BMJ Open

Enabling dads and improving First Nations adolescent mental health: a pragmatic randomised controlled study

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To cite: Reilly L, Adams M, Diamond B, *et al*. Enabling dads and improving First Nations adolescent mental health: a pragmatic randomised controlled study. *BMJ Open* 2023;**13**:e072202. doi:10.1136/bmjopen-2023-072202

► Prepublication history for this paper is available online. To view these files, please visit the journal online (http://dx.doi.org/10.1136/bmjopen-2023-072202).

Received 13 February 2023
Accepted 21 June 2023

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ABSTRACT

Introduction There are few empirically supported social and emotional well-being programmes for First Nations adolescents, and we found none targeting those living in Aboriginal communities in remote areas of Australia. The dearth of social and emotional well-being programmes is concerning given that adolescents in remote Australia are at much greater risk of mental disorder and suicide. Our pragmatic community-based research intervention 'Enabling Dads and Improving First Nations Adolescent Mental Health' is designed by and for First Nations people living in remote communities to promote and support the parenting role and examine the interconnection between men's parenting knowledge and adolescent mental health. The aim is to improve adolescent mental health by strengthening the participating father's empowerment, parenting confidence and engagement in the parenting role. The words Aboriginal, First Nation and Indigenous are applied interchangeably, as appropriate, throughout the article.

Methods and analysis The intervention is currently being conducted in five remote First Nations communities in Far North Queensland, Australia. The project is funded by the Medical Research Future (MRFF UNSW RG200484), and staff recruitment and training began in early December 2020. The aim is to recruit 100 men and dyad adolescents, that is, in each of the five community sites, we will recruit 20 men and adolescent dyads at baseline. To date, we have complete data collection in one community, and fieldwork will begin in the final community in September 2023.

The intervention involves a pragmatic randomised controlled trial, using a novel and culturally designed and manualised parenting programme with men (Strong Fathers, SF). The comparison group is receiving a culturally congruent and familiar yarning/relaxation (YR) condition. The SF component focuses on reinforcing knowledge related to parenting adolescents, promoting father's empowerment, and increasing their confidence and engagement with the adolescent. The second component systematically measures and examines differences in adolescent social and emotional well-being before and after their father's involvement in either the SF or YR. The adolescent is blind to the father's group allocation. The outcome measures for the men include parenting knowledge, attitudes and beliefs; a First Nations measure for empowerment; the Harvard Trauma Questionnaire (Indigenous) used to assess post-traumatic stress disorder symptoms; and alcohol use. The adolescent mental health outcomes are measured by a culturally congruent social and emotional well-being measure.

Ethics and dissemination Ethics approval was granted from the Aboriginal Health and Medical Research Council of Australia: Human Research Ethics Committee (1711/20). Results will be verbally shared at community meetings and conferences, and reports will be produced for community stakeholder use. Data will be available for community-controlled health services and stakeholders. Findings will also be published in peer-reviewed journals, and summaries will be provided to the funders of the study as well as male participants and adolescents.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ 'Enabling Dads and Improving First Nations Adolescent Mental Health' is the first mental health intervention study examining the associated benefits of improving fathers' parenting knowledge and confidence and adolescent mental health.
⇒ The method includes a culturally designed and implemented intervention that is subject to a randomised community-based trial.
⇒ The culturally sensitive outcome measures will provide unique information about the emotional health of the fathers and their adolescents and determine if there are any mental health benefits associated with the intervention.
⇒ The intervention may provide empirical support for mental health policy and practice targeting the inter-relationship between a father's parenting and mental health and that of their adolescent children, although future studies will require a longer follow-up to establish if any positive effects are sustained.
⇒ Power estimations and sample size estimates were based on men's and adolescents' outcome measures; however, a power calculation was not separately performed for each key outcome measure.

INTRODUCTION

Aboriginal people in Australia carry a significant mental health burden indicated by the high prevalence of mental disorders and suicide among adolescents, their fathers and mothers in Indigenous communities.[1–4]

This mental health disparity in comparison with the non-Indigenous population has been associated with a history of colonisation, racist treatment of First Nations people and generations of children forcibly separated from their parents. The impact of this history has had profound intergenerational effects on the social and emotional well-being (SEWB) of Australian Aboriginal people. The history of colonisation impacts and compounds contemporary social, political and economic marginalisation.[3–5]

Fathers who are confident and empowered can foster the mental health of the next generation by playing a vital role in guiding their children on the pathway through adolescence and into adulthood. By taking a holistic approach to adult and adolescent mental health, Strong Fathers (SF) focuses on increasing men's parenting knowledge and sense of empowerment in the context of parenting interactions with their adolescent child. The expected main outcome is a sustained improvement in the child's mental health, measured in the Indigenous context by SEWB.[5 6] SF recognises men's strengths and skills as parents, and their inherent capacities to break cycles of trauma, loss and disadvantage that undermine confidence and can place them and their adolescent children at risk of mental harm.[1 4] This community intervention is being conducted in five North Queensland Indigenous communities and is designed to be replicated and sustainable. It incorporates local involvement, capacity building, skills development and leadership. All research personnel directly involved in implementing the programme are from the participating communities.

Our project builds on a small pilot study led by the first author. The project was a community-supported randomised controlled trial (RCT) testing the feasibility of SF among Aboriginal and Torres Strait Islander male parents in three of the five identified North Queensland communities. The trial did not measure effects on the mental health of an adolescent child. The pilot was completed in December 2019. While the pilot was too small to report conclusive findings, it provided us with evidence of feasibility for our community-driven intervention and demonstrated a strong trend for the efficacy of SF in promoting parenting knowledge, men's empowerment and their own mental well-being. We therefore hypothesise that SF, compared with the control condition yarning/relaxation (YR), will achieve stronger measurable positive impacts for adolescents, and fathers in the SF group will demonstrate increased awareness and knowledge of historical and contemporary factors (structural and practical day to day) related to parenting adolescents. SF will provide a greater sense of empowerment and improved general mental health for male parents (as well as improvements in traumatic stress and alcohol use; recognised morbidity and mortality risks in this group). In adolescent children (10–18 years) of men undergoing SF, the primary outcome will be a sustained improvement in SEWB, a proxy for mental health.[6 7]

METHODS

The intervention combines an RCT with the real-world pragmatics of implementation. Our design has prioritised feasibility, cultural acceptability and the potential to sustain the initiative beyond the trial.[8] The key components of our study are: (1) a manualised programme which focuses on promoting men's parenting knowledge and empowerment (SF) and, via that programme, the primary endpoint of positive effect on the SEWB of their adolescents; and (2) qualitative observations of the research process and impact from participants (using yarning circles).[9]

Cultural appropriateness

We acknowledge that Western methods may not resonate or accurately reflect what is being measured. Our team works across cultures in the mental health field, and we take a systematic approach to ensure our methodology reduces the risk of misunderstanding and misinterpretation across cultures. Further, every study is strengthened by future research to confirm findings or establish variance, and then to consider the variables that may account for differences, including that measures may not be determining variables as intended. Our commitment to this end is to document our process accurately, so that replication of the measurement and the intervention is possible. It is an important note that our study was designed in response to a community-driven interest in program evaulation using quantitative and qualitative measures. Our study employs local people in each site to be trained as research assistants, under the direct supervision of First Nations academics.

We purposely integrate the use of qualitative measures to confirm and gain further insight and understanding into the main questions of our study, that is, does the men's parenting intervention make the men feel more empowered and confident to parent, and do the adolescent children feel more socially and culturally well after the fathers have been engaged with the intervention. We use yarning circles, a culturally acceptable format, to gather data for this analysis.

Data sharing

An important feature of our study is that we take our findings back to Elders and councils in each community to share and discuss, a process which respects local Indigenous insights and considerations regarding the accuracy and usefulness of our findings before they are reported. Data collected in each community are also owned by that community, that is, we promote data sovereignty.

Setting

The participating communities are located in remote areas of Queensland, Australia. These townships tend to have poorer health outcomes compared with urban and larger regional areas because of unique characteristics and challenges.[10] Although the advantages of living in these communities are many, some factors assocated with

Figure 1 Location of the five participating communities in the Cape area of Australia.

comparatively poorer health status include vast distances and social isolation, overcrowded and poor standard of housing and infrastructure, higher cost of healthy food, distance from essential health services, low level of health education and awareness, low socioeconomic status, historical and contemporary exposure to racism and contemporary neglect, and living in cyclone, drought or flood-stricken environments.[3 10]

The communities participating in our study include Doomadgee, Wujal Wujal, Hopevale, Kowanyama and Aurukun (see figure 1 below).

Participants and recruitment

Eligible men include adults over the age of 18 years with at least one child in the age range of 10 and 18 years. A probabilistic recruitment based on epidemiological principles was not considered feasible and it was preferable for us to include everyone who was interested to participate. These are small communities (less than 1500 people) and we wanted to encourage anyone interested to engage in the study. We knew that the men would then be randomised to either the intervention or the men's group control (both of which provide group support to men). The participants were therefore recruited by word of mouth, a process initiated by local research assistants and existing men's group coordinators, leading to a snowballing effect throughout the communities. Our familiarity with the five communities, Elders and organisational representatives ensures active support for the study. When there is more than one eligible adolescent per family, random selection is implemented. We expect to achieve a natural balance between boys and girls in the cohort so that gender can be factored into multivariate analyses. Exclusion criterion for men includes overt severe mental illness, and those not included in the study will be referred to appropriate agencies.

We ensure that information describing the study intervention and control condition (for local research personnel, participants and the wider community) is articulated in a way that will avoid creating the impression that one group condition is superior to the other. This veiled approach reduces the risk of bias regarding the value or expected efficacy of either of the two group conditions. Randomisation using a block design is conducted by an independent statistician using STATA software. Training, reliability checks and fidelity of data gathering and entry will be an ongoing, iterative process. The importance of privacy and confidentiality is emphasised in the men's intervention groups and with adolescents. The men are reassured that they are not being judged as parents and that all data from interviews are de-identified for analysis. Adolescents are similarly reassured about confidentiality.

Sample size

The outcome measures for this study are both continuous and dichotomous (categorical), and power estimations and sample size estimates are based on these considerations. An estimate of both men's and adolescents' outcome measures indicates that to detect a 0.50-unit difference in SDs for primary outcomes with 95% power, a sample of 100 (50 for each condition) participants will be required for statistical analysis. To retain 100 dyads in each arm at the end of the study, we will recruit a total of 150 men and dyad adolescents at baseline. If we have reduced power, we will report non-significant but nevertheless indicative findings, and acknowledge the limitations.

Yarning circles

We will facilitate yarning circles following the completion of the study with adolescents and dads separately to gather qualitative data in each community, including on issues related to feasibility and benefits or problems related to the intervention for them, their families and communities. Yarning data will also be used to improve uptake and local facilitation of the intervention. We will use semistructured questionnaires informed by observations and insights gathered throughout the course of the intervention. All participants are eligible for inclusion in the groups. Yarning groups can be any size, although they will be limited in our study to under 15 members to ensure that all can participate and have their opinion heard.[9]

Quantitative measures

The following measures are selected based specifically on their centrality to testing our hypotheses: previous validation in Indigenous populations or across cultures; our assessment of their cultural sensitivity; relevance and ease of use by local Indigenous workers (rather than clinicians); and use in routine health services for the future.

The Personal Wellbeing Index-School Children (adolescent only)

The Personal Wellbeing Index-School Children is used to assess the well-being of children, a key outcome measured in the study. It has been validated with Indigenous adolescents to measure emotional well-being is consistent with the Indigenous conceptualisation of mental health as holistic. It is also consistent with the intrinsic value Indigenous people place on the broad concept of wellness. Measure can also be applied to compare findings against national studies with non-Indigenous adolescents.[11]

Men's parenting knowledge, attitudes and beliefs (father)

This measure assesses and evaluates change in men's parenting knowledge including the barriers and enablers and the impact of parenting of adolescents. This measure is closely aligned with the content of the SF intervention as detailed in the manual and it demonstrates sensitivity to the manual's learning outcomes. Testing demonstrates a high level of comprehension and acceptance.

Growth and Empowerment Measure (father only)

Psychometric validation of the Growth and Empowerment Measure (GEM) applied with Indigenous Australians: The GEM measure is designed and applied in our study to assess the empowerment and mental health of First Nations men. The widely used Kessler 6 Distress Scale (K6) international measure for mental distress is validated with First Nations populations and is included in the GEM, including two additional items found to be relevant to Indigenous people: 'happy in yourself' and 'angry at yourself or others' (K6 plus 2).[7]

The Aboriginal version of the Harvard Trauma Questionnaire (father and adolescent)

The Harvard Trauma Questionnaire has been adapted and validated in Australian Indigenous populations by First Nations leader and expert in trauma, Dr Judy Atkinson. It is used in this study to measure baseline trauma and changes in the impacts of trauma. It measures trauma events and post-traumatic stress disorder (PTSD), consistent with the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. [12 13] It uses continuous variables: 30 on trauma symptoms and 24 trauma events questions.

The Alcohol Use Disorders Identification Test (father and adolescent)

The Alcohol Use Disorders Identification Test (AUDIT) is a 10-item alcohol screener that has been recommended for use in Aboriginal primary healthcare settings. It is relevant to this study because it is strongly associated with mental distress and alcohol intake may be modified if, following the intervention, participants perceive it may negatively impact their parenting and/or relationships with their adolescent. Identifying Aboriginal-specific AUDIT-Concise and AUDIT-3 cut-off scores for at-risk, high-risk and dependent drinkers is done by using measures of agreement with the 10-item AUDIT.[14]

Content of SF

The manualised intervention is facilitated by fully trained locally recruited research assistants. The manualised intervention is run over eight sessions. Each locally recruited facilitator is directly supervised by the First Nations chief investigators. The manualised intervention sessions target the barriers and enablers to parenting adolescents, including historical and contemporary social factors (this includes discussing positive images of fathers in society, connecting at an emotional level with adolescents; the negative impact of stolen generations and related dislocations; and lack of role models, intergenerational trauma, alcohol use and unemployment). The programme recognises 'dad's strengths' and his intrinsic capacities and resources (personal, familial, communal, traditional) to overcome obstacles to be caring and supportive parents to their adolescents. Using the group dynamic, the men discuss and share their skills and strengths as parents, including emotional reaction patterns and overt behaviours that can undermine or benefit their adolescent's SEWB. The facilitator takes notes, summarising and reflecting on key points of learning and consensus with an emphasis on being positive, affirming and empowering. Included in the discussion are immediate living issues facing men in each community, for example, familial and community conflict, climate-related hardships, sorry business, unemployment and poor housing.

A substantial focus is on contemporary parenting expectations in a context of cultural transformations, and how to integrate the positive aspects of traditional approaches with changing expectations and more within an evolving society. Consideration is given to the array of services in the community, experiences (negative and positive) in engaging with these agencies, the problem of bias against male parents and ways (collective, individual) of addressing these misconceptions, and to encourage an approach that is inclusive of fathers.

The group facilitator encourages men to consider parenting in terms of support and caring, listening and validation, trust and sharing, in addition to using more specific strategies to mutually resolve common adolescent life challenges, as well as to manage difficult behaviours, including aggression. The strengthening of the parent–adolescent relationship is discussed as centrally important to advancing adolescent SEWB. The deeper transformation achieved in increasing men's sensitivity to the emotional needs of their adolescents was frequently referred to as a turning point by men who had participated in the preceding pilot SF programme. These participants said that being an effective parent enabled them to feel in control of other areas of their lives, including managing problems related to past trauma and not drinking alcohol to deal with stress. It was noted that the parenting process helped men to restore a sense of meaning and purpose which renewed feelings of empowerment. Homework sessions in SF relate directly to engaging the adolescent. This focus is not only on implementing specific parenting techniques but on consciously being aware of becoming

attentive and helpful to their adolescents. In the post-homework sessions, men discuss and share the successes and setbacks they have experienced in these parenting efforts, supporting each other in taking the next steps to consolidate the knowledge gained.

Content of comparison YR group

The comparison condition group is based on the tradition of yarning coupled with a component of relaxation training, commonly offered in the context of men's groups.[11] Men meet for the same number and duration of sessions as the SF intervention in a safe, social setting where they are supported in yarning (discussing) issues that affect all aspects of their lives. The facilitator uses general counselling and group dynamic skills by encouraging mutual respect, listening, positive interactions, support, and the opportunity to express feelings and concerns without being judged or censored. The men can talk about any mental health issues, as is relevant to them at the time. Two structured and tested sessions of stress management are administered to the YR group. In training the facilitator, with equal time and emphasis as training for the SF condition, there will be no special focus on parenting, although spontaneous discussion of the topic will not be discouraged. If a parenting-related matter arises, it will be documented and discussed generically without the empowerment focus on enablers and barriers.

Statistical analysis

The analytical strategy we outline is appropriate to testing the hypotheses in the context of our study design. Key issues that require consideration in planning the analysis include: the RCT methodology; clustering effects (there may be systematic differences in participant characteristics and conditions of life across communities); the dyadic structure of the complex sample (pairing of fathers and index adolescents); the sequential paths involved (testing the core hypothesis that SF leads to enhanced primary outcomes in fathers which in turn lead to changes in primary outcomes in adolescents); possible mediating effects and covariates exerting fixed effects (age, gender); and the time points of assessment necessary to examine for sustained effects. It needs to be noted that time points are limited to the pre-intervention and post-intervention data from the fathers, and the pre-intervention and post-intervention data from the adolescents. All post-intervention data are collected between 7 and 14 days after the father completes the intervention. Further studies will require a longer follow-up to establish if any positive effects are sustained. Descriptive data (prevalence, means, SDs, distributions) will be inspected, guiding preliminary univariate statistics. This will include intraclass correlation coefficients to test for clustering by community which may require appropriate weighting or a multilevel approach to be applied in further analyses. Bivariate statistics (paired t-tests, McNemar's statistic, univariate logistic models) will provide preliminary indicators of the strength of relationships predicted by our hypotheses, both in cross-sectional and longitudinal data.

In the next step, we will apply two analytical approaches to test our major hypotheses: (1) to assess within a dyadic framework whether fathers' primary outcomes (parenting, empowerment, K6) relate to index adolescents' social well-being (SWB), an Actor-Partner Interdependence Model will be applied, at each time point and across time points (to test for time-lagged effects on adolescents); and (2) to model the relationship of patterns of change of father and adolescent primary variables, we will use multilevel Multiple-Domain Latent Growth Models (MDLGMs).

Together, our statistical approaches will make it possible to answer the key question of whether participating in SF has a positive impact on the father's parenting knowledge and empowerment, and reduces mental distress, which in turn have a beneficial effect on the index adolescent's SWB and use of alcohol. The same models can be used to test relationships involving secondary outcomes in fathers. The preliminary step in MDLGMs is to focus on each intervention group (SF and YR) separately to assess model fit and adjust for misspecifications. If individual models fit well, then slope factor loadings will be set for sequential measurement waves and the intercept calculated to account for the final change effect in the outcome measures. In the next step, a joint analysis including both intervention conditions is assessed using a simultaneous MDLGM. We assess whether the father's participation in SF has a greater impact on primary adolescent outcomes than the YR group. Our statistical method determines whether there is a difference in the direct effects of each intervention group condition on the slope and growth (intercept) of curves when assessing the outcome of each primary adolescent index (SEWB). A X^2 test will reveal whether SF has a significant effect, that is, results in an overall longitudinal improvement in child indices relative to the father's primary outcomes. The analyses will be conducted in STATA and MPlus adjusting for dropouts and missing data by using appropriate imputation methods. The analytical team consists of one highly experienced biomedical and psychometric statistician who has extensive experience with the types of models and software packages that will be used.

Qualitative data and analysis

Yarning circles will be facilitated by local research assistants with all eligible participants in the study. The aim is to gather data on the research process and outcomes.[11] The discussion will focus on semistructured questions including if they felt the intervention or the study process was beneficial, what was useful, what was not beneficial and their recommendations for improving the process. Data will be recorded and transcribed, and NVivo software will be used for analysis. Thematic analysis undertaken by our First Nations authors will be used to deduce (discuss, consider, debate) the meaning of what is being shared in each group. We will report the identified themes from the text and use coding to examine for the extent to which themes are supported, and the examples from each. We will also report dissonance and reflections that will be useful for future research in communities.

Ethics and dissemination

At the same time as adopting a pragmatic RCT approach, our design ensures that the content of the programme is embedded in and highlights an understanding of the consequences of trauma and social marginalisation experienced by Indigenous communities. In that sense, we have reconciled the need for scientific rigour with a commitment to a social justice and culturally sensitive framework of intervention, ensuring strict adherence to the Indigenous protocols governing research practice and community engagement. Conducting research within an Indigenous setting risks diminishing respect for Indigenous world views and culturally valid sources of knowledge generation that do not conform to mainstream society epistemologies. Strict RCT designs without accompanying community development and inclusion activities risk producing rarefied findings that do not consider local skills or the wider historical and structural factors that influence mental health. Our engagement with the five communities, in which there has been extensive knowledge sharing (bidirectional), has on the contrary demonstrated a rich awareness and keenness to pursue rigorous research that can demonstrate effect and is Indigenous led.

We have engaged a leading translation service for First Nations health research, *HealthInfoNet*, to ensure our findings are shared widely with Indigenous and non-Indigenous services, policymakers and practitioners. We have an ongoing dialogue with stakeholders and Elders in all participating communities and community-controlled health services, where we share knowledge and updates on the project throughout the process, and where we will discuss and share preliminary reports and findings. Our First Nations authors will present the intervention and its findings at national and international conferences and forums.

Patient and public involvement

The first author engaged with community leaders, Aboriginal councils, men's group facilitators and men in each community to discuss and plan the pilot parenting intervention. Men volunteered to be involved in the study and were aware that their views and perspectives about the intervention were very important in its design and future use. It was designed and shaped by the men's interest to focus on parenting and to talk about parenting and how men can be better recognised and engaged as parents. The intervention was tested and adapted after the men's feedback and ideas. The community was involved in recruitment because it was by word of mouth. The results will be shared with participants and communities by way of a report, meetings with key stakeholders and meetings with the participants in men's groups. Communities will have access to the whole datasets, and assistance with applying research to support their future endeavours. Yarning circles conducted after the intervention will generate qualitative data to assess the negative and positive impacts on participants.

DISCUSSION

Our pragmatic community-based research intervention 'Enabling Dads and Improving First Nations Adolescent Mental Health' is designed to improve the mental health of First Nations adolescents living in communities in the Far North of Australia. The study also aims to strengthen parenting knowledge and empowerment among the participating male fathers. The study aims to address a dire need to reduce the burden and risk of mental illness and suicide in our First Nations adolescents and to improve the SEWB of their fathers.[15] This project draws on existing cultural knowledge and strengths and aims to be sustainable, replicated and rolled out by First Nations communities, if it achieves its anticipated outcomes.

Acknowledgements The authors wish to acknowledge and thank the study participants and stakeholders including Apunipima Aboriginal Community Controlled Health Service, North West Remote Health and the Aboriginal councils in each community. We would also like to thank Batool Moussa, LLB, for reading and editing the draft manuscript.

Contributors Conception and design of study—LR, MA, BD, PD, JD, CK, DS and SR. Acquisition of funding—SR, LR, MA and DS. Community liaison and planning—LR, MA, SR, BD, PD, JD and CK. Fieldwork—LR, BD, PD, JD and CK. Cultural advice—LR, MA, BD, PD, JD and CK. Original draft—LR and SR. Contribution, critical review and editing of the manuscript—LR, SR, MA, BD, PD, JD, CK and DS. Approval of the final manuscript—LR, SR, MA, BD, PD, JD, CK and DS. All authors are guarantors for this work.

Funding Medical Research Future Fund, National Health and Medical Research Council of Australia (RG200484).

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Competing interests None declared.

Patient and public involvement Patients and/or the public were involved in the design, or conduct, or reporting, or dissemination plans of this research. Refer to the Methods section for further details.

Patient consent for publication Not required.

Provenance and peer review Not commissioned; externally peer reviewed.

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