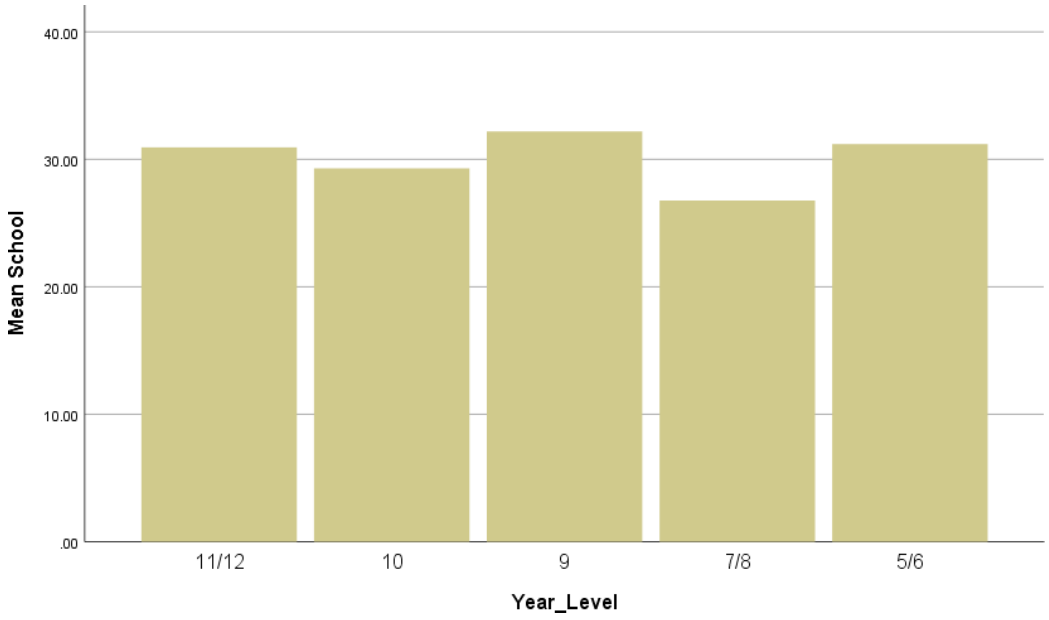
Dimension	Item number
School	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Family, cases, home life	15, 16, 17, 18, 19, 20
Friends/Relationship	21, 22, 23, 24, 25
Others (Out of School Experiences)	26, 27, 28

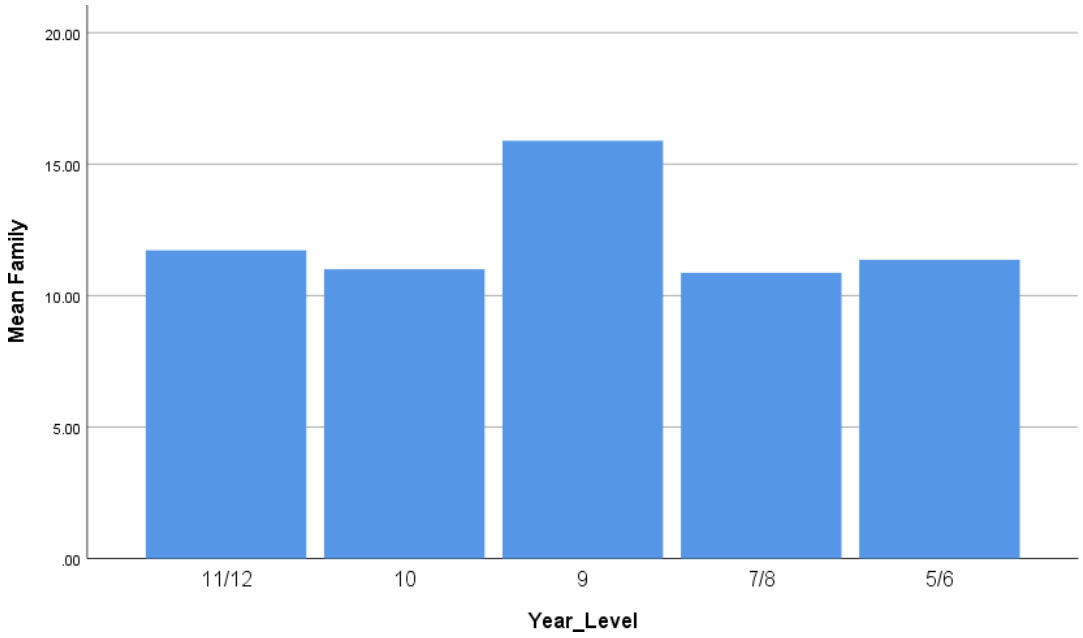
Descriptive statistics were computed for students' responses on each item (Table A). The mean values for each item tend to be around 2 or less. In none of the items were the means close to 3

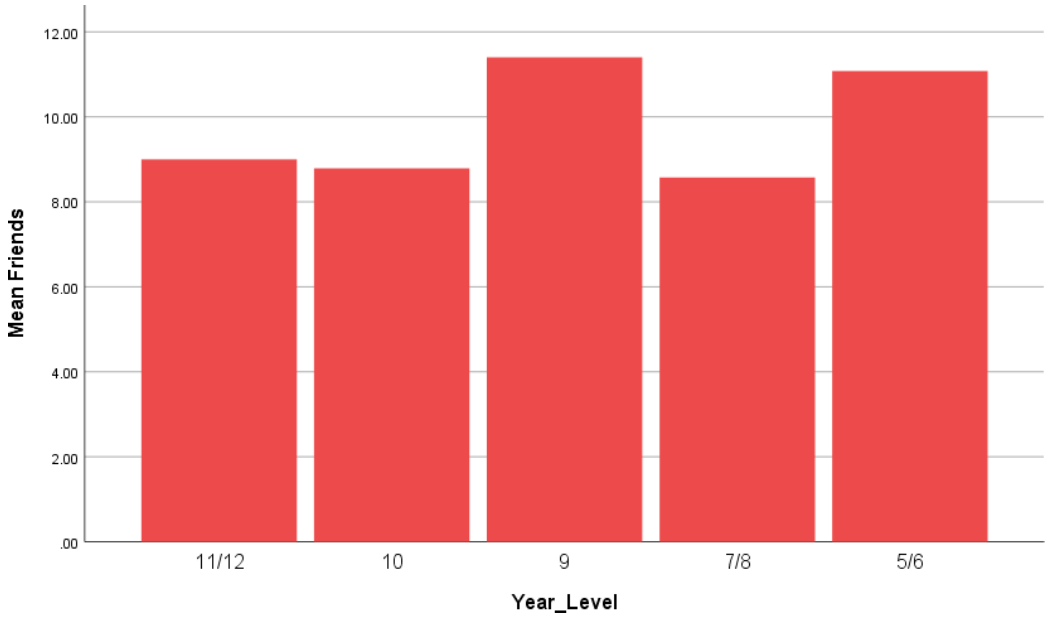
or above. The above pattern for means overall, suggests that students tended to not feel overly stressed about school, home, friendships and other factors outside of home and school.

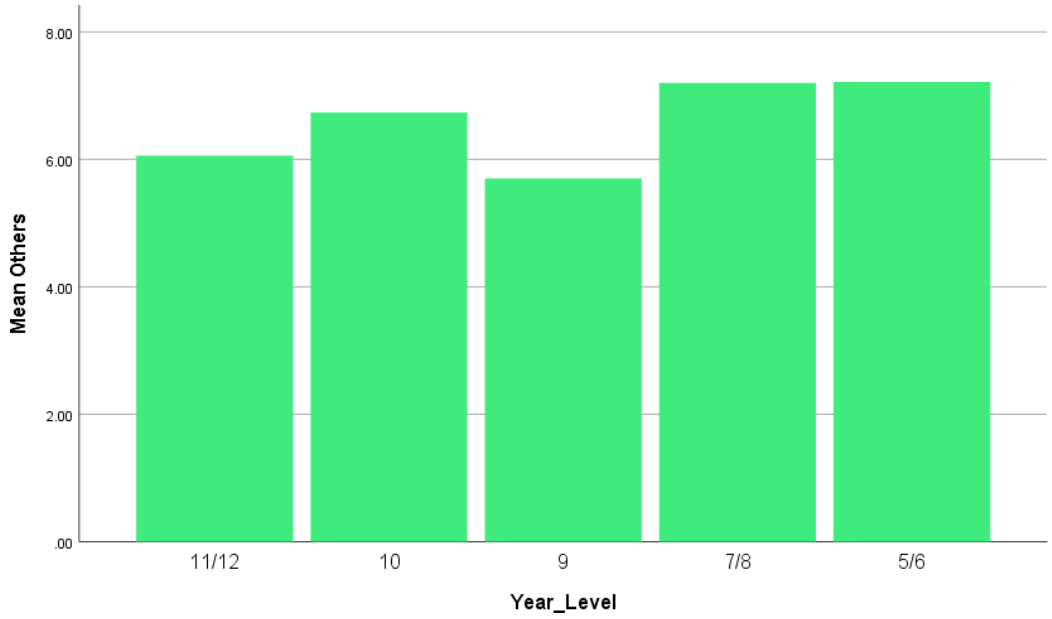
However due to the lack of sensitivity of the rating scale, responses on or close to 2.5 (“a little bit” to “quite a bit”) were overlooked. In this range, there were mild but not statistically significant effects for stress related to not enjoying learning, not getting enough sleep and having distractions outside of school. Stronger effects hovering on 2.5 points were for stress due to too much noise and not being able to concentrate in class. Also stress was experienced due to family not being able to help them do well at school and things outside of school making it difficult for them to concentrate.

The means for each of the four dimensions are presented graphically below. The differences in the means for School, Family, Friends and Others were not statistically significant as indicated by the following bar charts.




20.00
15.00
10.00
5.00
.00
Mean Family
11/12
10
9
7/8
5/6
Year_Level


12.00
10.00
8.00
6.00
4.00
2.00
.00
Mean Friends
11/12
10
9
7/8
5/6
Year_Level



2. Gender-based Differences

The second research question was to identify potential gender-based differences in students' responses. This issue was examined by conducting independent-samples t-tests. The results of this comparison for each item showed an absence of significant differences between male and female students.

3. Year-level Differences

The third question interested in was examining differences in students' responses with respect to their year levels. Students were grouped into 5 year levels (Years 11 & 12, Year 10, Year 9, Years 7 & 8, Years 5 & 6). A one-way between-subjects ANOVA was conducted to compare the effect of year levels of students on their response to the 28 items in the survey. Significant effects of year level on students' responses ($p < 0.05$) was found on Items 5, 8, 14.

Table 3

Item 5	$F(1,69) = 4.32$; $p = 0.041$
Item 8	$F(1,67) = 4.18$; $p = 0.045$
Item 14	$F(1,70) = 4.30$; $p = 0.042$

Discussion

No elevated stress levels were found in any groups and for any category when comparing means. On T-Tests, no significant differences were found between male and female students however, a significant difference in the responses of students according to year level on items 5, 8 and 14 was found, i.e. amount of school missed, having too many assignments/ homework, and having adults at school they can trust. The older the student, the more school they missed, the more pressure they felt due to assignments and homework, and the less they could trust adults at

school which is taken to mean not having positive relationships with the school due to experiencing pressure to attend and to meet deadlines. However, further clarification would be needed on the meaning given by respondents to items such as trusting adults at school.

Due to the absence of a middle point on the rating scale, it was not possible to achieve statistically significant results on responses that were suggestive of higher levels of stress on these other items. Responses rated between 2 and 2.5 suggest more than "a little" stress. Students felt stressed to a lesser degree by not enjoying learning, not getting enough sleep, having distractions outside of school which are perceived to be more important than their education and to a greater degree, due to too much noise, not being able to concentrate in class, family not being able to help them do well at school and things outside of school making it difficult for them to concentrate.

Limitations of the Study

The test items have not been validated and data from the survey cannot be said to be a reliable indicator of stress. Even if the measure was reliable and the test, valid, there are other confounds such as teachers who did not explain or supervise the completing of the test and confusion about the meaning of some items. Poor literacy skills and English as a second or other language, would lead to a high probability that some students could not read the items or comprehend them and may have guessed responses. It is also likely that indigenous respondents may tend to minimise their distress or not question or be familiar with verbalising internal mental states. In addition to linguistic and other barriers mentioned, it is possible that survey items are not culturally sensitive and students' culture could have influenced their responses, especially reluctance to divulge personal information. If the study were to be repeated, test preparation and monitoring with explanation of the purpose of the survey in addition to checking comprehension and correct entering of responses would need to be undertaken.

Conclusions

Overall, results from students' responses is that they are not in the high to extreme categories of stress according to this set of indicators and that female students do not experience more stress than male students. As predicted, the higher the year level, the more students reported missing school, falling behind and consequently feeling pressured by the school. However, older students did not report experiencing stress due to relationships. While there is some evidence to support these findings in the literature, the findings of this study are based on data from a small sample using an unreliable instrument which has not been validated and using an introspective survey measure which has a tendency to lead to inaccurate data. This renders making claims or definitive statements about students' stress levels indicated by their responses to the items in the survey, questionable. At best, the results are suggestive.

Furthermore, due to a lack of sensitivity of the rating scale, there is a possible underrating of responses. There is a slight tendency which is not statistically significant, for students to experience mild stress (rated between “a little bit and “quite a bit”) due to not enjoying learning, not getting enough sleep, having distractions outside of school which are perceived to be more

important than their education and more so, (closer to the rating “quite a bit”), due to too much noise, not being able to concentrate in class, family not being able to help them do well at school and things outside of school making it difficult for them to concentrate.

If the survey responses are accurate, then a possible explanation for low overall rates of perceived stress is that most respondents have been at the school some time, and being schooled at Djarragun may already have a buffering effect on their overall levels of perceived stress. In addition, many of the test respondents may have been boarders from remote communities as day students have higher rates of absenteeism on any one day and the literature predicts higher rates of stress among urban Indigenous.

Recommendations

As this was only a preliminary study and a pilot pre-test for the Berry St intervention in the school, more rigorous testing is recommended using reliable instruments which are culturally appropriate and which have been validated for indigenous populations. However, any pre and post measures adopted by the school to test the effectiveness of the Berry St intervention, would be problematic as it may be difficult to ascertain that it was Berry Street and not other factors affecting overall results such as merely being able to attend the school or that respondents are from remote communities.

It is also recommended that day scholars and boarders be considered as independent variables in any future testing, that the test be rigorously administered and that the scale be a 5 point likert with a middle category between “a little bit” and “quite a bit” to more accurately register degrees of stress which currently only suggest significance. Regardless of the outcome of such a test, students do not have to be stressed to benefit from Berry Street as the Berry St Model is one that can apply to all educational contexts promoting Emotional Intelligence based on a Positive Psychology framework. It benefits the entire school community.

It is also obvious that a follow-up to the findings of this study, is for senior students to attend school more regularly such that they minimise stress due to falling behind in their assignments and being pressured by teachers. The school could also take measures to educate about sleep, keep noise levels under control, help students find ways to make learning more enjoyable and teach strategies to help them concentrate. Additionally, the school could target involving family more in their children’s education, and explore more deeply with students, what those outside influences are that distract them from schooling and why they perceive them to be more important than their education and hence their future life prospects.

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Acknowledgments

The author acknowledges assistance provided by the Djarragun College Executive for granting permission to conduct this study and to access anonymised student data.

Acknowledgement is also due to the Manager of Cape York Health who made it possible to attend the October 2019, Rural and Remote Mental Health Symposium in Adelaide for which this paper and accompanying poster was prepared.