

Project title: Understanding the sustainable processes and impact of engaging young people in a peer-led dance group, the TR14ers

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Background: Poor health clusters in economically disadvantaged communities. Children growing up in poverty are more likely to suffer poor physical and mental health as adults and are at increased risk of severe, long-term and life-limiting illnesses.¹ Interventions aimed at improving population health sometimes widen rather than address health inequalities, and populations that bear the greatest burden from chronic illnesses have historically been the least represented and considered to be the most difficult to engage in research, leading to a research inequality as well.^{2,3} There is a paucity of evidence for sustainable behaviour change programmes which engage and are effective across the socioeconomic spectrum.⁴

The TR14ers group emerged in 2005 from the C2: Connecting Communities process, begun in Camborne, Cornwall in 2004.^{5,6} Youth anti-social behaviour was one of the problems commonly reported by community members, which the young people blamed on the absence of activities for them in the evenings and holidays. An interest in learning hip hop dance was expressed by the young people and with the support of the Neighbourhood Policing Team at that time, the TR14ers were established. Since 2005, over 1,500 young people are estimated to have become TR14ers. In the early days the children were ashamed of living in Camborne and embarrassed to say they lived there. That is why they chose their post code in their name. Between 40 and 60 young people attend each week, and while there are a couple of staff members (coordination and dance tuition) and volunteers, instruction is provided by dance leaders who are members of the Group. Currently, those aged 10 years or older can become leaders, with the Group being principally self-organising.

Plain English Summary: Children living in poorer neighbourhoods are twice as likely to suffer from poor physical and mental health compared with children from more wealthy areas and these behaviours often last into adulthood. Although there has been a lot of research looking at different ways to involve children in activities aimed at supporting healthy behaviours, especially from poorer backgrounds there is very little evidence to show the best ways to interest young people in being more active and how to keep them interested in participating.

Camborne, West Cornwall, has high levels of poverty and in the past it has also had high levels of antisocial behaviour. The Police found that arresting more and more young people did not reduce antisocial

behaviour or tackle the causes of that behaviour, so they changed their response. When asked what it was like to live in Camborne young people spoke of having nothing to do and said they felt embarrassed about where they lived. When the Police asked what they would like to do young people suggested dance as an interesting activity. The first dance workshop was attended by 100 young people and over the last 15 years, more than 1,500 young people have taken part in dance sessions. The group, the TR14ers, is now led by the young people and is a registered charity.

This research looked at how and why young people engage with the group and measured some possible impacts of participation including how physically active the Group are, their nutrition knowledge, self-belief and mental well-being. Physical activity was measured over a week using wearable devices which measure how active a person is every few seconds during the day and night. 86% of TR14ers wore these devices for the whole time period. On average a TR14er member does moderate to vigorous activity for 43 minutes a day, which is similar to the national average. However, over three times as many TR14ers compared to nationally representative data from the Health Survey for England were undertaking at least 30 mins of moderate to vigorous physical activity each day. We looked at their diet, nutrition knowledge, emotional well-being, smoking and drinking behaviours and self-esteem using questionnaires. In each case the TR14ers had similar outcomes to the whole population of children and young people from national surveys. This is a significant finding, as based on their circumstances, it would be expected that the TR14ers would have poorer outcomes than the national average.

The young people helped us identify these possible impacts of being a TR14er as well as ways of taking these measurements. We talked to TR14ers, parent volunteers, people who lead and support the Group as well as people who have left the Group to better understand what being a TR14er means and its longer-term impact. People identified the Group as providing a culture of care, fun and support which led to increased confidence and self-esteem. The strong ethos of inclusivity and 'sense of family' are part of the TR14er identity. Working with the Group we have developed a full evaluation bid and several TR14ers have offered to become research ambassadors to support data collection and participation. This research has also been used by the TR14ers in the reports they need to write to their funders.

Scientific Summary

Background: Poor health clusters in economically disadvantaged communities and interventions aimed at improving population health sometimes widen rather than address health inequalities. There is a paucity of evidence for sustainable behaviour change programmes which engage and are effective across the socioeconomic spectrum. The TR14ers are a peer-led dance group which engage between 40-60 young people a week in dance in an area of high economic deprivation.

Aims and objectives: The overall aim was to collect baseline physical and psychosocial data, including co-creating an initial theory of engagement to inform a full evaluation of the impact of this group on young people's physical and emotional health.

Objectives:

- i) To collect process data to understand how and why young people participate in the TR14ers
- ii) To co-develop a logic model which accurately captures the processes of engagement and participation in the group and hypothesised short- and long-term outcomes
- iii) To co-develop valid, feasible and acceptable methods for collecting baseline process and outcome data on a sufficient number of TR14ers
- iv) To co-develop a full evaluation proposal, including identifying counterfactuals and routinely collected datasets for comparison

Methods: Mixed methods evaluability assessment, involving workshops with the TR14ers, physical activity and health and wellbeing data collection, identification of age appropriate national data sets for comparison and observations and interviews.

Results: Fifty-nine (92%) of the TR14ers who frequently attended the weekly meetings participated in the study and 20 of these meetings were observed. Fifty-one (86%) TR14er participants provided physical activity data across 8 days. The average time spent in MVPA was 43 minutes/ day and two hours in light activity. Data on food intake, health behaviours, nutrition knowledge, health, wellbeing and self-esteem were also collected. Results from appropriate ages were comparable with national averages, which is significant given the young people's circumstances. A logic model showing the form and function of the TR14ers was co-developed. Interviews with parents/ dance coordinators/ people who have left the TR14ers and two research workshops

with current members were held. These discussions illuminated themes of inclusivity, the TR14ers as a safe space, making new friends, role modelling inclusive behaviours, enjoyment and support, which people linked to their short-term outcomes of confidence, self-esteem and 'being healthy' and longer term outcomes concerning their wellbeing, employment and relationships with others.

Conclusion: The findings from this initial research support the need for a full evaluation of the TR14ers: The group identified short term outcomes and ways of collecting these which have been demonstrated to be feasible and acceptable. Initial outcome data suggests that participation in the Group is associated with better mental and physical health, when compared with national dataset compactors.

Study aims, objectives and research question: The overall aim was to collect baseline data, including developing a theory of engagement to inform a full research proposal to evaluate the impact of this group on young people's physical and emotional health.

Objectives:

- i) To collect process data to understand how and why young people participate in the TR14ers
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Methods: Mixed methods co-created approach to identifying and assessing health and wellbeing short- and longer-term outcomes associated with being a TR14er.

- i) Co-creation of a 'logic model' through observations of dance sessions, interviews with coordinators and evaluability assessment⁷ workshops with the TR14ers.
- ii) Process and outcome assessment –
Process evaluation: Observations of TR14er workshops and interviews with coordinators, parent volunteers and people who have left the TR14ers. Reflective diaries were used by the researchers to document their experiences and reflections.
Outcome assessment:
 - a. Physical activity assessed using GENEActiv⁸ wrist worn accelerometers for one week
 - b. Diet assessed on all participants aged 9 or over using the food intake questionnaire (FIQ)^{9, 10} (those aged 9 years and over)
 - c. Nutrition knowledge tests based on the United Nations Food and Agriculture Organisation (UN FAO) guidelines¹¹ (those aged 11 years and over)
 - d. Health Related Quality of Life assessed using the validated self-completion KINDL instruments.¹²
 - e. Self-esteem using the Adolescent Self-Esteem Questionnaire¹³ (those aged 11 years and over)
 - f. Smoking and alcohol consumption using the questions from the Health Survey for England¹⁴ (those aged 11 years and over)
- iii) Evaluation design for full proposal- TR14er evaluability assessment⁷ workshops to help the identification of possible counterfactual groups, feasible and acceptable study design and negotiate how young people might be involved in the full proposal.

Results: Ethics Approval for the research was obtained on October 5th 2018. All milestones and deliverables have been met and the key uncertainties addressed.

Baseline characteristics: Between September 2018 and March 2019 there were 116 registered TR14ers, 12 of whom were elite leaders and 14 recruit leaders (Appendix 2 – CONSORT diagram). Excluding those who rarely (3 or fewer sessions) attended where it would have been difficult for them to participate in the study left 64 potential study participants. Fifty-nine TR14ers participated in at least one aspect of the study. The mean age of participants was 11.00 years (standard deviation 3.16 years) and 81.4% of participants were female. Valid postcodes were provided by 57 of the 59, 22% of which were from non-TR14 postcode areas. In terms of area deprivation most participants were from decile 4 of the Index of Multiple Deprivation (IMD, range 1-7) and Income Deprivation Affecting Children Index (IDACI, range 1-8). Participants in the project included those who had been a TR14er for 8 years through to those who joined during the study period.

Twenty-five of the TR14ers participated in the first evaluability assessment workshop in October 2018. During this workshop we explored their experiences and the outcomes they reported from participating in the group. The TR14ers agreed with the outcomes we had ethical approval to collect and based on their suggestions we added the adolescent self-esteem questionnaire.¹³ Details of all the outcomes are provided below.

Physical activity outcomes: 51 TR14ers wore GENEActiv accelerometers continuously over an 8 day period (Friday-Friday). Average time in moderate to vigorous physical activity (MVPA) is 43 mins (5 mins to 100 mins per day) and mean light activity is two hours (45 mins to 3.8 hours per day). Appendix 3 includes two plots comparing the TR14ers physical activity data with data from the 2008 Health Survey for England when objective physical activity data was last collected from children.¹⁴ The first plot shows that across each day of the week the activity of the TR14ers is not statistically significant to the HSE data. However, when you compare the proportion undertaking 30 mins or more MVPA each day, over 60% of participants achieved this on 5 days of the week, while less than 20% of the HSE achieve that amount of physical activity on any day.

Food Intake Questionnaire and nutrition knowledge: 37 (88%) participants aged nine or over completed the FIQ for a weekday. On average, participants reported eating more healthy snacks than energy dense snacks and reported more positive food markers than negative food markers. Among the 20 participants aged over 11 years who completed a brief (5 question) test of basic nutrition knowledge (food groups, water consumption, sources of micronutrients and traffic light labelling), none answered every question correctly with the lowest score being 5 out of 16.

Health and Wellbeing: 50 (85%) of participants completed the age appropriate Kindl (3-6 years; 6-13 years; 14-17 years). The mean total health related quality of life was 69.64 (standard deviation (14.85) out of 100. Appendix 4 is a plot comparing the scores of those participants aged 11-17 years with the BELLA study¹⁵; the total score and sub-scores did not differ statistically. Twenty of the 30 participants aged 11 years or older also completed the Australian Adolescent Self-esteem questionnaire.¹³ Their mean score was 31.60 (standard deviation 11.61) and only two of the participants were identified as having a low self-esteem score defined as a score ≤ 17 , which in the validation study was indicative of a greater than 50% probability of having depression.¹³

Health behaviours (smoking and drinking): 20 TR14ers aged 11 and over (67%) completed questions taken from the Health Survey for England about smoking and alcohol consumption.¹⁴ The majority had never smoked (85%; 2 did not answer) and only one person reported having tried an e-cigarette. Five had tried an alcoholic drink (including alcopops; 1 did not answer): their first experience was aged ≥ 10 years and all five reported now only drinking a few times a year. These figures are similar or slightly better than the 2016 HSE figures.¹⁴

The second evaluability assessment workshop in February 2019 focused on the possible designs for the full evaluation. Consequently, only those who were leaders were invited to participate and 12 (50%) participated. The group reviewed the revised logic model (Appendix 5) and discussed the proposed controlled cohort study using local schools as control sites. We were also able to explore what was meant by 'improving confidence' among this group, which was the most commonly reported outcome, but difficult to measure.

Process evaluation: The process evaluation included observations of 20 Friday dance sessions; six parent/volunteers interviews, four interviews with people who have left the TR14ers (TR14ers alumni), two interviews with coordinators and three interviews with dance tutors. It also included findings from two workshops which were held to co-create and refine the logic model and develop the full funding proposal. The qualitative data supported the findings from the baseline measures as well as providing information on longer term impacts of participation.

The revised logic model is shown in Appendix 5. It depicts the activities of the Group in terms of their form and their function. There appear to be several key aspects of the formal running of the Group and the qualities of delivery which contribute to the overall ethos and culture of the TR14ers.

How the Group is run: The overall ethos for the Group is one of children's rights¹⁶ and the TR14ers are a means to give children and young people access to their social right to the best possible health. Ever since its

inception in 2005 the Group delivers the dance sessions free of charge; this ensures that no one is prevented from coming due for financial reasons and that children and young people can choose to attend each week. There is a sense that not charging for the sessions and not having membership terms and conditions creates a strong sense of ownership for the young people, that the TR14ers is 'theirs'.

The TR14ers are a registered charity (charity number 1128834) and a registered company (company number 06793947). All of the Charity trustees are also company directors – over half of whom are young people from the TR14ers. At the age of 15 years, TR14ers are invited to join the company directors training scheme, attend Board meetings and are offered a place on the National Citizenship Service residential course. At the age of 16 years they are appointed as director and trustee and have a full vote on the Board. This current structure creates responsive feedback loops, from the delivery of the dance sessions to the Board, allowing them to respond to changes in how the sessions are delivered (for example, trialling different rooms for different age groups) and whether additional funding is needed for extra activities.

The Charity currently has fixed running costs for venue hire, providing TR14er tee-shirts, dance tutors and statutory training. The Group are currently supported through BBC Children in Need, funding from 'I Will' and additional local fund-raising events. The Trustees and Coordinators spend a lot of time looking for funding opportunities and are seeking to find ways that they can be self-sustaining by developing a dance studio which can be hired out. Being financially self-sustainable would further support the strong identity about the Group being 'needed' rather than 'in need'.

There are nine volunteers (parents) who support the Friday workshops; all have first aid and safeguarding training. Parents/ carers bringing children for the first time can stay for the sessions if their child wants but once their child is settled, they drop them at the venue and leave. The volunteers, whilst not part of the dance delivery, observe the sessions, oversee the breaks and are 'trusted adults' who the children and young people go and talk to if something is bothering them.

Although there are no membership rules they have created a set of principles for being a TR14er and delivery of the sessions (Appendix 6). These principles were articulated in the workshops we ran and are embodied in the dance sessions.

They have developed a leadership framework which every member can become part of if they want to choreograph and lead dances; young people aged ten and over start as 'recruit' leaders and then can progress to 'elite' leaders and then dance tutors. This is a deliberate means of developing confidence and communication skills as well as encouraging the role modelling of inclusive and nurturing behaviours. Enabling the young people to become dance tutors who are paid also supports the group to become self-sustaining.

What it means to be a TR14er: There is a very strong collective identity associated with being part of the Group. The principles of inclusivity, support, encouragement and development were common themes expressed in the interviews:

"It's very important to engage with everyone, all the time. And seeing that person sitting in the corner, not engaging, checking out if they are alright. And it's fine if they are not dancing; for me, what's important is that they are there and that they are in that positive, safe atmosphere." [Coordinator 1]

"There's got to be a core ethos that every single person in that room is equal to the other; there's no-one better than the other. And that is what, I think, builds the confidence." [Coordinator 1]

This culture and leadership framework means that children and young people experience the Friday dance sessions as a safe and nurturing space which in turn creates confidence and self-belief. In the workshops the young people spoke of feeling able to identify and reject bullying behaviours at school and in friendship groups since becoming a TR14er, having a strong sense of their worth and confidence to try new activities and make new friends.

Volunteers, young people, dance tutors and previous TR14ers all identified the sense of belonging from being a TR14er which was repeatedly likened to being 'like a family':

"He feels safe. Nobody's judging him. He can go over and be with the older leaders and be part of the group. They don't say, go away you're little. They just encourage him in. He feels he's part of the family, he's blossomed into a leader." [Volunteer 2].

This sense of belonging also extends to the volunteers, several of whom, spoke about the effect the Group has had on them:

"I think it definitely makes me feel a bit more in touch with my community, ... Yes, I like it, I kind of get to see lots of kids and it's really nice, I think I'm such a familiar face now, a lot of the kids will come to me if they're feeling poorly or had a tough week or whatever." [Volunteer 1]

"So there were heartbreaks and stuff, they would whisper, can I talk to you outside? I never had thought of myself as being that kind of a person, I was not really one to suffer the heartbreaks myself – I'd be, oh it's finished, I'll move on – I'm quite like that with my emotions. But apparently I'm quite good at being the agony aunt. So I'm quite happy with that role." [Volunteer 3]

Impact of being a TR14er: It is clear that being a TR14er is more than learning and choreographing dance, although dance is the attraction for children and young people to engage with the group in the first instance. Many of the TR14ers spoke about their 'pre-TR14er' self, using words such as 'shy', 'lack of self-confidence', 'hiding in a corner', 'quiet' and 'self-conscious' and having few friends. They attributed being part of the TR14ers with having confidence, self-belief, having a voice and being heard as well as spending time practising dances and being conscious of looking after their body through drinking water and eating healthily.

"It's given me a lot of social skills. Because I used to be really quiet... having (name) as a mentor was a really positive influence, I could watch how (they) talk to people, how (they) lead people and I've been able to speak to parents' kids, adults..." [TR14er alumni 1]

Medium and longer term identified outcomes were literally a sense of participation in the Group being 'life changing'. Although this data is from a small group of 'ex-TR14ers', all were clear that the skills they had gained from being a dance leader as well as role modelling the behaviours that they had witnessed from the Coordinator and dance tutors led to their current employment opportunities and, in one case, was the reason they were able to reject being a gang member:

"I honestly would have been locked up if I didn't come to TRs, there's no doubt about it. It got me into teaching, it got me out of Cornwall, got me out of the situation of being around the gang as well and, well, helped me grow up, really.... Because I was teaching. I realised I was a role model." [TR14er alumni 2]

**[Dance coordinator] started helping me so much with my confidence. I went through a time when I was really really bad at talking to people ... having [them] there was a really positive influence, I could watch how s/he talks to people, how s/he leads people and I've been able to speak to parents' kids, adults that I used to go really shy at or people my age, I'd back away from and let someone else talk for a while."* [TR14er alumni 1]

In March 2019 we met with policy makers and commissioners from health and education at Cornwall Council to discuss our findings and future plans. Those present supported the work and the planned full evaluation and a discussion took place around how initiatives like the TR14ers can be recognised and supported in non-financial ways.

Conclusions and Recommendations: The findings from this initial research support the need for a full evaluation of the TR14ers: The group identified short term outcomes and ways of collecting these which have been demonstrated to be feasible and acceptable. Initial outcome data suggest that participation in the Group is associated with better mental and physical health when compared with national dataset compactors. Repeated measures are now needed to look at the effect of exposure over time and to compare the data with age and gender matched controls from the same area. The process evaluation data strongly resonates with the findings from an evaluation of Youth Work in Scotland.¹⁷ The research found patterns as to the delivery of working with young people such as providing a space to be heard; giving praise and encouragement; working effectively alongside others; practitioners as role models; having a trusted adult; developing long term relationships and inclusive practice. These were linked to positive impacts including confidence, Skills for life, feeling equal and included, new friendships, feeling safe and well, being able to lead and help others and get on with others.

Working with the TR14ers, we have been able to address all the uncertainties around a full evaluation and have support from the Group, the Board of Trustees and Public Health and Children's Services Commissioners from Cornwall Council to undertake one. A full outcome and process evaluation and Social Return on Investment will provide much needed evidence of how the conditions for young people's health and wellbeing can be created and sustained in communities.