

# The Building Underdeveloped Sensory Systems (BUSS) Programme: an Evaluation of the Experience of Foster Carers and Social Workers.

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Commissioned by

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## 1. Introduction

### 1.1 Background

#### Sensory Integration

Sensory Integration refers to our ability to receive and process all forms of sensory information and respond adaptively based upon this information (Ayers & Robbins, 2005). Humans are constantly receiving sensory information both about the environment around us, but also about our own internal state (Ayers & Robbins, 2005). As well as the five basic senses, sight, hearing, taste, touch and smell, we also receive sensory information from our vestibular and proprioceptive systems. The vestibular system provides core stability and gravitational security, helping us to balance and maintain our posture, whilst the proprioceptive system coordinates our muscular movements to ensure they are smooth and effective. Information from all the senses is then processed unconsciously to allow us to respond in a way that is purposeful and adaptive. Without our ability to integrate information from our various senses we would be unable to interact effectively with the world around us.

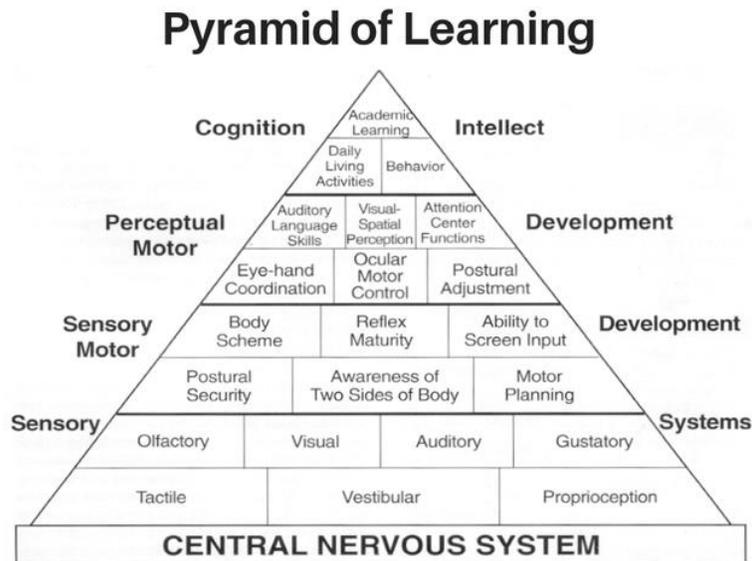
Babies are born with the innate capacity to develop sensory integration, but it is through early experiences of interacting with their environment, and people within it, that this ability develops. During the first seven years of life children understand the world largely through their senses, later in life mental and social processing skills are built upon this foundation of sensory processing (Ayers & Robbins, 2005).

Children who experience severe neglect in their early years are deprived of the experiences required to develop an effective sensory integration system (Lloyd, 2015), which often leads to them struggling with many activities of daily living and

experiencing frustration and emotional challenges as a result of this (Ayers & Robins, 2005).

### Improving Sensory Integration

It has been argued that sensory integration difficulties must be addressed before children can benefit from other therapies that aim to explore their emotional experiences (Lloyd, 2016). Lloyd's model of Building Underdeveloped Sensory Systems (BUSS) focuses on developing the proprioceptive, vestibular and tactile systems, as these are considered to be the foundation systems, see Figure 1 below.



*Figure 1: Pyramid of Learning (Williams & Shellenberger, 1994).*

The BUSS programme develops these systems by giving the child the movement experiences they have missed. These experiences take the form of exercises that the child practices at home with their foster carers, and at times at school. See Table 1 below for some examples.

*Table 1: Exercises for developing underdeveloped sensory systems.*

Underdeveloped System	Exercises
Tactile System	<p>Oral games (e.g. sucking thick drinks up a straw, blowing bubbles into a milkshake, blowing a Malteser around an assault course)</p> <p>Tactile games (e.g. guessing objects in a bag using just their hand, guessing letters or shapes drawn on the their back with a finger)</p>
Vestibular and Proprioceptive Systems	Lying on their tummy propped up on their elbows, commando crawling, obstacle courses, crab crawling.

The BUSS programme contains exercises like those offered in typical Sensory Integration Therapy (SIT) programmes. Leong and Carter (2007) conducted a review into the efficacy of SIT. Most SIT research focuses on participants with autistic spectrum disorder, learning disabilities or other developmental disabilities, with Leong and Carter's (2007) review only including one study where participants did not have developmental disabilities. Leong and Carter (2007) concluded that evidence for the efficacy of SIT is inconclusive and due to the resource heavy nature of the intervention its continued use in clinical practice for people with disabilities could not be justified. This conclusion was based upon the quality of the research, particularly the lack of clarity around participant characteristics and size of  $n$ , as well as the lack of definitive proof of the mechanism of change for SIT. Whilst there is value in understanding the active ingredient in a

therapeutic intervention, advocating for the removal of an intervention based on limited understanding of this appears pre-emptive as the mechanisms for change have not been clearly tested and proven for the majority of therapeutic interventions offered to children and adolescents (Kazdin & Nock, 2003). One key difference between the BUSS programme and other SIT programme is that the BUSS exercises are supported by the child's foster carer rather than a clinical professional. This goes some way to addressing Leong and Carter's concern regarding intensity of resource use.

In the years since Leong and Carter's (2006) review many additional systematic reviews have been conducted (e.g. Barton, Reichow, Schnitz, Smith, & Sherlock, 2015; Case-Smith & Arbesman, 2008; Case-Smith, Weaver, & Fristad, 2015; May-Benson & Koomar, 2010; Polatajko & Cantin, 2010). As noted by Watling and Hauer (2015) the diversity in inclusion criteria and outcomes being measured, lack of clear definitions as to what constitutes a sensory integration based intervention and different populations which the interventions have been targeted at, has led to contradictory conclusions and a lack of clear answers as to the efficacy of SIT.

### 1.2 Service Context

The Leeds Therapeutic Social Work Team (LTSWT) is a team of Psychologists and Social Workers that support children and young people who are looked after, living in kinship care, are subject to a child protection plan or a supervision order. The team offer therapeutic interventions with the children or young people and their families to address the child's emotional needs and psychological well-being. The children and young people seen by the LTSWT have often experienced severe abuse and neglect.

In 2018 Sarah Lloyd became involved with the team and developed the Building Underdeveloped Sensory Systems (BUSS) Programme. A sub-team was developed to support Sarah in running the programme. The programme has gone through several revisions due to the high levels of demand. At the time of the research the programme involved:

1. Training day – training on the theory underlying the BUSS programme and examples of exercises and activities are provided.
2. Assessment – an individual assessment of the child’s sensory abilities is conducted by a member of the LTSWT.
3. Activities at home and school – the foster carer supports their child to do various exercises and activities tailored to their needs. The complexity of the exercises increases as the child succeeds.
4. Reviews – reviews with the LTSWT are built in to check on the child’s progress.

### 1.3 Commissioning

This service evaluation project was commissioned by Sarah Lloyd, Occupational Therapist, who developed the BUSS programme and has implemented it within the LTSWT. Whilst Sarah received regular informal feedback about the programme, it was felt that to better understand the programme and to aid its future development it would be beneficial to collect feedback in a structured formal way. It was also hoped that having an independent researcher could allow participants to speak more freely about their experiences.

### 1.4 Aims

This evaluation aims to understand the experience of foster carers who have supported their foster children through the BUSS programme and social workers working in the LTSWT where the BUSS programme is delivered, with the view to develop and improve the programme.

## 2. Method

### 2.1 Design

A qualitative methodology was used to explore the participants' experiences of the BUSS programme. Whilst a survey could have been used to recruit a wider pool of participants, face to face interviews were considered to be the best method of gathering detailed accounts of the participants' experiences. Interviews also gave the opportunity to ask further questions to prompt participants to expand on their ideas and experiences. Quantitative methods were also considered, however as this was an initial exploratory evaluation it was unclear what variables could be impacting on the programme and using quantitative methods focussed on set variables could have reduced the scope for understanding the complexities of this intervention.

### 2.2 Measures

Two interview schedules, one for social workers and one for foster carers, were developed collaboratively with the commissioner (Appendix A). The interview schedules aimed to serve as a guide to facilitate the participants describing their experiences. The interview schedules were structured to prompt the participants to reflect on their experiences of all stages of the programme including the training session, the assessment process, implementing the activities at home and the outcomes of the programme.

### 2.3 Participants and Recruitment

It was important to interview both social workers and foster carers involved in delivering the intervention to understand the intervention from different perspectives.

All foster carers who had taken part in the BUSS programme between September 2018 and March 2019 were invited by the commissioner to take part in the evaluation. Contact details were then provided, with consent, to the researcher and contact was made with each potential participant. Five foster carers then gave their informed consent to participate. Foster Carer 2 and Foster Carer 3 were a married couple. Separate interviews were conducted to allow them opportunity to speak about their individual experiences, however their accounts relate to the same foster child.

Three additional foster carers expressed interest in participating but did not wish to be recorded. Conducting interviews without recording was considered, however by this point two interviews had already been conducted and recorded. It was felt that proceeding with unrecorded interviews could skew the analysis to the perspectives of the recorded interviews as the transcripts from the recordings would be more detailed than notes taken during non-recorded interviews.

All members of the LTSWT were invited to participate in the evaluation by the researcher attending a team meeting. Five social workers then approached the researcher and agreed to take part in the evaluation.

#### 2.4 Procedure

Informed consent was obtained from each participant, and they were given the opportunity to ask any questions about the research. An example information sheet and consent form can be found as Appendix B. Individual interviews were conducted with each participant lasting approximately thirty minutes. The interviews took place at the LTSWT's office in Leeds and were recorded using a dictaphone with the participants'

consent. The interviews were then transcribed by the researcher and unique identifying numbers were assigned to each participant to ensure anonymity.

### 2.5 Data analysis

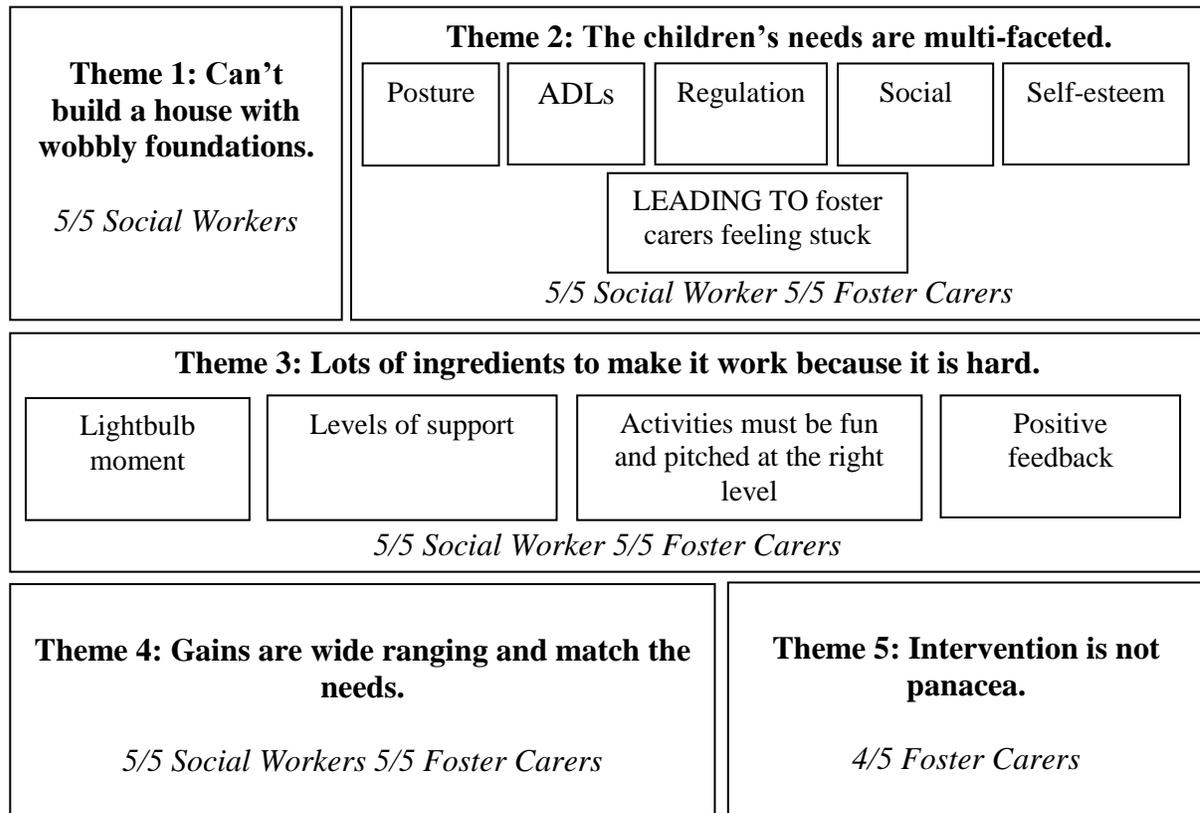
The transcripts were analysed following Braun and Clarke's (2006) six steps of thematic analysis. Credibility checks were carried out through discussing the themes with the commissioner and revising them accordingly. Themes were also reviewed by a peer on the Doctorate of Clinical Psychology (DClin) training programme. This peer was able to provide an objective perspective as they had no prior involvement with the evaluation.

### 2.6 Ethical Approval

Ethical approval for conducting this evaluation was granted by the School of Medicine Ethics Committee at the University of Leeds on 10.01.2019 (Ethics number: DClinREC18-009).

### 3. Results

The themes and subthemes that were described by the participants are summarised in Figure 2 below. Each theme is then described in further detail.



*Figure 2: Thematic Map*

#### Theme 1: Can't build a house on wobbly foundations

The Social Workers described feeling like the BUSS programme was the **missing part of a puzzle** when helping children.

*"It was just kind of like a piece of the jigsaw." (SW1)*

*"It's been the missing link." (SW2)*

There was a sense that they **had been stuck** with some children before and now this intervention helped them understand where they had got stuck.

*“No matter what we did we didn’t seem to make much progress with psychological therapies, no matter how good we were, or how supportive the system was, there was something missing.” (SW2)*

*“I’ve not really made massive amounts of progress and I thought well this might be the missing part of the jigsaw.” (SW3)*

The Social Workers also stated that they believe sensory integration work **should come first** before any other type of intervention.

*“They’ve never quite been given that environment to sit and to move and to stand up and that’s very much the basis on which everything else is built on. So we’ve got to get that right. We’ve got to put that in place.” (SW1)*

*“It’s a bit like building a house, if your foundations aren’t solid your house is gonna be wobbly isn’t it?” (SW4)*

## Theme 2: The children’s needs are multi-faceted

All the foster carers and social workers interviewed referenced this theme. Difficulties were described in **the way that the children held themselves** and moved their bodies.

*“His body was really floppy and that he could almost fall off a chair.” (SW3)*

*“He’s so clumsy, he’s always falling over his own feet.” (FC1)*

*“She just couldn’t hardly stand up and she was like three!” (SW1)*

The participants described how these physical difficulties made it challenging for their foster children to do certain **activities of daily living**.

*“Couldn’t use a knife and fork.” (FC5)*

*“He’s thirteen and couldn’t pick the kettle up.” (FC2)*

*“He’s always struggled with being able to open bottles of water, bottles of pop, tear a packet of sweets or crisps open.” (FC3)*

*“They always used to get a drink and they always used to spill it.” (SW4)*

The children being very active and **unable to regulate** themselves effectively was also described by the carers and social workers.

*“His behaviour is off the chart. He just bounces off the walls 24 hours a day, 7 days a week.” (FC1)*

*“Very active, and am I allowed to use the word hyper?” (FC4)*

*“Still struggling with big emotions.” (SW4)*

*“She was having real difficulties with knowing where her body started and finished, with knowing when she was hungry, when she was tired, when she need something to drink.”*

*(SW2)*

*“Can be very aggressive and very threatening to his carer.” (SW2)*

The children were described as having **social difficulties** due to their physical and regulation difficulties.

*“He’s taken a lot of stick and the children suffer, you know, other children notice and he has, I’d say, suffered.” (FC5)*

*“His actions could leave him open to, not I’d say ridicule, but could leave him a target.” (FC3)*

*“He doesn’t really have any friends because he’s easily wound up and they know what buttons to press.” (FC4)*

*“One little boy was really struggling with his friendships.” (SW5)*

**Low self-esteem** was also described.

*“Not an ounce of pride in hisself.” (FC5)*

*“He’s no self-esteem, no self-worth.” (FC2)*

*“He’s just got such low self-esteem that even doing some of the exercises he feels like he’s being watched and judged.” (SW4)*

*“Really low confidence and over-stimulated.” (SW4)*

The complexity of the foster children and how wide ranging their needs are created a **sense of hopelessness** or being stuck in some foster carers.

*“I were stuck.” (FC5)*

*“There’s been a couple of times where I’ve said right that’s it, I can’t do it.” (FC1)*

*“It has been really, really, really difficult.” (FC2)*

Theme 3: Lots of ingredients to make it work because it is hard.

Foster carers and staff described a **lightbulb moment** that served as the catalyst for their motivation to try the intervention.

*“What I really enjoy is watching people on the training and looking at their recognition of yes this makes absolute sense, knowing this child or that child.” (SW5)*

*“It was one of those lightbulb moments” (SW4)*

*“We just could not believe it. You’re sat there and you think oh my god that’s just what they do.” (FC2)*

*“I went to see her [Sarah] at that first meeting and the lights came on.” (FC5)*

Everyone described the need for **levels of support** around the child to ensure the intervention was successful. The children themselves need a lot of support to be motivated to engage with the intervention, which is very demanding on the foster carers, therefore meaning they need scaffolding from the social work team, school and other foster carers. Finally, the social workers described needing support from Sarah to boost their own morale and prevent their feelings of hopelessness when progress was slow.

*“It is hard doing anything in fostering if the child thinks ‘no, I don’t want to do this’.”*

*(FC2)*

*“You do have to put the work in.” (FC4)*

*“You want that team around the child, all trained, all knowing what we are recommending so that the foster carer is scaffolded.” (SW2)*

*“Keeping them going really so they can keep the child going.” (SW5)*

*“They’ve got tips and ideas from the other carers.” (SW3)*

*“Watching Sarah talk to foster carers has been helpful because that’s what she does, and she never just gives up, she always says right this didn’t work let’s do this.” (SW5)*

Everyone also referenced the need to keep the intervention **fun and pitched at the right level** for the child. It is important to use creativity to adapt the intervention and translate it into their own world.

*“Finding different ways of getting them to do what you want them to do without it feeling like its hard work is the trick.” (SW2)*

*“It’s better that they keep repeating the same thing and they’re getting it right, and they’re enjoying it.” (SW4)*

*“I’m doing exactly the same as Sarah but I’ve changed it so it fits in to my world.” (FC5)*

*“For me you just have to change, you have to adapt to go with your child.” (FC1)*

*“Even if they’re like doing push-ups, put a Smartie on the floor and they’ve got to get it.”  
(FC4)*

Both foster carers and social workers also referred to the **need for positive feedback** and for the child and the carer to be able to see the gains.

*“I think that feedback, oh I’m a bit better at that already, motivates them and it motivates the carers to do it.” (SW1)*

*“Finding things that are working and being really positive about those and commenting.” (SW5)*

*“It’s important for the kids so that they know how far they’ve come.” (FC2)*

*“When you see someone day-to-day you don’t see things as clearly as what other people do when they haven’t seen them for a while.” (FC1)*

The participants reported that these ingredients for success were all necessary because despite appearing simple in some ways **the intervention is quite challenging** to fully understand and demanding on time and resource.

*“It looks so simple, but it isn’t.” (SW2)*

*“Even though it’s kind of really straight forward I think it is a different way of looking at something.” (SW1)*

*“Trying something different and then worrying you’re not going to be able to do it is hard.” (SW2)*

*“The amount of time that we’ve put in on the assault course, the amount that we’ve put in to get his posture straight, to march, to feel, the amount of time we’ve put in to let him stop and smell the roses.” (FC5)*

Theme 4: Gains are wide reaching and meet the needs.

Improvements were always described that mapped on to the multifaceted needs described earlier, namely; physical, activities of daily living, regulation, self-esteem and social.

*“Now she can do basic things like carrying a cup, using a knife and fork because she's gained that control.” (SW2)*

*“Now he can open bottles of water.” (FC3)*

*“Carers have seen big shifts in regulation, that kids are calmer.” (SW2)*

*“He's got friends at school now.” (SW5)*

*“Quite significant positive changes in how a child manages their body, moves around and sometimes that's helped with regulation as well.” (SW1)*

*“If the way their body works improves, we see that change in their self-esteem, we see that change in how they function in a classroom, it's like a ripple effect almost really.”*  
*(SW2)*

*“Build some sort of strength up in different areas, which has given him a bit more confidence.” (FC1)*

Alongside the process of physical improvements leading to an increase in confidence and ability to regulate themselves there was a sense that the foster carers had gained a deeper understanding of their child which helped them to empathise more, and

therefore approach their children in a different way. Both foster carers and social workers described this improved relationship.

*“Made me aware of what this kid had missed out on.” (FC5)*

*“More of a connection between the child and the carer because they’re spending more time together” (SW1)*

*“A big change has been in our understanding of why. It’s not just ‘cause he can’t. It’s not ‘cause it’s something that he doesn’t want to do it, because it’s something that he physically can’t do.” (FC2)*

*“This knowledge that she’s given me has now and will forever more enable me to go, well maybe they didn’t have such and such, not thinking what’s wrong.” (FC5)*

#### Theme 5: Not panacea

Four of the foster carers described how the intervention was not panacea and their foster children still needed a lot of prompting and support.

*“He has to be reminded practically every meal, ‘knife and fork, two-hands.’” (FC3)*

*“He’s not a hundred percent.” (FC4)*

*“There’s still so much work to be done, for his brain to coordinate correctly and get him moving right with his hands and his eyes.” (FC5)*

#### Differences between participant groups.

Initially two thematic analyses were conducted, one for the foster carers and one for the social workers, as it was anticipated that there would be differences between the two groups. However, once the analyses were completed it was clear that there was considerable overlap between the two participant groups, with all participants referring to three of the themes. Differences between the groups emerged in theme 1 with only the social workers referring to the idea that ‘you can’t build a house on wobbly foundations’. This is possibly a reflection of their professional training in interventions leading them to look at the intervention in comparison to other therapies offered by the service. Theme 5 was only referenced by the foster carers, again this could reflect the differences in training perhaps leading to the foster carers having different expectations about the intervention, and therefore being more likely to express concerns that the intervention was not panacea.

## 4. Discussion

### 4.1 Summary of Results

The participants were overwhelmingly positive about the BUSS programme and described both a clear need for the intervention and positive outcomes in many areas of the children's lives. The value of the intervention was recognised by both the professionals and the foster carers. The importance of this should not be underestimated for two reasons. Firstly, despite acknowledgement of the need to improve outcomes for looked after children this has been difficult to achieve (Coman & Devaney, 2011), with looked after children underperforming in education, being vastly overrepresented in the criminal justice system and experiencing higher levels of mental health and social difficulties than their peers in later life (Oakley, Miscampbell & Gregorian, 2018). This highlights the importance of interventions that could reduce this gap. Secondly, many of the participants alluded to feeling out of options before the BUSS programme. One foster carer explicitly stated that had it not been for the BUSS programme she is certain that the placement would have broken down, resulting in another upheaval for the child and the loss of another attachment figure. Providing consistency for looked after children is paramount, with preventing placement breakdown being a key goal of services (Oosterman, Scheungel, Slot, Bullens & Doreleijers, 2007). The impact of this was acknowledged by the foster carer who stated, 'it would have been the end of him'.

The positive impact of the intervention described by the participants is at odds with Leong and Carter's (2007) review, claiming SIT has little value. It is possible that this was due to a qualitative methodology being used in this evaluation. Parham et al. (2007)

identified challenges with selecting outcome measures as one of the possible reasons that demonstrating treatment efficacy in SIT is challenging. The studies included in Leong and Carter's review were all quantitative and could have overlooked changes that occurred by not allowing participants to provide their own detailed accounts of the intervention.

The participants spoke extensively about the complex needs of the children and the impact this had on the systems around them. This parallels the sensory integration literature, which reports that children who struggle to process sensory information will have difficulties in many areas (Ayers & Robbins, 2005). Ayers and Robbins (2005) describe children who struggle to integrate sensory information as finding a wide range of daily living tasks to be more effortful and as experiencing frustration and less satisfaction than children without these difficulties. This was paralleled in the foster carer's accounts of their children where they struggled with motivation to engage with the activities, partially due to a fear of failure and the frustration associated with this.

The social workers experience of being unable to make progress with other interventions before addressing the sensory needs of the children is also predicted by the literature which suggests children need to develop their tactile, vestibular and proprioceptive systems before they can manage more complex tasks (Williams & Shellenberger, 1994). Whilst the social workers reflected on their lack of progress prior to the intervention, and the leaps the children had taken, which they attributed to the BUSS programme, none of the participants spoke about progress with other interventions following completion of the BUSS programme. Longitudinal research would be required

to unpick whether the children had more success with talking therapies and play therapies when their sensory needs had been addressed.

Parham et al. (2007) assessed fidelity in research on sensory integration interventions. A panel of experts reviewed the literature and reached a consensus as to what the core elements of a sensory integration intervention are. The interventions that they considered were delivered by occupational therapists rather than foster carers, however many of the elements they felt to be crucial were paralleled by the participants in this evaluation. For instance, they refer to the need to ‘provide just-right challenges’, that are adapted to the child’s needs and are not too difficult or too easy and the need to ‘create play context’, referring to the need to make the activities fun and engaging. These two elements were described in this evaluation’s thematic map as ‘activities must be fun and pitched at the right level’. Furthermore, Parham et al. (2007) refer to the need to ‘maximise the child’s success’, which is described as the need for the child to know they are doing well and feel they are achieving, which appears similar to the need for ‘positive feedback’ which was described by the participants in this evaluation.

It is widely acknowledged that difficulties experienced by looked after children relate to the inter-play of a wide variety of factors (Coman & Devaney, 2011). Alers (2005) described the importance of a holistic, multi-disciplinary and multi-model approach when working with children with complex emotional difficulties. For instance, Alers (2005) advocates for an approach drawing heavily on sensory integration alongside attachment theory. This was an ethos shared by the social workers that participated in the research, with the sensory integration work being seen as a ‘piece of the puzzle’ rather than the

solution in its entirety. This was also echoed by the foster carers who acknowledged their foster children still had many challenges to face after completing the BUSS programme.

#### 4.2 Reflexivity

As noted by Elliott, Fischer and Rennie (1999) it is important to own one's perspective when conducting qualitative research. Prior to clinical training I worked within an Occupational Therapy department where sensory work was held within high esteem. It is likely that this shaped my thinking and is undoubtedly why I was drawn to this SEP. Throughout my training I have believed that effective multi-disciplinary working is key to good mental health care, it is possible that these beliefs and experiences may have influenced my interpretation of the data. However, I attempted to remain mindful of these potential biases whilst conducting the analysis and repeatedly returned to the raw data to ensure I was being guided by the data and capturing the participants' experiences. Credibility checks were used to further mitigate this risk.

#### 4.3 Limitations

There were several limitations with this SEP. As the participants were self-selecting it is possible that there could be a bias in the sample with participants who were passionate about the intervention volunteering. This limits the generalisability of the themes. Efforts were taken to reduce this by inviting all foster carers and social workers to participate and designing an interview schedule which asked about all aspects of their experiences of the intervention.

When conducting the interviews it transpired that all of the foster carers who participated were fostering boys. It is possible that the experience of supporting a girl through the BUSS programme may have been different. With hindsight attempts could have been made during sampling to ensure that the foster carers had foster children of varied ages and genders, however as only five foster carers volunteered to participate this may not have been achievable.

As noted in the method, foster carers 2 and 3 are a married couple. It was possible that this could have skewed the results due to these two participants speaking about the same child, therefore likely having had similar experiences. This was considered during the analysis, however there was a high level of consistency between all the foster carers' accounts mitigating the risk that themes emerged based only on the similarities between foster carers 2 and 3's experiences.

Due to the understandable scrutiny that foster carers receive from Social Care Services it is possible that the participants' responses could have been self-censored. This fear of coming under scrutiny was reflected in many of the participants' apprehension around being recorded. Efforts to reduce this and to allow the participants to speak freely were made by reassuring participants that their anonymity would be maintained within reasonable boundaries and by using a researcher independent of the LTSWT.

#### 4.4 Recommendations

Several recommendations were made as part of this SEP:

- *Continue running the BUSS programme.* The responses from the participants indicate that the BUSS programme has been incredibly valued and it making positive differences to foster carers and their children, in one instance being reported as the sole reason the foster carer has been able to continue fostering their child.
- *Contact between the LTSWT and the foster carers should be maximised.* The foster carers described how challenging it was to persevere with motivating their foster children to continue with the exercises and that contact with the LTSWT helped with this a great deal. There was a sense that they would appreciate more contact with the team and without this their motivation and therefore the success of the intervention would be impacted. Due to budgetary constraints and competing demands in the social workers' case loads this contact could be done in groups as the foster carers felt they also benefitted from contact with other foster carers.
- *Highlight the importance of creativity and persistence.* Motivating the children to engage in the exercises was a complicated process and appeared to be dependent on the individual child. It is essential that the foster carers recognise that this will be challenging and that without creativity and fun it appears unlikely they will succeed.
- *Further research to understand the foster children's experiences.* It was not within the scope of this SEP to conduct interviews with the children who took part

in the BUSS programme. It may be beneficial to understand their experiences of the intervention.

#### 4.5 Dissemination

This evaluation was summarised in a poster (Appendix C) which was displayed at the University of Leeds DClin Service Evaluation poster conference. The research will be described in more detail at a presentation to the DClin third year trainees and staff team on 12<sup>th</sup> December 2019. The research findings are also scheduled to be disseminated to the LTSWT team in the form of a presentation at their team meeting on Thursday 21<sup>st</sup> November.

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## Appendices

### Appendix A: Interview Schedules

#### **Semi-structured Interview Prompts: Foster Carers.**

What motivated you to try the intervention?

How did you find the training?

Was there anything you found particularly helpful about the training? .... Unhelpful?

How did you find the assessment?... how did having the training before the assessment affect the assessment?

Did you feel prepared to do the exercises and activities after the assessment and training?

Do you have any ideas as to how the training could be improved?

How did you find implementing the games and strategies at home?

Was there anything you found hard about trying the games and activities at home?

Have you been able to overcome these challenges? ... How did you do this?

Is there anything that would have made the process easier?

Have you seen any positive changes?... if so, what have these been?

Has there been any negative changes?... if so, what have these been?

Is there anything else that changed at home during or after the intervention?

What do you think was the cause of the change you saw?

Would you recommend the programme? ... Why?

What advice would you give another foster parent who was struggling with the games and activities?

Anything else you'd like to add?

**Semi-structured Interview Prompts: Staff.**

How did you hear about the intervention?

What were your first thoughts about the intervention?

What motivated you to get involved with the intervention?

Is it similar to what you expected? ... (in what ways is it different?)

Was there anything that you thought was particularly helpful about the intervention? ...  
unhelpful?

Do you have any ideas about how the intervention could be improved?

Have you come across any barriers to helping foster carers with the intervention? How  
have you overcome these?

Have you seen any children make changes after using the intervention? ... what were  
the changes you saw?

What do you think was the cause of the changes you saw?

What advice would you give to a foster carer who was struggling with the games and  
activities?

Is there anything else that you'd like to add?

## Appendix B: Participant Information Sheets and Consent Form

**Foster Carer Information Sheet****An Evaluation of the Building Underdeveloped Sensorimotor Systems (BUSS) Programme in the Therapeutic Social Work Team in Leeds.**

I would like to invite you to take part in the above-named study but before you decide, please read the following information.

**What is the purpose of this study?**

I want to understand foster carers' experiences of the BUSS programme. I am interested in how people are finding the programme, and what your opinion is on what helped bring about any changes that occurred. It is hoped that these findings will help the Therapeutic Social Work Team to develop the programme and support other foster carers who may be finding the programme difficult.

**Who is doing the study?**

The study is being conducted by the University of Leeds. It was organised by Sarah Lloyd, who designed the BUSS programme and Tom Cliffe, who is a lecturer on the University of Leeds Doctorate in Clinical Psychology (DClinPsy) course. Katherine Grindheim is a student on the DClinPsy course and will be conducting the research.

**Why have I been asked to participate?**

We are approaching foster carers who have taken part in the BUSS programme as we are interested in their experiences and opinions on the programme.

**What will be involved if I take part in this study?**

If you choose to take part you will be required to take part in a short interview with Katherine Grindheim. We imagine this will take approximately 30 minutes. The interview will be your chance to give feedback on how you have found the BUSS programme. If there are any questions you are uncomfortable with answering you can decline to answer them. The interview will be recorded.

**What are the advantages and disadvantages of taking part?**

There are no direct benefits from taking part in this study. It is hoped that the findings may help future foster carers who are taking part in the BUSS programme and those delivering the BUSS programme to implement it more effectively.

**Can I withdraw from the study at any time?**

You can choose to end the interview at any point. If you do so then the recording will be deleted, and your data will not be included in the study. After the interview is completed you will have seven days in which you can still choose to withdraw your data from the study. After this seven-day period, transcription will begin, and you will no longer be able

to withdraw your data. The data will be presented on an aggregated level and there will be no identifying information.

**Will the information obtained in the study be confidential?**

All the information that you give us will be kept confidential. The recordings will be password protected, stored on a secure server and only accessible to the research team. All data will be stored in accordance with General Data Protection Regulation (GDPR; 2018). In the report the data will be presented on an aggregated level, ensuring that no individual can be identified. Where quotes are used these will be given with a pseudonym. All data will be destroyed after three years.

Confidentiality would only be broken if information was provided during your interview that led us to believe that there was a risk to the safety of your foster child. In this incidence we would inform the Service Manager of our concerns and appropriate measures would be taken.

**What will happen to the results of the study?**

The findings of this study will be written in to a research report and presented at a conference at the University of Leeds. Anonymity of all participants will be ensured in the report and during the conference. The results will also be feedback to the Therapeutic Social Work Team informally so that they can continue to develop the programme in accordance with the findings. An article may also be submitted to an academic journal based on our findings.

**Who has reviewed this study?**

Ethical approval has been given for this study by the School of Medicine Ethics Committee at the University of Leeds (SOMREC Project Number: DCLinREC18-009).

**If you agree to take part, would like more information or have any questions or concerns about the study please contact Katherine Grindheim (ps09kas@leeds.ac.uk) or Tom Cliffe (t.d.cliffe@leeds.ac.uk).**

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Katie Wrench  
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If you would like to make a complaint about the research please contact Gary Latchford.

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of Leeds, Worsley Building – Level 10, Clarendon Way, Leeds, LS2 9NL.  
0113 343 2736

**Thank you for taking the time to read this information sheet.**

## Staff Information Sheet

### **An Evaluation of the Building Underdeveloped Sensorimotor Systems (BUSS) Programme in the Therapeutic Social Work Team in Leeds.**

I would like to invite you to take part in the above-named study but before you decide, please read the following information.

#### **What is the purpose of this study?**

I want to understand staff members' experiences of the BUSS programme. I am interested in how people are finding the programme, and what your opinion is on what helped bring about any changes that occurred. It is hoped that these findings will help the Therapeutic Social Work Team to develop the programme and support future foster carers who may be finding the programme difficult.

#### **Who is doing the study?**

The study is being conducted by the University of Leeds. It was organised by Sarah Lloyd, who designed the BUSS programme and Tom Cliffe, who is a lecturer on the University of Leeds Doctorate in Clinical Psychology (DClinPsy) course. Katherine Grindheim is a student on the DClinPsy course and will be conducting the research.

#### **Why have I been asked to participate?**

We are approaching staff members who have helped deliver the BUSS programme as we are interested in their experiences and opinions on the programme.

#### **What will be involved if I take part in this study?**

If you choose to take part you will be required to take part in a short interview with Katherine Grindheim. We imagine this will take approximately 30 minutes. The interview will be your chance to give feedback on how you have found the BUSS programme. If there are any questions you are uncomfortable with answering you can decline to answer them. The interview will be recorded.

#### **What are the advantages and disadvantages of taking part?**

There are no direct benefits from taking part in this study. It is hoped that the findings may help future foster carers who are taking part in the BUSS programme and those delivering the BUSS programme to implement it more effectively.

#### **Can I withdraw from the study at any time?**

You can choose to end the interview at any point. If you do so then the recording will be deleted, and your data will not be included in the study. After the interview is completed you will have seven days in which you can still choose to withdraw your data from the study. After this seven-day period, transcription will begin, and you will no longer be able to withdraw your data. The data will be presented on an aggregated level and there will be no identifying information.

#### **Will the information obtained in the study be confidential?**

All the information that you give us will be kept confidential. The recordings will be password protected, stored on a secure server and only accessible to the research team. All data will be stored in accordance with General Data Protection Regulation (GDPR; 2018). In the report the data will be presented on an aggregated level, ensuring that no individual can be identified. Where quotes are used these will be given with a pseudonym. All data will be destroyed after three years.

Confidentiality would only be broken if information was provided during your interview that led us to believe that there was a risk to the safety of a foster child. In this incidence we would inform the Service Manager of our concerns and appropriate measures would be taken.

**What will happen to the results of the study?**

The findings of this study will be written in to a research report and presented at a conference at the University of Leeds. Anonymity of all participants will be ensured in the report and during the conference. The results will also be feedback to the Therapeutic Social Work Team informally so that they can continue to develop the programme in accordance with the findings. An article may also be submitted to an academic journal based on our findings.

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**If you agree to take part, would like more information or have any questions or concerns about the study please contact Katherine Grindheim (ps09kas@leeds.ac.uk) or Tom Cliffe (t.d.cliffe@leeds.ac.uk).**

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If you would like to make a complaint about the research please contact Gary Latchford.

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Joint Programme Director

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**Thank you for taking the time to read this information sheet.**

**CONSENT FORM**

<b>Statement of agreement</b>	<b>Please put our initials in the box to confirm agreement</b>
I have understood the participant information sheet.	
I understand that my personal details will be kept confidential. This means that no information will be shared with anyone else.	
I understand that my data will be anonymised to protect my identity. This means that even though we will report back your stories and ideas no-one will be able to identify who you are.	
I understand that any information I give may be included in published documents but all information will be anonymised.	
I understand that my participation in the study is voluntary and that I am free to withdraw from the study at any time. If I choose to withdraw I understand that I can ask for my data to be withdrawn for seven days after the interview, at which point transcription will have begun and it will no longer be possible to remove my data.	
I have had the opportunity to ask questions and have received satisfactory answers to my questions.	
I have received enough information about the study.	
I agree to take part in this study.	

Participant signature:

Date:

Name of participant:

Researcher signature:

Name of researcher:

**ONE PARTICIPANT COPY & ONE COPY FOR THE RESEARCHER**

Appendix C: SEP Poster



# The Building Underdeveloped Sensory Systems (BUSS) Programme: an Evaluation of the Experience of Foster Carers and Social Workers.

Katherine Grindheim, Psychologist in Clinical Training  
Commissioned by Sarah Lloyd, Occupational Therapist

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## 1. Introduction

**Sensory Information**  
Sensory integration is our ability to receive and process all forms of sensory information and respond adaptively based upon this information. We constantly receive sensory information both about the environment around us and our own internal state (Ayres & Hobson, 2005).

We receive this information from our five basic senses, but also from our vestibular system which provides core stability and postural security and our proprioceptive system which allows us to coordinate muscle movements. Both are essential in interacting effectively with the world around us. Sensory information is then processed unconsciously to allow us to respond in a way that is purposeful and adaptive.

Without our ability to integrate information from our various senses we would be unable to interact with the world around us. Babies are born with the innate capacity to develop sensory integration, but it is through early experiences of interacting with their environment, and people within it, that this ability develops. During the first seven years of life children understand the world largely through their senses, later in life mental and social processing skills are built upon this foundation of sensory processing (Ayres & Hobson, 2005).

Children who experience sensory neglect in their early years are deprived of the experience required to develop an effective sensory integration system (Lloyd, 2013).

**Leeds Therapeutic Social Work Team**  
The Leeds Therapeutic Social Work Team (TSWT) is a team of Psychologists and social workers that support looked after children and young people. The team offer therapeutic interventions to children or young people who have experienced abuse or neglect and their families.

**Building Underdeveloped Sensory Systems Programme (BUSS)**  
The BUSS programme aims to build neglected children's under-developed sensory systems through exercises and activities supported by the children's foster carers and their school. These exercises are targeted at the proprioceptive, tactile and vestibular system and include things such as concrete crawling, making thick drinks up streets and high step walking. By giving children these movement experiences that they have missed out on it is theorised that their systems will develop and improve.

## 2. Aim

To understand the experiences of foster carers and social workers going through the BUSS programme.



## 3. Method

All members of the TSWT and all foster carers who had taken part in the BUSS programme between September 2019 and March 2020 were invited by the commissioner to take part in the evaluation. Five foster carers and five social workers volunteered to take part in individual interviews that lasted approximately 90 minutes. Interviews were guided by an interview schedule and were recorded with the participant's consent. The interviews were then transcribed by the researcher. The transcripts were analysed using thematic analysis (Krause and Clark, 2006). Credibility checks were carried out through with the commissioner and a peer on the Doctorate in Clinical Psychology programme and were revised accordingly.

## 4. Results

The themes that were described by the participants are summarised below.

**Theme 1: Can't build a house with wobbly foundations.**

“No matter what we did we didn't seem to make much progress with psychological therapies, no matter how good we were, or how supportive the system was, there was something missing.”

**Theme 2: The children's needs are multi-faceted.**

- Picture
- Regulation
- ADLs
- Social
- Self-esteem

“Could it use a knife and fork.”

Leading to foster carers feeling stuck.

“It's been really, really, really difficult.”

**Theme 3: Lots of ingredients to make it work because it is hard.**

- Lightbulb moment
- Positive feedback
- Levels of support
- Activities must be fun and pitched right

“You have to adapt to go with your child.”

“It looks so simple, but it isn't.”

**Theme 4: Gains are wide ranging and aren't the same.**

“If the way their body works improves, we see that change in their self-esteem, we see that change in how they function in a classroom, it's like a ripple effect almost really.”

**Theme 5: Intervention is not persona.**

“There's still so much work to be done, for his brain to coordinate correctly and get his reading right with his hands and his eyes.”

## 5. Discussion

The participants spoke extensively about the complex needs of the children. This parallels the sensory integration literature, which reports that children who struggle to process sensory information will have difficulties in many areas (Ayres & Hobson, 2005).

The social workers experience of being unable to make progress with other interventions before the BUSS work was completed is also predicted by the literature which suggests children need to develop their tactile, vestibular and proprioceptive systems before they can manage more complex tasks.



## 6. Recommendations

Overall the participants felt extremely positively about the programme and that there was little that needed changing. However recommendations include:

- Increased contact between TSWT and foster carers doing BUSS programme to improve commitment and motivation.
- Emphasise that change can be slow and the importance sticking with the message.

