Sales assistants serving customers with traumatic brain injury

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Abstract

Background: General lack of awareness regarding neurogenic communication disorders generally, and cognitive communication disorders following a traumatic brain injury (TBI) specifically, has resulted in pervasive environmental and attitudinal barriers for these individuals. While collaborative communication partner training programmes have been advocated as a means to remove barriers and provide social supports to enhance participation, a dearth of published programmes is evident within the field of TBI specifically. Similarly within the corporate context, in spite of legislative changes and diversity awareness programmes for employees, few training programmes exist worldwide, and in South Africa particularly, that remove barriers between employees and customers with a communication disability, and with a TBI specifically. In order to address this, the current research targeted the retail supermarket environment as a context in which a significant number of everyday communicative exchanges take place.

Aims: The study examined the effects of a specialised once-off training session on the confidence and knowledge of sales assistants in identifying barriers to, and facilitators of, sales interactions with customers with cognitive-communication disorders following a TBI. To do this, a randomised controlled trial design was used.

Methods and Procedures: Two questionnaires were developed and administered on two different occasions to the experimental group pre and post training, as well as the control group, to determine the confidence and knowledge with which they identified barriers and facilitators during videotaped sales interactions. The training session was developed based on previously established principles of diversity awareness training. Training and its evaluation used original on-site videotaped scenarios within small group discussion format.

Outcomes and Results: Inter- and-intra group comparisons were analysed on the derived confidence and knowledge constructs from item analysis of the questionnaires. All results pointed consistently to the impact of the once-off training session on experimental group participants, who also rated the training session highly.

Conclusions: The need for companies to expand their concept of customer service to include the customer with a disability is emphasised. Training programmes empowering their employees to interact with greater knowledge and confidence specifically with customers with a TBI will potentially facilitate deeper participation for both. The current research lays the groundwork for more in-depth research that

can be generalised beyond this specific population of individuals with a communication disorder.

Sales assistants serving customers with traumatic brain injury

The range of cognitively based communication impairments following a traumatic brain injury (TBI) has been extensively described and highlighted in the literature to include deficits impacting on the individual's academic and work-related performance, social participation, and ability to resume their pre-traumatic roles in society (Coelho, 1999; Holland, 1982; Isaki & Turkstra, 2000; Larkins, Worrall, & Hickson, 2004; Mentis & Prutting, 1987; Milton, Prutting, & Binder, 1984; Penn & Jones, 2000; Sohlberg & Mateer, 2001a; Togher, 2001; Togher, McDonald, & Code, 1999; Watt & Penn, 2000; Ylvisaker, Szekeres, & Feeney, 2001). Prutting's (1982) term "social competence" (p. 129), which refers to appropriate communication, can be applied to individuals with a TBI. A person's social competence can be affected by a range of cognitive communication disorders and thus impact on how the individual is perceived generally, and more specifically in relation to their ability to independently and competently manage communicative interactions such as service encounters (Mazaux et al., 1997; Mentis & Prutting, 1987; Milton et al., 1984; Togher, Hand & Code, 1997a, 1997b; Togher, McDonald, Code & Grant, 2004; Ylvisaker et al., 2001). There are a number of barriers to people with TBI during service encounters. Examples of these difficulties in the retail context—highlighted from focus group input in the current study (Goldblum, 2005)—could include: difficulty reading labels and prices correctly; being understood by the sales assistant; working out how much money to give the cashier, and the change to expect when the transaction is completed; impulsive buying of unwanted items on the shopping list; difficulty asking relevant questions of the sales assistants regarding the required purchase; over-familiarity with the sales assistant or other customers, thereby creating anxiety and discomfort in these communication partners.

There is a general lack of awareness regarding the impact of a TBI, thus resulting in pervasive environmental, attitudinal and informational barriers marginalising the individual (Cottrell, 2001; Garcia, LaRoche, & Barrette, 2002; Sarno, 1986, 2004). Parsons, Elkins, and Sigafoos (2000) have noted how one of the most valued social roles in Western society is that of the customer or consumer. In spite of this, few investigators have examined the views of business communities towards customers with disabilities, and those who have done so have reported limited awareness regarding individuals with a disability, and with communication disorders in particular (Bedrosian, Hoag, & McCoy, 2003; Brown et al., 2006; Cottrell, 2001; Garcia et al., 2002; Saxby, Thomas, Felce, & De Kock, 1986). The need for "wide-ranging and increased training and awareness-raising among the general public about communication disability" has been advocated by Cottrell (2001, p. 102). Paradigm shifts within the rehabilitation field (with specific reference to individuals with neurogenic-based communication disorders), have been advocated by various sources including the participation-based International Classification of Functioning, Disability and Health framework (ICF), developed by the World Health Organisation (WHO) in 2001 (WHO, 2001); together with consumer-driven models of intervention, including the social model of disability (French, 1994; Jordan & Kaiser, 1996; Oliver, 1996); the Life Participation Approach to Aphasia Project Group (LPA) (2000); and the supported participation model (Ylvisaker, Jacobs, & Feeney, 2003). Their

combined focus is to progress beyond creating functional and relevant outcomes for the individual with communication disorders, in order to create communication-friendly places, with fewer barriers and more facilitators. One of the ways to achieve this aim is by means of collaborative interventions with communication partner training programmes (Kagan, 1995; Kagan & Gailey, 1993; Kagan & LeBlanc, 2002; Kagan, Black, Felson Duchan, Simmons-Mackie, & Square, 2001; Pound, Parr, Lindsay, & Woolf, 2001; Simmons-Mackie et al., 2007; Togher et al., 2004), which provide "communication ramps" (Kagan & Gailey, 1993, p. 204), and empower both the individual with a communication disorder and their communication partner, impacting positively on the quality of life of both these individuals (Sarno, 2004). Training aimed at forming partnerships between the individual with a disability and their community, enhancing both the awareness and the skill of the communication partner (thereby facilitating deeper participation and building community capacity in a sustainable way), has likewise been strongly advocated by Alant (2005a, 2005b), and Alant and Lloyd (2005). To achieve this, Alant (2005b) advocates the mind shift that is necessary for communities to change their priorities and work in partnership with professional services in accommodating individuals with disability.

In spite of community reintegration frequently being suggested as the primary aim of the rehabilitation of the individual with a TBI (Coelho, DeRuyter, & Stein, 1996; Ylvisaker & Feeney 1998a), examination of the literature specifically in relation to individuals with a TBI reveals a dearth of published research evaluating the results of training the communication partners of individuals with a TBI to create more respectful and normal communicative opportunities (Holland & Shigaki, 1998; Togher et al., 2004; Ylvisaker, Feeney, & Urbanczyk, 1993). Togher et al., (2004) have thus advocated the need for training of individuals across uninformed sectors of society in order to facilitate enhanced participation for the individual with a TBI across a range of service encounters.

In the area of cognitive rehabilitation specifically, attention has likewise shifted increasingly towards a consideration of the barriers existing within the social environment. Numerous authorities (including Sohlberg & Mateer, 2001b; Sohlberg, Glang, & Todis, 1998; Ylvisaker & Feeney, 1996, 1998a, 1998b, 1998c, 1998d, 2001; Ylvisaker & Holland, 1985; Ylvisaker, Feeney, & Feeney, 1999; Ylvisaker et al., 2001, 2003) advocate a collaborative brain injury intervention approach for the rehabilitation of individuals with chronic TBI using an apprenticeship or "supported participation" model (Ylvisaker et al., 2003). In spite of these efforts, the ongoing need for training to provide support, lessen barriers, and empower both the individual with a TBI and their partners is highlighted (Togher et al., 2004).

As in the rehabilitation context, so too are transformations apparent within the corporate context, in South Africa specifically, as well as internationally. Legislative changes in South Africa, such as the Employment Equity Act of 1998, address some of the inequalities within the workplace, particularly in relation to individuals with a disability. Corporate diversity awareness programmes worldwide are increasingly common, with particular focus being evident on awareness related to race and gender issues, as well as on reduction of environmental barriers for individuals with disability. In spite of this trend, very few South African companies have reportedly addressed the issues of integrating individuals with disability into the workplace, and of transforming company values in order to modify attitudes and remove barriers for

both employees, and customers with disability (Silver & Koopman, 2000; Swart, 2001). Furthermore, in spite of the focus of contemporary business on the importance of customer care and service (Ackerman, 2002, 2005; Covey, 1992, 2004; Hammer, 2001, Kotter & Cohen, 2002; Underhill, 1999), only minimal reference, if any, is made to the customer with a disability.

The main aim of this study (Goldblum, 2005) was therefore to investigate the ability of sales assistants to identify barriers to, and facilitators of, interaction involving customers with a cognitive communication disorder following a TBI, and to evaluate the impact of a once-off 4-hour training session on this ability. In order to do this, an experimental and a control groups' performances were compared before and after the training session administered to the experimental group only.

Method

Research design

A randomised controlled trial design (Schlosser, 2003) was adopted in the study (Goldblum, 2005), in which stores in the northern region of a large South African retail supermarket chain were randomly assigned to the experimental and control groups.

The study comprised two preparatory phases: Phase 1 and Phase 2 (which included the pilot study), and Phase 3, the main study. Contextualised video scenarios were developed and refined, and a communication partner training session was developed to train sales assistants in a supermarket with respect to communicating with a customer with TBI.

Phase 1

During this phase the researcher obtained consent for carrying out Phase 3 (the main study) within one region of the national supermarket chain, and for all preparatory work (Phases 1 and 2, including the pilot study) to be carried out in an adjacent region of the same chain. This retail company was approached in view of the widely held perception that it has always been an innovative, socially responsible company, proactive in its responsibility towards both its customers and its personnel (Ackerman, 2002, 2005). In addition, focus group questions to be used in the preparatory phase were drafted and sampled during this phase.

Phase 2

This phase involved gathering information from three focus groups, as well as the development and refinement of material in the pilot study for use in the main study including: video scenarios; two pre and post questionnaires; and a training session. A pilot study was then conducted to test the applicability of the developed material.

Focus groups

Purposefully sampled focus groups (Bornman, 2001; Brotherson, 1994; Brown et al., 2006; Krueger, 1988; Krueger & Casey, 2000; McMillan & Schumacher, 2001; Sohlberg et al., 1998) were held in order to understand the experience of barriers and facilitators for both customers with a TBI (two focus groups) and sales assistants (one focus group) within the shopping environment serving such customers. Input was also obtained through the use of a questionnaire formulated by the researcher, from local

and international experts with extensive experience working with adults with acquired brain injury. Consensus was obtained regarding the need for education and training of sales assistants in order to make the shopping experience a more positive and accessible one for both the customer with a TBI, and the sales assistant.

Development and refinement of video scenarios

Video scenarios were developed for assessment and training purposes. Video scenarios 1 and 2 were used for assessment to accompany the administration of pre and post questionnaires 1 and 2 respectively, and video scenarios 3-7 were used during the training session of the main study (Table 1).

Table 1. Video Scenarios Used for the Main Study

Video scenario	Duration (once edited)	Topic	Pre and post questionnaire administration/training session
1	15 minutes 06 seconds	Photo counter scenario: customer endeavours to purchase an 800 ASA film.	Assessment: **Questionnaire 1**: Pre and post questionnaire administration
2	8 minutes 18 seconds	Returns counter scenario: customer returns two expensive items without a cash receipt.	Assessment: **Questionnaire 2**: Pre and post questionnaire administration
3	8 minutes 15 seconds	Buying items with R50.00: two customers given R50 to buy something to eat.	Training session
4	2 minutes 5 seconds	Customer with dysarthric speech requests items from the sales assistant and manager.	Training session
5–7	3 minutes 24 seconds	Customer with dysarthric speech requests items from various sales assistants.	Training session

Input from the three focus groups, and expert questionnaires were used to identify common potentially difficult themes for customers with a TBI, as well as the sales assistants serving them. These themes were systematically refined into seven video scenarios that were obtained from two separate in-store videotaping sessions using four volunteers with a TBI as “customers” (Table 1).

Development and refinement of two pre and post questionnaires

The researcher compiled and refined an initial set of 10 questions into two pre and post questionnaires that were administered during Phase 3 (the main study) in relation to two in-store video scenarios (scenarios 1 and 2 respectively). The questionnaires were formulated using a combination of input from a review of literature (Bedrosian et al., 2003; Cottrell, 2001; Cummings, Stewart, & Hulley, 2001; Mayo & DuBois, 1987a; Mertens, 1998; Worrall, McCooey, Davidson, Larkins, & Hickson, 2002); the framework of the Activities, Participation and Environmental constructs of the ICF (WHO, 2001); focus groups of individuals with a TBI, sales assistants, and experts; input from relevant store management; and ongoing discussion with colleagues, and guidance from a statistician.

Development and refinement of a training session

The preliminary input and rationale leading to the development and refinement of the training session used in the study (Goldblum, 2005) included responses from expert questionnaires (Phase 2); review of limited literature regarding published partner training programmes within the acquired adult neurogenic field; examination of limited existing published corporate diversity awareness training programmes; and the unsuccessful effort to find existing video material specifically using individuals with a TBI in retail transactions.

The training session broadly used the ICF (WHO, 2001) as the framework of reference targeting a system level change (Simmons-Mackie et al., 2007) within the retail sector specifically. It aimed at having a group of sales assistants increase their confidence and knowledge at identifying the barriers to, and facilitators of, a range of videotaped sales interactions with customers with a TBI. In so doing, the sales assistant would potentially shift from being a barrier to a facilitator, thereby potentially enhancing the participation of the customer with a TBI in the retail context.

Phase 3: Main study

A large South African national retail supermarket chain participated in all three phases of the study. The chain currently comprises 108 supermarkets countrywide, with over 40,000 employees (Ackerman, 2005), with 24 stores in the northern region where the main study took place.

Participant selection and description

Purposeful sampling was used to select all 24 Customer Service Managers (CSMs) and all 24 Customer Care Assistants (CCAs) in the stores to attend the training session. They were randomly assigned to the experimental and control groups. An additional 22 sales assistants from the Deli and Bakery (frontline customer service areas of the store) were selected to participate, in order to create sufficient numbers in both the groups for statistical purposes. Table 2 reflects the demographics of the participants in both the experimental and control groups who attended the first session of the main study.

Table 2. Description of Participants

Participants	Experimental group n = 31	Control group N = 33
Service level in supermarket	13 Customer Service Managers 11 Customer Care Assistants 7 Deli/Bakery Sales Assistants	8 Customer Service Managers 11 Customer Care Assistants 14 Deli/Bakery Sales Assistan
Average age	38.3870 years (S.D. 9.30)	41.9393 years (S.D. 8.96)
Home language	A variety of mother tongues spoken	A variety of mother tongues spoken
Perceived level of speaking English	26 Good 5 Average	24 Good 9 Average
Perceived level of understanding English	26 Good 5 Average	28 Good 5 Average
Literacy skills	31 literate	33 literate
Average length of time working for the company	10.8710 years (S.D. 7.3518)	11.0606 years (S.D. 6.9997)

In spite of the arrangement for 35 participants to attend in order to comprise both the experimental and control groups respectively on the designated days of the three sessions of the main study, the attendance numbers fluctuated in both the experimental and control groups due to a variety of practical reasons including illness and transport problems.

Video scenarios

Seven professionally produced and edited in-store video scenarios were used in the study (Goldblum, 2005). Video scenarios 1 and 2 were developed for assessment purposes, to accompany the administration of pre and post questionnaires 1 and 2 respectively. Video scenarios 3-7 were used during the training session of the main study only (Table 1). Video scenarios, although planned, were not scripted in detail in advance, so that the individual "customer" with a TBI was encouraged to use their own initiative in dealing with the unfolding demands of the interaction with the sales assistant.

Pre and post questionnaires

Two pre and post questionnaires were formulated to determine the sales assistants' perceptions regarding two different sales transactions (in assessment video scenarios 1 and 2 respectively) (Table 1) before and after a once-off training session (that was presented to the experimental group only). Pre-post questionnaire 1 comprised 21 questions (20 closed-ended questions, and 1 open-ended question) around the photo counter scenario (video scenario 1); and pre-post questionnaire 2 comprised 15 questions (14 closed-ended questions, and 1 open-ended question) around the returns counter scenario (video scenario 2). The same open-ended question was posed in both questionnaires. A 3-point Likert scale was used for each of the questions, with possible levels of responses ranging from *Agree* to *Unsure* to *Disagree*. Table 3 provides a description of the components, as well as examples of questions included in pre and post questionnaires 1 and 2 as used in the main study.

Table 3. Description of Components and Examples of Questions used for Pre-and-Post Questionnaires 1 and 2

Questionnaire	Components	Examples of questions
Pre-and-post questionnaire 1	21 questions: 20 closed-ended questions, and 1 open-ended question	**Question 1:** I would feel unsure about serving this customer. **Question 4:** I would spend the same amount of time with this customer as he did in the video.
Pre-and-post questionnaire 2	15 questions: 14 closed-ended questions, and 1 open-ended question	**Question 1:** I would feel comfortable when approached by this customer. **Question 8:** I would think the customer finds it hard to understand what the sales assistant is saying.
Open-ended question pre-and-post questionnaires 1 and 2		**Question:** If this was you, in your own words describe what you would have done differently if you were serving this same customer.

Pre-and-post-training confidence rating scale
A pre-and-post-training confidence rating scale was developed to obtain a subjective pre-and-post-training measure of the experimental group participants' confidence in their ability to manage sales transactions involving customers with a TBI. Before and directly after training, experimental group participants were asked to place a cross on a line indicating how confident they felt in serving a customer with a TBI. The rating scale ranged from a rating of 1 (*not confident*) to 5 (*very confident*).

Training session evaluation form
A training session evaluation form was developed and administered to all experimental group participants on completion of their 4-hour training session. This was used to obtain their subjective impressions of the training, and in order to triangulate the data (Mayo & DuBois, 1987b, 1987g). Questions were presented in closed-ended format where respondents had to indicate *Agree*, *Unsure*, or *Disagree* with the statements regarding the session's content. In addition, participants were asked to provide an overall rating of the training session on a 5-point Likert rating scale, where 1 was *poor* and 5 *very good*.

Training session
Using a combination of adult learning principles (Bornman, 2001; Caffarella, 1994; Franklins Disability Awareness, 2001; Mayo & DuBois, 1987b, 1987c, 1987d, 1987e, 1987f, 1987g; Mintzberg, 2004; Silberman, 1990) the assistance of a research assistant with a TBI; and key questions around various in-store meaningful video scenarios, training aimed to systematically increase the confidence and knowledge of the participants in identifying the barriers to, and facilitators of interaction with customers with a TBI. Given the logistics of the functioning of a large retail company, and the aim of training sales assistants coming from large distances within a surrounding geographical region, only one day was allocated by the participating company for the training session to take place in their conference room.

The training session was piloted with five sales assistants working in a region of the participating supermarket store adjacent to the region where the main study took place. Minor modifications were necessary. Table 4 provides a summary of the eight training session slots, their content and purpose. Slots used in both the pilot training session and the courtesy training session are reflected.

Table 4. Summary of the Training Session Slots, Content and Purpose

Slot	Content	Purpose
Slot: 1a	Welcome and Introduction[ab] Brief introduction, followed by introduction of research assistants. Research assistant with a TBI to provide the group with a brief overview	• Set the context for the day • Exposure to an individual with a TBI and experiencing more fully what they will be trying to understand during training
Slot: 1b	Confidence Rating Scale: Pre-training	• Subjective pre-training confidence rating of participants' perceptions regarding their confidence in serving customers with a TBI
Slot: 2	Diversity awareness through a fable (Roosevelt Thomas (with Woodruff) 1999)[ab]	• Fable used as metaphor to consider range of potential customers they may serve, and the possible barriers and facilitators needed
Slot: 3	Shopping considered from both a customer and sales assistants' perspective	• More in-depth look by the groups of awareness (from the customer and sales assistants' perspective) of possible barriers intruding on sales transactions involving customers with a TBI
Slot: 4	Use of video scenario (scenario 3) to consider barriers and facilitators when serving customers with a TBI[ab] (Table 1)	• Discussion around serving a diverse range of customers
Slot: 5	Use of other video scenarios (scenarios 4–7) to consider barriers and facilitators when serving customers with a TBI (Table 1)	• More in-depth look at the barriers and facilitators (from the customer and sales assistants' perspective) when serving a customer with a TBI
Slot: 6	Review list of Do's and Don'ts[ab]	• Raising awareness of the barriers and facilitators within a sales transaction with a diverse range of customers, and with customers with a TBI in particular
Slot: 7	Integration of Material Covered	• Integration of issues raised to feel more confident when serving customers with a TBI
Slot: 8a	Summary, and Formulation of personalized list of Do's and Don'ts[ab]	• Summarizing and integration of issues discussed to develop a personalized list of tips when serving customers with a TBI
Slot: 8b	Confidence Rating Scale: Post–training	• Subjective post-training confidence rating of participants' perceptions regarding their confidence in serving customers with a TBI.
Slot: 8c	Training Session Evaluation Form[a]	• Determining the value of the session
Slot: 8d	*Certificate of Attendance* from the University of Pretoria given to all participants[b]	• Sense of accomplishment for participation in training session

[a]Sessions used in the pilot training session. [b]Sessions use in the courtesy training session.

Procedures for data collection

Phase 3 (the main study) (Goldblum, 2005) took place over the following three sessions, during which the researcher was assisted by a qualified speech language pathologist (SLP):

- *Session 1.* This commenced with the experimental and control groups combined, meeting with the researcher for an hour and a half to view two videos (assessment video scenarios 1 and 2 as described in Table 1), and thereafter completing pre-questionnaires 1 and 2 to determine their confidence

and knowledge in identifying barriers to, and facilitators of interactions with customers with a TBI in sales interactions.

- *Session 2.* The training session (Table 4) took place exactly 2 weeks later with only the experimental group participating. A research assistant with a TBI collaborated with the researcher in this session, and discussed issues related to TBI and shopping with the group participants. An interactive small group format with meaningful video scenarios and overhead material facilitated lively discussion. The 4-hour training session (comprising eight programme slots) aimed to provide a range of opportunities for the participants to identify the barriers to, and facilitators of a range of sales interactions with customers with a TBI with greater confidence and knowledge.
- *Session 3.* The same procedure as described for session 1 was repeated, which took place exactly 2 weeks after session 2 (and 4 weeks after session 1). The research assistant with a TBI was not present during this session. At the end of this session, all participants were presented with a Certificate of Attendance from the University of Pretoria.

Courtesy training session

Immediately after the end of session 3 the control group participants stayed on for an hour-and-a-half-long courtesy training session comprising essentially the same programme slots as used in the pilot study. At the end of this session, all participants were presented with a Certificate of Attendance from the University of Pretoria. The researcher was assisted by both the research assistant with a TBI, and the qualified SLP during this session.

Data analysis and statistical procedures

For practical reasons, some participants did not complete both the pre and post questionnaires. However, all the available data were used for each statistical comparison. After the administration of the pre and post questionnaires 1 and 2 during sessions 1 and 3 in the main study respectively, reliable confidence and knowledge constructs were formulated by clustering the questions on each pre-questionnaire in order to assist in statistically determining a trend of responses in the experimental and control groups to the procedures of the main study (Goldblum, 2005). The following steps were taken to formulate these constructs in discussion with the statistician:

1. Initially questionnaires 1 and 2 were examined for the most preferred answers to each questionnaire (as would be expected of a trained person). These answers were then coded into a 3-point grading: 1 = least preferred; 2 = unsure; 3 = most preferred.
2. All questions on the two questionnaires were divided into three theoretical constructs (confidence; knowledge; insight). Item analysis was performed on these constructs, and the item-total correlations, as well as the Cronbach Alpha reliability coefficient, revealed the need to systematically tighten them in order to increase their reliability and raise the Alpha coefficient.
3. Certain questions on all three scales revealed a skew distribution (with a low item-total correlation), reflecting how the group participants in the pre-questionnaire administration situation had already given the preferred answer. Six questions were therefore omitted from the revised version of the constructs in pre and post questionnaire 1; and two questions from the revised version of the constructs in pre and post questionnaire 2. The third construct (insight) was thereafter absorbed into the first and second constructs (confidence and

knowledge respectively), thereby raising the Alpha coefficient, indicating that the two constructs were reliable.

4. The two constructs used for the final analysis were the confidence and knowledge constructs, with questions from pre and post questionnaires 1 and 2 allocated to it respectively.
5. The confidence construct was defined as confidence in serving this kind of customer, and interacting with them with self-assurance and boldness. It comprised four questions from pre-post questionnaire 1, and five questions from pre-post questionnaire 2.
6. The knowledge construct was defined as ability to observe and respond appropriately to this kind of customer—including feelings regarding the customer's competence. It included 10 questions from pre-post questionnaire 1, and 7 questions from pre-post questionnaire 2.

All data were computerised for statistical analysis with the SAS and BMDP Statistical Software packages. The results were then analysed using a variety of statistical procedures.

Results

Inter-group results

The following section will present the results obtained by the experimental and control groups in relation to (a) the biographical information of the groups, (b) the confidence and knowledge constructs of pre and post questionnaires 1 and 2, and (c) the open-ended question in pre and post questionnaires 1 and 2 (Goldblum, 2005).

Inter-group comparison: Biographical information

All experimental and control group participants completed a biographical information form during the first session of the main study. Examination of the demographic data of both the experimental and control group participants revealed no statistically significant differences between these groups. They were well matched on the following variables: gender; ability to speak and understand English; educational level; position in the company; self-reported knowledge of anyone with a speech problem; age; literacy skills; home language; distribution; and number of years participants in both groups worked for the company. Both experimental and control group participants were female, with the exception of one male in each group respectively. A total of 16 participants from the experimental group and 19 participants from the control group reported knowledge of someone with a speech problem, while 15 participants and 14 participants in the experimental and control groups respectively reported no such knowledge. Table 2 provides a description of the 64 participants.

Inter-group comparison. Confidence and knowledge constructs: Pre and post questionnaires 1 and 2

In order to determine the impact of training on the experimental group participants, the experimental and control groups' performances were compared on the confidence and knowledge constructs of pre and post questionnaires 1 and 2 respectively via the Mann-Whitney *U* Test (McMillan & Schumacher, 2001). In addition, in order to take cognisance of and compensate for any pre-existing levels of confidence and knowledge in either of the two groups, the differences were calculated of the scores

obtained on the two constructs of the post-questionnaire minus the scores on the pre-questionnaires 1 and 2 respectively in both these groups over the two video viewings, and questionnaire completions.

Table 5 shows the results obtained when the Mann-Whitney *U* Tests were used to compare the experimental and control groups' performance on the confidence and knowledge constructs of pre and post questionnaires 1 and 2 respectively.

Table 5. Comparison of Experimental and Control Group Responses on the Confidence and Knowledge Constructs

	Pre-questionnaire						Post-questionnaire				
	Experimental group (n = 31)		Control Group (n = 33)		P-value (Mann-Whitney U Test)	Effect size	Experimental group (n = 31)		Control group (n = 33)		P-valu (Mann-Wl U Tes
	M	SD	M	SD			M	SD	M	SD	
Questionnaire 1											
Confidence Construct	2.19	0.44	2.07	0.45	0.31	0.27 small	2.24	0.42	2.07	0.37	0.07*
Knowledge construct	1.79	0.37	1.75	0.41	0.78	0.03 small	1.88	0.37	1.79	0.48	0.28
Questionnaire 2											
Confidence Construct	2.51	0.51	2.38	0.37	0.10	0.30 medium	2.57	0.50	2.31	0.50	0.02**
Knowledge construct	2.31	0.33	2.03	0.46	0.02**	0.68 medium	2.49	0.33	2.09	0.39	0.00**

Note. Effect size: 0.0–0.2 = small effect size, 0.2–0.8 = medium effect size, > 0.8 = large effect size. * p < 0.10 , **p < 0.05, ***p < 0.01.

Table 5 illustrates that for scores obtained for pre-questionnaire 1, no significant difference was found between the experimental and control groups on the confidence and knowledge constructs. Both groups were relatively matched in their confidence and knowledge levels before the second session of the main study, when the experimental group participants had participated in a training session. In contrast, a significant difference was found at the 10% level on the confidence construct of the scores obtained on post-questionnaire 1 only ($p < .10$) (medium effect size = 0.44), reflecting a statistical increase in confidence among the experimental group participants after training. Specific items emphasising this construct included greater confidence in serving this kind of customer and not wanting to avoid them; and feeling more comfortable in the presence of this individual even outside the work environment when, for example, sitting next to him/her on a bus or taxi.

Table 5 shows how a significant difference was found at the 5% level ($p < .05$) (medium effect size = 0.68) between the experimental and control groups on the knowledge construct of pre-questionnaire 2. This finding indicates that the experimental group already appeared to be more knowledgeable than the control

group participants before they had received training. After training, results from administration of post-questionnaire 2 indicated that the experimental group was more confident on the 5% level of significance ($p < .05$) (medium effect size = 0.51), and more knowledgeable on the 1% level of significance ($p < .01$) (large effect size = 1.11).

Specific items highlighting the confidence construct included greater confidence within the experimental group participants when approached by this customer and in serving her without wanting to avoid her, in attending to her needs without calling other colleagues to assist her; and feeling more comfortable in the presence of this individual even outside the work environment when, for example, sitting next to her on a bus or taxi. On the knowledge construct, the experimental group improved significantly in their understanding of the correct amount of time to spend in serving this kind of customer; recognising the appropriateness of asking this kind of customer to either repeat or write her request down when she was not understood; acknowledging the customer's competence both to understand the communication interchange with the sales assistant, and to shop independently without someone helping her.

To further examine the association between the performance of the experimental and control group participants on the pre and post questionnaires 1 and 2, and taking cognisance of and compensating for any pre-existing levels of confidence or knowledge in either the experimental or control groups, the groups were further compared with regard to the difference between the post-questionnaire score minus the pre-questionnaire score on each of the constructs of questionnaires 1 and 2 respectively. This was performed via the Wilcoxon rank sum test for paired observations (McMillan & Schumacher, 2001) in order to determine more precisely the gain within the two groups on the confidence and knowledge constructs of these two questionnaires. The results are illustrated in Table 6.

Table 6. Difference between Post-Questionnaire Score Minus Pre-Questionnaire Score on the Confidence and Knowledge Constructs in the Experimental and Control Groups

	Experimental Group (n = 28)		**Control Group** (n = 30)		**P-value** (Wilcoxon rank sum test for paired observations)	**Effect Size**
	M	SD	M	SD		
Questionnaire 1						
Confidence Construct	0.05	0.44	0.02	0.57	0.44	0.07 small
Knowledge Construct	0.14	0.37	0.04	0.31	0.21	0.27 small
Questionnaire 2						
Confidence Construct	0.02	0.56	−0.04	0.53	0.86	0.11 small
Knowledge Construct	0.20	0.44	0.02	0.41	0.14	0.41 medium

Note. Effect size: 0–0.2 = small effect size, 0.2–0.8 = medium effect size, >0.8 = large effect size.

Table 6 reveals that in questionnaires 1 and 2 respectively, in both the confidence and the knowledge constructs, the experimental group gained more than the control group, even though this gain was not statistically significant. On questionnaire 2, the control groups' score was slightly lower when the differences were examined (mean = -0.04), indicating a reduction in confidence in this group over the questionnaire administrations. The above-described findings of larger gains in the experimental group may have been more significant had the sample size been larger.

Inter-group comparison. Open-ended questions: Pre and post questionnaires 1 and 2

A comparison was made of the experimental and control groups' responses to the open-ended question on pre and post questionnaires 1 and 2, where all participants were asked to write in their own words what they would have done differently if they had been serving the same customer as seen in video scenarios 1 and 2 respectively. Their responses were then categorised and compared. Any amount of information could be provided, so that some participants gave only one suggestion, while others made several.

In response to open-ended question number 21 (pre-post questionnaire 1), many of the participants in both the experimental and control groups provided a range of suggestions, which in both groups overall reflected a prominent emphasis on the need to follow company policy, with many participants recommending the need to accompany the customer to a quieter place in the store in order both to understand his request, and assist him more patiently. Similarly, in response to open-ended question number 15 (pre-post questionnaire 2), many of the participants in both the experimental and control groups provided a range of suggestions, which in both groups also reflected a prominent emphasis on the need to follow company policy; and to be polite to this kind of customer so that she would want to return to the store again. Similar numbers of participants in both groups suggested asking the customer to write down what she was saying in order to clarify her request. In addition, the suggestions overall reflected a critical attitude towards the manner in which the sales assistant in the video dealt with the customer, together with the frequent suggestion to serve this customer “as queen … with the heart, and the five unbreakable promises”, referring here specifically to store policy, and reflecting in-store training received by the participants. Only one control group participant on the pre-questionnaire recommended the need for further training to serve this kind of customer, while three control group participants made the same recommendation on post-questionnaire 2. One of these participants stated “we need urgent training”, and another participant stated that “If I had been given proper training about such customers I think I should have coped well with her.” No experimental group participants recommended the need for further training in response to this question on either the pre-or-post questionnaires.

Training session evaluation and confidence ratings by experimental group participants

Since quality of training, and the way in which individuals experience it, are crucial in this research (Goldblum, 2005), subjective examination of the training session by all experimental group participants (reflected on both the training session evaluation form, and the pre and post training confidence rating scales) revealed the following: On the training session evaluation form, 80% of the participants rated the training

session as a 5 (very good), while 20% of the participants rated it as a 4 on the scale. All participants agreed with statements that the trainer was well prepared and that training was meaningful. Only two individuals indicated uncertainty regarding the sufficiency of the length of training received, and the usefulness of the video material used. These data reflect the overall highly positive ratings given by all group participants for the training session they received (Table 4).

This overall positive input was further corroborated in their responses to open-ended question number 3 of the training session evaluation form, where participants were asked for comments and suggestions for further training. A total of 13 participants (43%) commented that the training was valuable, using adjectives such as “excellent” or “very good” to describe their perception of the training received; 12 participants (40%) recommended the need for “all staff including management to be trained with this kind of training”; 13 participants (43%) expressed the need for more training with different kinds of customers with speech problems; and 7 participants (23%) supported the benefit of using videos to augment training.

Subjective ratings from the confidence rating scale revealed a perceived increase in confidence that was likewise reflected in their significantly increased scores on the confidence constructs of post-questionnaires 1 and 2 (when compared with the control groups).

Discussion

When examining and comparing the similarities and differences between the experimental and control groups' performance on the confidence and knowledge constructs of the pre and post questionnaires 1 and 2, no contradictory evidence was found in any of the measures used. All results obtained consistently pointed to the improvement within the experimental as compared to the control group on the post-questionnaires as compared with the pre-questionnaires. This pointed to the impact of the training session on their confidence and knowledge in identifying barriers to, and facilitators of, interaction with customers with a cognitive communication disorder following a TBI (Table 5).

With reference to the confidence construct, Table 5 illustrates how on both post-questionnaires 1 and 2, the experimental groups' confidence improved in feeling significantly more comfortable and self-assured about interacting with and serving a person with dysarthria on their own. Such customers may also have a range of cognitive communication problems that may potentially create attitudinal barriers for them within the retail encounter. Experimental group participants became more confident on post-questionnaires 1 and 2 as compared with their results on both pre-questionnaire administrations, where neither experimental nor control group performed statistically significantly differently on this construct.

This finding (reflecting confidence in serving the customer on one's own) contrasted with the content of both in-store video scenarios, where the sales assistants approached by the customers called in several colleagues (including management) to understand and assist the customer appropriately (Table 1).

When examining the results on the knowledge construct, it is evident that neither group performed statistically significantly different on either the pre or post questionnaire 1 administration (Table 5). In contrast, the experimental group was found to be already statistically significantly more knowledgeable on pre-questionnaire 2 (session 1) in identifying barriers to, and facilitators of interaction with, this given type of customer (Table 5). In addition, they became even more knowledgeable after the administration of post-questionnaire 2 (following their once-off training session), with respect to their ability to recognise the correct amount of time to spend with this customer, and the appropriateness of asking her to repeat her request, or write something down (as her speech was hard to understand) (Table 5). The participants were also able to recognise the competence of the customer shown in the video scenario, in spite of her relatively unintelligible dysarthric speech.

The finding that the experimental group was statistically significantly more knowledgeable than their control group counterparts on pre-questionnaire 2 (before they received training) (Table 5) is surprising, in view of the effort by the researcher (Goldblum, 2005) to take great care with the randomisation of participants, as well as the matching of the two groups. Two factors that could potentially have contributed to the experimental group being statistically significantly more knowledgeable in the pre-questionnaire 2 administration (while not statistically significantly more knowledgeable in the pre-questionnaire 1 administration) include the following: In spite of the experimental and control groups being matched, practical circumstances arose in session 1 that led to changes in the anticipated composition of the experimental and control groups, where the experimental group comprised more CSMs (13) than the control group (8), but fewer Deli and Bakery sales assistants (7), as compared to 14 in the control group. While not a statistically significant difference, this nevertheless skewed the experimental group in terms of comprising more participants with more advanced in-store training levels, focusing very specifically on the company's core values related to excellent and courteous customer service (Ackerman, 2005). This demographic may have contributed to the experimental group participants being more knowledgeable as compared with their control group counterparts (even before training) as shown by pre-questionnaire 2 (relating to assessment video scenario 2). This same factor did not seem to make the experimental group more knowledgeable with regards to the situation enacted in assessment video scenario 1 (as assessed by pre-questionnaire 1).

However, in relation to this distribution of experimental and control group participants, closer examination of the content of the assessment video scenarios may account for this differential finding: Both assessment video scenarios 1 and 2 (Table 1), while reflecting different transactions, were considered to be representative supermarket interactions adequately highlighting the themes identified as universal barriers and facilitators during sales transactions involving a customer with a TBI. Assessment video scenario 1 (the photo counter scenario; Table 1)—which was shown before the administration of pre and post questionnaire 1—superficially presented an interaction with a customer requesting a particular kind of film at the photo counter of the store. Identification of barriers and facilitators by the research participants in this video scenario was clearly more complex for the following reasons: The scenario represented a very typical interaction concerning an individual with a TBI (Larkins et al., 2004; Milton et al., 1984; Prutting, 1982). From the outset, the “customer” requested an apparently scarce item that was unavailable in the store

(an 800 ASA film), and he lacked the insight to notice both the inappropriateness of the request and the length of time taken by the manager and several sales assistants (15 minutes and 06 seconds) in trying to assist him with his request. The inappropriate pragmatics of his interpersonal communication (resulting from his cognitive communication disorder) included, for example, over-familiarity with the manager whom he teased about his name. He also asked the manager at various points in the lengthy interaction to give him items for nothing (e.g., a free Kodak photo album; a free camera); shouted loudly across the store for service; and appeared unaware of the growing discomfort of the manager and sales assistants who were unable to meet his requests. These examples comprised a cluster of behaviours that were sufficiently subtle and complex, making it difficult for the experimental and control group participants to identify the barriers to, and facilitators of, the interaction with either confidence or knowledge in the pre-questionnaire administration. After the training session the experimental group became more confident and less anxious in the presence of this kind of customer although, when compared with their control group counterparts, they did not improve on the knowledge construct of this particular questionnaire (Table 5).

In contrast, assessment video scenario 2 (the return counter scenario; Table 1), which was shown before the administration of pre and post questionnaire 2, reflected an interaction where a customer with very dysarthric speech, and some accompanying physical difficulties, asked if she could return an expensive item for which transaction company policy required a till slip. Her speech was highly unintelligible to the four sales assistants and manager who tried to assist her but, in contrast to assessment video scenario 1, this customer was pragmatically far more appropriate and insightful, and the issues requiring decisions by the research participants (in completing pre and post questionnaire 2) were more similar to the customer service scenarios with which they were specifically trained to deal in their in-store training. Thus the more experienced experimental group participants could have used their experience and training to respond more knowledgeably (than their control group counterparts) in the pre-questionnaire 2 administration. Furthermore, the impact of the training session then improved their knowledge even more in the post-questionnaire administration, resulting in this group being significantly more knowledgeable as compared with their control group counterparts (Table 5).

Further research

Further applied research in the field of communication partner training is important to broaden the evidence base of the field. Based on the results of this study, further research could include ways to examine real-life in-store behaviours of trained sales assistants, as well as broadening this methodology to a cross-section of individuals with a range of communication disorders to compare response patterns of trainees. Refining the confidence and knowledge constructs further would also be useful, together with some measurements to determine the impact of using a trainer with a TBI on trainees. In spite of positive comments about his involvement in the main study, measurements were not really sensitive enough in reflecting these positive experiences.

Conclusions

Overall, the results of this study (Goldblum, 2005) provided experimental support for the impact of a once-off 4-hour-long training session in improving the confidence and knowledge of a group of sales assistants in identifying the barriers to, and facilitators of, interaction with customers with a cognitive communication disorder following a TBI. These results were further supported by the positive subjective training session evaluations, and increased confidence ratings of this group, where many participants recommended that this kind of training be received "by all staff including management". As a result, the training session content (focusing on barriers and facilitators) assisted the experimental group participants in using their previous in-store training and experience (Mintzberg, 2004) to consider different and new solutions with greater confidence and knowledge.

It is important to examine the implications of this training session in relation to the results obtained. The training session facilitating these outcomes reflected a shift in the training paradigm; that is, that rehabilitation professionals should develop collaborative networks of support across social contexts (as advocated by numerous authorities in the field, including Brown et al., 2006; Simmons-Mackie et al., 2007; Ylvisaker 2002, 2003; Ylvisaker et al., 2001, 2003). More specifically, this kind of training is seen to encompass a collaborative effort between the sales assistant and the customer with a TBI, building community capacity as advocated by Alant (2005b), and in so doing potentially facilitating participation at a deeper level for the individual. This training comprised an innovative preliminary effort to address the dearth of communication partner training programmes (highlighted specifically in the field of TBI), and aimed at creating more facilitative and less barrier-filled communication opportunities for such individuals, potentially reducing the stigmatisation and marginalisation they face (Brown et al., 2006; Cottrell, 2001; Sarno, 1986, 2004; Togher et al., 2004). Furthermore, the participation of the particular large supermarket chain in this diversity-focused training session, reflected the former's commitment to transforming company values regarding the possibility for change (Mintzberg, 2004), and to the potential of becoming a role model and leader, and "an employer of choice" (Penn & Jones, 2000; Silver & Koopman, 2000), removing barriers in the workplace for their employees by making it more comfortable for them to serve customers with a TBI. Such participation also reflected the spirit of an Ubuntu approach (Bhengu, 1996; Mbigi & Maree, 1995) in which, through the removal of barriers, a more comfortable and respectful environment was potentially created for both the sales assistant and the customer with a TBI (Coats, 2003; Codrington, 2003). The results of this research support the conclusion that it would be timely for companies interested in expanding the concept of customer service to include an acknowledgement of, and response to customers with disability. Enhanced confidence, knowledge, and comfort in interacting with customers with a TBI have been defined within the current research (Goldblum, 2005) as positive constructs. Clearly, the training session reduced obstacles by empowering the sales assistant to identify barriers to, and facilitators of, interactions with such a customer using increased confidence and knowledge. These outcomes were facilitated by means of opportunities provided in the training session to consider different and even new solutions with such customers, through integration of new insights in relation to established beliefs and experiences (Mintzberg, 2004; Silberman, 1990; Slavin, 1996). Enhanced confidence, comfort, awareness, and knowledge as a result of this training

session would not only empower the sales assistant but also provide support for the customer with a TBI that would enable the latter to participate more comfortably and successfully in an everyday encounter such as shopping. The groundwork has been laid for more in-depth research that can be generalised beyond this specific population of individuals with a communication disorder.

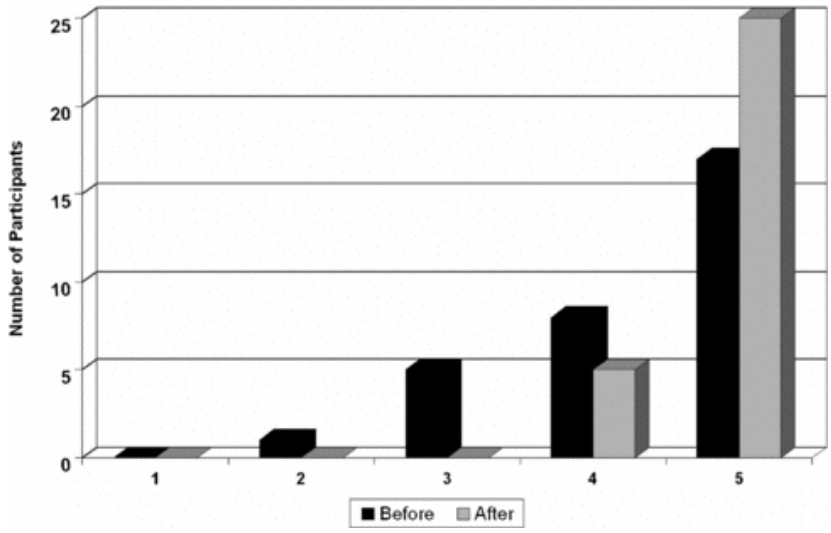

Figure 1. Confidence Rating Scale: Pre-and-post training session.

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Notes

The study was presented as a PhD in Communication Pathology in the Centre for Augmentative and Alternative Communication (CAAC) of the University of Pretoria, Pretoria, South Africa, by Glenn Goldblum under the guidance of the second author, Professor Erna Alant. In addition, the authors would like to thank the individuals with a TBI, as well as the management and sales assistants from the participating supermarket chain for their collaboration throughout the research project on which this article is based.