"If they don't like the front of it they ain't going to open it": How to facilitate children's informed consent by providing age-appropriate information materials

Abstract

There is a growing acknowledgement amongst researchers that children must give their informed consent if they are to be included in research. A review of the literature suggests that the presentation of clear and unambiguous information to potential participants is essential if children are to be able to make an informed decision about whether or not to consent to participation. The main objective of this exploratory study was to facilitate the production of information materials that would enable prospective participants of primary school-age in a subsequent study to give their informed consent. With the aid of a participant information letter outlining the nature, aims and method of the study together with an informed consent questionnaire, 52 potential participants from a state primary school in a London Local Education Authority, took part in an Introductory Session lasting approximately one hour. Following the session 46 participants (23 males, 23 females) volunteered to participate in focus groups to explore what was required for children to effectively read and fully understand participant information leaflets. Seventeen mixed-gender focus groups were conducted, with each group comprising 5 or 6 children and lasting for approximately one hour. Task-based research activities including worksheets, brainstorming, sorting and evaluation exercises, as well as a design activity were conducted. Results of a quantitative content analysis and a thematic cross-case analysis showed that participants' preferences were for greater legibility and readability of the information materials, both in terms of design and layout and in terms of language and style of content. The results of these findings have implications both for the presentation of participant information materials and for the informed consent process.

Keywords: informed consent, participant information, school children

Introduction

Whilst it is currently necessary to seek consent to work with children from a range of adult gatekeepers, there is a growing acknowledgement that children themselves must give informed consent to be included in research (e.g., National Children's Bureau, 2003). Indeed, researchers have suggested that involving children in the decision-making process about taking part in a research project can be seen as a useful experience in and of itself, giving children a sense of control over their own individuality, autonomy and privacy (Edwards & Alldred, 1999).

Much of the literature about informed consent and research with children is concerned with issues of power; whether to treat children as passive objects who are incompetent and therefore unable to give their informed consent to participate, or whether to treat them as active participants in the research process, thus respecting their rights to participation and freedom of expression. Although several themes regarding informed consent emerge from a review of the literature, the one most pertinent to this paper is the notion that the presentation of clear and unambiguous information will

allow children to make an informed decision about whether to consent to participation (Edwards & Alldred, 1999; Morrow & Richards, 1996).

Moreover, it has been argued that children's ability to give informed consent to participation will be informed by their understanding of the research topic within the context of their individual lives (Edwards & Alldred, 1999; Goodenough, Williamson, Kent & Ashcroft, 2004; Morrow & Richards, 1996). Therefore, in order for children to give their informed consent, they need to be provided with full information about the nature and purpose of the research, what their involvement will entail, the intended outcomes of the research, and confidentiality (Davis, 1998; Hill, Laybourn, & Borland, 1996; Mahon, Glendinning, Clarke, & Craig, 1996; Masson, 2004; Morrow & Richards, 1996). In order to provide information to potential participants, researchers working with children have adopted a number of different methods including information leaflets, information packs, posters and introductory sessions. For example, some researchers have utilized information leaflets to introduce the research aims, method, and location, and the issue of confidentiality (David, Edwards, & Alldred, 2001; Punch, 2002). Others have made use of an information pack, providing information in both paper and tape formats and activity sheets, as well as information leaflets for parents and carers (O'Kane, 2000).

However, whilst there is a growing acknowledgement that children require clear information in order to give their informed consent, little research to date has been carried out to find out how best to express this information. Therefore, one aim of the present exploratory study was to facilitate the production of information materials that would enable prospective participants in the main research programme to give their informed consent. More specifically, the aim was to find out what children require to effectively read and fully understand participant information leaflets.

Method

Design

This study incorporated an Introductory Session to introduce the study to prospective participants followed by mixed-gender focus groups combined with task-based activities. The aim of Focus Group A was to explore the content children needed to read and fully understand participant information leaflets. The aim of Focus Group B was to explore what children needed to understand participant information leaflets in terms of appearance. An overview of the study design and methods is presented in Table 1.

Table 1
Overview of the study design

	Aims	Methods
Focus Group A	To explore content requirements for children to read and fully understand participant information leaflets.	Worksheets, brainstorming and the Delphi Technique (Pretty, Guijt, Thompson, & Scoones, 1995)
Focus Group B	To explore requirements for children to read and	The Evaluation Wheel (Pretty et al., 1995) and

	understand participant information leaflets in terms of appearance.	designing a leaflet

Participants

Participants were drawn from one Year 5/6 class and one Year 6 class. A total of 52 children were present at the Introductory Sessions, 27 males (51.9%) and 25 females (48.1%). Of these, 23 males (50.0%) and 23 females (50.0%) volunteered to take part in the study. A total of 41 children participated in the focus groups, 20 males (48.8%) and 21 females (51.2%), as not all participants took part in both focus groups (see Table 2 for a more detailed breakdown). All participants were aged between 9 and 11 years of age. Given that the emphasis of this study was on meaning rather than on quantification, specific details of gender and ethnicity were not recorded (Millward, 2000).

Table 2
Details of participants in Focus Groups A and B

	Male		Female	
	n	%	*n*	%
Focus Group A & B	16	39.0	20	48.8
Focus Group A only	2	4.9	1	2.4
Focus Group B only	2	4.9	0	0.0
Total	20	48.8	21	51.2

Materials

Introductory session.

During the Introductory Session participants were recruited with the aid of a double-sided A4 Participant Information Letter produced with advice from a Key Stage 2 worker. Full details outlining the nature, aims and method of the study were presented on one side together with details about participation, confidentiality, anonymity, the right to withdraw, and the intended outcomes of the research. On the reverse, an Informed Consent Questionnaire was presented. This questionnaire consisted of seven items to ascertain whether the children had understood the participant information letter and whether they consented to participate (e.g., "Have you read the Information Letter?" and "Do you agree to take part in this research?"). Children responded to each item by circling either "yes" or "no".

Focus groups.

In Focus Group A, three research activities, worksheets, brainstorming and a sorting exercise were used to determine the content needed for children to read and fully understand participant information. Using the collective insight of the focus group, brainstorming was employed to quickly generate a list of issues, topics and questions to ascertain what content children required to fully understand the research. The Delphi Technique (see Pretty et al., 1995 for full details) was used to cluster, sort and rank ideas generated during brainstorming. In Focus Group B, two activities were used, the Evaluation Wheel (adapted from Pretty et al., 1995) and designing a leaflet, to find out what was needed in participant information leaflets in terms of appearance.

The Evaluation Wheel activity was selected for its capacity to enable individuals to evaluate different aspects of printed materials while the second activity provided participants with an opportunity to design their own front cover for a leaflet. The stimulus materials presented to the participants for evaluation were: (a) the original A4 Participant Information Letter (serif font, 12-point; business-style letter on Roehampton University letterhead); (b) a leaflet promoting the *ChildLine* helpline (henceforward called the ChildLine leaflet; sans serif font, approximately 10-point size; colour; cartoon illustrated throughout; text boxes); and (c) a self-auditing booklet aimed at promoting non-violence (henceforward called the non-violence booklet; sans serif font, approximately 9-point; black and blue print; cover photograph only). The task-based activities were conducted with felt-tip pens, coloured markers, worksheets, flip-chart paper and coloured Post-it notes. In addition, in the leaflet design activity, a variety of art materials were supplied including coloured paper, coloured shapes and stickers (ticks, smiley faces, and "well done"), glue and scissors.

Focus groups ranged from 3-6 participants each. Those children who had consented to participate during the Introductory Sessions but were absent on the day that the focus groups were conducted were offered an alternative date to participate. The class teachers allocated the participants to each focus group. Participants were collected from their classroom by the lead author and escorted to an unused classroom awaiting refurbishment where the focus groups were conducted during lesson time, each lasting approximately one hour.

Procedure

Access and recruitment.

Following a mailing to all primary and secondary school headteachers in a south-west London Local Education Authority (LEA) inviting them to participate in the study, telephone conversations occurred subsequently with several prospective schools and Cedar School (a state primary school) agreed to participate.

Informed consent.

Consent to participate was sought at three levels, from the headteacher on behalf of the school and the teaching staff, from the parents/carers, and from the children themselves. A principle of consent was adopted that required the active consent of the child and the passive consent of the adult (Thomas & O'Kane, 1998). After consent had been granted from the headteacher using the Roehampton University Research Participant Consent Form, a letter drafted by the researcher was sent to parents/carers by the school outlining the study and seeking their permission for their child to be approached to participate. Parents/carers were requested to contact the school should they not wish their child to be approached; no parent/carer did so. The Introductory Session, the Participant Information Letter and the Informed Consent Questionnaire were all employed in an effort to enhance the children's understanding of the study and the notion of informed consent, and to enable children to actively consent to participate (David et al., 2001; Davis, 1998; Hill et al., 1996; Mahon et al., 1996; Masson, 2004; Morrow, & Richards, 1996).

Confidentiality.

Adopting an approach advanced by Thomas and O'Kane (1998) the children were assured that anything told to the researcher during the course of the study would not

be repeated to others. In the event that any information given by a child raised concerns (e.g., that someone was at risk of harm) it was decided that it would be the researcher's responsibility to support the child in telling a third party (Thomas & O'Kane, 1998). In terms of reporting the findings, the participants were assured of their anonymity such that any information provided would not be individually identifiable as theirs.

Focus groups.

The participants were seated on chairs in a small circle for some exercises or around a table for others. Each focus group began with instructions to explain the general nature of the focus group, confidentiality, anonymity, and the right to withdraw and all children agreed to the focus groups being tape-recorded. This was followed by a name game to aid introductions, to help build rapport between the researcher and the participants, and to act as an "ice breaker" or "warm up". Data were collected in the form of audio tape-recordings of the focus group discussions, individual worksheets, flipchart outputs and individual leaflet designs. Data collection took place during lesson time rather than at playtime, lunchtime or during school assembly.

Debriefing.

At the end of each focus group participants were offered the opportunity to discuss their experience of participation to ensure their understanding of the nature of the research. If they felt that participating in the research had disturbed them in any way, participants were also reminded about the additional support listed at the end of the participant information letter should they require to discuss their experiences with a third party. On completion of the study, participants each received a £2 gift token in recognition of their contribution (although the reward was not mentioned in negotiating their consent) together with a ChildLine information leaflet entitled *Bullying: Information for primary school pupils* and a thank-you note. The children were offered the opportunity to access feedback on the research findings from the school office at a later date.

Results

The results of the preliminary study are reported in two sections. Presented first are the results of the thematic cross-case analysis of the focus group data in terms of identifying themes pertaining to what is required for children to effectively read and fully understand participant information leaflets (Miles & Huberman, 1994). The second section presents the results of the quantitative content analysis of the participants' leaflet designs.

Focus Groups

A matrix was created by ordering the data from each focus group into one main variable based on the aim of the study, that is, identifying what is required for children to effectively read and fully understand participant information leaflets, and labelled leaflet production. Following a thorough examination of the matrix, the data were further divided into two themes, design and layout, and language and style. The two themes were then further clustered into seven categories. Short quotes and summarizing words or phrases were selected to illustrate each of the categories. The themes and categories are explained in detail below.

Theme 1: Design and layout

The first theme to be identified focused upon the presentation of leaflets and information materials aimed at children in terms of the design and layout. Five categories were identified: appeal, font, images, colour, and modes of communication.

Category 1: Appeal.

Overall, analysis of the data suggested that participants perceived the ChildLine leaflet to be more appropriate for the 9 to 11 year old age group, as it looked more fun and exciting than the non-violence booklet. In terms of initial appeal, the non-violence booklet received criticism in terms of being too formal: "it should look more for children", being unexciting: "it's dull", "…and it's boring", and being unattractive: "too ugly". For example, one participant said it needed "more pictures, big titles, more fun; it's got to *do* something". More specifically, the focus group data suggested that the black and white front cover photograph of secondary school-aged children would not encourage potential readers to open it "the cover's a bit formal, too boring". One participant said of the non-violence booklet "it looks like a boring leaflet that you would find in a hospital or in a doctor's". Another said, "if they don't like the front of it they ain't going to open it". Above all, participants considered the non-violence booklet unsuitable for a Year 5/6 audience: "it should look more for children…the book should be more for children not for teenagers".

Category 2: Font type and font size.

The font used for the non-violence booklet was considered "boring" by participants due to its size, "look how boring it looks, like tiny black writing" as was the A4 Participant Information Letter, "boring, too small". Whilst participants preferred the size of the font used in the ChildLine leaflet, they considered it unattractive, "it's big, but it's too plain". However, they liked its colour, "not only is it quite big for a little leaflet but it's got colour this writing". For future information materials, participants preferred a larger, fancier font, suggesting "we kinda like big writing" and something "bigger, a bit more funky". One participant suggested that "the writing could be in a more fancie [sic] way" and another would like to have seen a font that was "like bold and more childish". In addition, some participants needed help with reading the content of the non-violence booklet as the font size was too small for them to read alone. In addition, participants judged the response tick boxes to be too small saying they wanted "bigger boxes".

Category 3: Images.

Participants considered the photographic image employed on the front cover of the non-violence booklet to be inappropriate in terms of the age of the children portrayed: "we don't need a teenager [we need] a seven year old…it should be pictures of children", and unrealistic in terms of "fake poses". The participants preferred the cartoon-style images adopted in the ChildLine leaflet, for example, "it's got pictures is what's important" and "on this one it has cartoon characters". In addition, one suggestion for future materials was to include drawings by children "like maybe nursery children…like they do drawings".

Category 4: Colour.

Participants criticized the non-violence booklet for its lack of colour: "all's it is is blue and black". On the other hand, the ChildLine booklet was praised for having colour, which for one participant equated to "excitement". The children identified two elements of the non-violence booklet that could benefit from bright colours, that is, the colour of the page itself and the font, "because we like lots of colour". For example, one participant said "the page needs more colour". Another said "colourful writing, not black". In addition, participants suggested that the text could be in a variety of different colours, and that if text boxes were included that they could also be in different colours.

Category 5: Modes of communication.

The analysis revealed the method of communicating information to children as an important element. Although one participant said of the non-violence booklet "I think the book is set out quite good", another criticized it for being tedious, saying "that's boring, that's boring". On the other hand, participants praised the ChildLine leaflet because "it's got all different points and boxes". Participants specifically suggested puzzles, competitions, quizzes, mazes, word searches, and graphs as alternative modes of imparting information. More specifically, one participant suggested "they should have comments from other children" and another suggested "maybe a character that says something".

In addition, several participants made recommendations regarding the structure of the response columns, suggesting the addition of a "sometimes" column in addition to the "yes" and "no" columns, to aid effective completion of each checkpoint. One participant also suggested "you could have a happy and a sad face to shade in instead of boxes".

Theme 2: Language and style

The second theme identified by the analysis focused on the participant's ease of reading and comprehension of the content of the stimulus materials. Participants indicated that the A4 Participant Information Letter and CYP were difficult to understand in terms of both the type of language used and in terms of the information that was included, especially the way in which the information was imparted. Participants suggested that the ChildLine leaflet was easier to understand than CYP, which they considered to be aimed at an older audience. The analysis identified two categories: vocabulary and content.

Category 1: Vocabulary.

Participants considered the language used in the non-violence booklet to be "way too serious" and "too formal". They would have like to have seen more slang, for example, they considered the word pupil to be "too serious" and said, "I'd rather be called a kid". More specifically, participants found statements difficult to understand in terms of the complexity of language and terminology employed. One exchange between two participants and the lead author illustrated this point:

> P1: Hey, what's this about, overcrowding on school premises is avoided? The questions in the book should be easier to understand, easier to understand.
> DJ: Easier to understand? Can you give me an example of…?

P1: This one, look…um…overcrowding on school premises is avoided…
P2: Yeah, it means like loads of people on the school premises…
DJ: Are there places in school that get too crowded?
P1: Yes, when fights and things [break out]
P2: And at home time

Other specific terms that the participants did not understand included the "Code of Conduct" and "the home/school contract" which had to be explained during the course of the activity in order for participants to complete the worksheet. One participant queried the checkpoint which states "There are comfortable places indoors and outside for me and friends", and wondered, "does that mean teaching in the school or outside?", adding that you "shouldn't put adult vocabulary".

Category 2: Content.

When asked what information needed to be included in an information leaflet about research, participants said that there was too much information contained within the A4 Participant Information Letter and concluded, "yeah, and you can't read it". Participants wanted to know the "What? Who? When? Where? Cost? Why?" about research. More specifically they wanted to know "what's going to happen?", "who's working there?", "how many kids would be [taking part]?", "what we going to be doing?" and the "right to join in". Participants also wanted to know whether there was going to be any refreshments and whether there was going to be a reward (e.g., "free sweets"). In addition, participants said that, "they need to know if someone can help you". More specifically, they wanted referral options for after the study including "more phone numbers" and "more websites". They also wanted "advice about how to prevent bullying".

Leaflet Designs

Content analysis was used to generate frequencies of the occurrence of design elements in each leaflet, although the materials that were provided necessarily influenced the designs. A preliminary examination of the 43 leaflet designs, together with the list of criteria for evaluating a leaflet generated by the participants in the Evaluation Wheel exercise, were used to devise a content-derived coding frame. Coding categories included the following design elements: (a) the predominant colour of the background, either pastel or bright; (b) the size of the leaflet; (c) the presence of a title; (d) the presence of coloured writing; (e) the presence of text boxes; (f) the presence of a cut-away pattern, either around the edge or in the middle; (g) the presence of an illustration, either drawn by hand or created from sticky paper pieces; (h) the presence of a pattern anywhere except around the border; (i) the presence of a smiley/well done/tick sticker; (j) the presence of stars; (k) the presence of a dialogue bubble; (l) the presence of a border design; (m) the presence of a logo/symbol; and (n) the presence of cut-out figures from the stimulus materials. Figure 1 presents the output of the content analysis in the form of frequencies of the presence of each design element.

INSERT FIGURE 1 HERE

Inter-rater reliability was assessed by Cohen's Kappa coefficient of concordance. Eighteen leaflet criteria were independently coded for each leaflet design by the

lead author and a PhD student with no other involvement in the research programme. Excellent inter-rater reliability was achieved with a Kappa coefficient of .94.

Discussion

A review of the literature suggests that the presentation of clear and straightforward information is essential if children are to make an informed decision about whether or not to consent to participate in research (Edwards & Alldred, 1999; Morrow & Richards, 1996). One of the main objectives of this exploratory study, therefore, was to facilitate the production of information materials for subsequent studies that would enable prospective participants of primary school-age to give their informed consent and, more specifically, to find out what children require to effectively read and fully understand information materials. To summarize the present findings, the participants expressed a preference for: (a) a legible font type and font size; (b) the presence of pictures, illustrations and drawings; (c) the use of colour; (d) less text; (e) easier, less formal vocabulary; and (f) minimal but clear information. Their preferences can be explained in terms of legibility (the ease with which an individual can distinguish characters) and readability (the ease with which an individual reads and comprehends the text) (Woods, Davis, & Scharff, 2005), in relation to design, layout, vocabulary and content. The participants' visual preferences can be explained in terms of findings from previous research that focused on the physical aspects of the text itself, whilst the language and content preferences can be explained in terms of children's language skills and learning to read.

In terms of the physical characteristics of the text, such as font type, font size and length of passage, Kanfer and Ackerman (1989) suggest that humans have finite attentional resources that can be devoted to any given task. Thus, if the text is easier to read, less attentional resources are required for the process of reading. Instead, these cognitive resources can be employed to attend to the message in the text, resulting in deeper processing and easier recall of the information presented. Accordingly, if we want to enable children to make informed decisions about whether or not to consent to participate in research, we need to ensure that information materials are easy to read, thereby maximising understanding and the ability to make an informed decision.

With regard to the font type and font size, the present results indicate that participants' preference was for a large, fancy, bold font. More specifically, during the course of the evaluation activity, participants expressed a preference for the typeface used in the ChildLine leaflet, which was a sans serif font, approximately 10-point size, to either the 12-point, serif font used in the A4 Participant Information Letter, or the approximately 9-point, sans serif font used in the non-violence booklet. Previous research with children from kindergarten through to fourth grade focused upon the effects of font type and font size on the legibility of printed matter and found that a sans serif font (e.g., Arial) was more legible than a serif font which increased its readability (e.g., Times New Roman) (Woods et al., 2005). It has been suggested that because sans serif fonts have uniform stroke widths and an absence of serifs (the fine lines that extend horizontally from the main strokes of a letter), they are less likely to act as visual noise, stressing the visual system, and therefore more likely to increase legibility (Woods et al., 2005). Serif fonts, on the other hand, which have the

presence of serifs and proportional spacing, have been shown to lower legibility, according to Yager, Aquilante, and Plass (1998). With regard to the present findings, it might be possible to explain participants' preference for the font type used in the ChildLine leaflet in terms of the absence of serifs thus making the text easier to read. This suggests that the use of a sans serif font in participant information materials may increase the legibility of the material, which in turn will increase its readability. With regard to font size, whilst an18-point size font was found to be more legible than a smaller point size (12-point) for kindergarteners and first graders, after first grade point sizes, which ranged from 10-point to 20-point, showed no significant influence (Woods et al., 2005). In the present study, on the one hand, participants expressed a preference for a large font. On the other, when presented with the three stimulus materials, all using different font sizes, they preferred the middle-size font (10-point). Whilst this appears contradictory, it may be possible to explain this preference in terms of the presence of other physical characteristics, such as the use of colour, text boxes and cartoons, in combination with a sans serif font.

Regarding the passage length of text, participants in the present study indicated that they found the text in the A4 Participant Information Letter too long and difficult to read. Previous research suggests that the passage length of text may also influence the comprehension of the material (Gasser, Boeke, Haffernan, & Tan, 2005). For example, Surber (1992) found that when participants were given either a long or a short textbook passage to study, those who read the short passage spent substantially more time per word reading than those who were given the long passage. Thus, in the present study, if participants spent less time per word reading, as this earlier research suggests, their understanding of the information overall may have been reduced. This suggests, therefore, that shorter passages, or chunks of text, may be easier for children to read and understand. This may explain participants' preference for alternative modes of imparting information such as text boxes, competitions, quizzes, mazes, word searches, and graphs. It may also be that children prefer these modes of communication since they have been learning about, and becoming familiar with, printed text through their daily encounters with environmental print (cereal boxes, milk cartons, advertisements and street signs) (Palincsar, & Perry, 1995).

In addition to paying attention to the physical characteristics of information materials, researchers need to be aware of the motivational, affective and cognitive benefits of utilizing appropriate illustrations, pictures and photographs thereby increasing the understanding of information materials, which in turn will make the informed consent process more meaningful to prospective participants. With regard to the use of images, participants did not find the non-violence booklet appealing as they thought the front cover unattractive, considering the photograph to be unsuitable for a primary school-aged audience. On the other hand, participants preferred the look of the ChildLine leaflet, which used cartoon characters throughout. Previous research suggests that pictures and illustrations can serve as an affective or motivational function for pupils. Pictures and illustrations can draw attention to a text by making it both colourful and interesting; they can motivate children to read; they can make reading a text more enjoyable; they can result in positive attitudes towards reading in general; and they can influence the time readers are willing to spend on a text (Brookshire, Scharff, & Moses, 2002; Elster, & Simons, 1985; Hibbing, & Rankin-Erickson, 2003). Furthermore, pictures help readers to comprehend and remember

texts by enriching or elaborating upon the text itself (Glenberg, & Langston, 1992). For example, Hibbing and Rankin-Erickson (2003) found in their work with struggling middle-school readers that the use of illustrations facilitated pupil's use of mental images as they read, thus enhancing their comprehension of the text. More recently, Brookshire et al. (2005) investigated the influence of illustration styles on children's comprehension and book preferences using three combinations of text and/or illustrations. Their results suggest that in the illustration-text condition children achieved higher scores on the comprehension scale than in the text-only or illustration-only conditions. Furthermore, they found that children preferred bright book illustrations significantly more than sombre illustrations with a trend towards realistic illustrations rather than abstract ones. These findings support participants' preferences for the presence of illustrations and the use of colour in the present study.

At the same time as paying attention to the design and layout of information materials, the results presented here indicate that researchers also need to pay attention to the language and style of content of information materials. In the present study, participants expressed a preference for easier, less formal vocabulary and minimal but clear information about the research. It is possible to explain these findings in terms of developmental stages of learning to read (Siegler, 1998). For example, Chall (1979, cited in Siegler, 1998) hypothesized a five-stage development of reading model: at Stage 0, lasting from birth to the beginning of Year 1, children master several prerequisites for reading, such as identifying letters of the alphabet, writing their names, and reading a few words. In Stage 1 (Years 1 and 2), children acquire phonological recoding skills, that is, the ability to translate letters into sounds and to blend the sounds into words. They also complete their learning of the letter names and sounds at this stage. In Stage 2, commonly occurring in Years 2 and 3, children begin to read fluently and identify individual words more quickly. In Stage 3 (Years 4 to 8) children become capable of obtaining new information from print. In Stage 4, the latter secondary school years, children come to comprehend written information presented from multiple viewpoints. Thus, in a study of early reading development, Snowling (2004) found that vocabulary and grammatical awareness, together with word recognition, provided the foundations for reading comprehension. Hence, in terms of the present findings this model of reading development suggests that printed materials aimed at children need to take into account their reading skills in order that the vocabulary and the style of writing is appropriate for the audience at which it is aimed.

Conclusion

The participants in the present study indicated their preferences for what is required to effectively read and fully understand participant information leaflets. Their preferences were for greater legibility and readability of information materials, in terms of design, layout, language and style of content. Previous research suggests that legibility and readability have an impact on the process of reading, which in turn has an effect upon the comprehension and remembering of text. If we are to enable children to make an informed decision about whether or not to participate in our research, we need to provide them with information materials that facilitate effective reading, understanding and remembering of the information. In the spirit of viewing children as active participants, it is important, therefore, to listen to their views so that the production of information materials takes into account their preferences. Only in

this way will children be genuinely able to voluntarily reflect upon, and take responsibility for, decisions about taking part in research.

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Figure 1. *Frequencies of the presence of each coding category*