

## DO PHOTOGRAPHS HELP ADULTS WITH SEVERE MENTAL HANDICAPS TO MAKE CHOICES?

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### Introduction

The philosophy of normalisation has succeeded if the number of choices available to a person with a mental handicap has increased (O'Brian and Tyne, 1981). Kishi *et al.* (1988) indicate that individuals with a mental handicap who are living in the community have significantly less choice about aspects of their life such as what to wear and eat than a non handicapped control group.

Kishi's disappointing finding may be the result of three factors:

1. People with mental handicaps may find it difficult to make choices.
2. Relatives and carers may not make choices available to them.
3. Give a willingness to offer choices, the person's associates may, nevertheless, find it difficult to communicate these choices and understand the responses they receive.

The study described below considers only the third of the factors and asks, given a willingness to communicate, can photographs help to communicate choices and facilitate an understandable response.

No previous research has looked specifically at how best to offer choices to people with mental handicaps but several studies have addressed the issue of how to ask questions of people with mental handicaps. The findings suggest that their responses to questions are often restrained by the structure of the question rather than the content. For example, in response to questions requiring a yes/no answer people with a mental handicap tend to respond with a yes (Gerjuoy and Winters, 1966; Rosen *et al.*, 1974; Sigelman *et al.*, 1981). Sigelman showed that this acquiescent response can be destroyed by presenting questions that require a choice between two options (either/or questions). Unfortunately, such questions produce also a systematic response bias with people with mental handicaps tending to choose the second of the two options presented (Sigelman *et al.*, 1981).

Open ended questions are an alternative to the structured questions described above. Wyngaarden (1981) recommends their use and, in addition suggests that the interviewer should rephrase the question if necessary in order to avoid response bias. Sugg (1987)

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used open ended questions in order to elicit views of individuals about community living. Likewise Lovett and Harris (1987) used both open ended and structured questions to ask subjects their views on important prerequisites of community living. Unfortunately many people with mental handicaps do not have sufficiently high verbal skills to make open ended questions practical.

In order to avoid the problems associated with interviews Edgerton (1967) and Edgerton *et al.*, (1976, 1984) relied instead on observations of their participant's in a wide variety of settings and social interactions in order to gain a picture of each participant's day to day experiences. Although Edgerton's method should be the one of choice wherever possible, such observations take a great deal of time. In addition, this method only answers certain questions about a person's everyday experiences. It gives less information about people's attitudes towards experiences, especially those experiences that are not yet available to them. This means that the associates of a person with a mental handicap will often have to rely on direct questioning.

In those cases where lack of time or content of questions precludes the use of observations and low verbal ability prevents the use of open ended questions, structured questions will need to be used. It seems reasonable to assume that the presentations of pictures with questions might facilitate communication for a number of reasons. Firstly, pictures would decrease the verbal loading of the question. Secondly, pictures would

reduce the need for the interviewee to make a verbal response (s/he need only point to a picture). Thirdly, pictures might reduce the systematic response bias often associated with the responses to verbal questions. For example, with either/or questions the options could be presented in picture form simultaneously, so lessening the likelihood of the interviewee choosing the second of the two options.

Sigelman and Budd (1986) interviewed a number of people with mental handicaps about aspects of their daily living with the aid of line drawings. They found that the pictures increased the response rate of and reduced the responses bias to either/or questions. In order to test the validity of the answers supplied by the interviewees, a parent or member of staff who knew the person well was also interviewed. Sigelman and Budd found that either/or questions and multiple choice questions produced less valid answers when accompanied by pictures than when not. They explained this result by suggesting that the higher response rate that resulted when pictures were used meant that interviewees were addressing more difficult questions and so less valid answers should naturally be expected.

The work by Sigelman and Budd indicates that the use of either/or and multiple choice questions in conjunction with pictures may be a productive way of asking questions of people with severe communication difficulties. The study described below considers whether the use of photographs with either/or questions is also a more helpful way of

presenting choices than the more usual way of communicating with such people: that is verbally accompanied, occasionally accompanied by Makaton signing. Specifically, the study tests four hypotheses:

1. Participants will respond more frequently if choices are presented to them with photographs.
2. Photographs will make responses more intelligible.
3. Photographs will reduce the tendency for participants to choose the second of two options presented to them.
4. Photographs will make questions more understandable which will, in turn, produce answers that are more valid.

With regard to the final hypothesis, there is no direct measure of the validity of a participant's preferences, therefore, validity will be estimated in two ways. Firstly, participants will also be asked eight further questions for which there are objectively correct answers. The hypothesis would suggest that participants will get more of these factual questions correct. Secondly, the key worker for each participant will be asked about the participants preferences. The hypothesis would suggest that use of photographs will result in a higher level of agreement between staff and participant. It must be noted that the meaning behind a lower level of agreement or no change in the level of agreement will be difficult to interpret, not only for the reasons outlined by Sigelman and Budd (see above) but also because using staff knowledge as a measure of validity implies that staff are better able

to express what a person with a mental handicap wants than the person him/herself. This is an unwarranted assumption.

Multiple choice questions are not being considered as a format in this study. Although it was thought that they might offer a good method of presenting choices using pictures it would not be a good method if choices were presented verbally because of the high memory load. It was therefore thought that this would be an unfair comparison.

## **Method**

### *Materials*

The materials consisted of two sets of eight questions that gave the participant a choice of two responses. One set of questions asked the participant to indicate which of the two everyday activities s/he preferred. For example:

"Do you like going to the pub or the cafe?"

The other set of questions asked the participant to indicate the correct answer to a factual question. The information that was needed to answer the factual questions was made as universal as possible so that a correct answer was a reflection of the participants' comprehension of the question rather than the extent of their factual knowledge. For example:

"Do you sleep on a bed or a table?"

Each question was accompanied by a pair of colour photographs (150 by 100mm). The photographs that accompanied the preference questions represented the objects of the choices. In a question such as:

"Do you like going swimming or

going to the park?" the accompanying photographs were of a local and familiar swimming pool and park. The photographs that accompanied the factual questions were pictures of the correct and incorrect answers.

### *Participants*

There were fifteen participants in the study, nine men and six women. All lived in the community. They were chosen as suitable for inclusion in the study because they had some comprehensive but little expressive language abilities. After agreeing to their inclusion in the study each participant was assessed using "section 3" and "section 5" of the "Communication Assessment Profile for Adults with a Mental Handicap" (CASP). This gave an indication of each participant's comprehensive abilities when compared with other people with mild to severe mental handicaps. The CASP showed the sample to lie between the 20th and 30th percentile of this population with a range from below the 10th percentile to the 60th. Of the 15 participants' normal method of communication, in addition to informal gestures and the spoken word, two participants made limited use of Makaton expressively (less than ten signs) but had greater comprehension and another made good use of Makaton (understood and used more than 20 signs).

### *Procedure*

The study was introduced to each participant by explaining that the researcher was interested in discovering people's likes and dislikes and whether

they knew the answers to some other questions about everyday life. Each participant was then asked eight questions about their preferences and eight factual questions (as described in the materials section). The factual and preference questions were mixed and were put in a different random order for each participant. Likewise the order in which two choices were presented within each question was also decided randomly for each participant. With half of the participants photographs accompanied the questions. If the participant understood Makaton signing, then signing accompanied the questions irrespective of whether or not photographs were used. Each participant was interviewed a second time between a week and two weeks later. They were asked the same questions a second time in a different random order, with the options again decided randomly. Those participants who had previously been asked questions accompanied by photographs were now asked them without and *visa versa*.

### *Analysis*

The frequency of response to both preference and factual questions was compared across the 'photograph' and 'no photograph' conditions using the Wilcoxon test for matched pairs. A participant was said to have made a response if s/he made any verbal response or attempt to make a sign or gesture. A single nod or shake of the head was not taken to be a response.

The frequency of intelligible responses was compared across the two conditions using the same statistical test.

An intelligible response was taken to be an understandable and relevant gesture, sign or verbalisation.

The degree to which participants chose the second of two options in each condition was calculated by making the total number of second options chosen, for each participant in each condition, a fraction of the total number of intelligible responses for that participant in that condition. The fractions obtained across conditions were compared using the Wilcoxon test.

The difference across conditions in the levels of agreement between staff and participant about preferences was compared by calculating the agreement between each participant and member of staff in each condition as a fraction of the total number of questions to which the participant made an intelligible response. The Wilcoxon test was used to compare conditions.

The number of factual questions answered correctly by each participant in each condition was compared using the Wilcoxon.

## Results

*Frequency and Intelligibility of responses:* On average participants responded to 6.600 of the 8 questions about their preferences in the verbal condition compared with 7.600 in the photograph condition ( $P < 0.05$ ). Participants responded to 6.733 of the factual questions when presented verbally compared with 7.600 of them in the photograph condition ( $P < 0.05$ ).

Photographs also made participants' responses more intelligible. The

mean number of intelligible answers to preference questions increased from 6.067 in the verbal condition to 7.000 in the photograph condition ( $P < 0.05$ ). Intelligible responses to factual questions increased from 5.867 to 7.400 from verbal to photograph condition (0.05).

### *Response bias towards second option:*

There was a significant reduction in the proportion of second options chosen in response to both preference and factual questions when questions were accompanied by photographs. In the verbal condition the second option in preference questions was chosen 69.1% of the time compared with 56.0% of the time in the photograph condition ( $P < 0.05$ ). Participants chose the second option in response to factual questions 59.3% of the time when presented verbally compared with 46.5% of the time in the photograph condition ( $P < 0.05$ ).

*Validity of Responses:* The mean number of factual questions answered correctly rose from 3.667 in the verbal condition to 5.533 when photographs were used ( $P < 0.01$ ). There was no significant increase in agreement between participants and their key worker about their preferences. They agreed 47.5% of the time in the verbal condition and 49.4% of the time in the photograph condition.

## Discussion

The study demonstrated how useful photographs can be in improving the responsiveness of adults with severe mental handicaps to questions concerning their preferences. The frequency of responses increased significantly. The finding might be

explained by looking at more qualitative aspects of the interviews. It appeared that on the whole the use of photographs moved the focus of the interview away from participant and onto the photographs themselves. In addition, from the way participants sat up and studied the photographs they seemed to be an added object of interest in their own right. These changes appeared to have had the effect of increasing the number of spontaneous comments, gestures and signs made by participants and so could be said to have increased participants' responsiveness to the interview situation as a whole.

The increase in the intelligibility of answers was also encouraging. But an increase in intelligibility is no guarantee that participants were answering the question that the researcher thought they were being asked. For example, a participant who points to a picture of the pub might not be saying, "I prefer to go here rather than this cafe" but might be saying, "I recognise this pub. I went there last night." Evidence that the increase in intelligibility was accompanied by an increase in comprehension came from the finding that significantly more factual questions were answered correctly in the photograph condition. However, no increase in the validity of responses to preference questions in the photograph condition was found as measured by agreement with staff. Indeed the amount of agreement in both conditions was the same as would be obtained by staff and/or participant responding to the questions in a random way. This indicates that asking staff about the preferences of a person with a severe

mental handicap gives no indication at all of what the person his/herself would say if asked the same question. Unfortunately this study gives no indication of whose responses are more valid.

Those who used Makaton signs comprised too small a subgroup within the study for any assessment to be made as to whether the use of photographs differentially affected them. However, it has been shown that the multimodal use of signs, graphic symbols and speech can be beneficial to students (for a review see Grove and Walker, 1990). Whether photographs could be an additional aid or a useful alternative to graphic symbols is an interesting question.

In conclusion, if the opportunity for direct observation is not available or the required information would not be supplied by observation and if the language abilities of the adult with a mental handicap are such that they would be unable to respond to an open question then the use of photographs appears to be a useful way of increasing the responsiveness, intelligibility and possibly the validity of responses to either/or questions.

## Summary

The study explores the use of photographs as an aid when offering choices to people with severe mental handicaps and communication difficulties. Fifteen participants were presented with eight pairs of daily activities and asked to indicate the one that they preferred. The questions were presented in one of two conditions, either verbally or verbally in conjunction with a photograph of the

activity in question. Between one and two weeks later each participant was asked the same eight questions in the alternate condition. It was found that photographs increased the response rate and the intelligibility of responses. It also reduced the systematic response bias towards the second of two presented options that plagues either/or type questions when used with people with mental handicaps (Sigelman and Budd, 1986; Sigelman *et al.*, 1981). There was also inconclusive evidence that the use of photographs increased the validity of responses. It was concluded that the use of photographs is a useful aid when communicating with people with severe mental handicaps and communication difficulties.

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