"Fine Fine Fine!" - Consulting Children with Social Emotional Behavioural & Communication Difficulties

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This paper will present the findings of a pilot study that aimed to determine if the use of Talking Mats (Murphy, 1998) increases the ability of children with social emotional and behavioural difficulties (SEBD) and communication difficulties to express their views. A special school and family support service for children with SEBD in central Scotland had expressed dissatisfaction with the process they used to consult children about their views prior to multi-agency review meetings. Six participants were identified and video interviewed twice about their views on school. They were interviewed once using Talking Mats and once using their main communication method (speech). Qualitative and quantitative analysis of the data showed that for the majority of participants the use of Talking Mats had a positive impact upon their communicative effectiveness.

Introduction

Researchers have found that 60 – 95% of children with emotional behavioural difficulties also have communication difficulties (Cross, 2004). These difficulties impact upon many areas including the child's ability to develop emotionally, socially and to learn. In order to ensure the best outcome for these children collaborative working between education, health and social work staff is essential. This collaboration should involve consulting and taking into account the views of the child; if the views of the individual about their communicative strengths and difficulties inform intervention decisions, efficacy of speech and language therapy interventions can be increased (Morris 2003, Cross 2004).

At a clinical level a special school and family support service for children with social, emotional and behavioural difficulties (SEBD), located in central Scotland, had expressed dissatisfaction with the process they used to consult children about their views prior to multi-agency review meetings.

Examples of good practice in consulting children with communication difficulties exist (Aitken & Miller, 2000). However there is an identified need for more practical ideas and an acknowledgement that there has been less success in involving children with cognitive and/or communication impairments (Aitken & Miller, 2000). In order to be fully inclusive, in both research and practice, it is essential that strategies that break down the barriers to communication are developed and implemented (Morris, 2003).

This project aimed to determine if the use of Talking Mats (TM) increases the ability of children with social, emotional, behavioural and communication difficulties (SEBCD) to express their views when compared with their main communication method (MCM).

TM is a visual interactive framework developed by Murphy (1998) which has been proven to enable adults with communication, cognitive and physical difficulties to express their views (Murphy, Cameron, Markova & Watson, 2004). It uses three sets of picture symbols: topic, options and a visual scale.

The topic symbol represents the topic that is going to be discussed, for example "My school day". The options relate specifically to the topic, such as "maths" and "reading". The visual scale can range from two to five symbols. It is placed along the top of the mat and enables participants to indicate their feelings about each option by placing them under the appropriate symbol, such as like, unsure or don't like.

Figure 1. A Talking Mat

Method

Participants

The researcher, head and deputy teachers and senior social worker of an identified special school for children with SEBD jointly identified six participants based on the following selection criteria: attendance at the identified school; parental and participant consent; an understanding of language at a two information carrying word level; and a current diagnosis of a moderate or severe language difficulty or a communication difficulty associated with an autistic spectrum disorder (ASD). A qualified speech and language therapist had previously determined their diagnosis using a range of non-standardised and standardised assessments. The assessments used varied according to each child's presenting needs. The table below provides demographic information about the participants.

Figure 2. Participant Details

Participant	**Age**	**Medical Diagnosis**	**Main Communication Method (MCM)**	**Speech & Language Diagnosis**
1	7.11	Autistic Spectrum Disorder (ASD)	Speech	Severe expressive, receptive and pragmatic language disorder associated with ASD
2	10	Attention Deficit Hyperactivity Disorder (ADHD)	Speech	Moderate receptive delay & expressive language disorder.
3	7.9	No known aetiology	Speech	Moderate receptive & expressive language delay.
4	7.11	ASD	Speech	Moderate expressive &

				receptive language delay.
5	10.2	ADHD	Speech	Moderate receptive & severe expressive language disorder.
6	8.6	No known aetiology	Speech	Moderate expressive and receptive language delay.

Research Design

Initial discussion took place with the senior social worker, head and deputy teachers in order to identify a topic that would be relevant for all the participants. The topic "My school day" was agreed and a three point visual scale was used. Discussion then took place with each participant's social worker and class teacher in order to identify twenty individual activities and associated picture symbols that would make up the options.

During the first interview the views of participants' on their school day were obtained using either a TM or their main communication method (MCM), which for all the participants was verbal questioning and answering. The interviews were counterbalanced to ensure that any influences from one type of interview to the other could be identified. The second interview took place two weeks later. Both interviews were video recorded and transcirbed. A digital photo was taken of each completed "mat" as a record of the participant's views and each participant received a copy of their photograph.

The video recordings of both interviews were analysed using a five point coding framework (Appendix1) which identified the following points as being indicators of effective communication: Participant's understanding of the issue for discussion; participant's engagement with interviewer; confidence of participant in articulating views/placing symbols; interviewer's understanding of participant's views; participant's satisfaction with their confirmed views. A consensus approach was used to rate the data. The researcher and an independent observer viewed the data at the same time and scored their judgements without knowledge of each others' scores. There was 85% agreement and the remaining 15% were discussed until a consensus was reached. The range of vocabulary used by the participants was also used as an indicator of effective communication. This was examined by counting the number of different words used to express positive or negative views. The use of a mid point was noted to determine if the participant's use of the concept "not sure" varied between interviews. A verbal mid-point was defined as a word or phrase that does not infer a definite negative or positive. For example "in between", "not sure", "sometimes I do sometimes I don't".

The percentage of on-task behaviours were analysed using a ten second time series analysis based on a procedure designed by Lower (2004). On task behaviours were defined as: Purposeful and controlled eye contact towards the interviewer; purposeful and controlled eye contact with objects or visual stimuli connected with the interview; and active engagement – defined as attending to the interview process and being responsive to interview prompts and stimuli. Participants were recorded as off task if they: Did not exhibit any of the above behaviours; handled objects not related to the interview; exhibited abusive, restless or avoidant behaviour e.g. standing up, turning away from the interviewer or shouting; or talked about a subject not related to the interview materials or process. To assess reliability the

researcher and an independent observer initially rated the TM and MCM interviews of two of the participants. A percentage agreement was then used to calculate the inter-observer reliability. This was found to be above 95%. As 70% is generally considered an acceptable level of agreement between observers the researcher then proceeded to rate the remaining interviews (Aspland & Gardner, 2003).

To further substantiate the quantitative data the following were examined thematically: The language used by the participants during both interviews to compare the syntactic structure and effectiveness of meaning; participant's non-verbal comments during the interviews to examine if they concurred with the views expressed verbally or on the mats; and views expressed in both interviews to compare similarities and differences.

Results

Communication Effectiveness

Visual inspection of the scores for the effectiveness coding framework showed the following: On all of the indicators from the effectiveness coding framework the scores for participants 1 and two were higher when using TM than their MCM. Participant three scored higher on engagement with the interviewer when using TM, on all the other indicators no difference was found. Participant four scored higher on three out of the five indicators: Participant's engagement with the interviewer; confidence of participant in articulating views/placing symbols and participant's satisfaction with their confirmed views. Participant five's scores were greater on all indicators when using TM except one; confidence in articulating his views, on this indicator no difference was found. For participant six no difference in effectiveness was found on any of the indicators.

Figure 2. Aggregate scores for effectiveness coding.

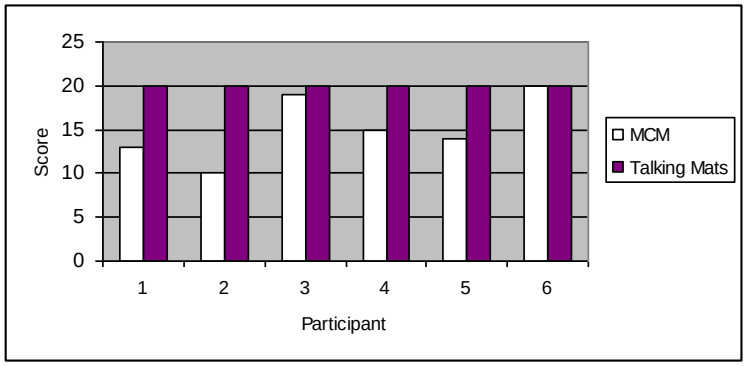
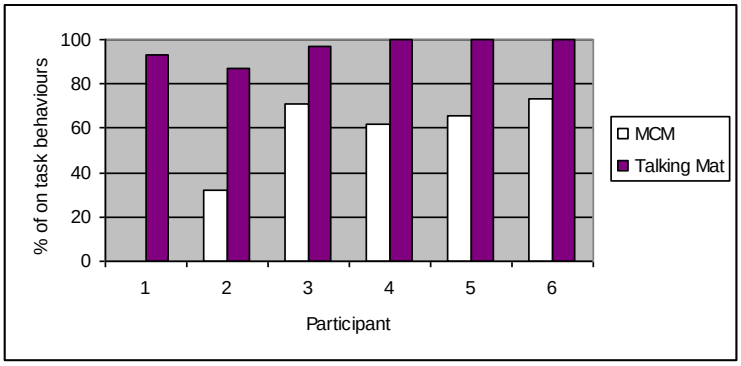


Figure 2 shows the aggregate scores for communication effectiveness. For five out of six participants their communication effectiveness increased when using a TM compared to their MCM. However only minimal change was noted in the fourth particpant's communication effectiveness. The effectiveness of the sixth participant's communication was the same under both conditions.

On task behaviours

Figure 3. Percentage of on task behaviours



Visual inspection of the results in Figure 3 shows that for all participants the percentage of on task behaviours was greater for the TM interview than for the MCM interview.

Use of the mid point.

The table below shows that all the participants used a midpoint during the TM interview but only two used it during the verbal interviews.

Figure 5. Use of the mid-point

Participant	**1**	**2**	**3**	**4**	**5**	**6**
TM	Yes	Yes	Yes	Yes	Yes	Yes
MCM	No	No	Yes	No	No	Yes

Substantiation of quantitative data.

Participant 5's comments during the TM interview were grammatically more complex and he used a wider range of vocabulary. During the verbal interview the only language he used to state his views was "fine" "un-fine" and "not fine" with no elaborations about why he felt this way. However during the TM interview he used a wider range of vocabulary, more sophisticated syntactic structures and elaborated upon his views. For example: "Putting that under that 'cos I don't know if I like it or if I don't like it", "Great!"" "like 'cos I like playing football with Jim when I'm on his team".

During the MCM interview participant 1 made regular conversation topic shifts for prolonged periods of time. These were generally linked to his special interests and/or triggered by a semantic link. For example he elaborated; "I don't like lunch time 'cos I don't like the crust on the bread, you know, the hard crust". The word crust then triggered him to talk about the "mantle of the earth". On occasions the rapid topic shifts resulted in the interviewer being unable to establish his view or understand his meaning. During the TM interview the conversation topic always remained focussed on the subject being discussed.

Participants 3 and 6 stated a wider range of views during the verbal interview than during the TM interview. For example participant 6 expressed the following:

TM: “don’t like” “boring” “in between” “alright” “like” “happy happy”
Verbal Interview: “hate” “boring” “dinnae like it” “in between” “fine” “like it” “favourite” “happy” “good” “love it”

During the verbal interview the non-verbal responses of participants 2, 4 and 5 did not reflect the views they expressed verbally. For example one participant frequently said, whispered or shouted “good” whilst facing away from the interviewer with his head down on his knees covered by his arms and/or giving the camera an abusive hand gesture. Another participant repeatedly commented “good” whilst holding his head in his hands.

During the TM interview all the participants’ non-verbal responses reflected their placement of symbols on the mat. Such responses included frowning, shaking their heads and/or banging symbols on to the mat for “don’t like”. Smiling, looking up and/or eyes widening for “like” and using a shaky hand gesture for not sure.

The views expressed by the participants differed on a varying number of subjects between interviews. The following patterns were observed: Participants 1, 2, 4 and 5 changed their views on two - four subjects due to their use of the mid point in the TM interview. Participant 5 repeatedly commented “fine” for eighteen out of the nineteen presented subjects during the verbal interview. In the TM interview he then changed ten of these to a negative view and four to the mid point.

Discussion

Engagement (Participants 1,2,4 & 5)

Establishing and maintaining engagement is a necessary pre-requisite for eliciting a child’s views. No matter how effective a resource is in promoting linguistic skills, if the individual will not engage, the resource is redundant. The above participants all have a diagnosis of either ASD or ADHD (see table 1) and are consequently children who are hard to engage. This study found that for these participants the use of TM increased their level of engagement. This is based on an increase in the engagement effectiveness indicator score, the percentage of on task behaviours during the TM interview and the length of time of the interview.

During the MCM interview their behaviour included turning lights on and off, talking for prolonged periods about an unrelated topic, putting feet on the table and swinging on chairs. Negative non-verbal responses often contradicted the positive view they were giving verbally, for example aggressively shouting “good”. Some of the non-verbal behaviours displayed appeared to be anxiety related, for example repetitive hand movements.

These findings suggest that participants found it difficult to listen, process and respond during the MCM interview and that being interviewed verbally was an unsatisfactory, stressful experience for them. They may not therefore have given an informed or considered response to the questions due to their difficulty in attending and their desire to finish. This is illustrated by participant 5 repeatedly commenting “fine” for eighteen out of the nineteen presented subjects. In contrast during the TM interview behaviours included participants remaining seated and still, looking at the materials and interviewer, making jokes and mirroring the interviewer’s body movements. Their non-verbal responses reflected the views they expressed verbally or their placement of symbols on the mat. The interviews lasted longer and the pace was generally slower.

The focus of the mat and the act of placing the symbols interrupted eye and direct face to face contact between the participants and interviewer. This interruption, which in AAC literature is cited as a negative aspect of symbol use, may have contributed to the participant's positive changes in behaviour; The TM decreased the pressure on them to communicate directly with the interviewer and shifted the focus of attention from them to the mat. This in turn created a less threatening situation which promoted attention to the task and willingness to communicate and interact (Arvidson, McNaughton, Nelms, Loncke, & Lloyd, 1999).

It can therefore be seen that the multi-modal (symbols and words) interactive approach of TM facilitated engagement and fostered social closeness; The process of looking, listening, doing and talking held participants attention and in doing so enabled them to relax, think, ask questions and respond in an informed manner (Cameron & Murphy, 2002).

Communication Effectiveness (Participants 1,2,4 & 5)

The findings show that for these participants the use of TM increased their communicative effectiveness, augmenting their verbal and non-verbal communication skills. They expressed a wider range of views when using TM than when using their MCM. This is demonstrated by their non-verbal and verbal use of the midpoint during the TM interview to indicate the concept "not sure". The visual symbol and explanation of "unsure" at the start of the interview appeared to help the participants to use a wider range of language concepts to think about and express their feelings. The use of the midpoint in the TM interview also prompted participants 1 and 2 to monitor their own comprehension. They placed a subject under the midpoint and spontaneously verbally asked what it was. The increase in the vocabulary used, sophistication of syntactic structures and elaboration by participant 5 during the TM interview may be directly linked to his increase in engagement and therefore willingness to say more.
The visual framework and process of completing the TM for participant 1 also increased topic maintenance. The focus of the mat meant that he became less distracted by his own thoughts.

Engagement (Participants 3 & 6)

The effectiveness indicator did not show a difference between the interviews in the level of engagement for participants 3 and 6; both participants were "always" engaged. However they did show an increase in the percentage of on task behaviours. This may be attributable to the fact that the on task analysis was more sensitive to change than the coding framework indicator.

Communication Effectiveness (Participants 3 and 6)

For these participants the use of TM made minimal or no difference to their communication effectiveness when compared with their MCM. In fact they expressed a wider range of views during the MCM interview. This may be attributable to these participants being linguistically more able than the other participants as they had a language delay versus a disorder. Also, their ability to engage and communicate was not compromised by ADHD or ASD, unlike the other participants. The three point visual scale may also not have offered them enough range and may therefore have limited their responses. Use of a five point scale may have produced different results.

Conclusions

This study has shown, based on a small cohort, that for children with SEBCD and ADHD or ASD, the use of TM facilitates engagement and increases their ability to express their views. Further research is now required to investigate if the findings of this study can be replicated in a study that involves a larger population. This study has identified the effectiveness of an inexpensive, readily available, low-tech communication resource which can be used to establish rapport and obtain children's views on a range of issues.

References

Aitken, S. and Millar, S. (2000). *Listening to children with communication support needs.* Edinburgh: Sense Scotland and CALL Centre.

Arvidson, H., McNaughton, S., Nelms, G., Loncke,T., & Lloyd, L. *Graphic Symbols: Clinical Issues.* 186, 174-189. In Loncke, F. Clibbens, J., Arvidson, H. & Lloyd, L. (1999). *Augmentative and Alternative Communication New Directions In Research.*

Aspland, H. & Gardner, F. (2003). Observational Measures of Parent-Child Interaction: An Introductory Review. *Child and Adolescent Mental Health,* 8(3), 136-143.

Cameron, L. & Murphy, J. (2002). Enabling young people with a learning disability to make choices at a time of transition. *British Journal of Learning Disabilities,* 30, 105-112.

Cross, M. (2004) *Children with Emotional and Behavioural Difficulties and Communication Problems.* London: Jessica Kingsley Publishers.

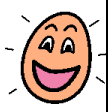
Lower, R. (2004). Evaluating the Effectiveness of Talking Mats *submitted in part fulfilment of doctorate in Clinical Psychology at the University of Edinburgh.*

Morris, J. (2003) Including All Children: Finding Out About the Experiences of Children with Communication and/or Cognitive Impairments. *Children & Society*, 17, 337-348.

Murphy J, Cameron L, Markova I & Watson J. (2004) Evaluating the effectiveness of Talking Mats as a communication resource to enable people with a learning disability to express their views on life planning. Final report to the Scottish Executive.

Murphy, J. (1998). Talking Mats: Speech and language research in practice. *Speech and Language Therapy in Practice*, Autumn 1998, 11-14.

Appendix 1

Talking Mats ™- Effectiveness Coding Framework						
	4  Always	3  Often	2  50:50	1  Occasional	0  Never/none	N/A
Participant's understanding issue for discussion						
Participant's engagement with interviewer						
Confidence of participant in articulating views/placing symbols						
Interviewer's understanding of client's views						
Participant's satisfaction with their confirmed views						

- By engagement we mean the social closeness that is established in the interaction and maintained through rapport and joint attention.
- Confidence is demonstrated by the participant's verbal, nonverbal and motor response.