

## **CHAPTER 4: Results**

### **Pilot Studies**

The first pilot study was conducted with nine students at USF in the HROD masters program. A letter (Appendix F), a questionnaire (Appendix B) and a copy of a sample MBTI® Team Report were given to the participants who kept track of the time it took to read and complete the questionnaire. The average time was 10 minutes. The longest was 20 minutes and the shortest was 4 minutes. The participants were asked to give feedback (see letter – Appendix F) on whether the questions were clear, simple, and easy-to-follow. Two participants gave suggestions for improvements in format and all others said the questions were clear and easy to answer.

The second pilot study for the questionnaire was conducted with five consultants experienced in using the MBTI® Team Report. The consultants agreed that the answers to the questions would uncover information related to the research questions in Chapter 1. Additionally, they noted the use of check boxes made responding quick and easy.

### **Sample**

During the months of May and June two scoring offices (Palo Alto & Washington DC) of Consulting Psychologists Press (CPP) mailed the questionnaires out along with the Team Reports to their ordering customers. Due to some circumstances discussed in Chapter 5, only 143 questionnaires were sent versus 590 Team Reports. Thus, 447 potential participants were missed (Appendix I - Executive Summary). As of June 20<sup>th</sup>, no questionnaires had been returned to the researcher. In July, several CPP customers were contacted to receive duplicate or initial questionnaires to distribute. More questionnaires were sent to those consultants willing to participate. The total

questionnaires supplied to CPP were 400, and 30 remained at the end of data collection. Due to several complications, such as; several were sent as duplicates and many never made it past the consultants (i.e., were never received by the potential participants), the sample percentage was difficult to determine.

The sample size was 51. The sample represented respondents from 10 different states and 7 different industries. Data on industries was gathered from Question 19 on the questionnaire, and the mail stamp on the envelope determined the states represented. The industries included Manufacturing, Service, Government, Professional Services, Non-profit, Medical/Healthcare, Insurance Healthcare and CPA's. The largest team of respondents was 19 people from Manufacturing or 49% of the sample. Medical/Healthcare made up 17.6% of the sample and the rest were under 10%. The number of weeks between receiving the Team Report and filling out the questionnaire varied from 1 to 16 weeks. Nine of the 51 respondents were leaders of their team.

### **General Results**

For questions 1-16 the percentage of each response (0-4) was calculated. In addition, the median was calculated as a measure of central tendency due to the ordinal scale of answers ranging from 0-4. The first nine variables (Ch. 3, p. 33) were represented by the 16 questions, and the results reflected answers to the first six of the seven research questions in Chapter 1 (p. 6). Questions 1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 15 and 16 all had a median of 3.0, which represented "Yes, Mostly" in agreement with the question. Questions 8, 13 and 14 all had a median score of 2.0, which represented "Some" agreement with the question (Table 1). Several questions had one or two missing cases but

**Table 1**

**Frequencies of Response and Median for all 16 Descriptive Questions**

<b>Question Number</b>	<b>Sample size</b>	<b>Frequency Value 1.00</b>	<b>Frequency Value 2.00</b>	<b>Frequency Value 3.00</b>	<b>Frequency Value 4.00</b>	<b>Median Response</b>
1	51	1	13	27	10	3.0
2	51	0	18	29	4	3.0
3	51	2	13	26	10	3.0
4	51	0	15	27	9	3.0
5	50	3	13	27	7	3.0
6	50	5	16	23	6	3.0
7	51	5	13	25	8	3.0
8	50	12	17	17	1	2.0
9	48	3	17	21	6	3.0
10	50	3	16	23	7	3.0
11	49	3	21	20	5	3.0
12	49	4	15	21	9	3.0
13	47	8	17	14	4	2.0
14	34	3	16	11	4	2.0
15	51	2	13	25	11	3.0
16	51	0	10	27	14	3.0

question 14 in particular was missing data from 17 respondents. Most wrote “Not Applicable” or left that question blank. The section below for leaders will cover the seventh research question (Ch. 1, p. 6) which was the tenth variable (Ch. 3, p. 33).

The overall research question of “Does the Team Report offer accurate and useful information about the team according to the team members?” can be determined by a combination of the first nine variables as well as questions 15 and 16 specifically. The first variable was the accuracy of the “Team Strengths” reported.

**Table 2**  
**Frequency and Percent of Response to Question 1 on the Questionnaire:**  
**Accuracy of Reported Team Strengths**

<b>Value</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cum. Percent</b>
1.00	1	2.0	2.0	2.0
2.00	13	25.5	25.5	27.5
3.00	27	52.9	52.9	80.4
4.00	10	19.6	19.6	100.0
<b>Total</b>	51	100.00	100.00	

Median = 3.0

Valid cases = 51

Missing cases = 0

As table 2 shows, 52% of the respondents selected “Yes, Mostly” (Value of 3.0) to the first question on the questionnaire. Similarly, the second question asks about the “Accuracy of the Weaknesses” reported, and 56.9% of the respondents chose the same answer reflecting the median 3.0. The third and fourth questions were the “Usefulness of Strengths” and the “Usefulness of Weaknesses” which followed a similar result with 51%

and 52.9%, respectively, choosing the same response (“Yes, Mostly”), which was also the median.

Questions 5, 6 and 7, regarding the perceptions of the “Problem Solving Process,” followed a similar pattern with 3.0 as the median and the frequency of responses highest at that value – 52.9%, 45.1% and 49%, respectively.

**Table 3**

**Frequency and Percent of Response to Question 8 on the Questionnaire:  
Specific Changes Made in Team Problem Solving**

<b>Value</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cum. Percent</b>
.00	3	5.9	6.0	6.0
1.00	12	23.5	24.0	30.0
2.00	17	33.3	34.0	64.0
3.00	17	33.3	34.0	98.0
4.00	1	2.0	2.0	100.0
11.00	1	2.0	Missing	
<b>Total</b>	51	100.0	100.0	

Median = 2

Valid Cases = 50

Missing cases = 1

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Question 8 was a little different: 34% of the participants responded “Some” (Value of 2.0) and 34% marked “Yes, Mostly” (Value of 3.0). The 23.5% of people responding “No, Mostly Not” (Value of 1.0) pulled the median down to 2.0. Question 9 had three missing cases and was similar to the first seven with a median of 3.0.

The next five questions were focused on the action plan. Questions 10-12 all had a median of 3.0 with over 40% of respondents falling in the median. Question 11, however, was different from the others because the highest percentage of respondents fell into the Value 2.0 category (versus the median category of 3.0):

**Table 4**

**Frequency and Percent of Response to Question 11 on the Questionnaire:**

**Was the Action Plan Applicable to Your Team?**

<b>Value</b>	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cum. Percent</b>
1.00	3	5.9	6.1	6.1
2.00	21	41.2	42.9	49.0
3.00	20	39.2	40.8	89.8
4.00	5	9.8	10.2	100.0
10.00	2	3.9	Missing	
<b>Total</b>	51	100.00	100.00	

Median = 3

Valid cases = 49

Missing cases = 2

Questions 13 and 14, also directed toward the “Action Plan,” resulted in a median of 2.0 with 36.2% and 47.1% responding at the median value, both being the highest frequency reported. However, question 14 had 17 missing cases, leaving only 34 valid responses out of the 51 participants.

Questions 15 and 16 were general questions regarding the overall Team Report satisfaction, variable 9. Both resulted in a median = 3.0 with zero missing cases.

## Number of Weeks

Question 17 determined how many weeks had lapsed since the participant received the Team Report training. The results offered here went beyond the primary objectives in the research questions and variables defined. However, the results were interesting and thus, included. The number of weeks were grouped into three levels: 1 = up to 1 week, 2 = 2-4 weeks, 3 = 5+ weeks. A Kruskal-Wallis 1-way Anova was used to test the significance of the relationships between each of the 16 ordinal-scaled questions and the number of weeks lapsed. Four of the 16 questions were found to have a significant relationship to the number of weeks lapsed. They were questions 1, 2, 15, and 16 (Tables 5-8).

**Table 5**

**Frequency of Response and Mean Rank of the Significant Relationship between Number of Weeks Lapsed and Question 1: Accuracy of Reported Team Strengths**

<b>Variable (1= 1 week) 2 = 2-4 weeks 3 = 5+ weeks</b>	<b># Cases</b>	<b>Mean Rank</b>
1	20	33.47
2	14	25.75
3	17	17.41
<b><i>Total</i></b>	51	

Chi-Square = 12.9668

D.F. = 2

Significance = .0015

**Table 6**

**Frequency of Response and Mean Rank of the Significant Relationship between  
Number of Weeks Lapsed and Question 2: Accuracy of Reported Team Weaknesses**

<b>Variable (1= 1 week) 2 = 2-4 weeks 3 = 5+ weeks</b>	<b># Cases</b>	<b>Mean Rank</b>
1	20	32.78
2	14	24.61
3	17	19.18
<b>Total</b>	51	

Chi-Square = 10.1794

D.F. = 2

Significance = .0062

**Table 7**

**Frequency of Response and Mean Rank of the Significant Relationship between  
Number of Weeks Lapsed and Question 15: Did Team Report Meet Expectations?**

<b>Variable (1= 1 week) 2 = 2-4 weeks 3 = 5+ weeks</b>	<b># Cases</b>	<b>Mean Rank</b>
1	20	31.50
2	14	25.07
3	17	20.29



<i>Total</i>	51
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Chi-Square = 6.1884

D.F. = 2

Significance = .0453

**Table 8**

**Frequency of Response and Mean Rank of the Significant Relationship between Number of Weeks Lapsed and Question 16: Recommend Team Report to Others?**

<b>Variable (1= 1 week) 2 = 2-4 weeks 3 = 5+ weeks</b>	<b># Cases</b>	<b>Mean Rank</b>
1	20	32.20
2	14	25.89
3	17	18.79
<i>Total</i>	51	

Chi-Square = 9.0732

D.F. = 2

Significance = .0107

In each case (Tables 5-8) those individuals responding within the first week gave the highest mean rank (most positive response to the question), and those responding the most weeks after training gave the lowest mean rank response.

All other questions did not have a significant relationship to the number of weeks between receiving the Team Report and completing the questionnaire.

### **Leaders**

Question 18 asked whether the questionnaire respondent was a leader of their team or not. The variable was collected in nominal form (Yes = 1 or No = 2) and the Mann-Whitney U was used to compare the medians of each group to each question

independently. Five of the questions had a significant relationship to whether the respondent was a leader. Two examples were questions 7 and 8 in tables 9 and 10:

**Table 9**

**Comparison of Mean Ranks for Leaders and Non-Leaders for Question 7:  
Was Problem Solving Process Section Useful?**

<b>Variable</b>	<b>Mean Rank</b>	<b>Cases</b>
1 = Yes	34.39	9
2 = No	24.20	42
<b><i>Total</i></b>		51

Z = 2.0102

2 – Tailed P = .0444

**Table 10**

**Comparison of Mean Ranks for Leaders and Non-Leaders for Question 8:  
Were Specific Changes Made?**

<b>Variable</b>	<b>Mean Rank</b>	<b>Cases</b>
1 = Yes	34.44	9
2 = No	23.54	41
<b><i>Total</i></b>		51

Z = 2.1336

2 – Tailed P = .0329

The leaders scored these questions considerably higher than the team members. The other three questions were Question 5, “Order of Problem Solving Preferences,” with a

significance of .0465; Question 10, “Reasons for Team Doing the Team Report,” with a significance of .0311; and Question 13, “Team Use Action Plan,” with a significance of .0103. The other 11 questions did not have a significant relationship to the respondent being a leader.