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BRIEF CLINICAL REPORT

The Resilient Youth Program: a promising skills-based online program for resiliency and stress management

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Abstract

Background: Prevention programs that target resilience may help youth address mental health difficulties and promote well-being during public health crises.
Aims: To examine the preliminary efficacy of the *Resilient Youth Program* (RYP).
Method: The RYP was delivered remotely from a US academic medical centre to youth in the community via a naturalistic pilot study. Data from 66 youth (ages 6–18, $M_{age} = 11.65$, $SD = 3.02$) and their parents were collected via quality assurance procedures (May 2020 to March 2021). Pre/post-intervention child/parent-reported psychological and stress symptoms as well as well-being measures were compared via Wilcoxon signed rank tests. Child/parent-reported skills use data were collected.
Results: Among child-reported outcomes, there were significant decreases in physical stress ($p = .03$), anxiety ($p = .004$), depressive symptoms ($p < .001$) and anger ($p = .002$), as well as increased life satisfaction ($p = .02$). There were no significant differences in child-reported psychological stress ($p = .06$) or positive affect ($p = .09$). Among parent-reported child outcomes, there were significant decreases in psychological ($p < .001$) and physical stress ($p = .03$), anxiety ($p < .001$), depressive symptoms ($p < .001$), and anger ($p < .002$) as well as increased positive affect ($p < .001$) and life satisfaction ($p < .001$). Effect sizes ranged from small to medium; 77% of youth (73% of parents) reported using RYP skills. Age and gender were not associated with outcome change.
Conclusions: The RYP may help reduce psychological/stress symptoms and increase well-being among youth; further research is needed.

Keywords: Prevention; Relaxation; Resilience; Stress; Youth

Introduction

Challenges associated with the COVID-19 pandemic have increased youth exposure to stressors associated with risk for depression and anxiety. Increases in mental health difficulties among youth were evident prior to the COVID-19 pandemic and research suggests these trends have continued well into the pandemic (Doom *et al.*, 2023). Youth who reported higher levels of resilience factors associated with stress management such as problem-focused coping, cognitive reappraisal, and social connection were less likely to report depressive and anxiety symptoms in the face of COVID-19-related stressors (Doom *et al.*, 2023). Prevention programs that target these processes may help youth address mental health difficulties before they worsen and promote well-being. However, there is a paucity of research on low-cost and scalable youth resilience-promoting

prevention programs that can be delivered remotely during public health crises (Doom *et al.*, 2023). Thus, the purpose of this study was to examine the preliminary efficacy of the *Resilient Youth Program* (RYP) via a naturalistic pilot study. The primary hypothesis was that participants would report lower levels of mental symptoms and stress, as well as higher levels of well-being indicators at post-intervention compared with pre-intervention.

Method

The RYP is a non-commercial six-session program adapted from the Stress Management and Resiliency Training/Relaxation Response Resiliency Program (SMART-3RP), which is informed by mind-body research, cognitive behavioural therapy, and positive psychology, and conceptualizes resilience as a malleable process that can be promoted via skills that elicit the body's relaxation response (to counteract the stress response), facilitate stress management (to reduce psychological symptoms), and enhance growth to (promote positive affect and connectedness). The RYP is newly developed and thus has not been previously researched. See Park *et al.* (2021) for more information about the theoretical and treatment model that informed the RYP.

The RYP consists of elementary-, middle- and high-school student online groups ($\leq$12 youth/group, 45 minutes/week). Youth were provided with psychoeducation on the stress/relaxation responses and taught evidence-based skills, including breathing techniques, mindfulness, progressive muscle relaxation, problem solving, cognitive restructuring, and self-coaching (see extended report in Supplementary material). The RYP was delivered remotely from a US academic medical centre to youth via a secure teleconferencing platform. Group facilitators were mental health trainees, psychologists and educators who completed implementation training and mentoring with the RYP developers.

Participants were recruited from the authors' academic medical centre through emails to employees and pediatricians, with a focus on children of first responders.

Parents/youth completed pre-intervention and post-intervention questionnaires (within a week of RYP completion) through a secure web platform for survey/data management. Youth completed a series of Patient-Reported Outcomes Measurement Information System (PROMIS®) paediatric short forms (Forrest *et al.*, 2018a; Forrest *et al.*, 2018b; Quinn *et al.*, 2014): *Anxiety* (v2.0, 8a), *Depressive symptoms* (v2.0, 8a), *Anger* (v2.0, 9a), *Physical stress* (v1.0, 8a), *Psychological stress* (v1.0, 8a), *Positive affect* (v1.0, 8a), and *Life satisfaction* (v1.0, 4a). Parents were administered the Parent Proxy versions (Forrest *et al.*, 2018a; Forrest *et al.*, 2018b; Irwin *et al.*, 2012). Child/parent-reported skills use data were also collected.

Two hundred and fifteen youth aged 6–18 years ($M = 11.70$, $SD = 3.03$) enrolled between May 2020 and March 2021, of which 79% ($n = 170$) attended at least one RYP session. Approximately 84% of youth ($n = 143$) and 78% of their parents ($n = 133$) completed the pre-intervention questionnaire, out of which approximately 46% of youth (ages 6–18, $M_{age} = 11.65$, $SD = 3.02$) and 50% of their parents (both $n = 66$) completed post-intervention questionnaires. Three parents (4.5%) did not report their child's gender. Of those who did, most identified their child's gender as 'female' (54.5%), followed by 'male' (40.9%) and trans/gender diverse (1.2%). Thirty-one parents (47%) did not report their child's race/ethnicity. Of those who did, most identified their child as 'non-Hispanic and White' (42.4%), followed by 'Asian American', 'African American' and 'Hispanic and multiracial' (each 3%).

Data were screened for extreme outliers, normality and linearity. No extreme outliers were identified. With the exception of physical stress scores, data were approximately normally distributed.

Wilcoxon signed-rank tests were conducted to examine agreement between parent- and child-reported outcomes at pre/post-intervention. To test the primary hypothesis, Wilcoxon signed rank tests were conducted to examine differences in parent/child-reported outcomes from pre- to

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Table 1. Differences in pre- and post-intervention parent- and child-reported outcomes

		Pre-intervention		Post-intervention		Wilcoxon signed rank test		
PROMIS measure	*n*	Mean T	*SD*	Mean T	*SD*	*Z*	*p*	Cohen's *d*
Parent-reported								
Anxiety	65	59.37	8.78	53.35	8.63	−4.95	<.001	.69
Depression	63	59.17	8.98	52.71	9.17	−5.05	<.001	.71
Anger	65	63.18	12.26	56.08	11.51	−3.02	.002	.60
Physical stress	63	54.28	10.16	51.35	9.16	−2.20	.03	.30
Psychological stress	62	61.81	8.27	55.21	9.25	−5.09	<.001	.53
Positive affect	61	37.34	8.12	42.36	9.40	4.54	<.001	.57
Life satisfaction	61	38.22	7.46	42.12	8.81	−3.54	<.001	.48
Child-reported								
Anxiety	65	57.20	8.31	53.81	8.88	−2.89	.004	.39
Depression	62	56.78	10.38	52.49	8.78	−3.38	<.001	.45
Anger	61	52.54	11.65	48.73	9.16	−3.13	.002	.36
Physical stress	62	56.37	8.57	53.90	9.99	−2.16	.03	.27
Psychological stress	62	57.51	9.42	54.81	8.83	−1.90	.06	—
Positive affect	62	42.41	7.05	44.37	8.70	−1.71	.09	—
Life satisfaction	62	42.25	9.51	45.14	9.91	−2.26	.02	.30

post-intervention. Cohen's *d* was calculated to examine effect sizes. *Post-hoc* exploratory analyses included regression analyses to examine associations between child age and change in outcomes; change variables were created by subtracting post-intervention T-scores from pre-intervention T-scores for each outcome measure for each participant and dummy codes were created to represent gender categories.

Results

Parents and their children tended to agree in their reports of most outcomes, with a few exceptions. At pre-intervention, parents reported higher levels of anger ($z = -2.48$, $p = .01$) and psychological stress ($z = -3.66$, $p < .001$), as well as lower positive affect ($z = -4.50$, $p < .001$) and life satisfaction ($z = -2.42$, $p = .02$) than their children. At post-intervention, parents reported higher levels of anger ($z = -5.30$, $p < .001$) and physical stress ($z = -3.11$, $p = .002$) than their children. There were significant differences in all parent-reported outcomes and in most of the child-reported outcomes from pre- to post-intervention (Table 1). Neither age nor gender were significantly associated with change in outcome scores (all $p > .05$). At post-intervention, most (77% of youth; 73% of parents) reported (their child) using skills taught in the program.

Discussion

This preliminary naturalistic pilot study suggests that the RYP may help reduce some psychological and stress symptoms as well as increase well-being among youth. This is in line with recent investigations suggesting that prevention programs aimed at increasing resilience among youth during the COVID-19 pandemic may be helpful in promoting well-being (Doom *et al.*, 2023). At the same time, conclusions about this study are limited by a lack of *a priori* sample size, data analysis based on quality assurance procedures, incomplete data around sociodemographic information and session attendance, as well as potential response bias due to participants who did not complete all questionnaires.

Randomized controlled trials are needed to establish the efficacy and acceptability of the RYP. Future research is needed to examine the extent to which outcomes vary by age group, gender,

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sessions attended (i.e. treatment dosage) and from assessing a wider range of resilience factors (e.g. at the relational and communal levels). Given the discordance between parent- and youth-reported outcomes, researchers/practitioners may consider using multiple measures for each outcome and collecting data on observable indicators of well-being. Future directions also include cultural and linguistic attunement of the RYP to meet the needs of youth populations who experience threats to their well-being, including racially/ethnically marginalized youth, lesbian, gay, bisexual, transgender, queer/questioning, two-spirit and more (LGBTQQ2+) youth, youth with intellectual, developmental, and special health care needs, and children with adverse childhood experiences.

Supplementary material. The supplementary material for this article can be found at https://doi.org/10.1017/S1352465823000644

Data availability statement. Data available on request from the authors.

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Competing interests. The seventh author works as a clinical consultant for the Gavin Foundation, Bay Cove Human Services, and US Minor and Major League Baseball. He has licensing and/or intellectual property agreements with Ironshore and White Rhino/3D Therapy LLC. He has served as a co-editor for the journal *Child and Adolescent Psychiatric Clinics of North America* special issue 'Updates in Pharmacologic Strategies in ADHD'. He receives royalties for the following books he has (co-) authored/edited: *Straight Talk About Psychiatric Medications for Kids* (Guilford Publications), *Attention-Deficit Hyperactivity Disorder in Adults and Children* (Cambridge University Press), *Massachusetts General Hospital Comprehensive Clinical Psychiatry* (Elsevier), and *Massachusetts General Hospital Psychopharmacology and Neurotherapeutics* (Elsevier). He is co-owner of a copyrighted diagnostic questionnaire ('Before School Functioning Questionnaire').

The eighth author receives royalties from Oxford University Press for the following book she has (co-)authored: *Managing Bipolar Disorder: A Cognitive Behavior Treatment Program*.

Ethical standards. Data were collected through quality assurance procedures and thus ethical approval was not obtained. Consent to participate was obtained prior to participation. Methods for data collection were reviewed and agreed upon by the leaders of the Child Resiliency Program at the authors' academic medical centre, who ensured that they conformed to the Declaration of Helsinki.

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