



**University
of Dundee**

Sistema Scotland: Evaluation of Big Noise Douglas

Divya Jindal-Snape, Derya Asi, Anna Robb, Alexia Barrable, Christopher Murray, Eilidh Ross and Hailey Austin

2021



Contents

Acknowledgements	1
Executive Summary	2
Chapter 1: Introduction	7
1.1 Sistema Scotland’s Big Noise programme.....	7
1.2 Douglas community overview.....	7
1.3 BND provision before and during COVID-19.....	8
1.4 Aim and Objectives	11
Chapter 2: Methodology	12
2.1 Research design	12
2.2 Methods of data collection	12
2.2.1 Secondary dataset	12
2.2.2 Primary dataset	12
2.3 Research ethics.....	14
2.4 Data analysis	15
Chapter 3: Results	16
3.1 Profile of children and families engaging with BND.....	16
3.2 Incorporation of Sistema Scotland values in BND	16
3.3 Impact of COVID-19 on the BND programme	18
3.3.1 Change in programme delivery during lockdown	18
3.3.2 Change in programme delivery after schools reopened	19
3.4 Relationship between school and Big Noise.....	20
3.4.1 School professionals’ perspective	20
3.4.2 BND staff perspective	21
3.5 Children’s perspectives of BND	21
3.5.1 Appeal of the Big Noise programme	21
3.5.2 Structure and content of the programme.....	22
3.5.3 Relationship with music.....	23
3.5.4 The Big Noise environment (physical environment including reactions to noise levels).....	24
3.5.5 Relationships with others.....	26
3.6 Motivation of children to participate in BND	26
3.7 Children’s engagement and participation in BND	28
3.7.1 Participation in the BND programme and facilitators	28

3.7.2 Barriers to participation in the BND programme	28
3.7.3 Strategies to enhance participation in the BND programme	30
3.8 Impact of BND on Baby Noise participants	31
3.9 Impact of BND on P1-P6 children.....	31
3.9.1 Impact Pathway 1: Boosting engagement with learning and education	31
3.9.2 Impact Pathway 2: Developed and consolidated life skills	33
3.9.3 Impact Pathway 3: Securing emotional wellbeing	35
3.9.4 Impact Pathway 4: Building social skills and networks	36
3.9.5 Impact Pathway 5: Respite and protection	38
3.9.6 Impact Pathway 6: Developing as a musician	39
3.9.7 Impact Pathway 7: Encouraging healthy behaviours	39
3.10 Reasons for impact of BND on the children.....	40
3.11 Impact of children participating in BND on parents' involvement in their schooling and development	41
3.12 BND and the community.....	41
3.12.1 Awareness of community about BND: Perspectives of school professionals, BND staff and parents.....	41
3.12.2 Impact of BND on the community.....	42
3.13 Views of parents and children: In-depth case study interviews	42
3.13.1 Impact of BND.....	42
3.13.2 Feelings and Attitudes about BND	43
3.12.3 The role/influence of the staff.....	44
3.13.4 Impact of COVID-19	44
3.13.5 Suggestions for BND	44
3.14 Logic modelling of seven pathways to identify prospective impact.....	44
Chapter 4: Discussion and Conclusions.....	53
4.1 Profile of children and families engaging with BND and its inclusive approach	53
4.2 Robustness and adaptability of BND delivery during COVID-19.....	53
4.3 Relationship between the school and BND programme	54
4.4 Children's motivation to engage with BND and participation: Parents' and professionals' perspectives.....	54
4.5 Impact of BND: Baby Noise.....	54
4.6 Impact of BND: Children's perspectives	54
4.7 Impact of BND: In-school (P1-P3) and after-school (P3-P6) provision.....	55
4.8 Reasons for the impact of BND	56
4.9 Impact of BND on parental involvement.....	57

4.10 BND and the community.....	57
4.11 Recommendations.....	57
4.11.1 Strategic recommendations	57
4.11.2 Operational recommendations	58
References	59

Acknowledgements

We are grateful to all the evaluation participants; children, parents, school professionals and Big Noise Douglas (BND) staff who gave their time and insightful perspectives to ensure a rounded evaluation.

Thanks go to Andy Thorn (Head of Centre, Big Noise Douglas) and the BND team who made this evaluation possible by their ongoing endeavours in accessing participants and supporting with the collection of visual methods data.

Thanks also to the Big Noise Douglas Evaluation Group for their ongoing advice. Thanks, especially to Audrey May (Head of Service (Chief Education Officer), Children and Families Service, Dundee City Council) for her support with various aspects of the infrastructure that made virtual data collection in schools possible.

Thanks to Chris Harkins (Public Health Programme Manager, Glasgow Centre for Population Health) for sharing the evaluation documents from other Big Noise programmes.

We are also grateful to the Sistema Scotland team, especially Nicola Killean (Chief Executive) and David Sinclair (Head of Fundraising & Governance) for their excellent leadership throughout this evaluation.

Contact

Professor Divya Jindal-Snape
School of Education and Social Work
University of Dundee
May 2021

Email d.jindalsnape@dundee.ac.uk

Executive Summary

Sistema Scotland is a charity with the purpose of “supporting children, young people and families to realise their potential, improving lives and strengthening communities through music and nurturing relationships”. Sistema Scotland currently runs four Big Noise programmes across Scotland, including Big Noise Douglas (BND). BND was launched in September 2017 and works with children from the Douglas community of Dundee who attend the two local primary schools – St Pius X RC and Claypotts Castle Primary. At present, all (around 250) P1-P3 children and 92 P3-P6 children participate in BND. BND also has a Baby Noise, Nursery and Community orchestra provision. This report focusses on the in-school (P1-3) and after-school (P3-6) programme strands as well as Baby Noise. Please note that due to COVID-19 related restrictions, the provision was adapted for 2020 and 2021.

Sistema Scotland’s first three Big Noise programmes have been evaluated extensively by a partnership led by Glasgow Centre for Population Health (GCPH) and involving Audit Scotland, Education Scotland and Glasgow Caledonian University. Please refer to [Evaluating Sistema Scotland: initial findings report](#) (GCPH, 2015); [Evaluating Sistema Scotland: Big Noise Torry initial findings report](#) (GCPH, 2017); and [People change lives](#) (GCPH, 2019). The GCPH evaluation has established a high degree of consistency of outcomes across Big Noise programmes and outlines seven impact pathways and related logic models which are used within this evaluation of Big Noise Douglas.

This evaluation focussed on BND from 2017 to 2020; however, due to the massive impact of COVID-19 on everyone’s life over the past year, participants mainly focussed on BND provision in 2020. This was also influenced by data collection being conducted between October 2020 and February 2021, a particularly challenging period during which to gather data due to pandemic restrictions. Some of the journeys of children and families from 2017 to 2020 have been captured in Section 3.13 as in-depth interviews were conducted with families.

This evaluation aimed to investigate the impact of BND on children, parents and the community. The specific evaluation objectives were:

1. To develop a profile of children and families engaging with BND
2. To explore children’s perspectives of BND
3. To explore parents’, school professionals’ and BND staff’s perspectives of the impact of BND on the child, family and community
4. To map the impact of BND using the seven pathways identified by Glasgow Centre for Population Health (GCPH) and identifying prospective impact
5. To explore the robustness and adaptability of the delivery of the BND programme during the COVID-19 lockdown

The strength of the evaluation is that it collected data from multiple sources (children, parents, school professionals and BND staff) and used multiple data collection methods (observations, visual methods, interviews, focus groups and online questionnaires). See Table 3 for more information.

Results

Delivery and Reach of the Programme

1. BND is delivered in an area which has been identified to be more deprived in most domains than other areas in the East End region of Dundee and Dundee city. It is an inclusive programme from recruitment to participation and membership is reflective of the eligible children in Douglas (see Sections 3.1, 3.2, 3.7, 3.13).
2. During COVID-19, BND staff remained creative, adaptable, resilient, and ensured participation of all children, despite the restrictions imposed by the pandemic. Children had equitable access to the instruments which they took home. A majority of participants were positive about the provision (Sections 3.3, 3.13).
3. A majority of school professionals, especially those whose classes are receiving/have received in-school provision, and BND staff reported that there was a strong relationship between the school and BND (Section 3.4).

Perceptions and interest in Big Noise in the community

4. Children were motivated to participate in BND by the following factors: to have fun, interest in music, to be part of a group, their parents' encouragement, their friends taking part and good relationships with staff. Further, BND was seen to provide a safe space and nutritious food (Sections 3.6, 3.13).
5. A majority of children were positive about BND. The appeal of BND was linked to the musical instrument they were playing, good relationships with staff, being with friends and the nutritious snacks they had before starting the session. A small number did not like being at BND due to the loud noise, behaviour of some children and uncomfortable chairs (Sections 3.5, 3.13).

Impacts of Big Noise Douglas

6. This evaluation highlights that BND is having positive impacts on children, families and the community.
7. Babies/toddlers interacted well with music and the musician. Further, music acted as a mediator for positive parent-child interaction (Section 3.8).
8. Most participants said that BND had an impact on parents' involvement in their child's development and with BND, especially during lockdown (Sections 3.11, 3.13).
9. BND was creating community spirit and cohesiveness with a sense of ownership and pride in children's achievements (Sections 3.12, 3.13).
10. The impact of BND was seen to be due to children having opportunities to express themselves, learn new skills in a fun and safe environment, creativity, enjoyment, access to resources and the positive relationships with BND staff (Sections 3.10, 3.13).
11. BND played a special role in supporting children and families during the pandemic, often providing the only normality in their lives.

12. Seven impact pathways have been modelled for BND consistent with the impact pathways developed for other Big Noise programmes by GCPH. This evaluation has found that the *pathways to impact and impact indicators are robust overall and provide confidence in BND's impact over its first three years and potential for further impact in the future* (Sections 3.9, 3.10, 3.13).
13. After three years of BND delivery, the impact pathways suggest that *BND is impactful in a majority of areas* (across all seven impact pathways) for at least some of the children and in some cases for all or most of the children. In particular, a majority of all adult participants agreed to the impact related to:
- Pathway 1 – Boosting engagement with learning and education, mainly in the context of enhancing children's determination, communication skills, motivation, listening skills, concentration in class, understanding skills, and oral skills
 - Pathway 2 – Developing and building life skills, including improved collaboration and co-operation skills, team working and creativity
 - Pathway 3 – Securing emotional wellbeing, including improved happiness and enjoyment, building better positive/trusting relationship with adults, increased self-control and sense of security
 - Pathway 6 – Developing as a musician, which includes enhanced creativity, instrumental and musical skills, self-confidence and performance skills

Although children were not asked the directly about BND's impact, children's drawings provide some examples of the seven impact pathways, namely, boosting engagement with learning and education, especially in the context of music (Pathway 1), developing and building life skills (Pathway 2), securing emotional wellbeing (Pathway 3), building social skills and networks (Pathway 4), respite and protection (Pathway 5), developing as musicians (Pathway 6) and encouraging healthy behaviours (Pathway 7).

14. The logic models were able to highlight the positive trajectory and impact of BND across *all seven impact pathways* (see Section 3.14). They were also useful in highlighting areas that need more consideration.

Illustrative images and quotes



Their experience of Big Noise in school from Nursery to P3 (motivates them to attend). In particular, their experience of the Big Noise staff. For many of our children, the chance to be in a warm, safe place, with a healthy snack, and surrounded by positive, supportive and consistent adults is a key attraction. (BND staff)

He's a lot more confident... grown as a boy... Before Big Noise... didn't make friends easy, he didn't mingle easily, whereas now that he's at Big Noise, he'll speak to anybody that speaks to him... In his classroom he's made more friends... speak(s) more in the class. (Parent 5, Interview child attended BND since 2017)

Children engage well in classroom sessions and some children who find learning tricky, readily join in and have a sense of achievement. (Depute Head Teacher, School A)

I have had children in my class who benefit from the social and the musical nature of the after school club. It makes the children feel part of a team, which is so important for so many of our kids. A sense of belonging! (Teacher, School A)

(Future job) Maybe in an orchestra... Because if I didn't it would feel like a little bit of a waste of a talent. (Child 3, Interview, child attended BND since 2017)

... for parents... who couldn't even afford to feed their child they could send them and know that they got their dinner and that they were with their friends ... you know that that's probably gonna be their only meal (Parent 1, Interview)

BN have been very proactive at promoting themselves in the school and community. I don't believe they can do any more. (Head Teacher, School B)

Conclusion and Recommendations

As outlined above, the evaluation highlights that BND is having positive impacts on children, families and the community. The views of what proportion of children have been impacted differs within and between stakeholder groups. This might be a limitation of the timing of the evaluation being conducted at the height of the COVID-19 pandemic and resulting in all data being collected at a distance by the evaluation team. Further, it is recognised that the evaluation was ambitious in seeking views about all impact pathways and indicators, when certain groups may have been unable to comment on them. This might be reflected in a large number of participants, especially school professionals, choosing 'don't know' in response to several impact pathways and the component impact indicators.

Strategic recommendations (see 4.11.1)

1. **Big Noise Douglas and its extension:** Big Noise is well-embedded in the two primary schools and given the focus on future outcomes for children, it is recommended that the provision is extended to young people of secondary school age.
2. **Raising communities' awareness:** More steps need to be taken to raise the communities' awareness of BND, beyond the immediate primary school community.
3. **Establishment of baseline:** To ensure robust measurement of changes and impact in future evaluations, it is important to establish a baseline for core indicators of impact before children start participating in BND or when they move from one provision to another.
4. **Longitudinal evaluation:** A longitudinal, ongoing evaluation is required to be able to see impact over time and to be able to unpack the predicted pathways to impact, any gaps and where programme changes are required. Further, this longitudinal evaluation should explore the impacts beyond the provision to determine whether impacts and projected outcomes are maintained beyond the life of BND. The impact on Baby Noise parents' wellbeing should also be evaluated as the sessions were found to be benefitting the parents who might otherwise be isolated.

Operational recommendations (see 4.11.2)

1. **Mode of delivery:** The BND programme should continue to be delivered using a range of delivery methods.
2. **Curricular links:** Clearer links should be made between the curriculum and the BND programme. Further consideration should be given to the co-creation of educational resources that can be used across the school and BND provision.
3. **Communication:** Effective communication and feedback loops are required between children, parents, school professionals, and BND staff about children's progress across the school, home, community and BND programme. This might provide more insights into the impacts and any need for (or impact of) differentiated learning provision.
4. **Needs assessment and training:** Training should be provided to BND staff as relevant, to improve their understanding of the additional support needs of children.

Chapter 1: Introduction

1.1 Sistema Scotland's Big Noise programme

Sistema Scotland is a charity with the purpose of “supporting children, young people and families to realise their potential, improving lives and strengthening communities through music and nurturing relationships”. Sistema Scotland currently runs four Big Noise programmes across Scotland in Raploch, Torry, Govanhill, and Douglas. Sistema Scotland launched its first orchestra centre in Raploch in 2008.

Big Noise Douglas (BND) is Sistema Scotland's fourth programme. It was launched in September 2017 and works with children from the Douglas community of Dundee, most of whom attend two local primary schools – St Pius X RC and Claypotts Castle Primary. The programme began by working with children in P1-3 at both schools – approximately 270 children and expanded this number to include another 150 children attending the nurseries at both schools. The after-school programme began in April 2018 with 52 P3 children out of a possible 87 (60%) from both primary schools. Baby Noise also began around the same time. BND is delivered by Sistema Scotland in partnership with Optimistic Sound and Dundee City Council, and with the support of Strategic Partner Gannochy Trust and a range of other trusts, foundations and individuals.

1.2 Douglas community overview

BND is based in Douglas which is one of the six areas in East End of Dundee (Figure 1).

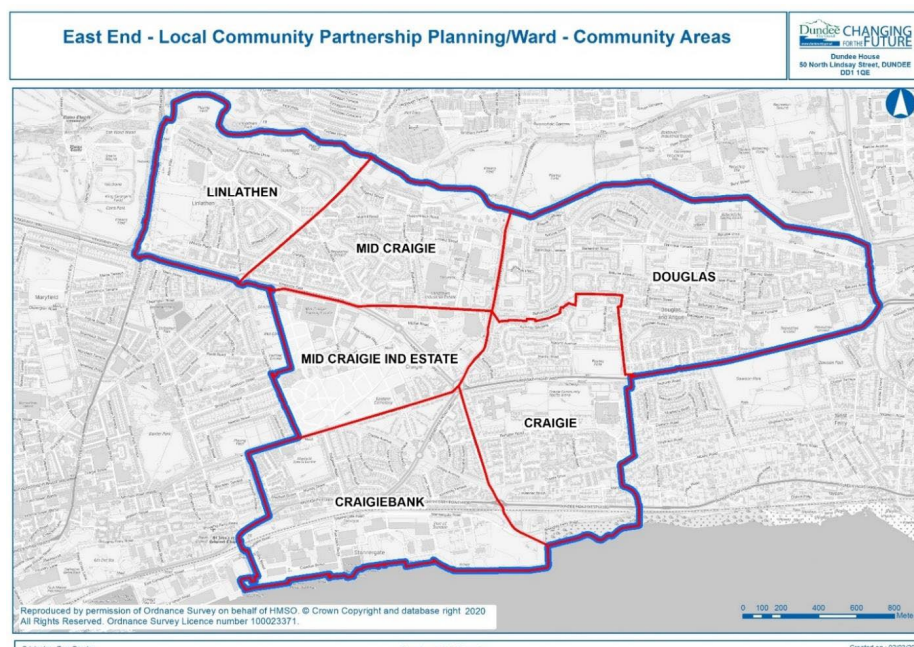


Figure 1: DCC Information and Research Team, SIMD profile 2020

It has a total population of 6,733 with 1,422 (21%) in the age group of 0-15 years. In 2020, 10.9% of its population (12% of 0-15 year old) were living in data zones ranked in the 5% most deprived and 88% (91.4% of 0-15 year old) in data zones ranked in the 20% most deprived areas (East End Local Community Planning Partnership report, 2020). As can be seen from Table 1, Douglas is an area which is more deprived than other areas in the East End (apart from employment and income deprived, and crime domain) and Dundee (in all domains apart from crime).

Table 1: Percentage of the population in the 20% most deprived in:

	Douglas	East End	Dundee
Health domain	88%	70.9%	36.6%
Education domain	88.5%	71.7%	47.3%
Employment domain	80.1%	69.6%	36.4%
Employment deprived	17.8%	18.1%	12.4%
Income domain	88%	76.33%	36.6%
Income deprived	24.9%	25.3%	16.4%
Housing domain	59.7%	47.5%	45.5%
Crime domain	22.5%	30.9%	33.1%

1.3 BND provision before and during COVID-19

This evaluation took place during the ongoing COVID-19 restrictions (Figure 2). BND delivery was completely re-designed to continue with the provision of BND programme during lockdown and reopening of schools with social distancing measures. Although the evaluation was designed to cover evaluation participants' perspectives of the programmes from inception in 2017 to current date, the pandemic and its substantial impact on people's lives, school closures and adapted delivery seemed to be at the forefront of their minds. It is, therefore, important to note that most of the data reflect BND programme strands and their impacts in 2020. Further, due to the speed with which BND staff adapted delivery during lockdown and subsequently after schools were reopened under social distancing measures, participants compared the pre- and post-COVID delivery rather than no-delivery and online/socially distanced delivery. Table 2 highlights BND programme strands and how they changed to accommodate the pandemic and government guidance.

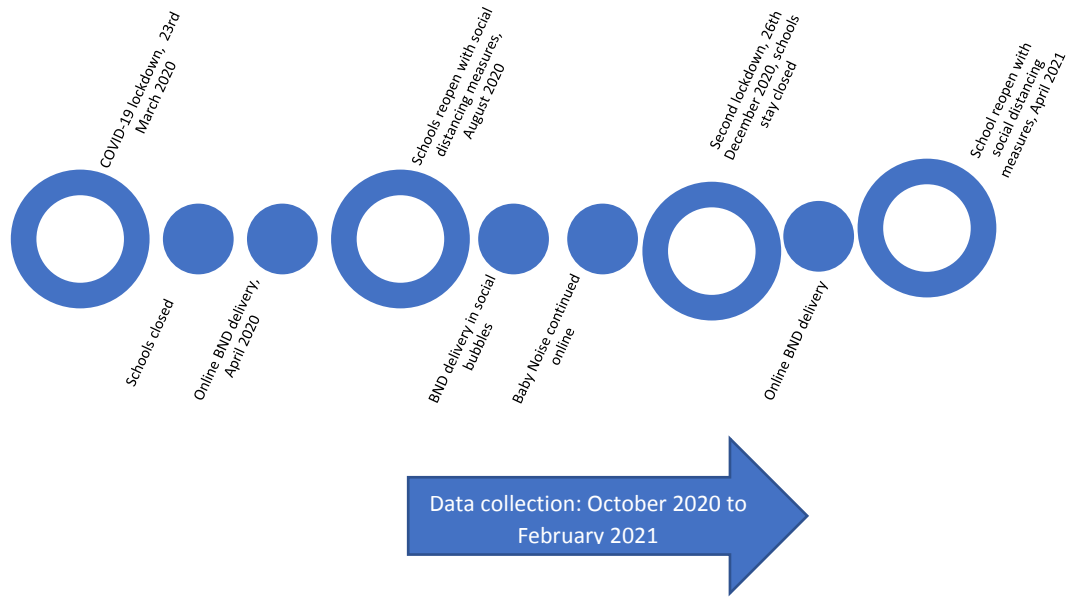


Figure 2: Timeline of COVID-19 school measures and mode of BND delivery

Between June 2019 and February 2020, BND provided 23 different opportunities for children to participate in performances which included sharing with parents, at a community event in Douglas, head teachers' conference, festival in Dundee and Christmas concert. Further, 50 children and families went to watch the LA Philharmonic and Gustavo Dudamel live at Tynecastle Park, Edinburgh in August 2019 and 37 children went on a holiday club trip to Auchingarrich Wildlife Centre in July 2019. Baby Noise parents went on a trip to Dundee Contemporary Arts. Due to COVID, all these activities had to stop (although summer club provision in July 2020 included special online concerts from members of the Scottish Chamber Orchestra) and none of the previous ones were mentioned by the evaluation participants. A Facebook live Christmas concert was organised in December 2020.

Table 2: Modes and format of BND programmes

Timeline	Baby Noise	Nursery	In-school	After-school	Community orchestra
Pre-COVID (as of 1st March 2020) Programme all delivered in person	<ul style="list-style-type: none"> Once per week x 45 minutes- babies' group Once per week x 45 minutes- toddlers' group Joint break, tea/toast, social time 	<ul style="list-style-type: none"> All nursery children 1 x 20 minutes session/ week at St Pius, and every fortnight at Claypotts. 	<ul style="list-style-type: none"> All P1-P3 2 x 30 minute sessions/week for P1 2 x 45 minute sessions/week for P2 and P3 	<ul style="list-style-type: none"> Monday to Thursday, 3.15pm - 4.45pm Children split into three orchestras: <ul style="list-style-type: none"> King Penguin Orchestra (mainly P5), Tuesday to Thursday Rockhopper Penguin Orchestra (mainly P4), Monday to Wednesday Snares Penguin Section (for deaf children), Wednesday with BSL support Children from both schools collected from class and taken to the Claypotts school hall <ul style="list-style-type: none"> offered a snack (fruits & vegetables) sessions included orchestra and sectionals split by instrument, general musicianship and choir 	<ul style="list-style-type: none"> Launched at the community centre in January 2020 Weekly session
Lockdown 1 (March – Summer 2020)	<ul style="list-style-type: none"> Continued online from April 2020 	Paused	Paused	<ul style="list-style-type: none"> All offered a 1:1 or paired lesson and online group sessions Pre-recorded video content shared with all Next year-group recruited and started digital sessions (Macaroni Penguin Orchestra – P3) Summer club sessions were digital; included music, crafts, games, some sports etc. Doorstep visits and garden lessons were offered to all participants, targeting priority families in particular Activity packs sent out Weekly lessons at Claypotts hub for keyworkers' and vulnerable children from <i>across the East End</i> for 5 weeks during the summer holiday 	<ul style="list-style-type: none"> Offered weekly digital session
September to December 2020	<ul style="list-style-type: none"> Weekly online session Face-to-face sessions resumed for 3 weeks in December 2020 	<ul style="list-style-type: none"> No face-to-face delivery but weekly videos shared 	<ul style="list-style-type: none"> In-person delivery resumed w/b 7th September 2020 1 x 30 minute session/week/school Similar content but no singing or string instruments could be played 	<ul style="list-style-type: none"> All children invited to attend one face-to-face and one digital session per week Face-to-face sessions split by class bubbles with no mixing Parallel sessions ran at both schools with 2 metre physical distancing in place whilst playing their instruments. 	<ul style="list-style-type: none"> Continued with weekly digital session

1.4 Aim and Objectives

This evaluation aimed to investigate the impact of BND on children, parents and the community. The specific evaluation objectives were:

1. To develop a profile of children and families engaging with BND
2. To explore children's perspectives of BND
3. To explore parents', school professionals' and BND staff's perspectives of the impact of BND on the child, family and community
4. To map the impact of BND using the seven pathways identified by Glasgow Centre for Population Health (GCPH) and identifying prospective impact
5. To explore the robustness and adaptability of the delivery of the BND programme during the COVID-19 lockdown

Chapter 2: Methodology

2.1 Research design

A mixed methods approach was used to collect both quantitative and qualitative data. Data were collected from multiple sources using data collection methods considered to be the most suitable for each participant group.

2.2 Methods of data collection

2.2.1 Secondary dataset

Dundee City Council and BND datasets were used to provide an overview of the area and programme. The purpose was to establish whether BND was reaching the children and families it aimed to reach.

2.2.2 Primary dataset

Primary data were collected from four participant groups who were closest to the BND programme, namely children, their parents/grandparents, school professionals and BND staff (see Table 3). A purposive sampling technique was used, and all participant groups were invited to participate in the evaluation.

Table 3: Participants, sample size and methods of data collection

Programme	Participants and sample size	Methods of data collection
Baby Noise	Mothers and babies; two pairs and one triad	Observation; two half hour sessions each; one session per pair/triad
P1-P6 (in-school and after-school)	Children; n=75	Visual method and focus group
	Children; n=6	Interview
	Parents; n=9	Questionnaire
	Parents; n=2	Focus group
	Parents; n=5	Interview
	School Teachers, n=20; Head Teachers/Depute Head Teachers, n=4)	Questionnaire
BND staff; n=14	Questionnaire	

2.2.2.1 Baby Noise

Three mothers were observed with their children who were between six months and 24 months old. The Parent-Infant Interaction Observation Scale (PIIOS) indicators were used as a general framework to observe the interactions during the online Baby Noise sessions (Svanberg, Barlow, and Tigbe, 2013).

2.2.2.2 School children (P1-P6)

Data were collected about the impact of BND on school children through various data collection methods (see Table 3).

Visual methods with children

A visual method based on creative approaches was used to listen to the voice of children in the age range of 5 to 11 years (Herd, Jindal-Snape, Murray, & Sinclair, 2020; Jindal-Snape, 2012). Due to COVID related restrictions, the research team connected online during these sessions. However, data were collected primarily by the BND staff.

A workbook and video were created, which provided guidance on the completion of worksheets (Figure 3). The comic was introduced by a comics creator and her assistant Caticorn, an anthropomorphic character created by children in the Dundee Comics Creative Space. The words in the comic were kept simple for younger children who may not be able to read. There were three worksheets featuring Caticorn asking the children three questions: What do you LIKE BEST about Big Noise?; What DON'T you like at Big Noise?, and How do you FEEL at Big Noise? They were asked to draw and write something that showed their views about BND.



Figure 3: Comic explaining the process

Online paired and focus group interviews were conducted with children for elaboration of their drawings. Due to constraints of undertaking them online, a detailed dialogue was not possible and the children presented their drawings one at a time. It is important to note that we could establish that children had not been influenced by BND staff during the drawing process as they were able to explain their reasons for their drawings.

Interviews with children

Six children were interviewed at the same time as their parents. An interview schedule was used that focussed on the following themes: questions about musical instruments they played, their views of BND and its impact, impact of Covid-19 on BND programme delivery and any suggestions for BND.

2.2.2.3 Parents

Parents' questionnaire¹

An online questionnaire was used which had five strands: (i) demographic information, (ii) their child's participation in BND, motivation to participate, impact of BND on the child (across 7 pathways of impact) and on their future, reasons for BND's impact, facilitators and barriers to participation; (iii) BND's impact on the parents' involvement with their child, school and the community; (iv) BND's impact on the community; and (v) impact of COVID on the BND programme and its effectiveness. The questionnaire included closed and open-ended questions. Most closed questions were followed by open-ended questions asking for examples or reasons for their views.

Parents' interviews and focus group

Although a number of focus groups were arranged, only two parents participated in one focus group. Similarly, although seven in-depth family interviews were arranged, only five parents participated. They lasted from one hour to one and a half hour. Some parents had multiple children participating in BND and they responded to the questions for each child. The questions focussed on the same themes as the parents' questionnaire but provided a forum for more discussion and probing, leading to very rich data being collected.

2.2.2.4 School professionals' questionnaire

The school professionals' questionnaire included the same strands as the parents' one, as well as initial questions about their role, class and school, and an additional question about relationship between the school and BND.

2.2.2.5 BND staff's questionnaire

The BND staff questionnaire was similar to that of the parents and school professionals, apart from asking them additional questions about Sistema values, similarities, and differences between BND and the other three Big Noise programmes.

2.3 Research ethics

University of Dundee's Research Ethics Committee approved the study. Age-appropriate participant information sheets for children were created. Active informed consent was obtained from children and their parents prior to the start of the evaluation. Although all P1-P3 school children participated in the visual methods activity, data could only be used for those whose parents gave written consent. Ongoing informed consent and assent was gauged throughout and if it appeared that children were no longer interested in participating in the interviews/focus groups, data collection was stopped. BND staff were also reminded of this for the visual methods sessions.

The participant information sheets for the parents and two professional groups were included at the start of the online questionnaire and they were asked to indicate their consent before responding to any questions. During interviews and focus group, parents and children were reminded of voluntary participation and their right to withdraw at any time. Their consent was audio recorded.

All data were stored within University of Dundee's secure online facility in line with its data protection policy.

¹ Questionnaires and interview schedules were based on GCPH's interview questions to ensure that we could create a logic model based on the seven pathways of impact they had identified at other Big Noise centres.

2.4 Data analysis

2.4.1 Visual methods

Each comic was examined and written notes detailing the words and pictures were recorded on an Excel spreadsheet. These notes were compared to the interview/focus group data to ensure accurate interpretation of children's drawings. Data were analysed thematically by age/stage. To ensure anonymity the following age groups were created: 4-6 years (P1-P2), n=27; 6-9 years (P3-P5), n=39; 9-10 years (P6), n=9. Themes were coded and then recorded in terms of the frequency of appearance in the data.

2.4.2 Interviews and focus groups

All data were transcribed by a confidential, professional transcription service. Thematic analysis was conducted in order to reveal emerging themes embedded in the datasets (Braun & Clarke, 2006). A coding framework was developed based on identification of themes and subthemes. Illustrative quotations have been used in the results chapter to provide the authentic voice of the participants (including from questionnaires).

2.4.3 Questionnaire

Quantitative data were analysed using descriptive statistics, and thematic analysis was undertaken of qualitative data as above.

Chapter 3: Results

3.1 Profile of children and families engaging with BND

All Big Noise programme strands aim to support children, young people, families and communities in Scotland to sustain and improve their wellbeing, resilience and learning, and to strengthen networks by targeting long-term, immersive support in communities of greatest need. All (around 250) P1-P3 children in the two Douglas primary schools, Claypotts and St Pius X RC, receive the in-school Big Noise Douglas (BND) programme; however, enrolment in the P4-P6 after-school programme is optional. The current enrolment in the after-school programme is 92 pupils (see Table 4). The demographics of BND participants, in the main, reflect those of pupils eligible to participate. This highlights that BND is an inclusive programme and is reaching the children and communities it has set out to include in its provision. As will be seen later, primary data from all participant groups suggest that BND staff proactively work to remove any barriers to participation (see sections 3.2 and 3.7 for some examples).

3.2 Incorporation of Sistema Scotland values in BND

BND staff were asked to indicate whether and how BND was embedding the values and aims of Sistema Scotland. Thirteen BND staff responded and highlighted that they incorporated Sistema Scotland values in BND and that they were pervasive in everything they did. These values included: (i) building positive, respectful and empathetic relations with children, families, schools and communities, (ii) bespoke provision that is adapted to a child's needs, leading to (iii) inclusive practices, and (iv) a holistic experience for the child, and (v) empowerment of the Douglas community.

The values are embedded from top to bottom - our teaching curriculum is build (sic) around these values... we work hard to build relationships with whole families, through regular, positive communication, and offers of flexible support and bespoke solutions ... (BND staff)

Most obvious value is inclusion and equality... BND is very inclusive, we try to model the programme on what the kids need so we can help every child, we have a programme for deaf children as well because we realised we weren't meeting their needs before. (BND staff)

They credited it to the structure of the team (Sistema Scotland and BND), staff, training opportunities and support for staff from Sistema Scotland and other Big Noise programmes.

Ten staff discussed the similarities and differences between BND and other Big Noise programmes. A majority believed that similarities came from Sistema's value base and ethos, but some said that also led to some differences as adapting to their local community's needs is important to them. The BND staff also reflected on the learning and support they accessed from other Big Noise programmes and how it provided them with insights into how to embed the values and provide an inclusive and responsive service.

Table 4: Profile of P4-P6 pupils from two schools and attendance at BND after-school club at October 2020

	All Douglas Pupils (P4 – P6)	Current Attendees of BND ²	Former Attendees of BND ³	Observations
Total	246	92 (37%)	82 (33%)	Over a third of the eligible pupils currently attend.
Male	128 (52%)	34 (37%)	44 ⁴ (54%)	More females than males currently attend, and males are more likely to stop attending.
Female	118 (48%)	58 (63%)	37 (45%)	
Ethnicity (White; Scottish/British)	215 (87% of all Douglas P4-P6 pupils)	77 (84%)	73 (89%)	The ethnicity of participants reflects that of those eligible to participate.
English as main language	227 (92% of all Douglas P4-P6 pupils)	81 (88%)	75 (91%)	Main language of the participants reflects that of those eligible to participate.
Eligible for Free School Meals (P4 – P6)	109 (44% of all Douglas P4-P6 pupils)	43 (47%)	27 (33%)	Participants' eligibility for free meals reflects that of those eligible for free school meals.
Looked After	<5%	Consistent	Below Consistent	Participants are representative of the overall LAC demographic in Douglas, with a slight increase in the intake from last year.
Additional Support Needs	104 (42%)	38 (41%)	35 (43%)	Percentage of participants with additional support needs reflect those who are eligible to participate.
ASN Attendance 2020	90.7%	90.8%	91.3%	School attendance of participants with additional support needs reflects those of pupils who are eligible to participate.
SIMD 1-2	224 (91%)	83 (90%)	68 (83%)	Percentage of participants living in SIMD 1-2 reflects those of pupils who are eligible to participate.
Attendance in 2020	91.6%	92.8%	92.4%	School attendance is slightly higher among current and former participants.
Unauthorised Absence	2.5%	1.4%	1.8%	Unauthorised absences are low among BND participants.

² Those still engaging in after-school at October 2020 (some will have been doing so since 2018)

³ Those who have engaged at some point in the three years prior to 2020 but stopped participating

⁴ One pupil's data not known or they did not have a binary identity

3.3 Impact of COVID-19 on the BND programme

This section highlights the planning and preparation for changes to BND programme delivery over COVID-19 lockdown and on the subsequent re-opening of schools under social distancing measures (Table 5; see also Table 2).

3.3.1 Change in programme delivery during lockdown

The programme delivery continued throughout lockdown using an online platform. BND staff reported the quick but thorough planning they did for online delivery of the programme (see Table 5).

Table 5: Planning and preparation for delivery during lockdown

Theme	Purpose	Actions	Outcomes
Communication and engagement with families	To inform of online programme delivery	Communicated intention of providing online sessions when lockdown started	Better relationships with parents
		Checked that families had access to IT devices and mobile data, and offered support if required	
	Scheduled one-to-one lessons		
	Ongoing engagement with families	Set up a Facebook group for ongoing communication	Better relationships with parents
Engaging children	To engage children and to provide flexibility to watch instructional videos at any time	Made videos, including creating a Vimeo channel	
	To provide ongoing music lessons	One-to-one lessons	Some children flourished but a minority felt isolated due to lockdown Provided normality, routine and structure to the day Reduction in number of lessons compared with full programme delivery
	To give opportunity to socialize with other children	Set up an orchestra session	Provided opportunities for children to engage with peers
		Online sessions like games, drama, arts and crafts in summer	Provided normalcy and opportunities for play
Safeguarding and safety	To ascertain safeguarding during online delivery	Wrote protocols for safeguarding	No safeguarding issues were reported
	To ascertain technology that was most GDPR friendly	Vetted different video calling applications	No safeguarding issues were reported
Technology	To ascertain optimum and inclusive delivery	Tested a range of technological options	Zoom was chosen. No problems were reported

This mode of provision over lockdown changed the frequency of delivery (reduction) and group sizes (one-to-one sessions in the main with some group sessions). Both advantages and disadvantages were noted. BND staff were seen to be creative, adaptable and keen to carry on with the values of inclusiveness and accessibility.

Advantages

The main advantages were related to: (i) this was the only provision that was available during lockdown and summer holidays, (ii) one-to-one sessions suited some children, especially by removing the 'stress of a big noisy group', (iii) children flourished and grew more confident in reading and learning music, (iv) provided some 'normality' and structure to their day, (v) led to improvement in interaction with, and involvement of, parents.

BND were superb through lockdown - gifting instruments and technology (with support from school) so children could access learning at home virtually. Some musicians even played in the garden. (Head Teacher, School A)

Covid had its affects (sic) on (child's name) and so having big noise still there supporting her in every way has definitely brought her a smile, the online sessions have greatly benefited her... These lessons have been a godsend and I pray they continue. (Parent, School A)

Disadvantages

The disadvantages were related to (i) reduction in opportunities for socialisation as a result of one-to-one sessions, (ii) losing the feel of being in 'BND physical space', and (iii) drop in participation rates of some children.

3.3.2 Change in programme delivery after schools reopened

After the schools re-opened, the sessions had to be delivered in small bubbles in line with COVID restrictions and schools' risk assessment. The participants reported that BND programme and staff were adaptable and were able to deliver effective sessions.

Advantages

The following advantages of working in small bubbles were noted by different participants: (i) children continued to receive music lessons in an inclusive manner, (ii) smaller group sessions were of benefit to some children, (iii) the shorter sessions engaged children throughout, (iv) the lessons were more focussed, and (v) clearer communication of learning intention to the class.

Disadvantages

The following disadvantages of working in bubbles were noted: (i) children were not able to meet children from the other school as well as some children from their own school, (ii) social distancing and staff wearing masks during sessions placed restrictions on how BND staff could interact with the children, including inability to use some musical instruments, and (iii) reduction in number of sessions for each child.

3.4 Relationship between school and Big Noise

3.4.1 School professionals' perspective

Most school professionals highlighted that the relationship between their school and BND was strong with the large majority (19 out of 24) choosing points on the scale between 7 to 10, with an overall average of 7.5 (Figure 4).

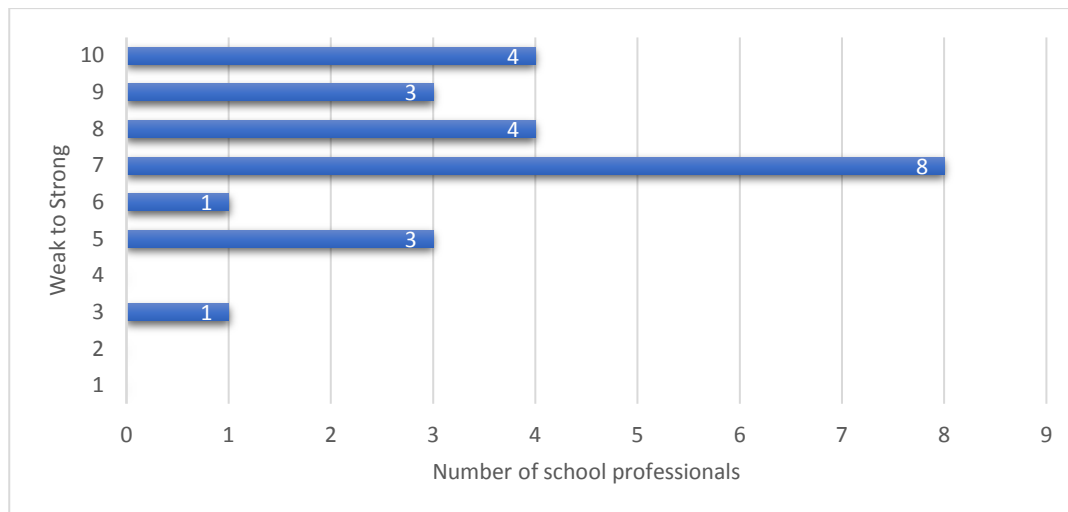


Figure 4: Relationship between school and Big Noise: School professionals' perspective (1 is very weak and 10 very strong; Mean 7.46)

More school professionals indicated the relationship was strong when their class/school had received in-school provision rather than after-school provision. This was the case for teachers whether their classes had participated in 2019 (n=14 in-school, n=9 after-school, chose 7 and over) or in 2020 (n=16 in-school, n=8 after-school chose 7 and over). This is not surprising as teachers are more likely to work with BND staff during in-school provision.

When asked if they would like to see any changes, more professionals whose class/school were eligible to receive after-school provision, responded in the affirmative than those whose class had received in-school provision in the two years. (Please note that as both schools receive in-school and after-school programmes, there was overlap in some respondents.) Of the 24 school professionals, nine made suggestions for improvement of this relationship and/or in the delivery of BND. These were related to: (i) better and effective communication to ensure better links with curriculum and learning experiences in and out of school (n=9), (ii) timely communication if anything changes (n=1), (iii) one point of contact in the team that teachers can communicate with (n=1), (iv) improvement in behaviour management in the afterschool club (n=1), and (v) returning to whole-school concerts after COVID restrictions were lifted.

Continue to develop working partnerships and curriculum links between class teachers and Big Noise musicians. This was at the beginning stage before lockdown. (Depute Head Teacher, School A)

Links to curriculum, dialogue with class teacher to support learning. (Teacher, School B)

3.4.2 BND staff perspective

Eleven BND staff members provided their views (some multiple views) on what was important to establish a strong relationship with schools to promote, encourage and implement Big Noise. These included importance of: (i) ongoing, effective and open communication, and good relationship with teachers and *all* staff (n=8), looking for opportunities to support schools with their events, such as ceilidhs (n=3), (iii) building relationships through BND concerts (n=2), (iv) supporting teachers by tailoring BND sessions to the needs of the class and individual children (n=1), and (v) making connections by ensuring consistency between BND staff and school teachers in their expectations of children's behaviour (n=1).

Although COVID-19 restrictions were seen to have disrupted the normal events they would have organised for the schools, one BND staff member highlighted that it had provided opportunities to get to know teachers better as they were working in small groups with the same teacher to the extent that BND was seen to be integrated in the school environment and was part of the school provision.

Overall, the data suggest that the relationship between the school and BND has been evolving and developing over the three years. School professionals were in general positive about their relationship with BND, but some suggested that further links should be created between the programme and curriculum. BND staff believed they were forming good relationships with school staff and were constantly trying to improve communication and links between the programme and curriculum as well as shared expectations of children's behaviour.

3.5 Children's perspectives of BND

This section is based on data collected through visual methods and follow up focus groups to discuss their drawings. Data have been presented collectively from the two schools to avoid identification of children. The themes that emerged from the data are as follows: (i) appeal of the Big Noise programme, (ii) structure and content of the programme, (iii) the Big Noise environment, (iv) relationships with others, and (v) relationship with music. These have been discussed in relation to the seven Big Noise impact pathways.

3.5.1 Appeal of the Big Noise programme

With individual exceptions, all year groups demonstrated a positive attitude towards Big Noise. The most enthusiastic group of pupils were those in the 6-9 years bracket using words such as *love* and drawing hearts in their boxes to demonstrate this even when asked what they did not like about Big Noise (Figure 5). This suggests that overall, the BND programme continues to *boost engagement with learning and education*, especially in the context of music (Pathway 1).



Figure 5: Examples of what two children liked about Big Noise

3.5.2 Structure and content of the programme

Two sub-themes emerged: (i) transitions, and (ii) key activities. Transition into the start and end of a BND sessions were commented on by some children in the younger age groups. One child had a soft start and did not like to be late for the session while another stated “I don't like the goodbye song because I have to go home” (Figure 6). This suggests that for some children the BND programme provides *respite and protection* (Pathway 5) as well as playing a vital role in *developing and building life skills* (Pathway 2) and *securing emotional wellbeing* (Pathway 3).

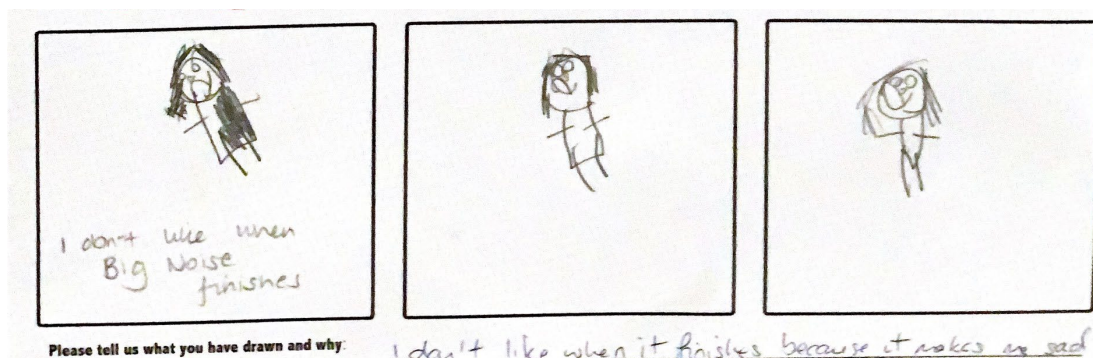


Figure 6: Example of comments similar to 'I hate the goodbye song...'

In terms of key activities, snacks and games were important to them. Snack was a theme which emerged across all age groups. Most of these children said it was something they enjoyed. This suggests that Big Noise plays a key role in *encouraging healthy behaviours. Building social skills and networks* (Pathway 4) through games was important for children aged 4-5 (Figure 7) and less important for those aged 9-11 who might be using other opportunities to develop social skills and networks.



Figure 7: Playing games

3.5.3 Relationship with music

This theme aligned closely with *developing as a musician* (Pathway 7) and *boosting engagement with learning and education* (Pathway 1) and can be split into two sub-themes: (i) listening to music, and (ii) making music, including views about the instruments and singing.

A number of the younger children explicitly mentioned that they liked listening to music. One child said "I feel nice when I'm listening" and another said "I like listening because it makes me happy". A link between movement and music also emerged, primarily through the role of clapping.

The children in the 6-9 years group most commonly highlighted that they enjoyed playing the instruments with the violin proving most popular followed by the cello. The double bass was also mentioned in this age group (Figure 8). One child in the 6-9 year group commented on the challenge and difficulties of holding the bow and the violin together at the same time: "went I don't like to hold the violin and bow together" and "I feel tired holding my instrument and bow".



Figure 8: I like double bass (6-9 years)

A child in the 6-9 year group commented on the paper instruments saying "I like making the paper violins". The chopsticks were also mentioned, most frequently in the youngest age group of 4-5 years: "I like the chopstick. It is fun."; "I like playing chopsticks really fast".

A number of the children mentioned singing in their comics though the popularity for this seems to wane as they increase in age. Children in the younger age groups made statements such as "I like singing" (see Figure 9). However, no children mentioned singing in the oldest age group (10-11 years).



Figure 9: I like singing (4-6 years)

3.5.4 The Big Noise environment (physical environment including reactions to noise levels)

This theme is split into the following three sub-themes: (i) noise, (ii) pandemic restrictions, and (iii) uncomfortable chairs.

Children across all the age groups made comments related to noise indicating that there is continuing scope to *develop as musicians* (Pathway 6). Some children preferred quiet noise while others preferred loud noises (Figure 10).



Figure 10: An image of sounds that are not liked (4-6 years)

Some children identified particular sounds that they did not like. For example, the metronome was singled out by two in the 4-6 age group. Some children focused on the noises of particular instruments (Figures 10 and 11).



Figure 11: A child's response to what they like about Big Noise (6-9 years)

Pandemic restrictions featured in some of the drawings as something that was disliked such as hand sanitiser (Figure 12) and masks.

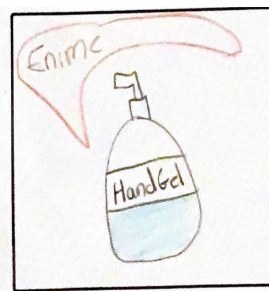


Figure 12: the influence of the pandemic (10-11 years)

Finally, a couple of the children in the age 6-9 group commented about their discomfort because of the chairs with one stating "I do not like the chairs" (see Figure 13).

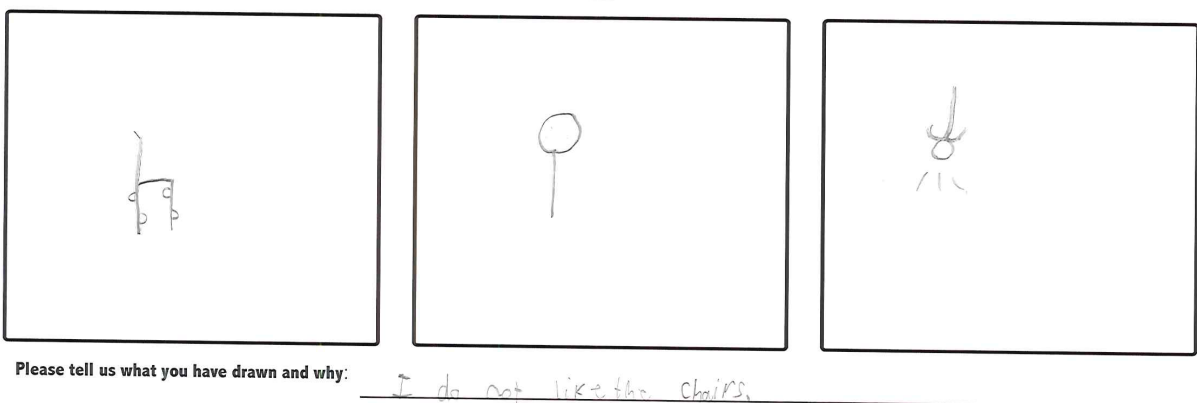


Figure 13: Response to what a child does not like (4-6 years)

3.5.5 Relationships with others

Relationships with others as a theme tied with *building social skills and networks* (Pathway 4). There were positive and negative aspects to this. Being with friends was a positive for the 6-9 year group. One child commented “My friends are the best at big noise” while another said that they liked the following about Big Noise “violin, music, being with people :)”. Some children however focused on disruptive behaviour displayed by peers such as playing instruments too loudly, talking over the teacher (Figure 14) and talking or singing too loudly.

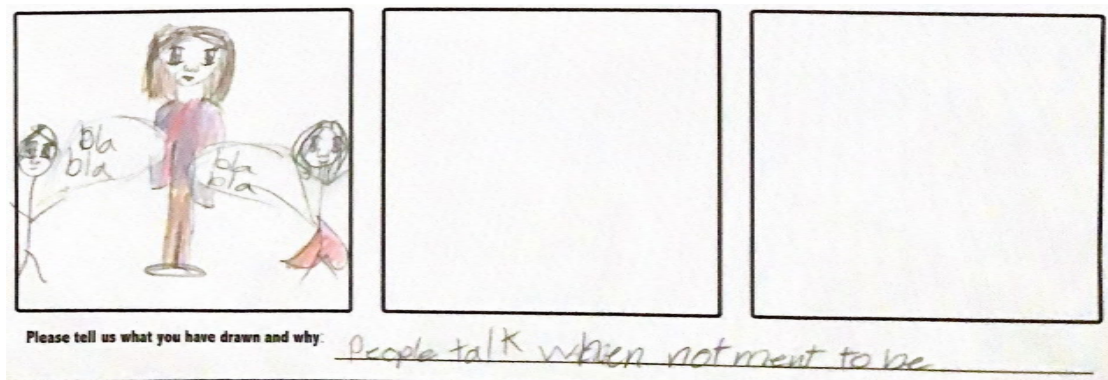


Figure 14: An image of pupils talking (10-11 years)

Children in the youngest age group of 4-5 years did not make mention of their relationships with the teaching staff but others were very positive about teaching staff with one saying “teachers I love them” (see Figure 15).



Figure 15: Things a child likes about Big Noise (6-9 years)

3.6 Motivation of children to participate in BND

All parents, and school and BND professionals provided their perspectives on why children were participating in the BND programme (note: parents’ data focussed on their child). The top two motivators that were common across the participants was *having fun* and *interest in music* (Figure

16). Their views were confirmed by children’s drawings which included drawings of the musical instruments and terms such as ‘fun’.

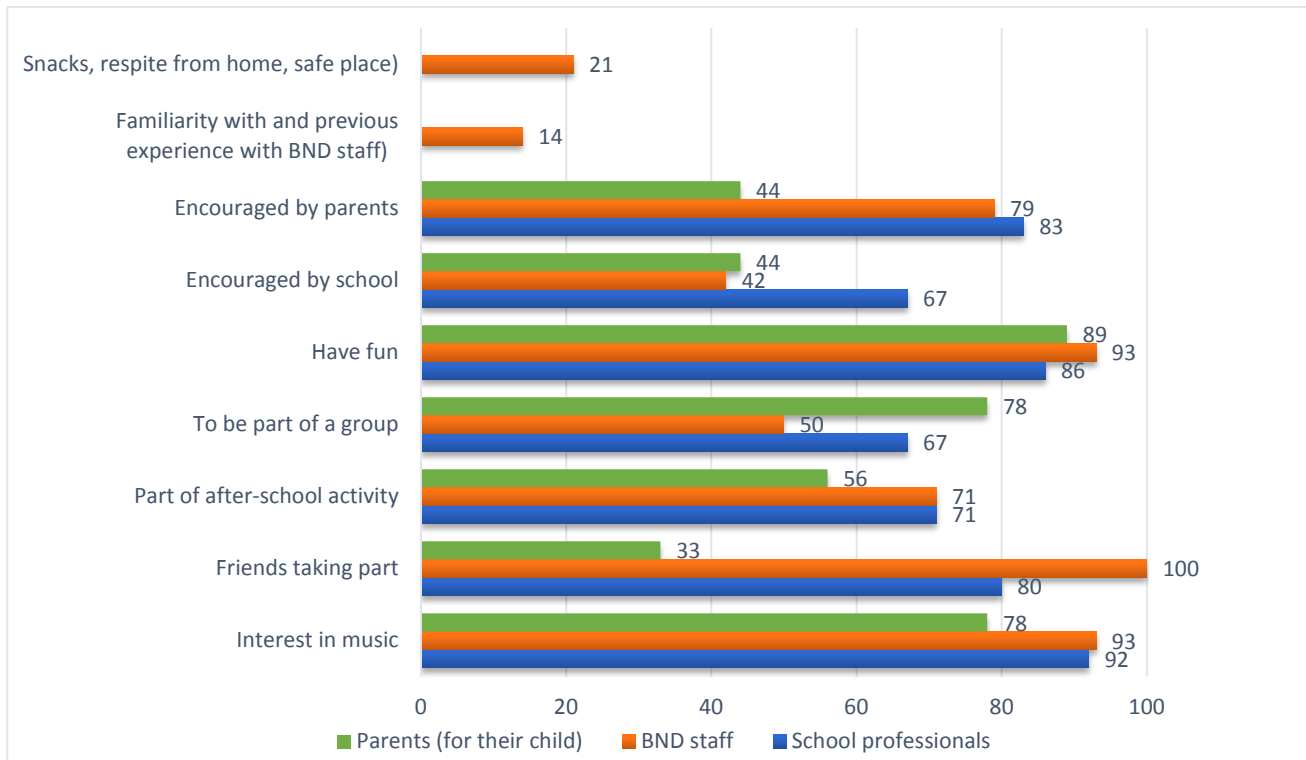


Figure 16: Motivation of children to participate in BND: Percentages of school professionals', BND staff's and parents' perspectives (note: based on sample size for each participant group, in some cases extremely small, with each percentage value being different)

BND staff and school professionals also chose *friends taking part* and *encouraged by parents* as strong motivators (see Figure 16); however fewer parents chose these. On the other hand, more parents chose *being part of a group* as a stronger motivator, than school and BND professionals. Three BND staff also commented on the motivator being the *safe space and nutritious food* BND provided.

Their experience of Big Noise in school from Nursery to P3. In particular, their experience of the Big Noise staff. For many of our children, the chance to be in a warm, safe place, with a healthy snack, and surrounded by positive, supportive and consistent adults is a key attraction. (BND staff)

Nine school professionals provided examples to elaborate on their views. These included opportunities to play musical instruments, being part of the school day, sense of belongingness and peer interactions.

I have had children in my class who benefit from the social and the musical nature of the after school club. It makes the children feel part of a team, which is so important for so many of our kids. A sense of belonging! (Teacher, School A)

Children have shown interest in the group and are enthusiastic to join with their friends. (HT, School B)

3.7 Children's engagement and participation in BND

3.7.1 Participation in the BND programme and facilitators

All 24 school professionals responded positively to how well children had engaged with BND even when compared to participation at school. However, a few school professionals qualified it as 'some', 'mostly yes', 'most' and 'a lot have but not all' children had engaged well.

Children engage well in classroom sessions and some children who find learning tricky, readily join in and have a sense of achievement.
(Depute Head Teacher, School A)

Yes. My class this year have been really well engaged. (Teacher, School B)

Parents were positive of the support they and their child had been provided by BND staff for participation in the BND programme. This included provision of (i) musical instrument, (ii) online sessions, (iii) encouraging the children, and (iv) maintaining ongoing communication with parents.

They feedback if he is doing well... and they also feedback if he has been misbehaving which I think is very important. (Parent, School B)

Very supportive staff and supplying cello is a massive help in (child's name's) learning and engagement. (Parent, School A)

3.7.2 Barriers to participation in the BND programme

In the questionnaire, only one parent reported a barrier to their child's participation which was to do with the unavailability of the child and/or parent on particular days/times. In the interviews, one parent highlighted that their child's willingness to participate on any particular day was dependent on what had happened at school rather than their views about BND.

If he's had a bad day at school, then he's not keen to participate at Big Noise. He just wants to get home and back into his bedroom. (Parent 5, Interview)

A larger number of school professionals indicated that they were slightly aware of some barriers; the topmost included, children (i) wanted to do something else after school (n=15) and (ii) were not interested in taking part (n=15), and (iii) lacked confidence (n=14), (see Figure 17). The first two were also barriers that three school professionals said they were strongly aware of.

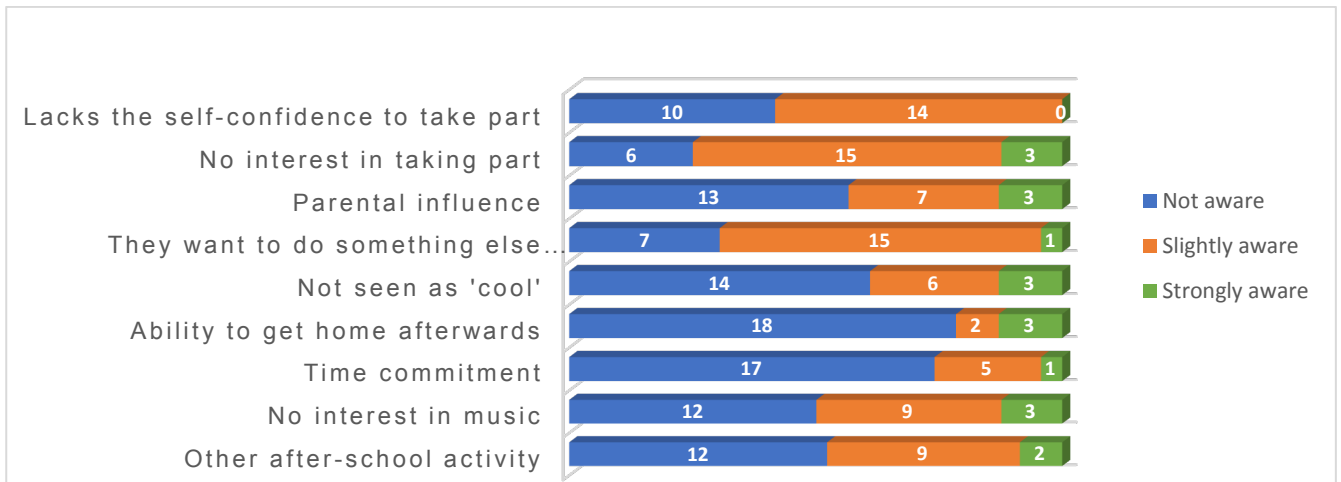


Figure 17: Barriers to participation: School professionals' awareness

BND staff seemed to have a good understanding of the barriers to participation and a large number chose reasons that they were *strongly aware* of, namely (i) other after school activity (n=10), and (ii) children want to do something else after school (n=7) (see Figure 18). There were large numbers that indicated they were *slightly aware* of other barriers, namely (iii) no interest in taking part (n=11), (iv) time commitment (n=10), (v) no interest in music (n=9) and (vi) lack of self-confidence (n=9) (Figure 18). Some BND staff elaborated on other barriers in open-ended question; these were related to the (i) seasonal conditions (e.g. dark to walk home), (ii) other children's behaviour and (iii) logistical issues for parents.

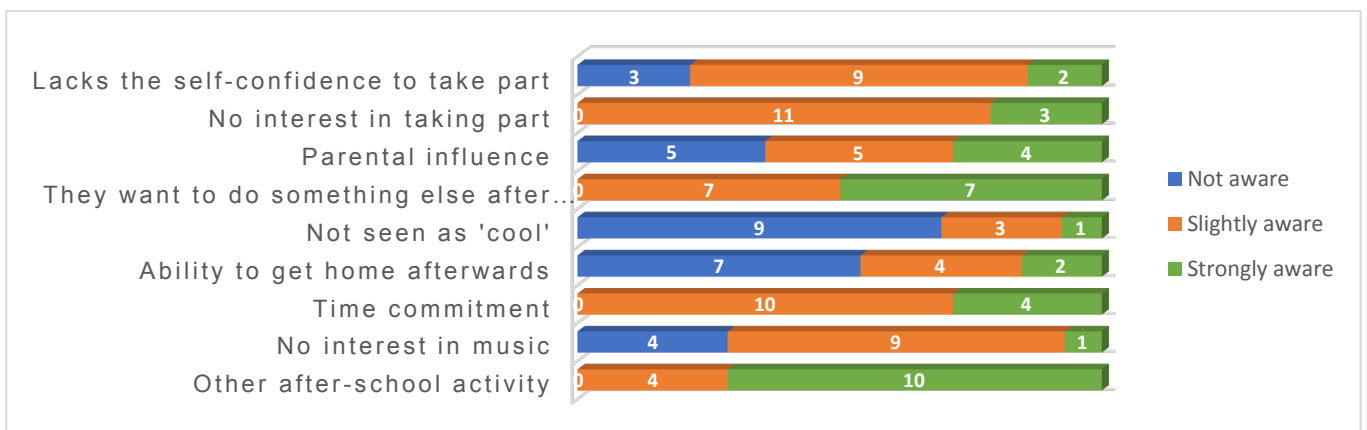


Figure 18: Barriers to participation: BND staff's awareness

BND staff were also asked about what caused children to drop out of BND. All fourteen responded to it with some of the previous causes mentioned again, such as (i) behaviour of other children and (ii) several other competing activities. Others highlighted some other reasons, such as (iii) opportunity cost of playing an instrument that is difficult to learn against online gaming, (iv) impact of COVID on the nature of provision, (v) disparity in ability amongst the groups leading to some

getting bored and losing interest in playing the musical instrument, and (vi) lack of opportunities to socialise due to COVID restrictions.

All BND staff reported they were aware of children dropping out and then expressing an interest in joining again. The reasons for dropping out ranged from (i) children wanting to take a break due to seasonal changes, (ii) general fatigue especially when children found it difficult to learn an instrument, and (iii) losing focus. Eleven of the 14 BND staff members reported that they were aware of returning to Big Noise policy, with most indicating that there is an open-door policy and individual plans are developed to help children re-join and reintegrate. They were further asked if there were any differences between those who stayed engaged and those who dropped out. Eleven BND staff provided various differences, including (i) confidence, (ii) ability levels, (iii) support at home, (iv) support at school, (v) home environment, and (vi) their behaviour.

Most children who 'take a break' are interested in returning. They just need a bit of individual focus to reintegrate them back to the sessions. Usually we can learn from them why they left and improve the sessions so as to avoid more kids 'dropping out' in the future. (BND staff)

Support at home is an important factor in encouraging children to be persistent in learning their instrument. This can often be very subtle: just taking interest in their learning, making sure children know when they are going to after-school club, help with carrying bigger instruments home and finding space for them at home. (BND staff)

3.7.3 Strategies to enhance participation in the BND programme

Some school professionals reported that BND were already proactive and could not do any more to enhance participation.

BN have been very proactive at promoting themselves in the school and community. I don't believe they can do any more. (Head Teacher, School B)

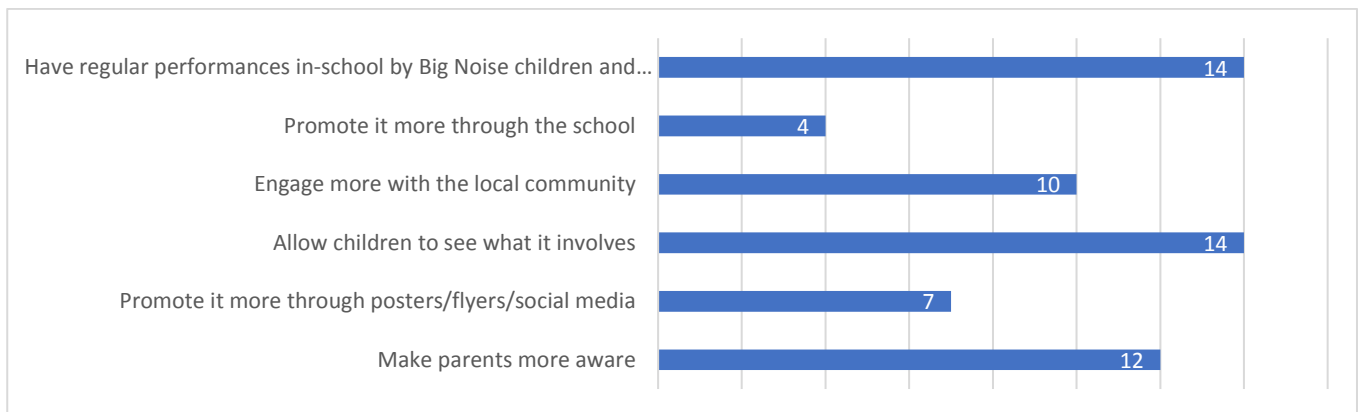


Figure19: Strategies to increase participation of children: School Professionals' perspective

Others suggested four strategies that could enhance participation (Figure 19). These included: (i) allow children to see what it involves (n=14), (ii) have regular school performances to enhance

visibility (n=14), (iii) make more parents aware (n=12) and (iv) engage more with the local community (n=10).

...Have regular performances in-school by Big Noise children and musicians. Online lessons/inputs where children can join in from home. Posters/ information leaflets detailing the benefits of learning musical instruments. Make an infographic to share findings from this study with parents and teachers. Make parents more aware. Promote it more through posters/flyers/social media. Engage more with the local community. (Teacher, School B)

3.8 Impact of BND on Baby Noise participants

This section is based on the findings from an observation of three baby-parent pairs. During these observations, it was obvious that babies were attracted by the instruments and were hypnotically absorbed in the music. When the baby and parent were both involved in a synchronous emotional mood and they had a good communication style, it was observed that babies engaged well in activities and had good communication both with the parent and the musician. Even the babies who were displaying varying levels of interests in Baby Noise activities, were suddenly very attentive when the musician started playing an instrument. They were observed to be absorbed in the music and listened to it carefully. This is quite important because music can be used as a mediator for better interactions and as a source of relief for reducing potential stress within the communication between mothers and babies (e.g., Fancourt & Perkins, 2008; Wulff, Hepp, Wolf et al., 2021).

3.9 Impact of BND on P1-P6 children

The data in this section primarily focusses on questionnaire data. [Glasgow Centre for Population Health \(GCPH\) have highlighted seven pathways to impact](#). These are:

1. Boosting engagement with learning and education
2. Developing and building life skills
3. Securing emotional wellbeing
4. Building social skills and networks
5. Respite and protection
6. Developing as a musician
7. Encouraging healthy behaviours

Parents responded about the impact of BND on their child/ren (n=15 children; frequency in figures corresponds to children), whereas both groups of professionals responded about the impact on children that they work with (frequency corresponds to number of professionals). A large number of participants chose 'don't know' across the pathways. This might be due to the timing of the evaluation during COVID-19 restrictions and/or the evaluation being ambitious in seeking to test all the impact pathways and indicators, which might have been impossible for certain participant groups to comment on.

3.9.1 Impact Pathway 1: Boosting engagement with learning and education

According to parents, BND had boosted engagement with learning and education (n=9), improvement in the motivation (n=7), and improved listening skills, language development, determination and understanding skills (n=5 each) (Figure 20).

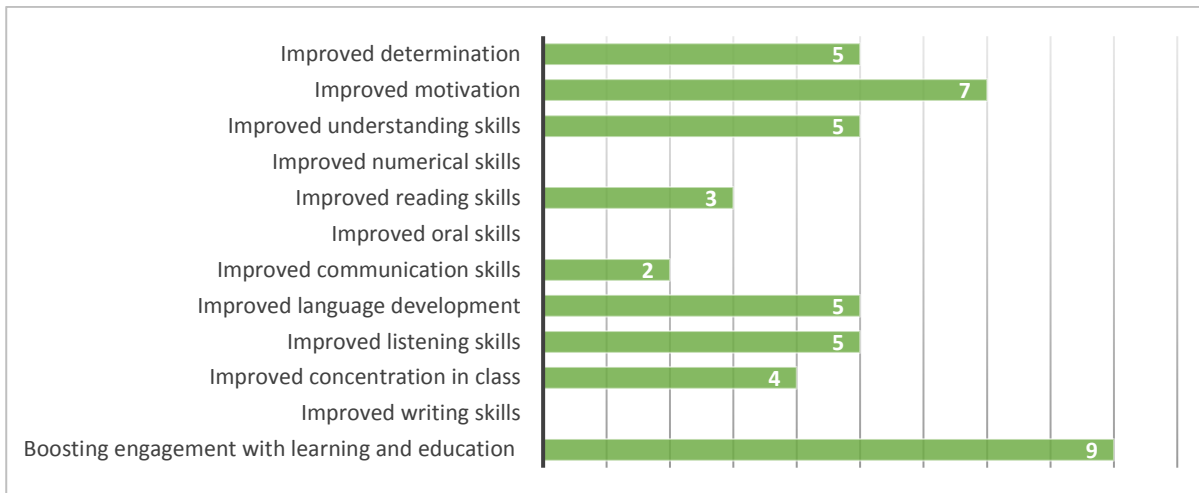


Figure 20: Pathway 1. Boosting engagement with learning and education (including its component pathways): Parents' perspective

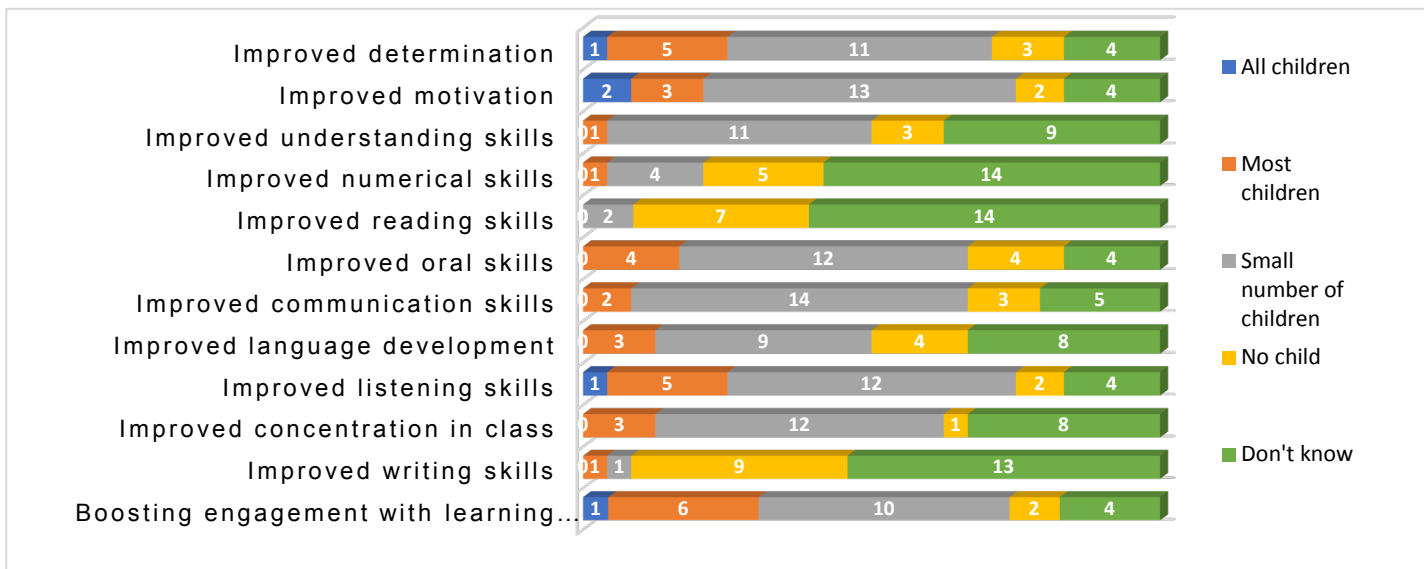


Figure 21: Pathway 1. Boosting engagement with learning and education (including its component pathways): School professionals' perspective

A majority of school professional reported that BND had had an impact on children’s determination, communication skills, motivation, listening skills, concentration in class, understanding skills, and oral skills (Figure 21). Most school professionals (n=11) observed these impacts in a small number of children, with a smaller group (n=5) observing the impacts in all or most children. A number of school professionals responded that there was no impact on improvements in writing skills (n=9), reading (n=7) and numerical skills (n=5) on any child.

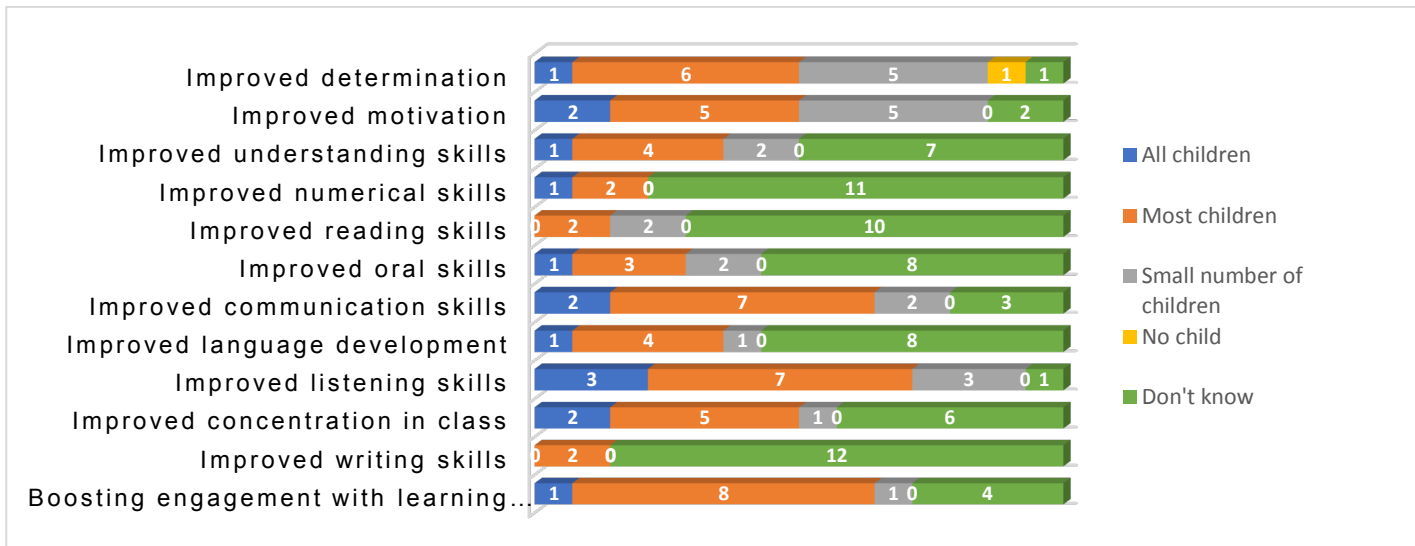


Figure 22: Pathway 1. Boosting engagement with learning and education (including its component pathways): BND staff perspective

In contrast, half of BND staff (n=7) indicated that BND had an impact on either all or most children’s motivation, determination and concentration, and more than half indicated on communication skills, listening skills, and engagement with learning (Figure 22). Similar to the school professionals, the numbers were low for improvements in numerical, writing and reading skills; however, this was due to most choosing ‘don’t know’.

3.9.2 Impact Pathway 2: Developed and consolidated life skills

According to the parents, impacts related to the second pathway seemed to be limited to fewer children with improved *team working* and *developed creativity* noted for five children each, and *increased sense of responsibility* for four children (Figure 23). It is important to note that the data were presented for a range of age groups where some of these aspects might not have been developed in younger children.

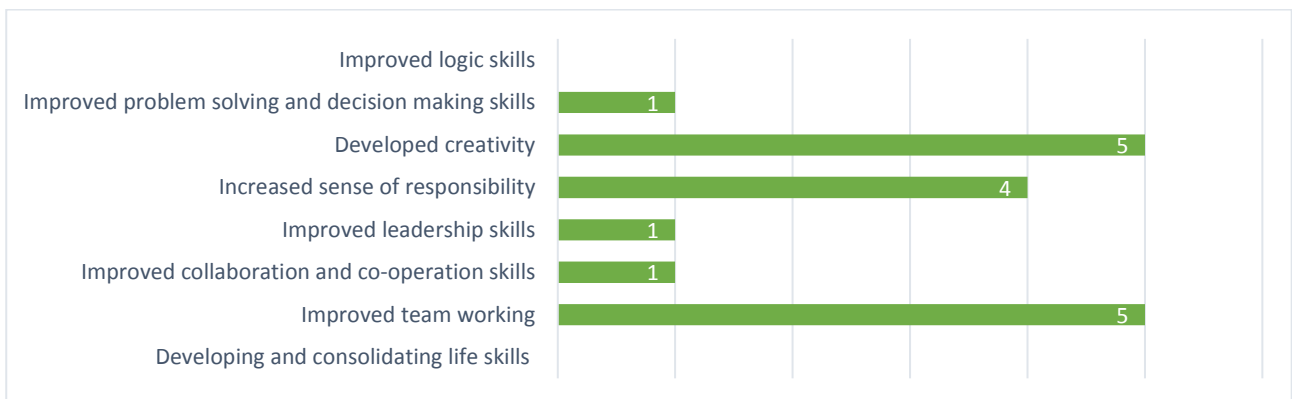


Figure 23: Pathway 2. Developed and consolidated life skills (including its component pathways): Parents’ perspective

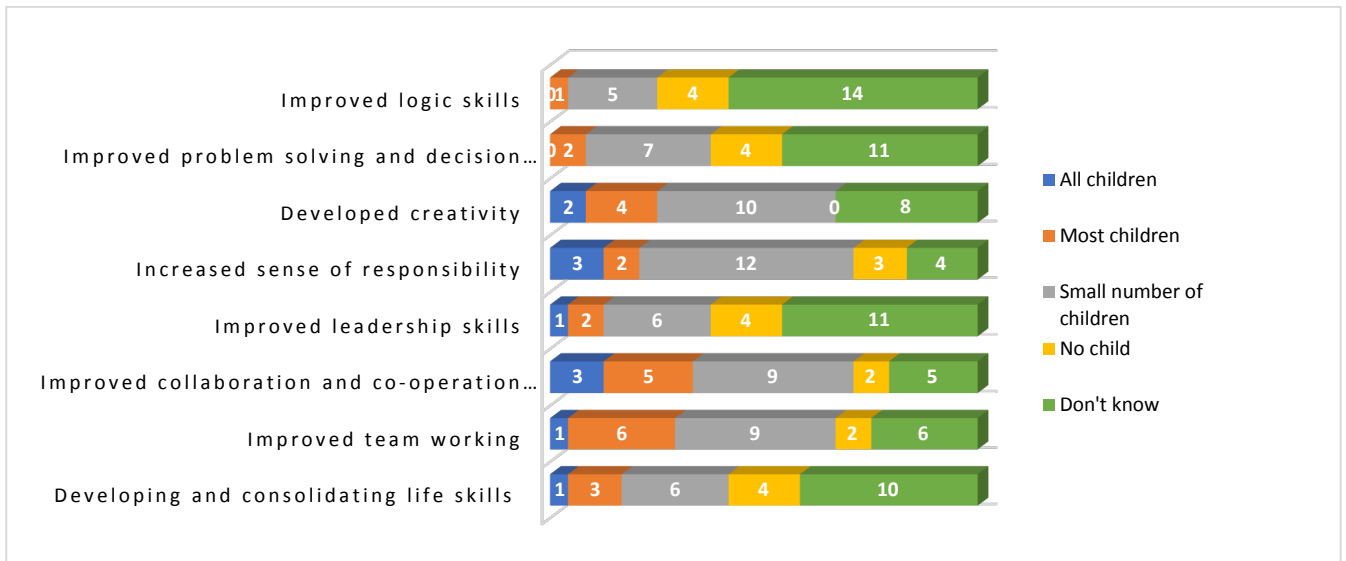


Figure 24: Pathway 2. Developed and consolidated life skills (including its component pathways): School professionals' perspective

Some school professionals indicated change in *all* or *most* children for improvements in collaboration and co-operation skills (n=8), team working (n=7), creativity (n=6). However, a larger number reported these impacts on a small number of children (Figure 24). Further a large number of school professionals indicated that they had observed the development of these skills in a *small number of children* (n=9, n=9, n=10 respectively), with almost a third (n=9) reporting that they had noticed improvements in problem solving and decision-making skills and specifically chose developing and consolidating life skills as well as increased sense of responsibility (n=12).

More BND staff than school professionals reported that all or most children had shown improvements in collaboration and co-operation skills, team working, creativity, and a high number also reported that most children had shown improvements in leadership skills (Figure 25). Almost two thirds chose the overall aspect developing and consolidating life skills.

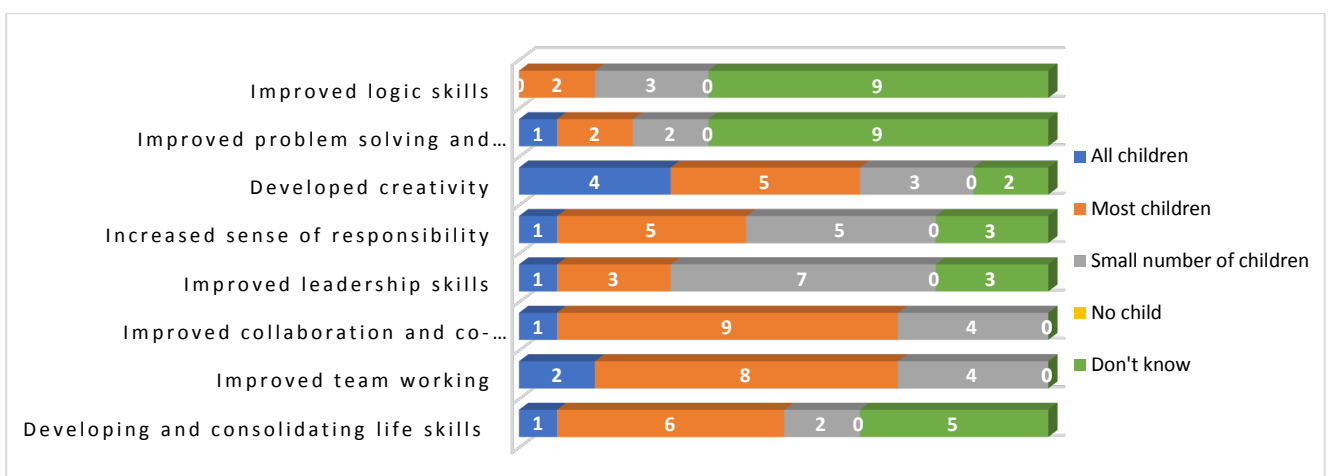


Figure 25: Pathway 2. Developed and consolidated life skills (including its component pathways): BND Staff perspective

Overall, despite variations in estimates of how many children had shown improvements in particular skills, it was clear that school and BND professionals had noted improvements in the same skills with the lowest improved aspect they noted being logic skills.

3.9.3 Impact Pathway 3: Securing emotional wellbeing

As can be seen from Figures 26 to 28, all participants reported impacts of BND on children's emotional wellbeing. According to their parents, six children had been able to develop better positive/trusting relationship with adults, five had increased self-control, and four each were more likely to take initiative and there was improved happiness and enjoyment as a result of BND participation (Figure 26).

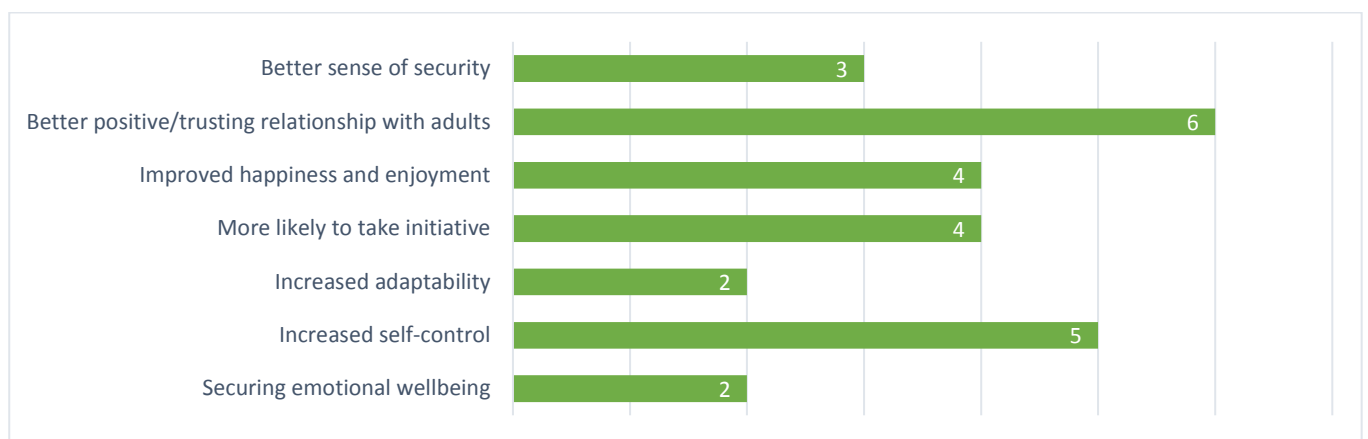


Figure 26: Pathway 3. Securing emotional wellbeing (including its component pathways): Parents' perspective

Four school professionals noted that BND had led to improved happiness and enjoyment of *all* children. This is one of the indicators which was noted as improved in either all, most or some children by all BND staff and 92% of school professionals. A high number of school professionals also indicated that BND had impact on either *most or small numbers* in the context of securing emotional wellbeing, increased self-control, better positive/trusting relationship with adults, with half indicating that children had developed a better sense of security (Figure 27). Similar findings were noted in BND staff data (Figure 28).

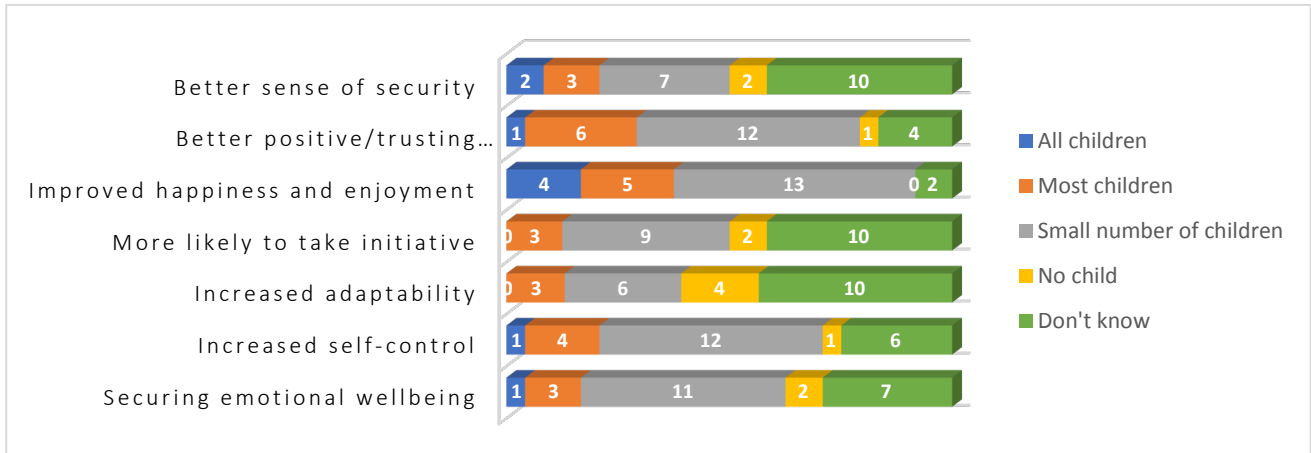


Figure 27: Pathway 3. Securing emotional wellbeing (including its component pathways): School professionals' perspective

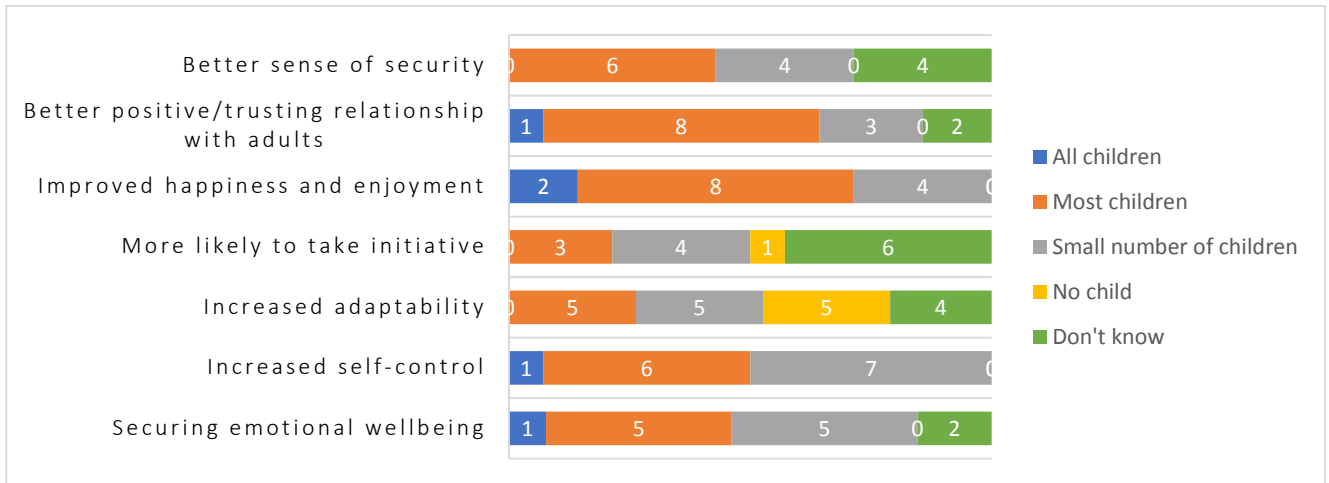


Figure 28: Pathway 3. Securing emotional wellbeing (including its component indicators): BND Staff perspective

The role of BND in providing a sense of security, trusting relationships and happiness has been noted across the entire dataset. This improvement is also significant in the context of the children that BND are working with (see Table 1) and might provide some indication on why there were fewer unauthorised absences in the BND programme as compared to the school.

3.9.4 Impact Pathway 4: Building social skills and networks

Parents indicated that six children had improved social skills as well as improvement in their self-confidence (see Figure 29).

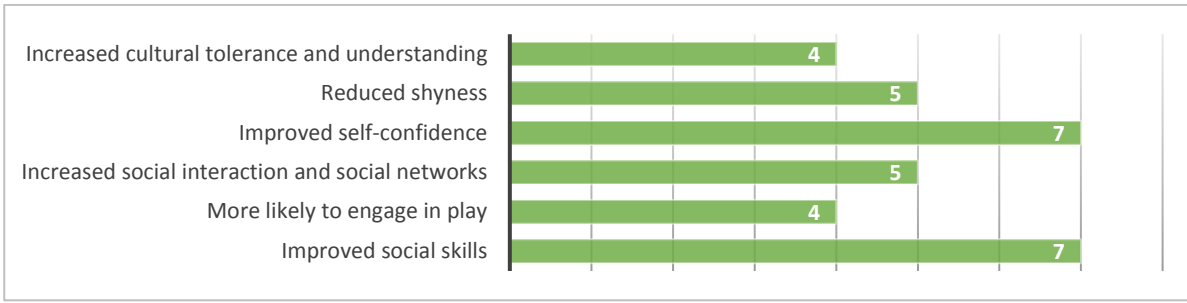


Figure 29: Pathway 4. Building social skills and networks (including its component pathways): Parents' perspective

Five school professionals reported that they had seen improvement in self-confidence of all children, and four noticed reduced shyness in all children (and two in most and 12 in some children) (Figure 30). Five reported increased social interaction and social networks, and self-confidence in most children (n=8 and n=9, for some children respectively). Half had noticed improved social skills in some children, whereas three had noticed it in most and one in all children.

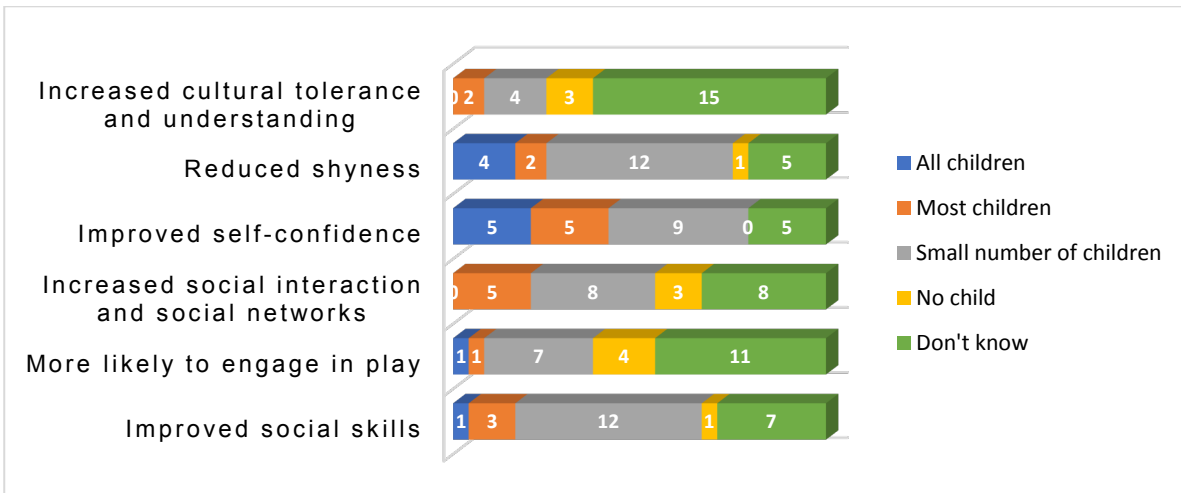


Figure 30: Pathway 4. Building social skills and networks (including its component pathways): School professionals' perspective

Four of the 14 BND staff indicated that they had seen increased social interaction and social networks and improved self-confidence in all children, with a similar number indicating improvements in social skills and self-confidence of most children (Figure 31). Ten BND staff noted reduction in shyness of a small number of children, with one each indicating that they had seen this in all or most children.

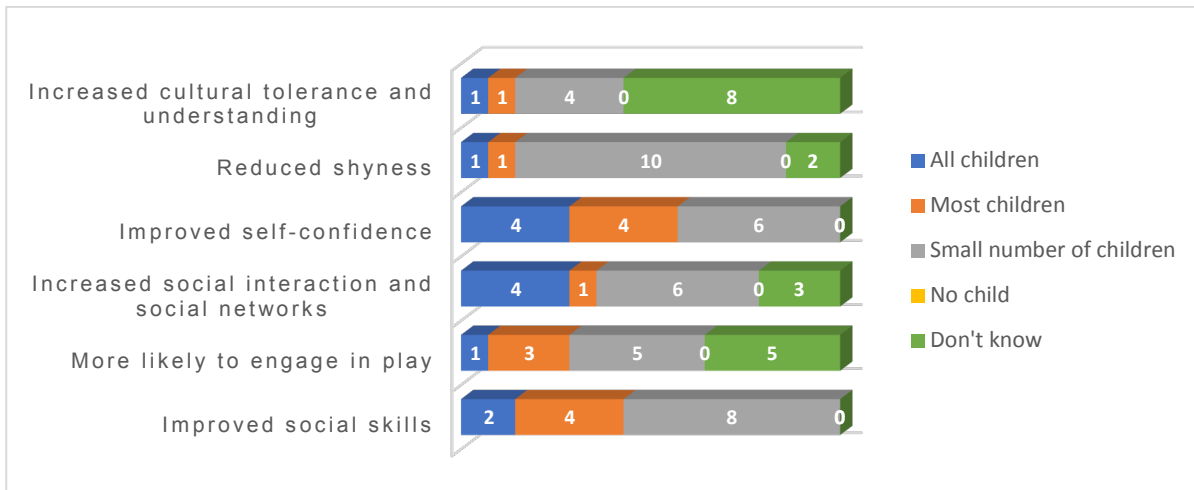


Figure 31: Pathway 4. Building social skills and networks (including its component pathways): BND Staff perspective

A very small number of professionals, school and BND staff, had noticed increased cultural tolerance and understanding. However, almost half of the parents had said that they had noticed this change as a result of BND.

3.9.5 Impact Pathway 5: Respite and protection

Parents noticed a reduction in opportunities for anti-social behaviour and stress at home and school (see Figure 32). One parent who was interviewed highlighted that their child was bringing happiness home and another noted that it had helped with their child’s mood and behaviour.

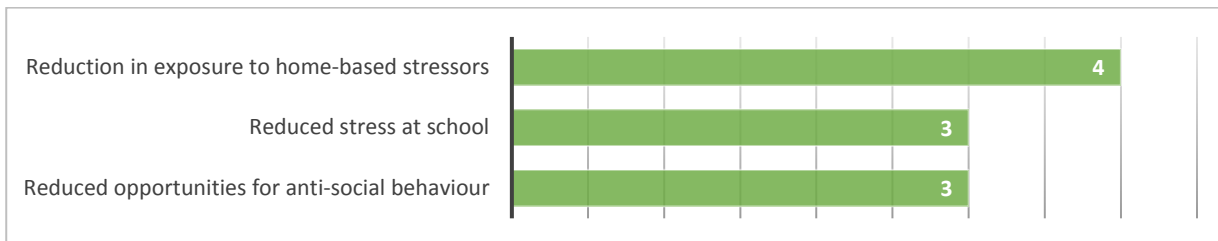


Figure 32: Pathway 5. Respite and protection (including its component pathways): Parents’ perspective

Three school professionals indicated that BND had an impact on reducing opportunities for anti-social behaviour and two on reduction in exposure to home-based stressors for all children, and three and one noted it for most children respectively (Figure 33). A larger number noted it for some children, including reduced stress at school for a small number of children (n=7).

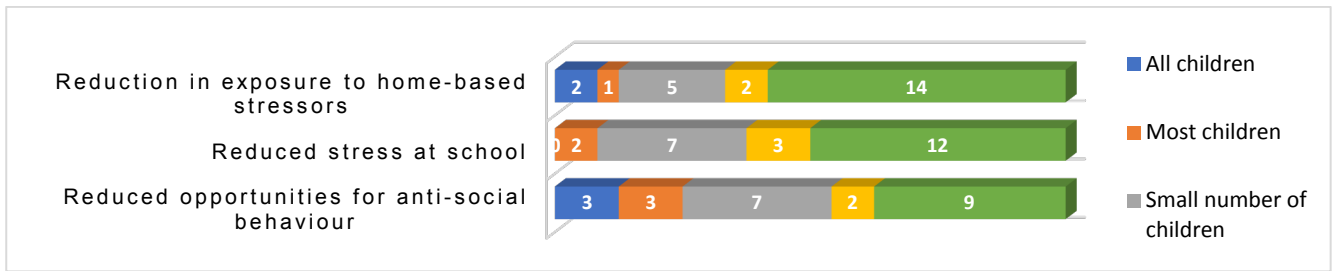


Figure 33: Pathway 5. Respite and protection (including its component indicators): School professionals' perspective

In contrast, none of the BND staff chose impacts for all children, but five each indicated reduction in opportunities for anti-social behaviour and exposure to home-based stressors and one in stressors at school for most children (Figure 34). These indicators were selected for some children by six staff each for the first two and by four for the latter indicator.

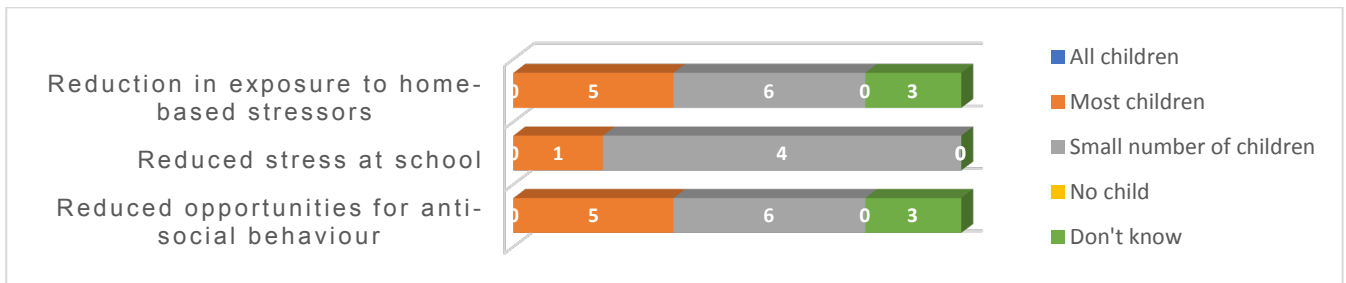


Figure 34: Pathway 5. Respite and protection (including its component pathways): BND Staff perspective

The visual methods data from children and interview and focus group data from parents, provide several examples of BND providing safe space and respite that children might not have experienced elsewhere.

3.9.6 Impact Pathway 6: Developing as a musician

Developing as a musician was one area where there was consensus among all participant groups. Parents responded that five children had developed as musicians due to participation in BND. Four school professionals reported that all children, ten most children and five that a small number had developed as musicians. A higher number of BND staff reported this impact; eight that all children had developed as musicians, five that most children and one that small number of children had developed as musicians.

3.9.7 Impact Pathway 7: Encouraging healthy behaviours

There was variance in perspectives related to this pathway of impact, with parents noting that BND had encouraged healthy behaviours related to physical activity in four and nutrition in two children. Sixty three percent of school professionals indicated that they did not know if there was any impact on both indicators of healthy behaviours. One school staff member indicated that they thought that BND had been able to encourage healthy behaviours related to physical activity for all children and two said most children for both healthy behaviours. However, six BND staff each indicated that the

programme had encouraged healthy behaviours in terms of both nutrition and physical activity in all or most children.

Other data suggest that there might be a reduction in physical activity as a consequence of lockdown and social distancing measures. There are several examples of children highlighting in the visual methods data that one aspect they like about BND is the snacks they provide and a parent highlighting that for some children that might be the only meal they might get. However, from the data it is not clear whether this encourages healthy behaviours related to nutrition or not.

Overall, it is important to consider in what way BND can have an impact on these behaviours in the time they have with children and what the role of school and families is in supporting the development of these behaviours.

3.10 Reasons for impact of BND on the children

According to the parents (n=8, questionnaire) the impact of BND was due to children having the opportunity to express themselves, learn new skills, creativity, enjoyment, being part of the team and supportive BND staff. Nine parents (questionnaire) reported that BND gave the following that school or home could not: (i) an opportunity to interact with adults, (ii) sense of belonging, (iii) additional educational activities, (iv) sense of achievement, (v) enjoyment, and (vi) learning music.

Fourteen school professionals reported that positive impacts have been due to: (i) learning in a fun and non-threatening way, (ii) well-planned lessons, (iii) opportunity to learn music, (iv) access to resources, and (v) children's positive relationships with BND staff who were seen to be enthusiastic, engaging, being there for the children no matter what, patient and passionate about music. However, one school professional reported that BND might not have a positive impact on every child as the change to routine can be difficult for some. Twenty-one school professionals highlighted that BND gave what school or home couldn't including (i) the opportunity to access specialised and varied musical training, (ii) sense of belonging, (iii) friendships, (iv) a safe environment, and (v) good relationships.

BND staff attributed the impacts to BND values, ethos and programme, namely, (i) offering a holistic programme, (ii) positive and trusting relationships with children and families, (iii) inclusive and fun culture, and (iv) opportunities to socialise in that environment.

Difference in the impact of Big Noise on children who participate in-school and after-school provision

Seven BND staff said that after-school provision provided more opportunities for children (i) to engage with children from other classes and school, and (ii) to experience performing in different venues, as well as opportunity (iii) for staff to engage with children and families.

Differences in the impact of Big Noise on children from different backgrounds

Eight BND staff said that impacts were different for children from different backgrounds but 10 provided reasons for this with some of these related to child's reasons for attending BND and

opportunities afforded by BND for learning, socialisation and safe space. However, regardless of the child's reason for being there, they said that they all benefitted from the programme.

I think the less privileged children benefit more because they have less opportunities for extra-curricular activities. (BND staff)

Some children are there because they want to be and others because it gets them out of the house. They all gain something from Big Noise but not necessarily the same things. (BND staff)

3.11 Impact of children participating in BND on parents' involvement in their schooling and development

Parents highlighted that due to their child's participation in BND, there were changes in their own involvement in four areas: (i) in their child's life (n=3 parents), (ii) in their child's school (n=2 parents), (iii) in the community (n=1 parent), and (iv) also with BND programme and staff (n=4 parents). Parents attributed this to the trusting relationships built with BND staff.

The 24 school professionals had a range of views about BND's impact on parental involvement with their child's schooling and development; five reported 'many parents', five 'the odd parent', four that there was no change and 10 reported that they did not know.

Three BND staff reported that 'most parents' had become more involved with their child's schooling and development, three that 'many parents' and eight that they did not know. Five provided examples of the change in involvement; however, these were in the context of involvement with BND programme and supporting their children with participation rather than schooling. BND staff reported that the involvement with BND increased due to online delivery during COVID restrictions.

3.12 BND and the community

3.12.1 Awareness of community about BND: Perspectives of school professionals, BND staff and parents

There were mixed views among parents who responded to the questionnaires about the community's awareness of BND. The two focus group parents said that the local community was now aware of BND but not those outside Douglas. However, another parent in the interviews said that the awareness is mixed.

Although more school professionals (mean 5.5) and BND staff (mean 6.8) indicated that the community was *aware* of BND, no school professionals and only two BND staff indicated that the community was *very aware* of BND.

3.12.2 Impact of BND on the community

Six parents (questionnaire) responded that BND was having an impact on the community but three said they did not know. Four reported the kind of impact BND has had on the wider community due to its impact on the members of the community, namely, (i) enhancing creativity, (ii) empowering children to enjoy music, (iii) interacting with parents, (iv) children interacting with those from the other school as a community, (v) raising self-awareness of their potential, and (vi) providing safe space and free meal. The interviewed parents concurred with these views.

... you see it (community spirit in Douglas) coming back ... for parents... who couldn't even afford to feed their child they could send them and know that they got their dinner and that they were with their friends ... you know that that's probably gonna be their only meal (Parent 1, Interview)

... kids play as a community instead of you go to that school, you're allowed to play with me. (Parent 5, Interview)

Of the 24 school professionals, 12 indicated that they did not know but 12 responded that there was an impact. Ten reported impacts, namely, (i) enhanced parental participation, (ii) creating community spirit, (iii) generating pride, and (iv) a sense of ownership.

Twelve BND staff responded that BND had had an impact on the community. These included: (i) sense of pride, (ii) feeling special, (iii) sense of achievement, (iv) community cohesion (through all the programme strands, including community orchestra), (v) bringing families together across school, and (vi) improvement in the physical environment.

3.13 Views of parents and children: In-depth case study interviews

The data were collected for case studies; however, are presented in this format due to parents' concerns about being identifiable.

3.13.1 Impact of BND

Three types of impacts were discussed by parents and children, namely (i) social/emotional impact (Impact Pathways 3, 4), (ii) impacts on communication/interaction (Impact Pathways 1, 4), and (iii) musical impact (Impact Pathway 6).

Social and emotional impacts

According to the parents, BND (i) builds confidence, (ii) pushes children to achieve more within a supportive environment, (iii) provides a forum to share their opinions with others, (iv) helps understand others better, and (v) develops social and emotional maturity when learning and playing music. Children reported feeling confident due to the inclusiveness of the programme and lack of judgement from BND and others.

... (during) their shows ... he would turn around and smile at you; he doesn't do a lot of smiling but he would turn around and smile ... it was actually nice to see. (Parent 1, Interview, child attended BND since 2017)

He's a lot more confident... grown as a boy... Before Big Noise... didn't make friends easy, he didn't mingle easily, whereas now that he's at Big Noise, he'll speak to anybody that speaks to him... In his classroom he's made more friends... speak(s) more in the class. (Parent 5, Interview, child attended BND since 2017)

Communication-Interaction

Three types of impacts were identified: (i) social connection with peers, (ii) bonding with adults, and (iii) wider community involvement.

Children reported that they enjoy having more friends and spending time with them during BND sessions and parents highlighted that BND provides connection to others via music and offers more opportunities to get to know other children in their own class/school.

...Big Noise... helped a lot with the kids' nursery transition... He was able to interact with children that go to nursery with him, so when he went to nursery he had some friends... wasn't just walking into a completely strange place... they all went together. (Parent 6, Interview, child went to Baby Noise)

Adult bonding included the following subthemes; good connections with particular musicians (i) made children happy, (ii) helped manage the online delivery during lockdown, (iii) enhanced engagement of children, and (iv) helped them create stronger bonds with other adults. Wider community bonding emerged from the parents' data who noted that (i) increasing number of parents attended BND performances, (ii) good reaction to concerts which was in turn motivating for children, and (iii) BND supports families to be more involved in school life through BND activities and events.

Musical impact

The musical impacts included, (i) enjoyment of learning music and playing instruments, (ii) good engagement with music. Some children enjoyed playing as a group, but some enjoyed playing solo. Their engagement was related to showing their talent or performance in front of others on stage. The journey of children with regards to their musical development over time has been captured by Child 2:

(at the start of BND)... I was quite nervous because I knew nothing about violins. Now I'm experienced that I know to play the violin. They made a lot of us do solo, play our songs. So from then to now I feel like I've learned so much more... I like to play my instrument, I like to do solos, I like to read music and I like to sing along with songs... (Child 2, Interview, child attended BND since 2017)

(Future job) Maybe in an orchestra...Because if I didn't it would feel like a little bit of a waste of a talent. (Child 3, Interview, child attended BND since 2017)

... (BND is) opening horizons... there are lots of career options for them. And then obviously... it will be easier to learn other instruments from learning one... (Parent 4, Interview, child attended BND since 2017)

3.13.2 Feelings and Attitudes about BND

Children and parents highlighted their happiness (being '*crazy about BND*' in one child's case) with BND for the following reasons; (i) a lot of fun, especially when learning new music, singing and performing, (ii) has made them love music more than before to the extent that children wanted to continue playing music as adults, and (iii) BND has left such a deep mark on their child that there will be a future for them in music. Some parents also reported how happy children are on the day of BND.

3.12.3 The role/influence of the staff

The parents and children explained the pivotal role of BND staff, including (i) liked the staff as they were fun, accessible, supportive, motivating, caring and dedicated, (ii) staff model how to play the instrument better, and (c) were friendly but also maintained good discipline.

It's a place of learning but it's also fun and mingling and they encourage the kids to work in groups and work individually, and the staff are their friends, a friend approach with the kids but they also have a discipline approach with the kids, so the kids know where they stand. (Parent 5, Interview, child attended BND since 2017)

3.13.4 Impact of COVID-19

This was one of the most repeated themes both in parents' and children's interviews because of the ongoing restrictions. The theme includes both positive and negative aspects of this situation.

Positive aspects

Children and parents expressed that online provision had been good for various reasons, including: (i) opportunity to still meet and connect with BND, (ii) one-to-one online sessions with the musician was reported to benefit some children, especially as it developed a better rapport with the musicians, and (iii) opportunities for parents to get involved and interact with BND staff.

Negative aspects

Some children and parents noted that the child did not enjoy online sessions during lockdown due to, (i) mode of delivery, (ii) less communication with others, (iii) less opportunities to socialise, and (iv) reduction in number of lessons. Similarly, some commented on the restricted opportunities to socialise with different children due to social distancing measures on return to school.

... we have to stay in our bubbles... we can only go with our classmates, we can't even mix classes, it's boring being with the same class all the time (Child 4, Interview, child attended BND since 2017)

3.13.5 Suggestions for BND

The suggestions for BND included, (i) better management of misbehaviour during sessions, (ii) improvement of some staff members' skills to better understand children and their particular needs, (iii) alternative days/times to make it more inclusive for children who cannot attend on particular days, (iv) ongoing communication with parents even when there are no online sessions, (v) continuation of BND delivery in Douglas, and (vi) extending it to other schools and communities.

3.14 Logic modelling of seven pathways to identify prospective impact

For each of the seven impact pathways, data collected from a variety of stakeholders were used to visualise the logic models that are presented here. However, due to the small sample size, the logic models are based on a combination of interpretation of *all* data and theorisation based on our previous research (e.g., Jindal-Snape, Davies, Scott, Robb, Murray, & Harkins, 2018; Levy, Robb, & Jindal-Snape, 2017; Robb, Jindal-Snape, & Levy, 2021; Vettraino, Linds, & Jindal-Snape, 2017).

[These have also been informed by the logic models proposed by GCPH for other Big Noise programmes.](#)

The logic models show a series of outlined programme elements and activities (in blue boxes) and move through to illustrate current programme outputs, as perceived by various stakeholders, namely children, parents, school professionals and BND staff (in green boxes). Finally, known outcomes from this evaluation have been presented in orange and theorised medium-term outcomes in pink. White boxes indicate areas where evidence of impact seems to be inconclusive (i.e. most participants indicated that they 'don't know') or weak (most chose no child) from the current dataset. Dashed lines indicate where a relationship is expected but either has not been evident due to COVID related restrictions or is not clear from the dataset.

As can be seen from the logic models (Figures 35 to 41), there is good evidence that BND has had a wide range of impacts on children in the first three years of its inception, despite a pandemic that has been disruptive for children, families, professionals, schools and communities. Further, the trajectory is such that, although theorised, the prospective impact outcomes seem to be achievable. Some of the areas where there was less evidence of impact are mainly related to educational impacts, such as numeracy, literacy and reading skills, and also logic skills. As mentioned previously, this could be a function of various factors outwith the control of the BND programme. Further, these are areas where strong partnerships between BND, schools and families become even more crucial. It is important that a thorough ongoing evaluation is undertaken when there are fewer (or no) COVID restrictions. This is also vital to test the attainment of outcomes predicted by the end of the next three years and to predict those for longer term.

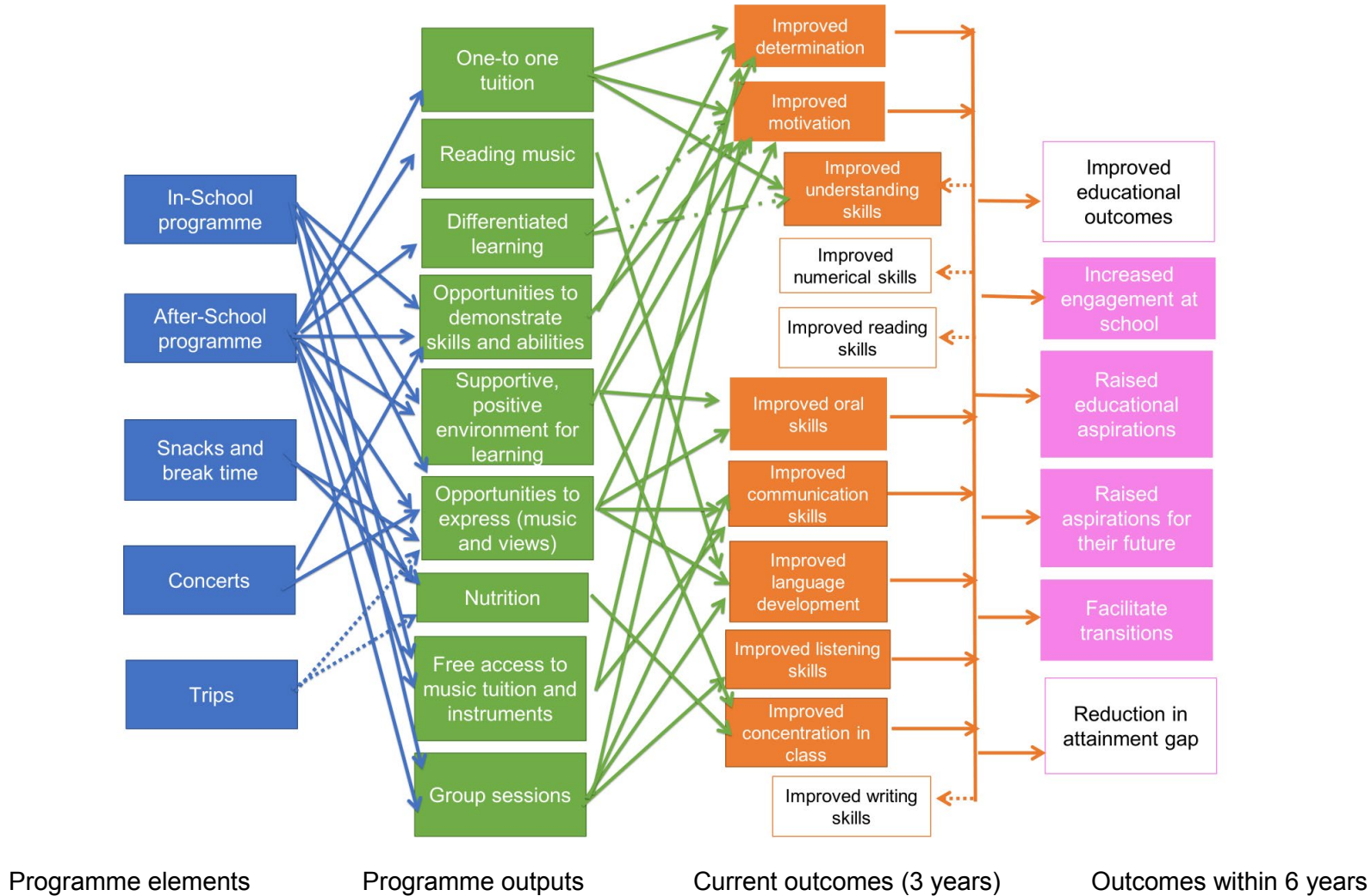


Figure 35: Impact Pathway 1 Boosting engagement with learning and education

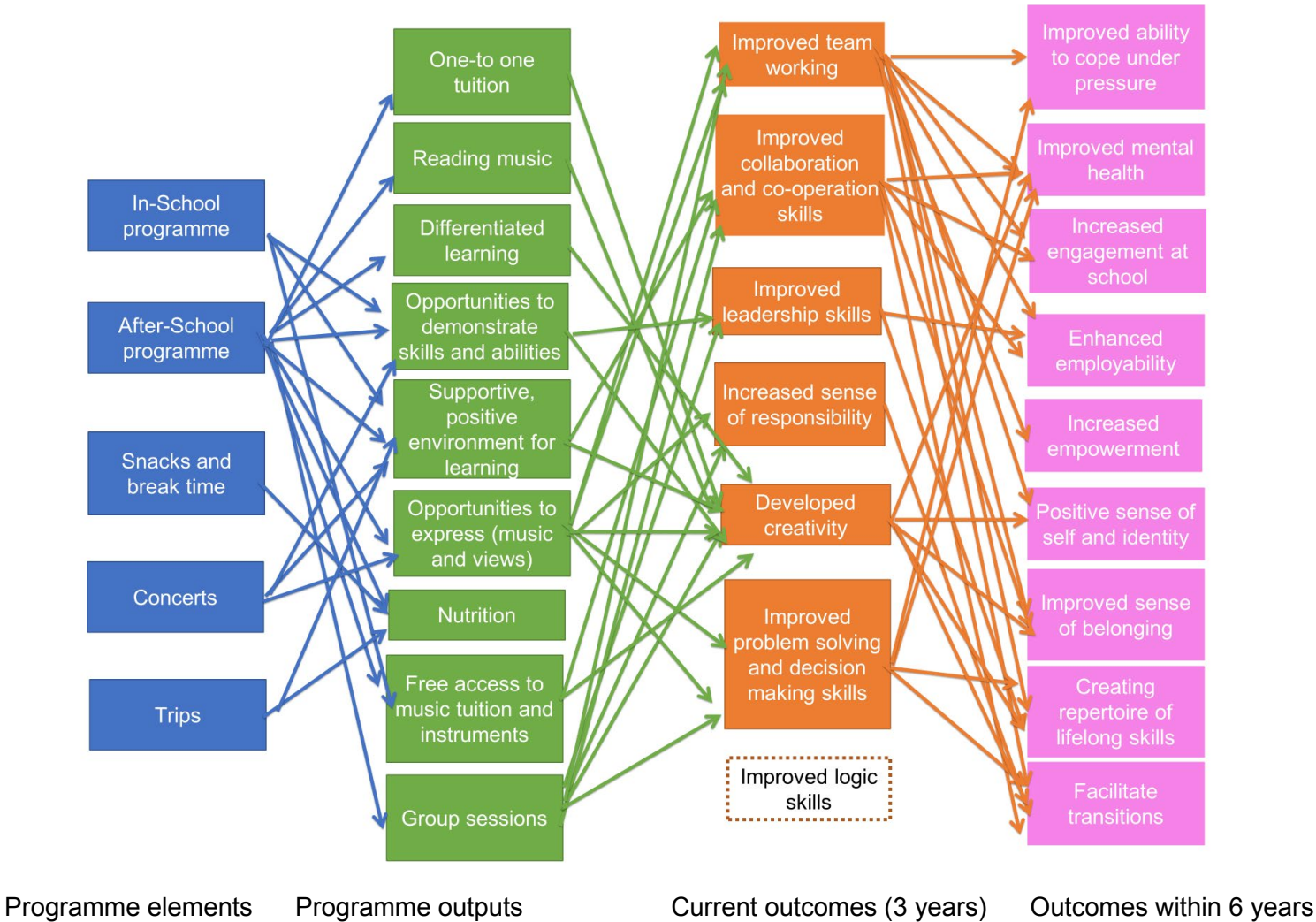


Figure 36: Impact Pathway 2 Developed and consolidated life skills

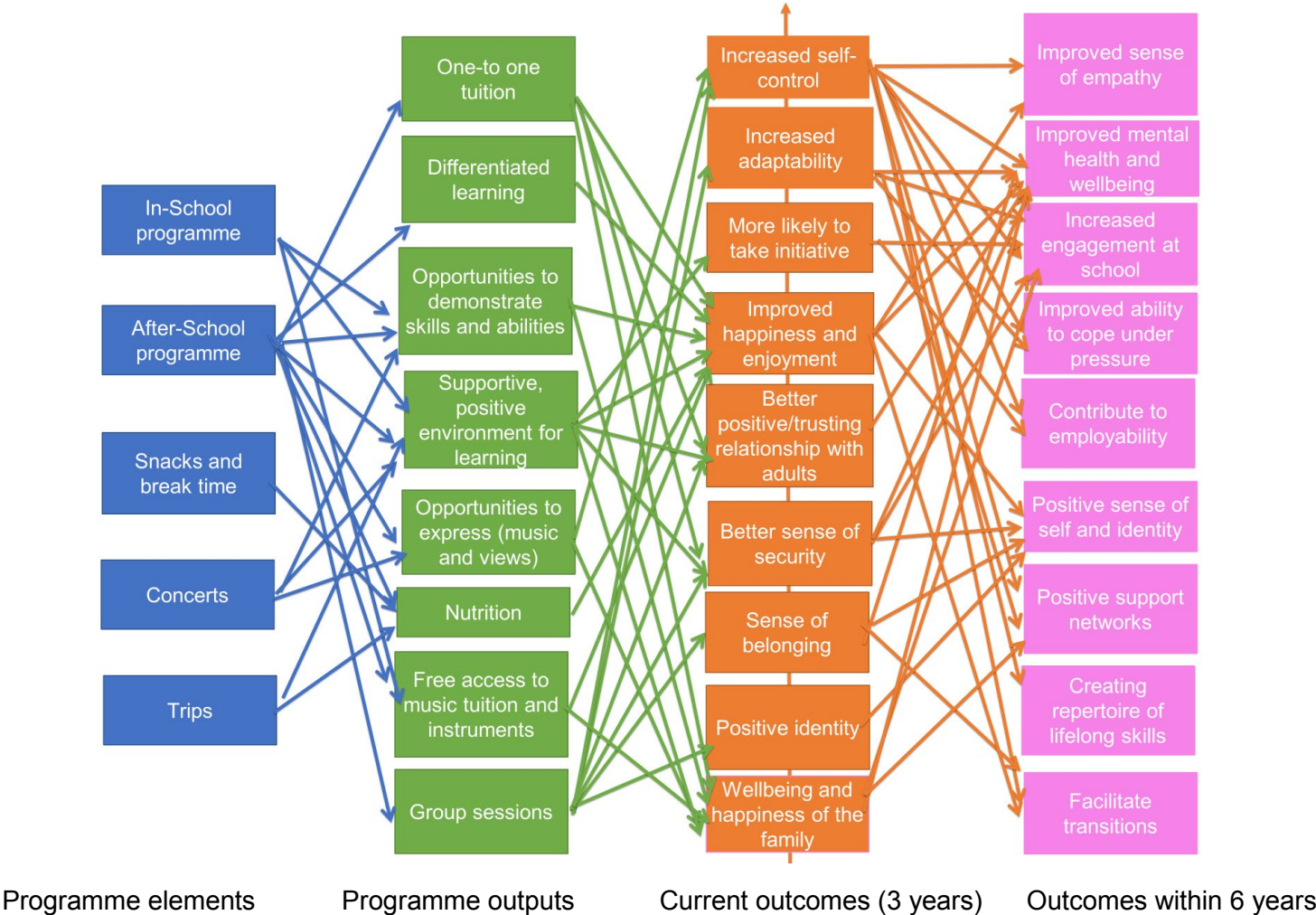


Figure 37: Impact Pathway 3 Securing emotional wellbeing

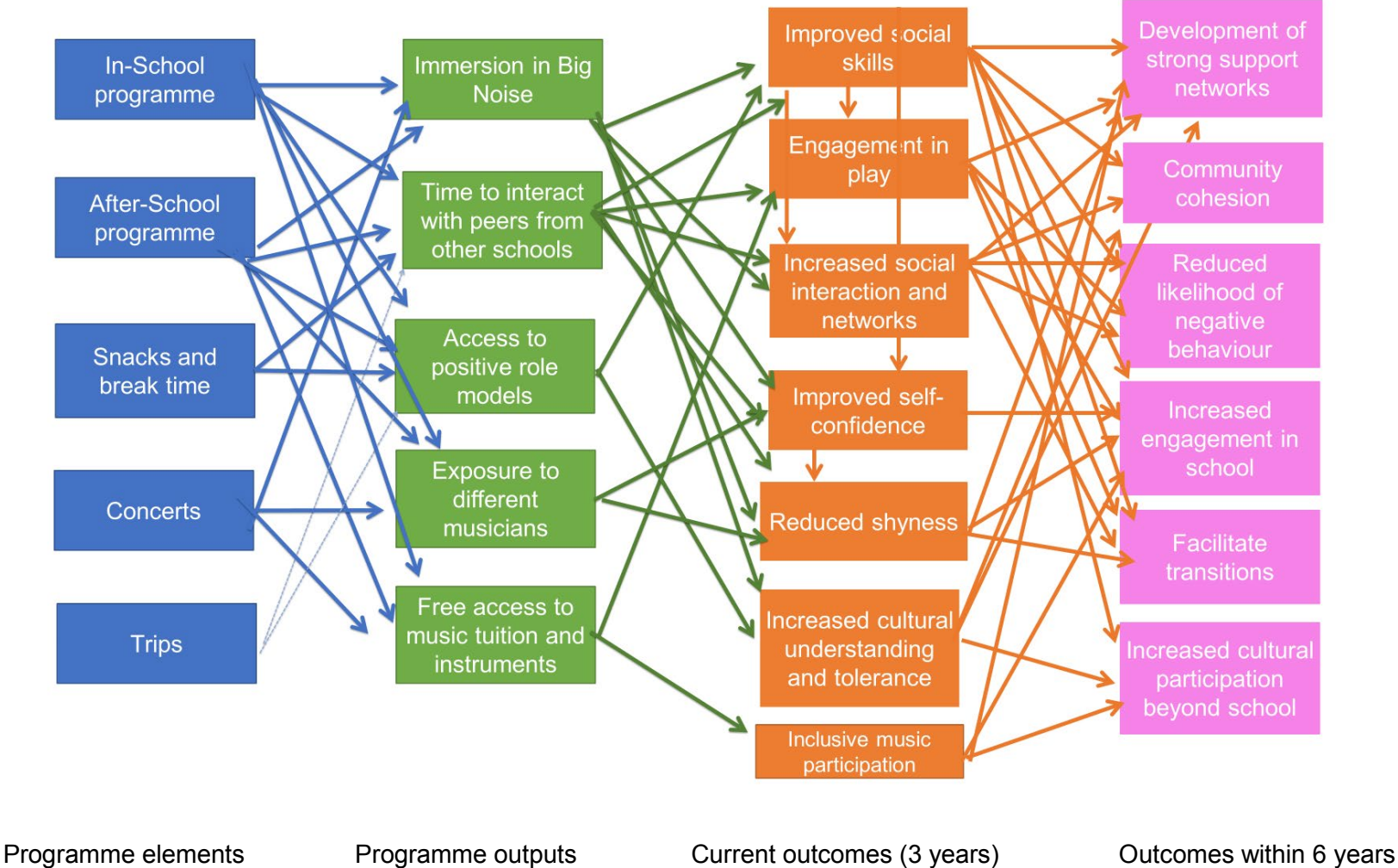


Figure 38: Impact Pathway 4 Building social skills and networks

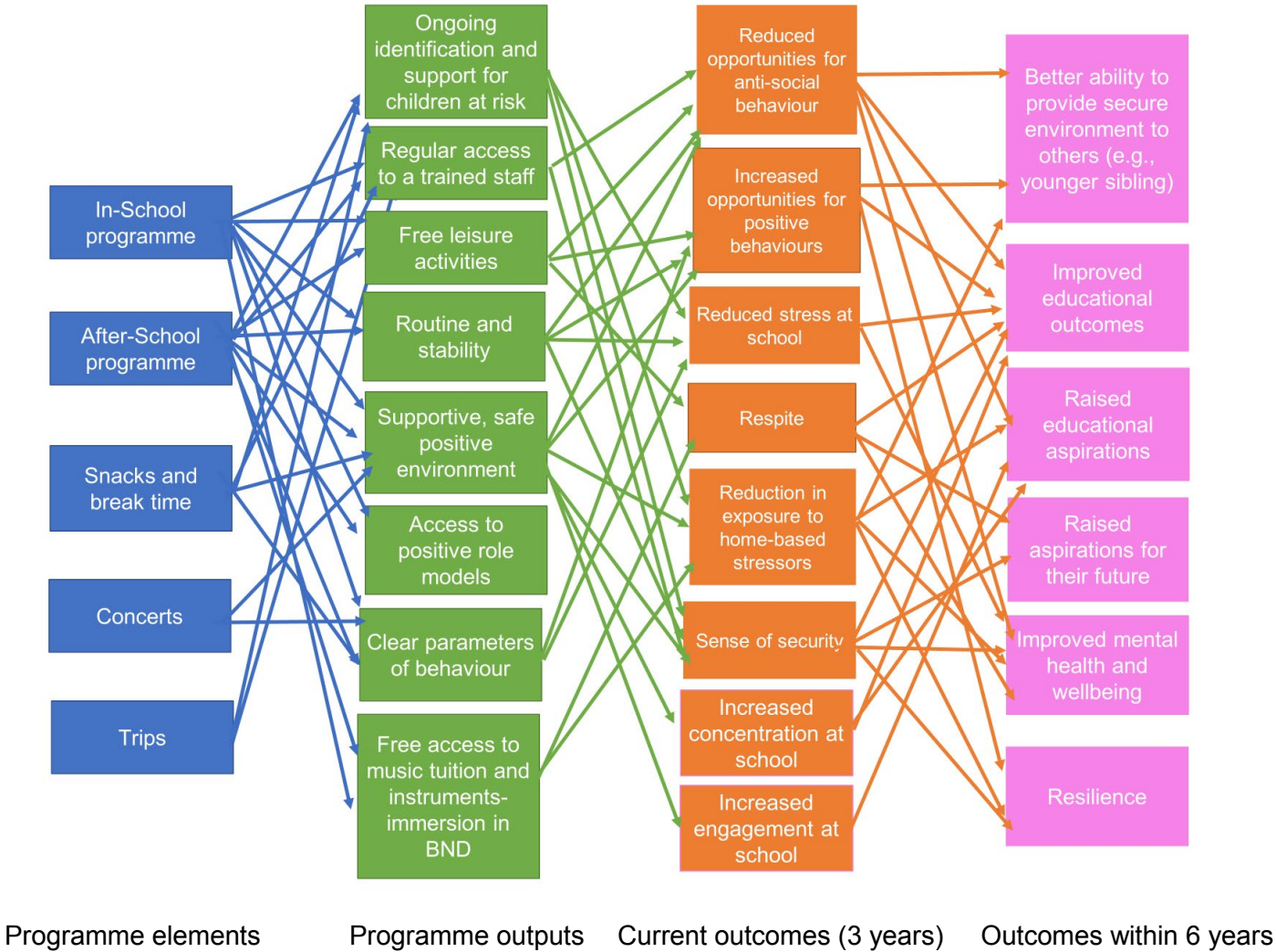
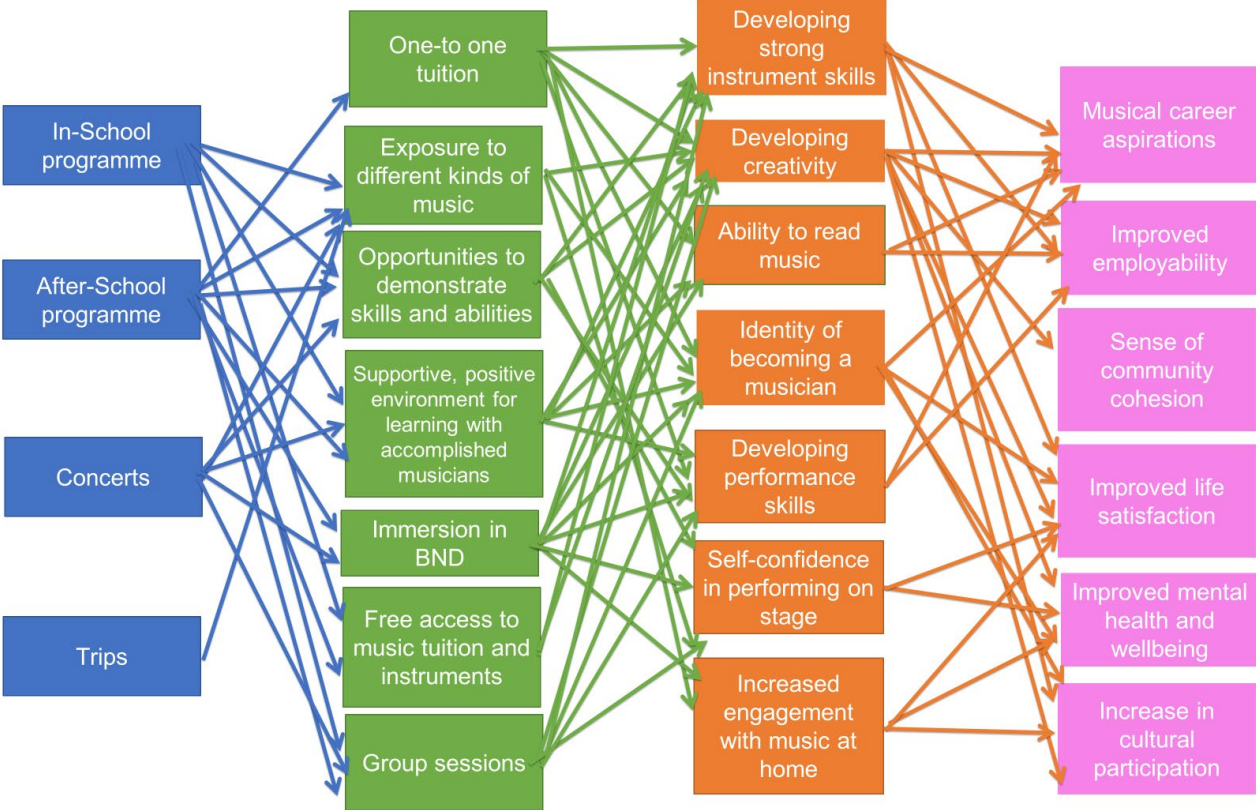


Figure 39: Impact Pathway 5 Respite and protection



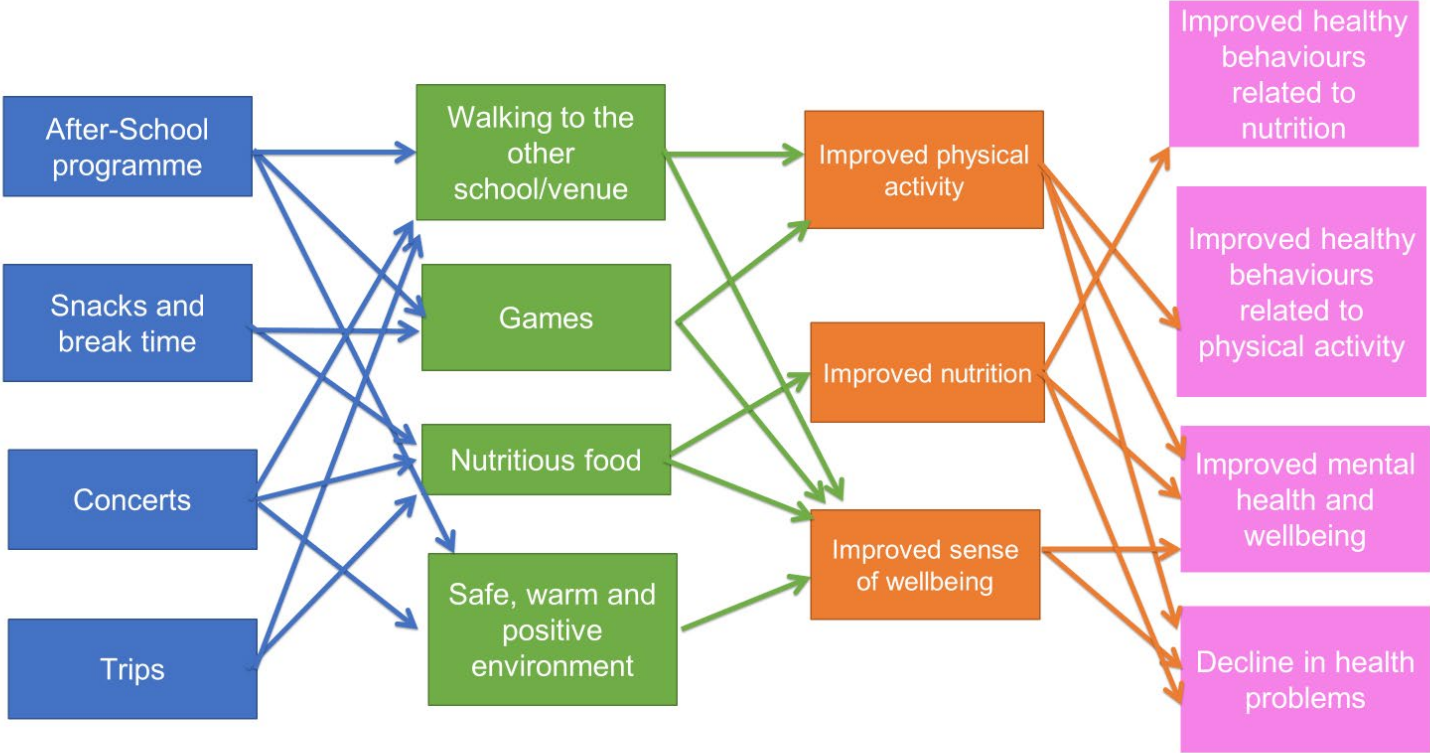
Programme elements

Programme outputs

Current outcomes (3 years)

Outcomes within 6 years

Figure 40: Impact Pathway 6 Developing as a musician



Programme elements Programme outputs Current outcomes (3 years) Outcomes within 6 years

Figure 41: Impact Pathway 7 Encouraging healthy behaviours

Chapter 4: Discussion and Conclusions

4.1 Profile of children and families engaging with BND and its inclusive approach

BND is delivered in an area which has been identified to be more deprived than other areas in the East End region of Dundee (apart from employment and income deprived, and crime domain) and across all regions of Dundee (in all domains apart from crime domain). BND is an inclusive programme from recruitment to participation. The evaluation found that BND staff embed the values and aims of Sistema Scotland, and actively work with children and families to engage them and to remove any barriers to their participation. Even for children who decide to take a break, which can be due to a variety of non-programme related reasons, they are made aware that there is an open-door policy and they can re-engage at any time. BND programme takes a holistic approach to programme delivery, including immersion in music as well as creating positive and trusting relationships with children and families, and provide opportunities to socialise in a safe and positive space.

4.2 Robustness and adaptability of BND delivery during COVID-19

Although the evaluation aimed to collect data about BND from its inception, most participants seemed to focus on the programme delivery in 2020, during lockdown related school closures and subsequently social distancing measures after reopening of schools. All participants were appreciative of BND staff's creativity, adaptability and quick action in providing online delivery during lockdown. Also, there was wide-spread awareness amongst all participants about the measures that had been taken, suggesting a planned approach with full information made available to all stakeholders. Children had equitable access to the instruments as they could take them home.

Most parents were positive about the online delivery and reported that in some cases, one-to-one online sessions were more effective for their child. Some children, especially those who did not like the noise in group settings or were adversely affected by other children's behaviour, found online sessions to be beneficial. Musicians were also able to provide differentiated learning opportunities. However, a couple of children and their parents noted that BND was not the same when delivered at home and that BND's physical space made it special for them. Parents and professionals reported that online delivery provided children some normality during lockdown.

After the re-opening of schools, the delivery was adapted in line with the social distancing measures. Lessons were provided in small bubbles and staff had to wear masks, restricting the usual face-to-face provision and ability to use some instruments. Some children commented on the negative impact of that on their ability to meet with friends from their school and the other school as well as some non-BND related aspects as seen in their visual methods drawings (e.g., using hand sanitisers). Overall, the data suggest that BND staff were adaptable, resilient and ensured participation of all children (after-school and Baby Noise during lockdown), despite the restrictions placed by COVID-19.

4.3 Relationship between the school and BND programme

A majority of school professionals and BND staff reported that there was a strong relationship between the school and BND, especially for those school professionals whose classes were receiving in-school provision and had regular contact with BND staff. The changes that some school professionals wanted to see were related to better and timely communication, and better links with curriculum and learning experiences. The need for these improvements were also evident from the data that were collected about pathways to impact and impact indicators with the majority of the school professionals and/or some BND staff choosing the category 'don't know'. This was most noticeable in the case of *Pathway 1* with 'small numbers' or 'no child' being selected for impacts on reading, numeracy and writing skills.

BND staff reported that they had formed good relationships with schools and highlighted the importance of effective communication and their ongoing efforts to make links between the programme and curriculum, as well as matching behavioural expectations of teachers.

4.4 Children's motivation to engage with BND and participation: Parents' and professionals' perspectives

The three adult groups made similar points related to why children wanted to participate in BND, including to have fun, interest in music, to be part of a group, their parents' encouragement and because their friends were taking part. BND staff also highlighted that it was due to BND providing a safe space, nutritious food and good relationships with staff. Further, all groups were positive about children's engagement and participation.

However, barriers to participation were also discussed by a few participants. BND staff seemed to be the most aware of these. They were: clash with other after-school activity or parents' unavailability on certain days, or interest in doing something else after school, no interest in taking part in music, time commitment required to learn an instrument and lack of self-confidence.

4.5 Impact of BND: Baby Noise

The impact of Baby Noise was observed on three parents and four babies/toddler. Due to the sessions being delivered and observed online, and for one session each for the pairings, the data need to be considered with caution. Overall, it seemed that the musician was able to attract the attention of the babies/toddler through music and music acted as a mediator for positive interaction between parent and child.

4.6 Impact of BND: Children's perspectives

Through the visual methods exercise and interviews/focus groups, most children highlighted the appeal of BND which seemed to be linked to the musical instrument they were playing, being with friends and the nutritious snacks they (children attending after-school club) had before starting the session. A small number indicated that they did not like being at BND; reasons included loud noise, behaviour of some children and uncomfortable chairs. Most children indicated that they had

positive relationships with the BND staff. Overall, most children were positive about BND and indicated that they were happy and enjoyed their engagement with BND.

Although children were not asked directly about BND's impact, their drawings provide some examples of the seven impact pathways, namely, boosting engagement with learning and education, especially in the context of music (Pathway 1), developing and building life skills (Pathway 2), securing emotional wellbeing (Pathway 3), building social skills and networks (Pathway 4), respite and protection (Pathway 5), developing as musicians (Pathway 6) and encouraging healthy behaviours (Pathway 7).

4.7 Impact of BND: In-school (P1-P3) and after-school (P3-P6) provision

Pathway 1: Boosting engagement with learning and education

Several participants noted that impacts were visible either for all, most or some children in relation to determination, communication skills, motivation, listening skills, concentration in class, understanding skills, and oral skills. However, there is less evidence of BND's impact on their numerical, reading and writing skills. This might be due to lack of communication between the two professional groups about all impacts, difficulty in making causal links with some aspects of the curriculum, impact of COVID on the schools or indeed the lack of curricular links.

Pathway 2: Developing and building life skills

There was more evidence of impacts on more children from the perspectives of parents and the two professional groups of improvements in collaboration and co-operation skills, team working, creativity, increased sense of responsibility and for some children there were also improvements in problem solving and decision-making skills. BND staff reported impact on more children than the school professionals.

Pathway 3: Securing emotional wellbeing

All participants reported the positive impact, with reports of children developing positive and trusting relationships with adults, increased self-control, more likely to take initiative, development of sense of security and improved happiness and enjoyment.

Pathway 4: Building social skills and networks

Parents noted improvements in several aspects for their child including social skills and self-confidence. Fewer school professionals noticed changes but those who did, reported increased self-confidence, reduced shyness, increased social interaction and social networks, and improved social skills.

Pathway 5: Respite and protection

Most school professionals again indicated that they 'don't know' but some school professionals and most BND staff noted that due to BND and immersion in music, there were reductions in opportunities for anti-social behaviour and exposure to home-based and school stressors.

Pathway 6: Developing as a musician

All adult and child participants indicated that most children were developing as musicians with a strong musical identity and improvement in musical skills. This was seen to be the case despite the change in the mode of delivery due to COVID.

Pathway 7: Encouraging healthy behaviours

There seems to be less certainty about this among two thirds of the school professionals but more certainty from parents and BND staff that the programme was developing healthy behaviours

through nutritious snacks for the children in the after-school club (as well as contributing towards free meals over the summer) and physical activities. Children also highlighted that they enjoyed the snacks they received. However, it is possible that the altered BND delivery model during COVID restrictions might have had some impact on physical activities.

The pathways to impact and impact indicators are robust overall and provide confidence in BND's impact over the last three years and potential for further impact in the future. The logic models also highlight areas where the impact has been well documented and those that need more consideration and careful planning. They point to the need for ongoing evaluation with more robust and clear baseline measures that can be compared over time.

4.8 Reasons for the impact of BND

Parents believed that the impact of BND was due to children having the opportunity to express themselves, learn new skills, creativity, enjoyment, being part of the team and supportive BND staff. Similarly, school professionals reported that the impact was due to learning in a fun and safe environment, well-planned lessons, opportunities to learn music, access to resources and the positive relationships that BND staff had with children. Parents, school professionals and children named several specific musicians and their enthusiasm, passion and inclusive behaviours to be the reason for these impacts. The BND staff said the impacts were due to Big Noise values, ethos and programme, which led to the provision of a holistic programme, positive and trusting relationships with children and families, inclusive and fun culture, and opportunities to socialise in that environment.

In terms of what BND provides that school or home cannot, school professionals reported that it was the specialised and varied musical training children were receiving as well as the imbuing of a sense of belonging, development of friendships, and provision of a safe environment and good relationships.

Differences in impact on children receiving in-school and after-school provision

Half of the BND staff indicated that there were some differences as in after-school provision children had a more immersive BND experience and staff had opportunities to engage with children and families.

Differences in impact on children from different backgrounds

Just over half of BND staff provided reasons for differences in impact on children from different backgrounds. These included the reason for the child being there, such as whether they were attending for respite or to learn music, or both; and language development of non-English speaking children. Their view was that children from more deprived backgrounds get more out of BND than those from more affluent backgrounds. However, they noted that all were getting benefits regardless of their background and reasons for being there.

4.9 Impact of BND on parental involvement

The impact of their child participating in BND was noticed on parents' involvement in their child's schooling and development to a degree by all adult participant groups. However, not all school professionals reported a change in involvement. BND staff were more positive about a larger number of parents, but most examples were in the context of involvement in BND (especially during the online delivery). Although only a small number of parents responded, they were all of the view that there was a change in their involvement in their child's life, school, community and BND.

4.10 BND and the community

There was a mixed view about the community's awareness of BND, with half of the school professionals indicating that they were moderately aware and more BND staff indicating higher awareness. BND staff indicated that they were participating and supporting as many community activities and events as possible to raise their awareness. There was an almost unanimous view that BND was creating community spirit and cohesiveness based on a sense of ownership and pride from the achievements of the children.

Overall, the data suggest that there is consensus among all participants that the BND programme is having positive impacts on children, families and the community. The views of what proportion of children have been impacted differs at times. This difference in data might be due to the way in which this evaluation was undertaken, which was mainly through an online medium and at a distance due to COVID-19. Further, there were some aspects of impact that were perhaps impossible for certain groups to comment on, which although might be considered to weaken the evidence of impact, suggests that participants were honest and candid in their responses.

4.11 Recommendations

4.11.1 Strategic recommendations

1. **Big Noise Douglas and its extension:** Big Noise is well-embedded in the two primary schools in the Douglas area and in the community, and was found to be impactful. Given the focus on future outcomes for children, it is recommended that the provision is extended to young people of secondary school age. Also, it is important to consider how it can be extended to benefit other children from across Dundee.
2. **Raising communities' awareness:** More steps need to be taken to raise the communities' awareness of BND. However, it is also important to discuss what different people mean when using the term 'community' as there seem to be different communities mentioned in the qualitative data. This will help consider the best ways to raise awareness, and more importantly involve, different communities (e.g., Douglas community, parent community, school community).
3. **Establishment of baseline:** It is important to establish a baseline for core indicators of impact before children start participating in BND or when they move from one provision to another (nursery to P1, in-school to after-school). The baseline data can be collected through questionnaires, visual methods exercise, observations, children's classwork and/or

existing self-reporting/parent/teacher-reporting standardised scales. This will assist in better measurement of changes and impact in future evaluations.

4. **Longitudinal evaluation:** A longitudinal, ongoing evaluation is required to be able to see impact over time and to be able to unpack the predicted pathways to impact, any gaps and where programme changes are required. Further, this longitudinal evaluation should explore the impacts beyond the provision. This will highlight whether the impacts and projected outcomes are maintained beyond the life of BND as children move to secondary/post-school and employment. This is also vital for Baby Noise as it might be one of the strongest pathways for impact. The impact on Baby Noise parents' wellbeing should also be evaluated as the sessions were found to be benefitting the parents who might otherwise be isolated.

4.11.2 Operational recommendations

1. **Mode of delivery:** The BND programme should continue to be delivered using a range of delivery methods (including online and videos) which might provide options for children and families who are unable to join the sessions on particular days or times.
2. **Curricular links:** Clearer links should be made between the curriculum and BND programme. This requires closer involvement with school professionals to better understand where stronger links with the curriculum can be made. Further, it will be useful to consider co-creation of educational resources that can be used across the school and BND provision, for example, creative resources and/or lesson plans that can make links between music and numerical skills.
3. **Communication:** Effective communication and feedback loop are required between children, parents, school professionals, and BND staff about children's progress across the school, home, community and BND programme. This might provide more insights into the impacts and any need for (or impact of) differentiated learning provision.
4. **Needs assessment and training:** Training should be provided to BND staff as relevant, to improve their understanding of the additional support needs of children. This could perhaps be provided through Dundee City Council's in-service provision for school professionals as BND and BND staff were seen to be an integral part of the school provision.

References

- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101.
- Fancourt D., & Perkins, R. (2018). The effects of mother–infant singing on emotional closeness, affect, anxiety, and stress hormones. *Music & Science*, 1, 1-10. <https://doi.org/10.1177/2059204317745746>
- Herd, D., Jindal-Snape, D., Murray, C., & Sinclair, M. (2020). Comics Jam: Creating healthcare and science communication comics – A sprint co-design methodology. *Studies in Comics*, 11(1), 167-192. https://doi.org/10.1386/stic_00020_1
- Jindal-Snape, D. (2012). Portraying children’s voices through creative approaches to enhance their transition experience and improve the transition practice. *Learning Landscapes*, 6(1), 223-240. <http://www.learninglandscapes.ca/>
- Jindal-Snape, D., Davies, D., Scott, R., Robb, A., Murray, C., & Harkins, C. (2018). Impact of arts participation on children’s achievement: A systematic literature review. *Thinking Skills and Creativity*, 29, 59-70. <https://doi.org/10.1016/j.tsc.2018.06.003>
- Levy, S., Robb, A. J., & Jindal-Snape, D. (2017). Disability, Personalisation and Community Arts: exploring the spatial dynamics of children with disabilities participating in inclusive music classes. *Disability & Society*, 32(2), 254-268. <https://doi.org/10.1080/09687599.2016.1276433>
- Robb, A., Jindal-Snape, D., & Levy, S. (2021). Art in my world: Exploring the visual art experiences in the everyday lives of young children and their impact on cultural capital. *Children & Society*, 35(1), 90-109. <https://doi.org/10.1111/chso.12392>
- Svanberg, P.O., Barlow, J., & Tigbe, W. (2013). The Parent–Infant Interaction Observation Scale: reliability and validity of a screening tool. *Journal of Reproductive and Infant Psychology*, 31(1), 5-14. <https://doi.org/10.1080/02646838.2012.751586>
- Vettraino, E., Linds, W., & Jindal-Snape, D. (2017). Embodied Voices: Using Applied Theatre for Co-Creation with Marginalised Youth. *Emotional and Behavioural Difficulties*, 22(1), 79-95. <https://doi.org/10.1080/13632752.2017.1287348>
- Wulff, V., Hepp, P., & Wolf, O.T. et al. (2021). The effects of a music and singing intervention during pregnancy on maternal well-being and mother–infant bonding: a randomised, controlled study. *Archives of Gynecology and Obstetrics*, 303, 69–83. <https://doi.org/10.1007/s00404-020-05727-8>





University of Dundee

