CHAPTER 5

RESULTS

5.1 Introduction

The current chapter commences with a presentation of the results of the measures specifically examined within the experimental group before and after their once-off training session. Thereafter, this chapter focuses on sub-aim 3 of the research, namely to analyze the inter-and-intra-group results, in order to examine and compare similarities and differences between the experimental and control groups' performance obtained through the confidence and skill constructs of pre-and-post questionnaires 1 and 2. The 2 other sub-aims have already been met in the preceding chapters, as they formed the basis for the methodology that was followed in the main study.

5.2 Measures administered to the experimental group before and after a training session

Since quality of training, and the way in which individuals experience it, are crucial in this research, this section commences with the subjective examination of the training session by all experimental group participants. This is reflected on both the Training Session Evaluation Form, and the pre-and-post training Confidence Rating Scales.

5.2.1 Training session evaluation and confidence ratings by experimental group participants

All 30 experimental group participants were asked to complete a Training Session Evaluation Form on the completion of their 4 hour training session, in order to obtain a holistic view regarding their subjective impression of it. 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 1-5 point rating scale, where 1 was *poor*, and 5 *very good* (*Appendix 27*). The results are presented in Table 5.1 below.

Table 5.1 Experimental group participant ratings of components of the training session

1. PRESENTATION OF THE TRAINING SESSION

	n	n	n
	Agree	**Unsure**	**Disagree**
The trainer was well prepared for the training.	30		
The training sessions were logically planned and presented.	30		
The length of the training was sufficient.	28	2	
The videos provided useful training material.	28	2	
There were enough opportunities for participation during training.	30		
The training will help me and my colleagues deal better with customers with a traumatic brain injury.	30		
I would recommend this training session to my other colleagues to help them serve customers with a traumatic brain injury more competently.	30		
Meeting Derick today was helpful in training	30		

2. OVERALL RATING OF TRAINING SESSION

Participants' Ratings					
	1	**2**	**3**	**4**	**5**
Number of participants (n)				6	24
%				20%	80%

Key: 1= poor 5= very good

Clearly the data in Table 5.1 (1) and (2) above illustrates the overall highly positive ratings given by all group participants for the training session they received. 100% of the participants *agreed* that 6 of the 8 components of the training session were good. These included that the trainer was well prepared; the sessions were logically planned and presented; there were sufficient opportunities for participation during training; the training would be helpful to them in dealing with customers with a TBI; and that they would recommend the training session to other colleagues in order to help them serve customers with a TBI more competently. In addition, all participants felt that meeting the research assistant, Derick,(with a TBI) was helpful in training, With respect to 2 training components, only 6% of the participants were *unsure* about whether the length of the training session was sufficient, and if the videos provided useful training material. Furthermore, 80% of participants rated the session overall with a 5 (*very good*), while 20% of the participants rated it as 4 out of a possible 5 (Table 5.1(2)).

This overall positive input was further corroborated in their responses to open-ended question 3 of the Training Session Evaluation Form (*Appendix 27*), where participants were asked for comments and suggestions for further training. Thirteen participants (43%) commented that the training was valuable, using adjectives such as "excellent "or "very good" to describe their perception of the training received. Twelve participants (40%) recommended the need for "all staff including management to be trained with this kind of training". Thirteen 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.

This quantitative and qualitative data further supported the observation by the researcher and research assistants that experimental group participants in the training session participated completely over the entire 4 hour period. They remained focused, motivated, interactive and responsive, and clearly enjoyed the input of the research assistant with a TBI, whom they chatted to both within the session at appropriate times, as well as during tea and lunch breaks.

In addition to the training session ratings, all experimental group participants were asked to complete a Confidence Rating Scale both pre-and-post training, in which they 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*) - 5 (*very confident*) (*Appendixes 25 & 26* respectively). A means procedure was used to determine whether a change had been perceived by the experimental group participants in their ability to serve a customer with a TBI pre-and-post training. The mean difference post-training was higher than pre-training, indicating that participants felt more confident after training in dealing with these customers.

Figure 5.1 below shows how 1 participant rated him/herself with a 2; 5 participants rated themselves with a 3; 8 participants with a 4; and 17 participants with a rating of 5 *pre-training*[1] on a scale of 5 (where 1 = *not confident* and 5 = *very confident*).

In contrast, *post-training*[2], 5 participants rated themselves with a 4, and 25 participants gave themselves a rating of 5. This perceived increase in confidence was likewise reflected in their significantly increased scores on the confidence constructs of post-questionnaires 1 and 2 (when compared with the control groups) (Tables 5.2 and 5.3).

[1] 31 participants completed this scale pre-training.
[2] 30 Participants completed this scale post-training as 1 person took ill during the session.

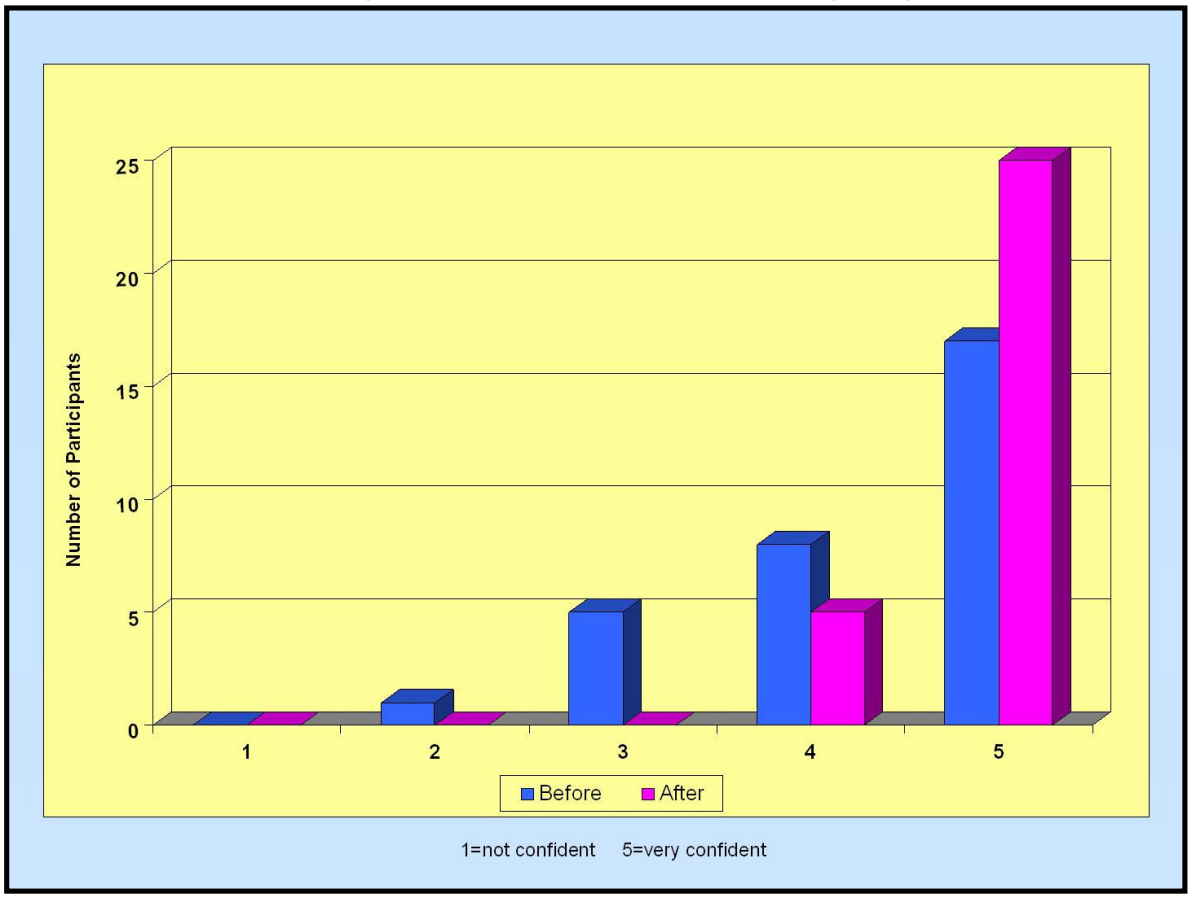

Figure 5.1: **Confidence Rating Scale: Pre-and-post training session ratings.**

5.3 Inter-group results

The following section will present the results obtained by the experimental and control groups in relation to:

- The biographical information of the groups;
- The confidence and skill constructs of pre-and-post-questionnaires 1 and 2; and
- The open-ended questions in pre-and-post-questionnaires 1 and 2.

5.3.1 *Inter-group comparison: Biographical information*

All experimental and control group participants completed a Biographical Information Form (*Appendix 16*) during the first session of the main study (Table 4.1). This information (presented in Chapter 4; Table 4.11**;** and *Appendices 29A – 29E*) revealed that they were matched on the variables of gender; age distribution; educational level; the ability to speak and understand English; position and number of years working for the company; and knowledge of anyone with a speech problem.

5.3.2 Inter-group comparison: Confidence and skill constructs: Pre-and-post questionnaires 1 and 2

The pre-and-post questionnaire 1 comprised a total of 21 questions (*Appendix 12*), with 20 closed-ended questions, and 1 open-ended question pertaining to the content of video scenario 1. Pre-and-post questionnaire 2 comprised a total of 15 questions (*Appendix 13*), with 14 closed-ended questions, and 1 open-ended question pertaining to the content of video scenario 2 (Table 4.6). Both sets of questionnaires were administered to the experimental and control group participants together, with a 1 month interval between administrations (Table 4.1).

In determining the impact of training on the experimental group participants (as compared with their control group counterparts), the following procedures were employed to examine their performance on the confidence and skill constructs of the pre-and-post questionnaires 1 and 2: The experimental and control groups' performances were compared on the confidence and skill constructs of pre-and-post questionnaires 1 and 2 respectively via the Mann-Whitney U Test. In addition, in order to take cognaissance of, and compensate for any pre-existing levels of confidence and skill in either of the 2 groups, the differences were calculated of the scores obtained on the confidence and skill constructs of the post-questionnaire minus the scores on the pre-questionnaires 1 and 2 respectively in both these groups over the 2 video viewings and questionnaire completions 1 month apart.

5.3.2.1 Comparison of the experimental and control groups' responses in pre-and-post questionnaires 1 and 2

Table 5.2 below shows the results obtained when the Mann-Whitney U Tests were used to compare the experimental and control groups' performance on the confidence and skill constructs of pre-and-post questionnaire 1 respectively.

Table 5.2 Pre-and-post questionnaire 1: Comparison of experimental and control group responses on the confidence and skill construct

	PRE-QUESTIONNAIRE				POST-QUESTIONNAIRE			
	Experimental Group (n=30)	**Control Group (n=33)**	**P-Value (Mann-Whitney U Test)**	**Effect Size**	**Experimental Group (n=29)**	**Control Group (n=30)**	**P-Value (Mann-Whitney U Test)**	**Effect Size**
Confidence Construct								
Mean	2.1917	2.0682	0.3115	0.27 small	2.2414	2.0667	**0.0682***	0.44 medium
SD	0.4389	0.4519			0.4198	0.3710		
Skill Construct								
Mean	1.7867	1.7545	0.7823	0.03 small	1.8759	1.7867	0.2834	0.27 small
SD	0.3702	0.4139			0.3651	0.4761		

* Significant at the 10% level of significance
Effect size: 0 – 0.2 = small effect size
0.2 -0.8 = medium effect size
> 0.8 = large effect size

Table 5.2 above illustrates that for pre-questionnaire 1, no significant difference was found between the experimental and control groups on the confidence and skill constructs. Both groups appeared to be relatively matched in their confidence and skill 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 post-questionnaire only, reflecting a statistical increase in confidence amongst the experimental group participants. Specific items emphasizing 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 on a bus or taxi.

Table 5.3 below shows the results gathered when the Mann-Whitney U Test was used to compare the experimental and control groups' performance on the confidence and skill constructs of pre-and-post questionnaire 2 respectively.

Table 5.3 Pre-and-post questionnaire 2: Comparison of experimental and control group responses on the confidence and skill construct

	PRE-QUESTIONNAIRE				POST-QUESTIONNAIRE			
	Experimental Group (n=30)	**Control Group (n=33)**	**P-Value (Mann-Whitney U Test)**	**Effect Size**	**Experimental Group (n=29)**	**Control Group (n=30)**	**P-Value (Mann-Whitney U Test)**	**Effect Size**
Confidence Construct								
Mean	2.5133	2.3818	0.1090	0.30 medium	2.5724	2.3133	**0.0286*** **	0.51 medium
SD	0.5138	0.3653			0.5035	0.5029		
Skill Construct								
Mean	2.3143	2.0346	**0.0206*** **	0.68 medium	2.4926	2.0857	**0.0001** **	1.11 large
SD	0.3322	0.4630			0.3319	0.3945		

** Significant at the 1% level of significance
*** Significant at the 5% level of significance
Effect size: 0 – 0.2 = small effect size
> 0.2 -0.8 = medium effect size
> 0.8 = large effect size

Table 5.3 above shows how a significant difference was found at the 5 % level (with medium effect size difference) between the experimental and control groups on the skill construct of pre-questionnaire 2. This finding indicates that the experimental group already appeared to be more skilled than the control group participants before they had received training. Results from the administration of post-questionnaire 2 indicated that the experimental group was more confident on the 5% level of significance, and more skilled on the 1 % level of significance (with a large effect size difference between them and the control group participants).

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 skill construct, the experimental

group improved significantly in their understanding of the correct amount of time to spend in serving this kind of customer; recognizing 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 skill 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 in order to determine more precisely the gain within the 2 groups on the confidence and skill constructs of these 2 questionnaires. The results are illustrated in Tables 5.4 and 5.5 below.

Table 5.4 Questionnaire 1: Difference between post-questionnaire score minus pre-questionnaire score on the confidence and skill constructs in the experimental and control groups

	Experimental Group	Control Group	P-value (Mann-Whitney U Test)	Effect Size
Confidence Construct				
MEAN	0.0536	0.0167	0.4379	0.07 small
SD	0.4376	0.5721		
Skill Construct				
MEAN	0.1357	0.0433	0.2083	0.27 small
SD	0.3734	0.3081		

Effect size: 0 – 0.2 = small effect size
0.2 -0.8 = medium effect size
> 0.8 = large effect size

Table 5.4 above and Table 5.5 below both reveal that in questionnaires 1 and 2 respectively, in both the confidence and the skill 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 = -0.0400),

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.

Table 5.5 Questionnaire 2: Difference between post-questionnaire score minus pre-questionnaire score on the confidence and skill constructs in the experimental and control groups

	Experimental Group	Control Group	P-value (Mann-Whitney U Test)	Effect Size
Confidence Construct				
MEAN	0.0214	-0.0400	0.8562	0.11 small
SD	0.5613	0.5341		
Skill Construct				
MEAN	0.1990	0.0238	0.1400	0.41 medium
SD	0.4422	0.4111		

Effect size: 0 – 0.2 = small effect size
0.2 -0.8 = medium effect size
> 0.8 = large effect size

5.3.3 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 questions on pre-and-post questionnaires 1 and 2 (*Appendix 12 & 13*), 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 categorized and compared. Any amount of information could be provided, so that some participants gave only one suggestion, while others made several.

On *open-ended question 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, on *open-ended question 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 overall 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 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 1 control group participant on the pre-questionnaire recommended the need for further training to serve this kind of customer, while 3 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 this question on either the pre-or-post questionnaires.

5.4 Intra-group results

The following section will present the results obtained within the experimental and control groups in relation to the confidence and skill constructs of pre-and-post questionnaires 1and 2.

5.4.1 Intra-group comparison: Pre-and-post questionnaires 1 and 2: Confidence and skill constructs

The Wilcoxin test was employed to examine a within-group comparison of scores obtained for the confidence and skill constructs of the pre-and-post questionnaires 1 and 2 respectively.

5.4.1.1 Pre-and-post questionnaires 1 and 2: Experimental group

Table 5.6 below demonstrates how a statistically significant improvement was found within the experimental group at the 5 % level on the skill construct of both pre-and-post questionnaires 1 and 2.

Table 5.6 Comparison of experimental group results on the confidence and skill constructs of pre-and-post questionnaires 1 and 2

Pre-post questionnaire				Pre-post questionnaire 2			
	Experimental Group	**P-Value (Wilcoxin)**	**Effect Size**		**Experimental Group**	**P-Value (Wilcoxin)**	**Effect Size**
Confidence Construct				**Confidence Construct**			
MEAN	0.0536	0.4442	0.07 small	MEAN	0.0214	0.8069	0.13 small
SD	0.4376			SD	0.5613		
Skill Construct				**Skill Construct**			
MEAN	0.1357	**0.0443*** **	**1.92 large**	MEAN	0.1990	**0.0288*** ** significance	**1.42 large**
SD	0.3734			SD	0.4422		

*** Significant at the 5% level of significance
Effect size: 0 – 0.2 = small effect size
> 0.2 -0.8 = medium effect size
> 0.8 = large effect size

5.4.1.2 Pre-and-post questionnaires 1 and 2: Control group

In contrast, examination of *within control group* comparison of scores obtained on the confidence and skill constructs of pre-and-post questionnaires 1 and 2 revealed no statistically significant differences for either of these constructs in the pre-and-post questionnaires 1 and 2 respectively (Table 5.7). Closer examination of Table 5.7 reveals how the participants' confidence levels reduced on pre-post questionnaire 2 (mean = -0.0400).

Table 5.7 Comparison of control group results on the confidence and skill constructs of pre-and-post questionnaires 1 and 2

Pre-post questionnaire 1				Pre-post questionnaire 2			
	Control Group	**P-value (Wilcoxin)**	**Effect Size**		**Control Group**	**P-value (Wilcoxin)**	**Effect Size**
Confidence Construct				**Confidence Construct**			
MEAN	0.0167	0.8229	0.18 small	MEAN	-0.0400	0.6503	0.41 medium
SD	0.5721			SD	0.5341		
Skill Construct				**Skill Construct**			
MEAN	0.0433	0.4217	0.26 medium	MEAN	0.0238	0.7443	0.32 medium
SD	0.3081			SD	0.4111		

Effect size: 0 – 0.2 = small effect size
> 0.2 -0.8 = medium effect size
> 0.8 = large effect size

5.5 Summary

The current chapter organized, analyzed and described the results of the research as they relate to the main aim of the research (in particular sub-aim 3). It commenced with an examination of the results of specific subjective measures examined within the experimental group before and after their once-off 4 hour long training session. This was then followed by a presentation and comparison of the inter-and-intra-group results of the experimental and control group participants on the confidence and skill constructs of pre-and-post questionnaires 1 and 2 (that were administered to them with a gap of 1 month in between).

Subjective training session evaluations by the experimental group participants were consistently highly rated, reflecting the active participation that was observed by the researcher and training assistants in all participants throughout the training session. Additionally, a concomitant increase was found in this group in terms of their pre-and-post training confidence ratings.

Inter-group comparison on the confidence and skill constructs of pre-and-post questionnaires 1 and 2 revealed the following:

- On *pre-and-post questionnaire 1*: No statistically significant difference was found between the experimental and control groups on these constructs on the pre-questionnaire administration; however, a statistically significant difference was found in the experimental group at the 10% level (with medium effect size) on the confidence construct of post-questionnaire 1.
- On *pre-and-post questionnaire 2*: A statistically significant difference was found at the 5% level in the experimental group (with medium effect size) on the skill construct in the pre-questionnaire administration. Results from the administration of post-questionnaire 2 indicated that the experimental group was more confident on the 5% level of significance, and more skilled on the 1% level of significance (with a large effect size difference between them and the control group participants on this construct).
- To examine more precisely the association between the performance of the experimental and control group participants on the confidence and skill constructs of the pre-and-post questionnaires 1 and 2, and to determine the amount gained within the 2 groups on the 2 questionnaires administered, 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. The results revealed that while not statistically significant, the experimental group participants gained more than the control group in confidence and skill on both questionnaires. In addition, the control group revealed a reduction on the confidence construct on questionnaire 2.
- Responses by both the experimental and control groups to open-ended questions 21 and 15 (of pre-and-post questionnaires 1 and 2 respectively) were categorized and compared. Many of the responses in both groups reflected comparable answers related to customer service and care. Only the control group participants made several suggestions for the need for further training with regard to the customer in video scenario 2 (on question 15 (pre-and-post questionnaire 2)).

Intra-group comparison of results likewise revealed a statistically significant increase in the experimental group only on the skill constructs of both pre-and-post questionnaires 1 and 2 respectively. These results will be discussed and considered in detail in the following chapter.