The self-determined and partner-predicted topic preferences of adults with aphasia

Ange Beringer, Kerstin M. Tönsing and Juan Bornman

Centre for Augmentative and Alternative Communciation

University of Pretoria

Pretoria

South Africa

Corresponding author: Ange Beringer, Centre for Augmentative and Alternative Communication, Communication Pathology Building, University of Pretoria, Lynnwood Road, Hillcrest, Pretoria, 0002, South Africa. Email: angeb@absamail.co.za

Abstract

Background: Due to the challenges presented by the complex nature of aphasia, the familiar communication partners of these individuals often act as informants in the process of selecting topics for inclusion in an AAC system. However, informant input is not always accurate, and hence the active involvement of adults with aphasia in the preselection of topics for use in an AAC system has been advocated. In order to provide adults with aphasia the opportunity to participate in research and clinical practice, appropriate support is needed. Such support can be provided in the form of concrete materials and partner facilitation.

Aims: This study aimed to 1) determine the topic preferences of adults with aphasia by providing them with the opportunity to preselect their preferred topics of conversation; and 2) compare the self-selected and partner predicted topic preferences.

Methods and Procedures: This study employed a descriptive design to describe and compare the topic preferences provided by members of 10 dyads comprising an adult with moderate to severe aphasia and his/her familiar communication partner. The topic preferences of the participants were obtained by using the Talking Mats™ framework to rate 37 topics taken from the PCR Manual (Kagan, Winckel, & Shumway, 1996) represented on topic cards. Spontaneous comments made by the participants were qualitatively analysed in order to better understand the way in which topic preferences were determined.

Outcome and Results: The participants with aphasia revealed that they would like to talk about the majority of the topics presented to them. Partners predicted topic preferences of persons with aphasia with an average accuracy of 65%. The amount of time dyads spent together, the variety of activities performed together as well as the manner of selecting joint activities were all factors that appeared to have a significant impact on the level of accuracy of the partner's predictions. Furthermore, partners who demonstrated their belief in the communicative competence of the person with aphasia, despite the person's speech and language limitations, also tended to predict preferences more accurately.

Conclusions: The adults with moderate to severe aphasia in this study were capable of communicating their topic preferences when provided with the Talking MatsTM framework. While partner input in topic selection is certainly important, various factors seem to influence the accuracy of partner's predictions. The results can serve to guide clinical practice when conversational topics are selected for persons with severe aphasia.

When the variables that affect the acquisition, retention and communicative use of augmentative and alternative communication (AAC) techniques and strategies are appropriately matched to the abilities, needs and priorities of adults with aphasia (Jacobs, Drew, Ogletree, & Pierce, 2004), AAC has been found to unmask the underlying communication competencies of these adults (Kraat, 1990). Amongst other techniques, AAC systems that use conversational topics have been found to successfully support the communication attempts of adults with aphasia (Fox, Sohlberg, & Fried-Oken, 2001; Garrett, Beukelman, & Low-Morrow, 1989; Garrett & Huth, 2002; Ho, Weiss, Garrett, & Lloyd, 2005; Lasker, Hux, Garrett, Moncrief, & Eischeid, 1997; Hux, Buechter, Wallace, & Weissling, 2010).

Conversational topics have been depicted using visual aids such as photographs, graphic symbols, newspaper clippings and written words displayed in AAC systems such as communication books or electronic devices (Garrett & Huth, 2002; Hux, Manasse, Weiss, & Beukelman, 2001; Rogers, King, & Alarcon, 2000). Adults with aphasia may use such visual topic setters to initiate topics of conversation independently. Visually depicted topics can also provide a framework from which adults with aphasia and their partners can co-construct conversations by deriving related vocabulary items and using other AAC techniques such as drawing and gesture to supplement their interactions (Garrett & Huth, 2002; Lyon, 1995; Van de Sandt-Koenderman, 2004). Overall, the use of conversational topics has been found to facilitate the conversational abilities of adults with expressive aphasia. Conversational topics need to be preselected in order to make visual referents to the topics available to an adult with aphasia. Adults with severe expressive aphasia, however, experience difficulty in participating in this preselection process, as they find it difficult to indicate which topics of conversation they would like to talk about (Garrett & Huth, 2002). Therefore, topics selected by clinicians or familiar communication partners of the person with aphasia have been used in an attempt to obtain more individualised topics for use within AAC systems (Garrett & Beukelman, 1992; Garrett & Lasker, 2005).

Although active participation of communication partners is essential in many intervention procedures with adults with aphasia, the reliability of partner input has been documented as inconsistent (Cruice, Worrall, Hickson, & Murison, 2005; Engell, Hütter, Willmes, & Huber, 2003; Hilari, Owen, & Farrelly, 2007). The conversational topics preselected by familiar communication partners may therefore not always be accurate. It can be assumed that, at times, the topics of conversation used within AAC systems are not the preferred topics of the adult with aphasia.

Predetermined lists of topics are another option for facilitating the preselection of topics. Such lists may be generated from observational data on the topic use of adults with and without disabilities. Davidson, Worral and Hickson (2003), for example, employed naturalistic observation to record the everyday communication activities of two groups of older adults (age range 63-78 years), one group with aphasia and one group without. Balandin and Iacono (1998) and Tönsing and Alant (2004) recorded the conversations of groups of adults without communication problems (aged 17-57 years and 40-51 years respectively) in the workplace using mini-cassette recorders, whereas Stuart, Vanderhoof-Bilyeu and Beukelman (1994) used voice-activated audio tape recorders to collect language samples from the everyday conversations of communicatively intact men and women aged 79-83 years. The topic lists generated through such observational methods have the advantage of being based on actual data rather than predictions. At the same time, the representativeness of such topic lists would be directly influenced by the representativeness of the participants, as well as the extent to which the recording procedures influenced their topic choice. Participants with communication challenges (e.g the participants with aphasia in the study by Davidson et al., 2003) may want to communicate about many more topics than they are able to, and thus observational data may not be a true reflection of their needs.

Predetermined, commercially available topic lists (Kagan, Winckel, & Shumway, 1996) together with visual referents for these topics have also been used to help persons with aphasia set topics of conversation. One such resource is found in the Pictographic Communication Resources (PCR) Binder (Kagan et al., 1996), where 39 conversational topics are represented pictographically in order to allow a person with aphasia to initiate topics of interest to him or her. Experienced clinicians selected these topics on the basis of their general applicability to the life situation and needs of a person who has aphasia.

Even so, the conversational topics within these lists are not always appropriate for the unique needs and life circumstances of the person with communication difficulties (Bryen, 2008). Personal tailoring and individualisation of such AAC systems have been found to enhance the communicative effectiveness and efficiency of adults with aphasia (Koul & Corwin, 2003; McKelvey, Hux, Dietz, & Beukelman, 2010; Van de Sandt-Koenderman, 2004), and are crucial for the acceptance of the system and its integration into the daily communicative situations in which the person in need of the system finds himself/herself (Beukelman, McGinnis, & Morrow, 1991).

Adults with aphasia should therefore be actively involved in the process of preselecting their preferred topics of conversation (Fox et al., 2001). Due to the complex nature of aphasia, this is not a straightforward task and requires creativity and ingenuity on the part of researchers and clinicians. Talking Mats™ is a dynamic framework that was developed to enable people with communication difficulties to express their thoughts and views (Murphy, 1998). It has been found to improve communicative effectiveness in certain populations of adults with acquired communication difficulties (Ferm, Sahlin, Sundin, & Hartelius, 2010). The interactive and visual format of this framework has been found to be a convenient and successful method whereby adults with aphasia can indicate preferences and priorities, allowing them to inform their families, friends and caregivers of their views in a tangible way (Gillespie, Murphy, & Place, 2010; Murphy, 2000).

The current study therefore aimed to determine the topic preferences of adults with aphasia through the use of the Talking Mats™ framework. Specifically, the participants were given the opportunity to identify their preferred topics of conversation from a predetermined list of conversational topics taken from the PCR Binder (Kagan et al., 1996). This study also aimed to compare the self-determined topic preferences of adults with aphasia to those predicted for them by their familiar communication partners by describing similarities and differences. Lastly, the researcher qualitatively analysed the comments of adults with aphasia and those of their communication partners in order to better understand the way in which topic preferences are determined.

Method

Research Design

The study employed a descriptive design, with the main data being quantitative (McMillan & Schumacher, 2010). The quantitative data was obtained by determining and describing the topic preferences of adults with aphasia (as established through the use of the Talking Mats™ procedures) and comparing these preferences to those predicted by their familiar communication partners. Most communication partners and a limited number of participants with aphasia produced spontaneous comments during the topic rating process. All these spontaneous comments were transcribed and qualitatively analysed (thematic coding) (Braun & Clarke, 2006); this served as an additional source of information to understand the reasons for the ratings given.

Participant Selection and Description

Two groups of participants were included, namely adults with aphasia (Participant Group A) and their familiar communication partners (Participant Group B).

In order to recruit participants with aphasia, speech-language therapists and a physical therapist working within the field of acquired neurological conditions in a large metropolitan area were approached and provided with the selection criteria as well as information about the study. They passed the information on to clients and their families whom they believed met the selection criteria. The client and their family then contacted the researcher if they were interested in participating in the study. To ensure that participant characteristics would not prohibit meaningful participation in the study, strict selection criteria were specified for Group A, resulting in a relatively homogeneous group. Participant selection criteria were derived and adapted from those used in a study conducted by Fox et al., (2001). Participants had to 1) be adults; 2) have a diagnosis of moderate to severe expressive aphasia by a qualified speech-language therapist, confirmed by subtests from the Western Aphasia Battery (WAB) (Kertesz, 1982); 3) have adequate comprehension abilities to understand the instructions given during the study, as determined by a cut-off score of at least 5/10 on the comprehension subtest of the WAB and by passing the practice items during the Talking Mats™ procedure; 4) be a minimum of six months post-onset of aphasia; 4) have been proficient English speakers prior to the onset of the aphasia; 5) have no reports of dramatic fluctuations in alertness; 6) be without reports of diffuse neurological damage; 7) be reported to have normal or corrected vision and hearing; and 8) have functional use of one arm. The group of persons with aphasia comprised 10 participants (n=10): six females and four males. The participants' ages ranged from 36 to 81 years. The time post onset of aphasia within this group ranged from 1.8 years to 26 years. Additional descriptive information is detailed in Table 1.

Participant Group B comprised the familiar communication partners selected by the participants with aphasia. The participants with aphasia were requested to select someone who knew them well and with whom they communicated on a regular basis to participate with them in the study. The adults with aphasia indicated their choice of partner by saying the person's name, writing the person's name, pointing at the person or by physically directing and accompanying the researcher to the selected person. The sample of familiar communication partners comprised 10 participants (n=10): five females and five males. A detailed description of the participants is included in Table 2. The familiar communication partners' ages ranged from 35 to 70 years. All were proficient in English and none reported communication, vision or hearing difficulties that impacted on their activities of daily living.

The sample of dyads therefore comprised 10 pairs of adults with aphasia and their familiar communication partners. A detailed description of the dyads is included in Table 5. Participant A06 selected his sister as she was the only person with whom he had regular social contact. She was therefore selected as his familiar communication partner despite the infrequency of contact compared to the other nine dyads.

Materials

The list of conversational topics taken from the PCR Binder (Kagan et al., 1996) was used in the study. This list is found in the binder under the heading *I want to talk about* and consists of 39 conversational topics that capture some of the specific, relevant and often complex issues facing people with aphasia (Kagan, 1998; Kagan et al., 1996). Two of the topics, *place name and picture setting* and *something else,* were too generic to be included in the current study. The remaining 37 topics were therefore used.

In order to obtain an impression of the representativeness of the 37 topics contained in the PCR, comparisons between this list of topics and other topic lists generated from observational data were made. Appendix A provides an overview in table format of the overlap between the PCR topics and the topics identified in four observational studies.

The topic preferences were determined with the use of the Talking Mats™ framework, which made use of the following items: 1) Thirty-seven laminated topic cards with a line drawing and written foil representing each of the 37 PCR topics (Kagan et al., 1996), fittend with Velcro at the back; 2) a textured mat, measuring 60cm x 40cm; 3) a video camera, Sony HandyCam 990 X; 4) a digital camera, Canon Powershot SD 450; 5) four topic cards representing food, water, television and car (described in more detail in the section below).

Procedures

Ethical approval was obtained from the research ethics committee of the relevant higher education institution prior to participant recruitment. Once participants were recruited, a pilot study was conducted with two dyads. Minor modifications were made to the measuring instrument and subsequent procedures (Beringer, 2010). With commencement of data collection for the main study two interview sessions were arranged at a location that was convenient for the participants.

Procedures for Participant Group A

Two interview sessions were conducted. During the first session the nature of the study was explained to the participants using information sheets enhanced with pictures. Requests for consent were made verbally and by providing consent forms enhanced with pictures. A family member observed this process and the response given by the adult with aphasia. These family members were then requested to complete an Observer Consent Support form in order to verify whether the adult with aphasia communicated willingness to take part in the study. All observers agreed that the adults with aphasia indeed gave consent and that they did so with good understanding of what was required from them and without being coerced. Once consent was obtained, the adults with aphasia selected a familiar communication partner and the spontaneous speech, repetition, naming and comprehension subtests of the WAB (Kertesz, 1982) were administered to evaluate the type and severity of aphasia for each participant.

During the second session biographical questionnaires were completed by the participants, with the assistance of a family member where necessary. The adults with aphasia were then provided with four practice items prior to evaluating the PCR topics (Kagan et al., 1996) in order to ensure their understanding of the Talking Mats™ framework. In this procedure participants were asked the question: *Is (name of graphic symbol) necessary for survival?* For this question, four graphic symbols on cards with printed foils were presented to the adults with aphasia. These symbols represented food, water, television and car. The participants were required to place these cards under *Yes*, *Maybe* or *No*, according to their personal opinion. In order to ensure that the participants with aphasia understood the question and the method employed, they were required to place the graphic symbols for water and food under the *Yes* option. Once the practice mat was complete, the participants with aphasia were requested to evaluate the 37 PCR topics (Kagan et al., 1996). In response to the question: *Would you like to talk about …?* each participant placed each topic card under either *Yes*, *Maybe*, or *No* on the Talking Mat™ according to their particular preferences. Once each participant had evaluated the topic cards, he/she was requested to re-look the mat and decide if he/she wanted to change anything (Murphy, Gray, & Cox, 2007; Murphy, Gray, Cox, van Achterberg, & Wyke, 2010). Both interview sessions were videotaped and digital photographs were taken of the completed mats. An example of a completed mat is shown in Appendix B.

Procedures for Participant Group B

The familiar communication partners were selected by the participants with aphasia during the first interview session held with the participants with aphasia. The partners attended their first interview session at the same time as the second interview session for the participants with aphasia. The participants were interviewed separately and the other member of the dyad was requested to leave the interview room for the topic placement process. During the interview session with the familiar communication partners, consent was obtained and the biographical questionnaires were completed by the participants. The familiar communication partners were then requested to evaluate the 37 PCR topics (Kagan et al., 1996) using the Talking Mats™ framework, based on what they believed their partner with aphasia would like to talk about. In response to the question: *Do you think (adult with aphasia) would like to talk about …?* Each topic was placed under the *Yes*, *Maybe* or *No* preference options on the mat according to the participant's individual predictions. Once each participant had evaluated the topic cards, he/she was requested to re-look the mat and decide if he/she wanted to change anything (Murphy et al., 2007; 2010). Procedures for obtaining topic ratings were thus identical for both groups. The interview sessions were videotaped and digital photographs were taken of the completed mats.

Data Analysis

For the quantitative analysis, the topic preferences provided by both participant groups were transcribed from the digital photographs of the completed mats onto computerised tables. Descriptive statistics were used to summarise the results, including frequencies of topic preferences across participants and topics, as well as percentage agreements between the person with aphasia and his/her partner—per topic and per dyad. Percentage agreement was calculated by dividing the actual number of agreements by the total number of possible agreements and multiplying by 100. Due to the small sample size, no inferential statistics were used.

The videotaped interviews were scrutinized in order to capture the spontaneous feedback from the adults with aphasia and their familiar communication partners. All verbal and non-verbal communication was transcribed. A thematic coding of all understandable communication segments that were clearly and unambiguously interpretable was undertaken. The second author developed the initial set of themes and subthemes from the transcription and coded every communication segment accordingly. Subsequently, the first author coded each of the communication segments identified on the basis of the themes developed by the second author or according to additional themes if she felt that none of the themes developed by the second author were applicable. Her coding was compared to that assigned by the second author. Percentage agreement was calculated by dividing the number of agreements by the total number of coded segments. When taking only overarching themes and not subthemes into consideration, agreement was 100% for the comments made by the participants with aphasia and 80% for the comments made by communication partners. When taking subthemes into consideration, agreement was 83% and 75% respectively, which represents good agreement.

Discrepancies in coding between the first and second author were discussed and consensus was reached on the final coding to be assigned. The coding rules are provided in Appendix C.

Results

Quantitative Analysis

Topic Preferences by Participants with Aphasia (Group A)

The frequency of *Yes* options provided by all 10 participants was 262 out of a possible 370. In other words, the adults with aphasia indicated that they would like to talk about 71% of the proposed PCR topics. The topic preferences for each of the 37 topics are presented in Table 3.

There were no topics that none of the participants with aphasia wanted to talk about. The five topics that all participants with aphasia wanted to talk about included three health-related topics (*speech and language therapy, occupational therapy* and *progress [communication]*) as well as two topics related to people (for example, *my children* and *my friend*). Other topics that related to themselves personally (e.g., *my hobbies*, *my transportation* and *my job*) also tended to be higher on the list (preferred by at least seven participants), as did some more general topics such as *current events* and *sports*. Of the topics that were preferred by six or less participants, five were described in the PCR as sensitive topics (*privacy*, *my will*, *voting*, *abuse* and *alcohol and drug issues*). The remaining seven topics that were also only preferred by six or less participants may also be seen as potentially personal and/or sensitive topics, such as *counselling, my marriage/spouse* and *risk of another stroke*.

Comparison of Self-determined and Partner-predicted Preferences

The frequency of *Yes* preferences provided by the familiar communication partners was 237 out of a possible 370. Thus, the familiar communication partners of the participants with aphasia predicted that their partners with aphasia would like to talk about 64% of proposed topics.

The topic preferences provided by both participant groups were compared by calculating the number of agreements of topic preferences across topics and dyads. The average agreement over all topics and dyads was 65%. This indicates that, in general, the familiar communication partners predicted their aphasic partners' topic preferences relatively accurately. Variations occurred across topics (30-100%) and dyads (49-89%).

Comparison of preferences obtained for each topic across dyads. The degree of total agreement (that is, *Yes-Yes*, *Maybe-Maybe*, and *No-No*) obtained per topic across all 10 dyads was used to calculate the percentage agreement for each of the 37 topics. Where the members of a dyad placed a topic under *Yes* and *Maybe* or *Maybe* and *No*, partial agreement was noted. Total disagreement was assigned in instances where members of the dyad placed topics under *Yes* and *No* respectively. The various degrees of agreement pertaining to each topic across all 10 dyads are presented in Table 4.

Topics that obtained 80-100% agreement included those related to health and specifically the communication impairment experienced by the adult with aphasia, for example, *communication problem, speech and language therapy*, and *communication progress*. All three topics related to people (*my children, my family*, and *my friend*) were also amongst these topics. When comparing Tables 3 and 4, it becomes apparent that topics with high agreement tended to be those that were preferred by most of the adults with aphasia. Specifically, topics with 80-

100% agreement were all preferred by 8 or more participants with aphasia, except for the topic *politics*, which obtained an agreement of 80% but was only preferred by 4 adults with aphasia.

Topics that obtained an agreement of 30% or less suggested that a substantial number of the familiar communication partners had an inaccurate idea of the preference of their partner with aphasia for talking about these topics. The topics within this category were, *counselling, risk of another stroke, power of attorney, abuse* and *alcohol and drug issues*. These topics tended to be the ones less preferred by participants with aphasia since only 4-6 participants indicated a preference to talk about them.

Comparison of topic preferences within dyads. The topics that obtained the same preferences (*Yes-Yes*, *Maybe-Maybe* or *No-No*) within each dyad were used to calculate the percentage of agreements within each of the 10 dyads for all 37 topics. These are presented in Table 5. Dyads are arranged hierarchically from those with the highest degree of agreement to those with the lowest degree of agreement. Agreement ranged from 49-89%. Table 5 also provides descriptive information for each dyad obtained through the biographical questionnaires.

From Table 5 it appears that two factors differentiated between dyads with a high degree of agreement from those with a low degree of agreement. Firstly, dyads where both members jointly decided on activities tended to have higher degree of agreement. The five dyads for whom this was the case obtained agreement of between 65% and 89%. The five dyads where circumstance determined joint activities or where either partner was the main decision maker obtained agreement of between 49 and 62%. Secondly, the three dyads consisting of partners who did not have daily contact tended to have lower agreement (49-62%). At the same time, daily contact did not necessarily imply high agreement, as can be observed in the case of Dyad 03.

Qualitative Analysis

Comments by Adults with Aphasia (Participant Group A)

Only three of the adults with aphasia made spontaneous comments during the process of rating the topics. All comments related to the applicability of the topic in relation to life circumstances, activities and activity limitations of the adult with aphasia. All three participants made such comments in relation to the topic *my job*. Other comments within this theme were made in relation to the topics *my hobbies, children* and *my medication*. These comments confirmed the participants' understanding of the topics and the task and also showed that they brought the topics into direct relation with their current or past life circumstances, activities or activity limitations.

Comments by Familiar Communication Partners (Participant Group B)

As could be expected, familiar communication partners commented much more extensively using speech. Of the 10 partners, eight commented during the prediction process. Only participants B08 and B09 did not comment at all. One participant (B10) only made comments regarding the process of prediction, which were not coded. For the other seven partners, between four and 13 segments were coded per participant, with an average of nine segments per participant. A total of 62 communication segments were coded. Nine themes were identified, of which three accounted for 40 segments. The themes and subthemes as well as the amount of segments related to the themes are presented in Table 6.

Table 6 shows that the majority of comments (18 communication segments) were related to the applicability of the topic in question to life circumstances, activities and activity limitations, personality and interests of adults with aphasia. Of these comments, most (10 communication segments) related to the current life experiences, activities and activity limitations of the adult with aphasia. These comments related to the following topics: *transportation, my job, power of attorney* (2 participants), *privacy, abuse, my stroke, counselling,* and *where I live*. It seems that issues regarding the aphasic adult's present situation (or at least the partner's interpretation of the situation) may have had an impact on the way partners judged these topics.

Another theme that emerged was whether or not the topic was something that participants tended to discuss or had previously discussed, and what the frequency of such discussions was. The topics that elicited such comments were *feelings, risk of another stroke* (2 participants), *sex, current events, politics, where I live, my stroke, power of attorney, abuse* and *my children*.

The third major theme identified related to the communicative abilities/tendencies of the adult with aphasia and the extensiveness of the partner's conversations with him/her. Eight comments were coded under this theme. Positive comments were made relating to the amount of interaction (e.g., *We talk a lot* – B04) and the range of topics talked about (for example, *I can't say that these things we would not talk about at all. I would say everything 'yes'.* – B04). This partner (B04) also predicted the preferred topics with the highest degree of accuracy. Positive and negative comments were made regarding the communicative abilities or tendencies of the adults with aphasia (e.g., *He's a talkative person* – B05; *She can't talk* – B07). One partner who had low accuracy in prediction (B03) commented on the limited number of topics that were actually discussed and expressed his wish for more topics as follows:

> *Ja, you know you wish you could talk about all of these bloody things. F***ing H***. It gives you a wake-up call.*

The difficulty of rating certain topics was commented on by four of the partners in relation to the topics *communication problem* (B03), *risk of another stroke* (B01), *abuse* (B04) and *counselling* (B05). These three topics also obtained very low levels of agreement.

The partner's avoidance or preference of the topic under discussion was also referred to. This theme also incorporated a comment that expressed the hope that the partner did not wish to talk about a topic (*sex*; B06). Participant B06 indicated that she wanted to avoid the topic *where I live,* as she knew that her brother with aphasia was unhappy about the living arrangements, whereas she saw no other alternative for him. She placed this topic under *No.* This illustrates that partners sometimes seemed to struggle to differentiate between their own wish to avoid the topic and the preference of the person with aphasia.

A somewhat related minor theme was the privacy/personal nature of certain topics. Participant B02 regarded all topics she placed under *Maybe* as personal. Participant B05 commented on the topic *power of attorney*: *No, that's private.* Neither of these partners were family members.

Discussion

Due to the relatively small sample size of the study, findings cannot be generalised but can be discussed in terms of trends and observations. Topic preferences by Participant Group A are discussed, while comparisons between self- and partner-predicted preferences are discussed in terms of the influence of the topic as well as the influence of the partner.

Topic Preferences by Participant Group A

The topic preferences provided by the participants with aphasia revealed that they wanted to talk about 71% of the topics presented to them. This was 7% higher than those predicted by the group of familiar communication partners (64%). The high percentage of preferred topics indicated that, although the adults with moderate to severe expressive aphasia experienced significant difficulty in talking, they would still have liked to communicate about a significant number of the topics presented to them. It is noteworthy that the topics that were more commonly preferred by adults with aphasia also tended to be the ones that overlapped with those recorded in the natural conversations of adults with intact communication abilities (Balandin & Iacono, 1998: Stuart et al., 1994; Tönsing & Alant, 2004) and in the naturally occurring communication activities of adults with aphasia (Davidson et al., 2003). Specifically, the five topics that all the participants with aphasia wanted to talk about had equivalent topics in all four of the mentioned studies. Five of the PCR topics that were preferred by six or less of the participants did not have an equivalent topic in any of the studies mentioned. These topics were *a problem, privacy*, *power of attorney, my will*, and *abuse*.

Overall, the results confirm the appropriateness of the topics found in the PCR for adults in general as well as adults with aphasia. The PCR topics seem to take into consideration both the fact that adults with aphasia have the same conversational needs and desires as other adults (for example, talking about children, family and food), while also including topics that take into consideration the unique needs and life situations of adults with aphasia (for instance, *speech and language therapy, progress [communication]*).

Comparison of Preferences: Influence of Topic

Overall, the familiar communication partners correctly predicted about two thirds of their aphasic partners' topic preferences (averaging 65%). There were clear differences between topics. Topics that were predicted more accurately seemed to be those relating to people as well as the communication challenges of the person with aphasia (90-100% agreement). Some topics that are common in adult conversations (e.g., *current events, money*) also seemed to be easier to predict. Some of the comments made by partners with regard to these topics related to their understanding of the preferences of the adult with aphasia based on the person's interests (e.g., the comment by B05 on the topic *politics* [see Table 6]) or their accurate judgment based on previous discussions of the topic.

Topics that were predicted with low accuracy included sensitive ones. Topics such as *power of attorney*, for example, elicited comments on the private nature of the topic. Topics that had poor agreement also elicited comments that indicated the partners' assumption that, due to the life circumstances, abilities or lack of abilities, the adults with aphasia would not want to talk about, whereas these adults actually wanted to. Such comments were made in relation to the topics *power of attorney*, *abuse* and *counselling*. Another topic that elicited many comments of this nature was *my job.* It is evident that some of the familiar communication partners in this study felt that, because their partners with aphasia were not employed at the time, they would not want to talk about employment. Unemployment after the onset of aphasia often results in the loss of a significant role and important part of one's identity (Simmons-Mackie, 2001; Morris, Franklin, Menger, & GD, 2011). For this reason, providing adults with aphasia with the opportunity and freedom to communicate about their previous employment allows them to discuss areas of their lives prior to the onset of aphasia and assists in the adjustment to their new sense of self. The necessity of adults with aphasia and their spouses to combine the memory of the way they were before the onset of aphasia with their new identity has been emphasized in order to facilitate acceptance of a changed identity after the onset of aphasia (Brumfitt, 1993). Therefore, if the spouse of an adult with aphasia behaves as if the adult with aphasia is handicapped and inadequate, incompetent and degraded, the adult with aphasia will experience a powerful negative change. However, if the spouse of an adult with aphasia behaves as if their spouse were still the same, then the adult with aphasia will be able to experience a sense of continuity with the past (Brumfitt, 1993). Realizing the importance of maintaining continuity with prestroke life in spite of severe communication problems may help partners to include topics that were relevant prestroke, and thereby increase the accuracy of their predictions. In this way, they may facilitate the communication attempts of the person with aphasia that may relate to previous experiences and abilities, rather than focussing on current inabilities only.

During the process of predicting the topic preferences of the adults with aphasia it was noted that some of the familiar communication partners commented on their desire or lack of desire for the various topics to be discussed. At times, topic preference predictions were based on whether or not topics had been previously discussed by the dyad, with the ability of the partners with aphasia to discuss these topics probably playing a role. Brewster (2004) describes these observations as circularity; the process whereby vocabulary may only be selected for communication on topics that the person can already communicate about, or which others wish them to communicate about. Circularity indicates an unquestioned assumption that what is actually spoken about is what the individual with communication difficulties wants and needs to talk about. At times, partners seemed to limit their judgment of the topic preferences of the aphasic adult by judging whether or not the adult with aphasia would talk to them about the topic, rather than to possible other partners. This tendency may also be the result of the limited number of communication partners such adults typically have (Parr, 2007).

Comparison of Preferences: Influence of Partner

The nature of the dyad relationship (that is, husband-wife, same-sex friend-friend, adult with aphasia-paid companion, sibling-sibling, parent-child) and whether the dyad knew each other prior to the onset of aphasia or not, did not appear to influence the level of agreement regarding topic preferences within the dyads. Instead, it was noted that the amount of time spent together, the variety of activities performed together and the manner of selecting joint activities appeared to have the greatest effect on topic preference agreement. All three of the dyads who had the highest level of agreement indicated that both members of the dyad decided on what activities to do together. Partners also provided information regarding the type of activities performed together. Increased participation in life has been found to provide a rich experience base for subsequent communication between adults with aphasia and their communication partners; in this way, the various life experiences that one may be involved in post-onset of aphasia, provide something to talk about (Lyon et al., 1997). The members within these dyads may have had more to talk about due to the wider range of activities they participated in, resulting in better awareness of each other's interests and experiences. This may have positively affected the ability of the familiar communication partners to predict the topic preferences of their partners with aphasia.

Additionally, the familiar communication partners within the dyads that obtained the highest percentage of agreement demonstrated their belief in the communicative competence of their partners with aphasia, and the ability of these partners to participate in relevant conversations, as noted in the positive comments about the amount and extent of interactions by, for example, participant B04. Comments by Participant B03, in turn, who was less than 50% accurate in his predictions, illustrated that he had severe difficulties in looking past the limitations of the adult with aphasia post-stroke. Factors specific to the dyad such as the functional status of the relationship have been found to facilitate interaction, as well as factors specific to the partner without aphasia, such as their conversational style, communication habits, personality, attitude, and perception of the partner with aphasia (Turner & Whitworth, 2006).

Speaking partners who believed that people with aphasia were competent, trustworthy people were more likely to structure their communication interactions to reflect this belief (Simmons-Mackie & Kagan, 1999). This was also observed in the current study and has implications for partner education and training. Informed understanding and beliefs regarding the competence of others ultimately leads to actions that support such beliefs (Simmons-Mackie & Kagan, 1999). This is an important intervention goal when working with the familiar communication partners of adults with aphasia.

Conclusions

The adults with moderate to severe aphasia in this study were capable of communicating their topic preferences when provided with consultative support in the form of the Talking Mats™ framework. They indicated that they would like to talk about most of the PCR topics presented to them. These topics correlated with those recorded in the natural conversations of adults with intact communication abilities as well as the conversations of adults with aphasia. Partners accurately predicted some of the preferred topics, but just over a third of their predictions (on average) were inaccurate. While partner input in topic selection is certainly important, various factors seem to influence the accuracy of partner's predictions. Such factors seemed to relate to the amount of time dyad members spend together, the variety of activities they perform together and the manner of selecting joint activities. The belief of the familiar communication partner regarding the communicative competence of their partner with aphasia was also noted to influence the accuracy of topic preference predictions.

Clinical Implications

The use of the Talking Mats™ framework in conjunction with a commercially available list of topics by adults with aphasia was found to be a clinically effective way to obtain clients' own view on some of their preferred topics in a relatively short period of time. Knowledge of the preferred topics of an adult with aphasia would provide direction in selecting appropriate and meaningful vocabulary items for use in AAC systems for adults with aphasia (Stuart et al., 1994). Adults with aphasia would therefore have better access to words that support relevant and socially appropriate adult roles (Bryen, 2008).

The topics of the PCR seem to be appropriate topics that many adults with aphasia would want to talk about. At the same time, commercially available topic lists such as the PCR are mostly not sufficient to determine personalized topic choices and partner input remains important in this regard. When such input is provided, clinicians need to be aware of the influence that the relationship between the dyad may have on this process. The involvement of various partners may ensure that a comprehensive view of preferred topics is obtained. Furthermore, clinicians can assist partners in several ways to increase the accuracy of their predictions. Firstly, partners should be guided to differentiate clearly between topics they themselves would or would not want to talk about versus those that the adult with aphasia would prefer. In this regard, partners should also be encouraged to think of other communication partners of the person with aphasia, especially because certain topics are of a more sensitive nature than others, and/or are only discussed with certain communication partners (Aries & Johnson, 1983). Secondly, partners should be encouraged not to base predictions solely on what has been talked about in the past or whether or not the partner can talk about a certain topic.

Thirdly, partners should realise that communication topics may span different time frames and need not be limited by current life situations or activities, but can refer to past as well as future events and activities. In the three studies that coded a time frame in their topic analysis (Balandin & Iacono, 1998; Stuart et al., 1994; Tönsing & Alant, 2004), although the present was referenced most, the past was referenced with the second-highest frequency. Stuart et al. (1994) found that reference to the past occurred more frequently in the older adults in their cohort. For adults with aphasia, referencing prestroke activities can become an important way of maintaining continuity with their prestroke identity. Lastly, clinicians should strongly consider involving both adults with aphasia and partners jointly in the topic preselection process. This process may not only verify the appropriateness of topics, but also illustrate to partners a way in which the communicative competencies of the person with aphasia may be revealed through a process of using a rating scale and visual support. This may encourage partners to increase their repertoire of conversational topics through the use of visual support.

Limitations of the Study

A small sample size was used, limiting the generalizability of results. Only descriptive statistics were employed and significance of correlations between variables was not obtained. The comments provided by the participants were spontaneous and recorded as such without any further questioning on the part of the researcher. Participants with aphasia understandably provided very few spontaneous verbal comments. A more extensive qualitative study may reveal the strategies partners use to predict topics, the success of such strategies and their perceptions of the process.

In the current study, information obtained about the dyad relationship was limited and its influence on the accuracy of predictions could not be definitively presented. More information could have been obtained on the dyad relationships, attitudes and perceptions of the familiar communication partners in the study. Replications of the study with a larger sample size, different aetiologies of adults who use AAC and/or a greater number of communication partners per adult with aphasia would provide valuable clinical and academic information.

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Table 1

Descriptive Information for Participant Group A: Adults with Aphasia (n= 10)

	A01	**A02**	**A03**	**A04**	**A05**	**A06**	**A07**	**A08**	**A09**	**A10**
Gender	F	F	F	M	M	M	F	F	M	F
Age	57	43	60	36	63	50	65	81	56	59
Education	Grade 12	Diploma	Diploma	Diploma	Diploma	Grade 10	Diploma	Bachelor's degree	Bachelor's degree	Grade 12
Occupation	Executive secretary	Personal assistant	Teacher	Manager	Sales representative	Manager	Personal assistant	Retired	Self-employed	Housewife
Handedness	R	R & L	L	R	R	R	R	R	L	R
First language	English	Afrikaans	English	Afrikaans	Afrikaans	English	English	Afrikaans	English	English
Marital status	Married	Married	Married	Married	Divorced	Divorced	Divorced	Widowed	Married	Married
Etiology	CVA	TBI	CVA	CVA	CVA	CVA	CVA	CVA	CVA	CVA
Aphasia type	Severe Broca's	Severe Broca's	Moderate Broca's	Moderate Broca's	Moderate Broca's	Severe Broca's	Severe Broca's	Moderate Broca's	Moderate Anomic	Moderate Anomic
WAB score (AQ)	29.7	29.3	39.8	39.6	47.9	14.5	31.1	32.9	64.4	62.5
Comprehension subtest score	6.15/10	5.05/10	8.7/10	7.3/10	7.85/10	6.25/10	7.75/10	8.25/10	9.55/10	9.25/10
Time post onset (in years;months)	5; 9	1; 8	8	2; 6	4; 8	5; 3	26	4; 6	1; 8	6;4
Assistant with form completion	Husband	Husband	Husband	Wife	Sister-in-law	Sister	Sister-in-law	Son	None	Husband

Table 2

Descriptive Information for Participant Group B: Familiar Communication Partners (n=10)

	B01	B02	B03	B04	B05	B06	B07	B08	B09	B10
Gender	M	F	M	F	M	F	F	M	F	M
Age	59	61	62	35	57	58	70	56	59	55
Education	2 Degrees	Diploma	Grade 12	Diploma	Grade 10	Grade 12	Grade 10	Bachelor's degree	Diploma	Diploma
Occupation	Engineer	Personal assistant	CEO	Laboratory manager	Plumber	Business manager	Housewife	Attorney	Au pair	Insurance assessor
First language	English	English	English	Afrikaans	English	English	Sesotho	Afrikaans	English	English

Table 3
Frequency of topic preferences per topic by Participant Group A (n=37)

Topics	**Yes**	**Maybe**	**No**
occupational therapy	10	0	0
speech and language therapy	10	0	0
my children	10	0	0
my friend	10	0	0
progress (communication)	10	0	0
my hobbies	9	1	0
my family	9	1	0
clothing	9	1	0
current events	8	2	0
communication problem	8	2	0
money	8	2	0
my medical decision	8	1	1
sports	8	0	2
my job	8	0	2
my transportation	8	0	2
food/diet	8	0	2
physiotherapy	8	0	2
my health	7	3	0
my stroke	7	3	0
the future	7	2	1
my feelings	7	2	1
progress (physical)	7	2	1
underwear	7	1	2
sex	7	1	2
where I live	7	0	3
a problem	6	4	0
privacy	6	4	0
counselling	6	3	1
my medication	6	1	3
power of attorney	5	3	2
my marriage/spouse	5	2	3
my will	5	1	4
politics	4	2	4
voting	4	2	4
risk of another stroke	4	1	5
abuse	4	1	5
alcohol and drug issues	2	3	5

Table 4

Amount of Agreement per Topic (n=37)

Topic	Total agreement			Partial agreement/ unsure	Total disagreement	% total agreement
	Yes	Maybe	No			
my children	10	0	0	0	0	100%
my family	9	0	0	1	0	90%
communication problem	8	1	0	1	0	90%
speech and language therapy	9	0	0	0	1	90%
current events	6	2	0	2	0	80%
my hobbies	8	0	0	2	0	80%
my friend	8	0	0	2	0	80%
money	8	0	0	2	0	80%
progress (communication)	8	0	0	2	0	80%
my medical decision	6	1	1	2	0	80%
politics	2	2	4	1	1	80%
my health	6	1	0	3	0	70%
my stroke	7	0	0	3	0	70%
where I live	5	0	2	2	1	70%
clothing	7	0	0	2	1	70%
the future	7	0	0	2	1	70%
privacy	4	3	0	2	1	70%
my medication	6	0	1	1	2	70%
sports	6	0	1	0	3	70%
voting	3	2	2	0	3	70%
sex	4	0	2	3	1	60%
progress (physical)	6	0	0	3	1	60%
my feelings	6	0	0	3	1	60%
food/diet	6	0	0	3	1	60%
my job	4	0	2	2	2	60%
occupational therapy	6	0	0	2	2	60%
my will	3	0	3	2	2	60%
my transportation	6	0	0	1	3	60%
a problem	5	0	0	5	0	50%
my marriage/spouse	4	0	1	4	1	50%
underwear	3	0	2	3	2	50%
alcohol and drug issues	1	1	3	2	3	50%
physiotherapy	4	0	1	1	4	50%
counselling	1	1	1	7	0	30%
power of attorney	1	1	1	5	2	30%
risk of another stroke	2	0	1	5	2	30%
abuse	0	1	2	3	4	30%

Table 5

Percentage Agreement within Dyads (n=10)

Dyad no	Number of agreed topic preferences	Percentage Agreement	Relationship Type	Relationship Length (in years;months)	Acquainted pre-aphasia?	Frequency of contact	Activity decision maker?
04	33	89%	Wife	11	Yes	Daily	Both
07	29	78%	Friend	5	No	Daily	Both
01	27	73%	Husband	29	Yes	Daily	Both
05	24	65%	Friend	2; 6	No	Daily	Both
10	24	65%	Husband	11	Yes	Daily	Both
02	23	62%	Paid companion	1; 4	No	Daily	Circumstance
06	23	62%	Sister	50	Yes	Once per month	Partner
09	22	59%	Paid companion	1; 6 s	No	Many times a week	Person
03	18	49%	Husband	40	Yes	Daily	Partner
08	18	49%	Son	56	Yes	Many times a week	Circumstance

Table 6

Themes and Subthemes Identified for Partner Comments and Number of Communication Segments Corresponding to Each Theme

Theme	No of segments	Subthemes	No of segments	Examples
The applicability of the topic in relation to life circumstances, activities and activity limitations, personality and interests of adult with aphasia	18	Topic applicable/not applicable due to current life circumstances and activities	10	B01: 'My job': *"OK well, she doesn't have a job."*
		Topic applicable if adult with aphasia's life circumstances were different	3	B03: 'My job': "*If she had a job? Well yes, if she had a job she would."*
		Topic applicable due to past life circumstances and activities	3	B05: 'My hobbies': "*I know he used to play guitar with one of the top South African singers*."
		Topic not applicable due to personality of adult with aphasia	1	B02: 'Power of attorney': "*No, she is a very independent girl."*
		Topic not applicable due to interests of adult with aphasia	1	B05: 'Politics': "*Nah, I don't think so. That's not his interest."*
Previous discussion of the topic/lack thereof	13	Topic previously discussed	4	B07: 'My feelings': "*Yes, if she is not happy, she comes and talks to me."*
		Topic not previously discussed	7	B02: 'Politics': *"OK, well I think she would, but we haven't spoken about this together."*
		Frequency of previous discussion	2	B04: 'Abuse': *"Because I wouldn't say that these topics are part of our day-to-day conversation."*
Communicative abilities/tendencies of partner with aphasia and extensiveness/types of conversations with them	9	Wish for more topics	1	B03 (not related to any topic): "*Ja, you know you wish you could talk about all of these bloody things. F***ing H***. It gives you a wake-up call."*
		Amount of interaction	1	B04 (not related to any topic): *"We talk a lot."*

Theme	No of segments	Subthemes	No of segments	Examples
		Extent of topics	3	B04 (not related to any specific topic): *"I can't say that these things we would not talk about at all. I would say everything 'Yes'."*
		Types of interaction	1	B05 (not related to any topic): *"We like to joke together, him and I."*
		Communicative abilities/tendencies of partner with aphasia	3	B05 (not related to any topic): *"He's a talkative person."*
Struggle/inability to predict the preferences of adult with aphasia	5	_	_	B04: 'Abuse': "*Abuse… hmm… its quite difficult."*
Partner's avoidance/preference of topic, hope that partner does not wish to talk about topic	5	Partner's avoidance	3	B06: 'Where I live': *"But it's something I avoid…"*
		Partner's preference	1	B 01: 'Sport': "*Sport- well I would like to talk about that, and maybe it's not fair of me to put it there* (under *No*), *she'd talk about it because I enjoy talking about it."*
		Partner's hope that partner does not wish to talk about the topic	1	B06: 'Sex': *"I hope not."*
Partner's emotional reaction to topic	4	-	-	B06: 'Where I live': *"Probably, but I can't deal with that."*
Personal/private nature of the topic	3	-	-	B02 (not related to any topic): *"These topics under 'Maybe' are personal things."*
Comment on strategy	3	-	-	B02 (not related to any topic): *"I think and I encourage*

Theme	No of segments	Subthemes	No of segments	Examples
partner would use if these topics would come up				*her… these are things that if there is a problem, I am happy to discuss them with her, but with someone else, in counseling."*
Necessity to talk about the topic	2	-	-	B06: 'Where I live': *"It will be interesting to see, because if he does want to talk about it, then we'll have to address that."*

Appendix A

Comparison of PCR Topics to Four Studies on Adult Topic Referencing

PCR topics	Balandin and Iacono (1998)	Tönsing and Alant (2004)	Stuart et al. (1994)	Davidson et al. (2003)
My children	Immediate family, Relatives	Family, Relatives	Immediate family, Relatives	Family (including grandchildren)
My family	Immediate family, Relatives	Family, Relatives	Immediate family, Relatives	Family (including grandchildren)
Communication problem	Health	Health	Health/Illness	Health issues (including stroke)
Speech and language therapy	Health, Service providers	Health, Service providers	Health/Illness, Service providers	Health issues (including stroke)
Current events	Events, Media	Specific event, Media	Community affairs, News events	News, including current affairs
Politics	-	-	-	Politics (local and national)
My hobbies	-	-	Hobbies	-
My friend	Close friends	Friends	Close friends, Social network	Friends and neighbours
Money	Finances	Money	Finances	-
Progress (communication)	Health	Health	Health/Illness	Health issues (including stroke)
My medical decision	Health	Health	Health/Illness	Health issues (including stroke)
Sports	Sport	Sport	Sports	Sport
Where I live	House	Housing/property	-	-
My health	Health	Health	Health/Illness	Health issues (including stroke)
My stroke	Health	Health	Health/Illness	Health issues (including stroke)
Clothing	Clothing	Clothing	Clothing	-
My medication	Health	Health	Health/Illness	Health issues (including stroke)
The future	Future	Future	Future	Plans for the day
Privacy	-	-	-	-
Voting	-	-	-	Politics (local and national)
My job	Work	Work	Work	-
My feelings	-	Emotional response	Emotional status	-
My transportation	Transport	Transport	Travel (recreation)	Transport/traffic, Travel (past and planned)
Food/diet	Food	Food	Food/Eating	Food and drinks
Occupational therapy	Health, Service providers	Health, Service providers	Health/Illness, Service	Health issues (including stroke)

PCR topics	Balandin and Iacono (1998)	Tönsing and Alant (2004)	Stuart et al. (1994)	Davidson et al. (2003)
			providers	
Sex	-	-	-	-
Progress (physical)	Health	Health	Health/Illness	Health issues (including stroke)
My will	-	-	-	-
A problem	-	-	-	-
Physiotherapy	Health	Health	Health/Illness	Health issues (including stroke)
Underwear	Clothing	Clothing	Clothing	-
My marriage/spouse	Family life, Social relations	Interpersonal relations	Family life, Social relations	Family (including grandchildren)
Alcohol and drug issues	Food	Food, Bad behaviour	Food/Eating	-
Power of attorney	-	-	-	-
Counselling	Health, Service providers	Health, Service providers	Health/Illness, Service providers	Health issues (including stroke)
Risk of another stroke	Health	Health	Health/Illness	Health issues (including stroke)
Abuse	-	-	-	-
Total number of overlapping topics	17	18	19	10

Appendix B

Example of a Completed Talking Mat, Displaying All 37 PRC Topics

Appendix C

Coding Rules

1) All verbalizations were transcribed.
2) Non-verbal actions were only transcribed if they were clearly interpretable as a communication message relating to the topic rating procedure.
3) Transcriptions were divided into communication segments.
4) A segment boundary was determined by
    a. a change in speaker,
    b. a change in thematic focus.
5) Communication segments that merely conveyed the participant's rating given to the topic (e.g. "hmm, no." "I'd say so." "So I think I'll change that to a 'yes'."), etiquette ("thank you") or stereotypical phrases were not coded.
6) Communication segments that represented requests for clarification of the topic or the procedure were not coded.