

Statistics for Marketing MGT 6469

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SPSS Case #1 Knit Shop Assignment

Question: Please conduct the following analyses, and describe in words what they mean for the Yarn Shop:

- 1) One sample T-tests, comparing the sample mean to the scale midpoint for the store satisfaction, yarn selection satisfaction, and salespeople satisfaction variables.
- 2) One sample T-test, to see whether the proportion of knitting survey respondents is significantly more or less than those participants who crochet.
- 3) Independent sample T-tests, with groups based on the nominal variable rewards club member, for the five scale variables (amount purchased, store satisfaction, yarn selection satisfaction, salespeople satisfaction, and recommendation likelihood).
- 4) Paired sample T-tests for the three satisfaction variables (store satisfaction, yarn selection satisfaction, and salespeople satisfaction; three pairs of two).

Answer 1:

1) (i) Store Satisfaction

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Store Satisfaction	100	5.27	1.490	.149

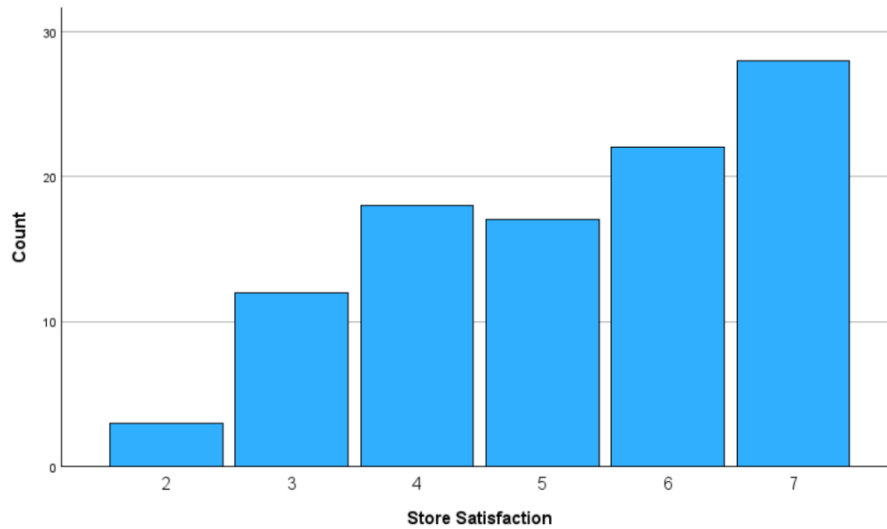
	t	df	Significance	
			One-Sided p	Two-Sided p
Store Satisfaction	8.525	99	<.001	<.001

The customer was satisfied with the store visited in terms of décor and layout as the mean satisfaction of **5.27** is higher than 4.0 (scale midpoint) with **t(99)=8.525** and **p <.001 <0.05**.

Managerial Recommendation: The store satisfaction is good – he should focus on improving other variables.

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The Customers are satisfied with the store visited, in terms of decor and layout (Mean Satisfaction=5.27)



(ii) Yarn Selection Satisfaction

One-Sample Statistics

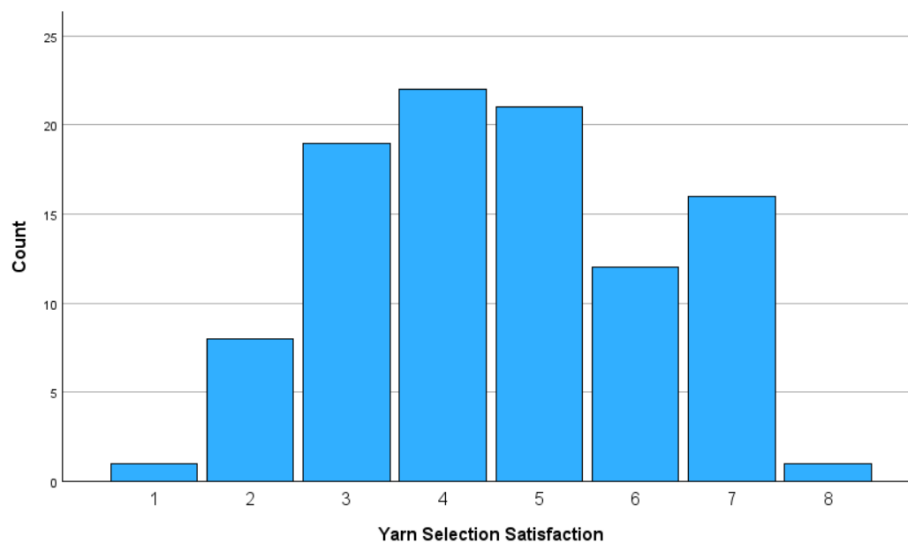
	N	Mean	Std. Deviation	Std. Error Mean
Yarn Selection Satisfaction	100	4.59	1.602	.160

	t	df	Significance	
			One-Sided p	Two-Sided p
Yarn Selection Satisfaction	3.682	99	<.001	<.001

The customer was satisfied with the yarn selection in the store as the mean satisfaction of **4.59** is higher than 4.0 (scale midpoint) with $t(99)=3.682$ and $p < 0.001 < 0.05$.

Managerial Recommendation: The yarn selection satisfaction is good, he should focus on other variables. Although, it could be improved upon more, it shouldn't be priority.

The Customers are satisfied with the yarn selection in the store. (Mean Satisfaction=4.59)



(iii) Salesperson Satisfaction Variables

One-Sample Statistics

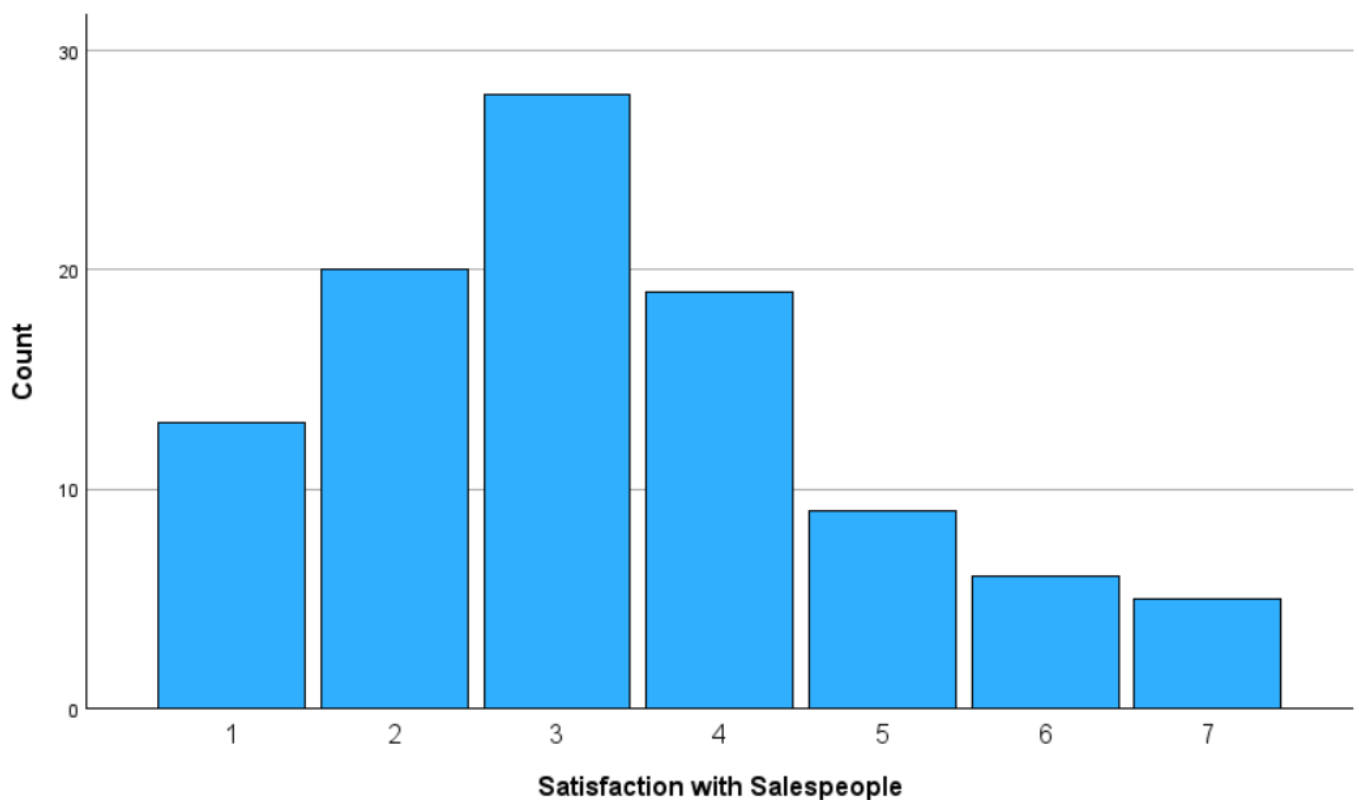
	N	Mean	Std. Deviation	Std. Error Mean
Satisfaction with Salespeople	100	3.29	1.597	.160

	t	df	Significance	
			One-Sided p	Two-Sided p
Satisfaction with Salespeople	-4.445	99	<.001	<.001

The customer was NOT satisfied with their interaction with a salesperson as the mean satisfaction of **3.29** is lower than 4.0 (scale midpoint) with **t(99)=-4.445** and **p < 0.001 < 0.05**.

Managerial Recommendation: Salesperson interaction definitely needs improvement. The store owner should vet and train their salespeople to better accommodate customers – it is not good, he needs to focus on improving this.

The customer was not satisfied with their interaction with a salesperson. (Mean Satisfaction=3.29)



Answer 2:

- 2) Is the proportion of knitting survey respondents significantly more or less than those participants who crochet?

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Hobby Type	100	.69	.465	.046

	t	df	Significance	
			One-Sided p	Two-Sided p
Hobby Type	4.088	99	<.001	<.001

Knitting = 1

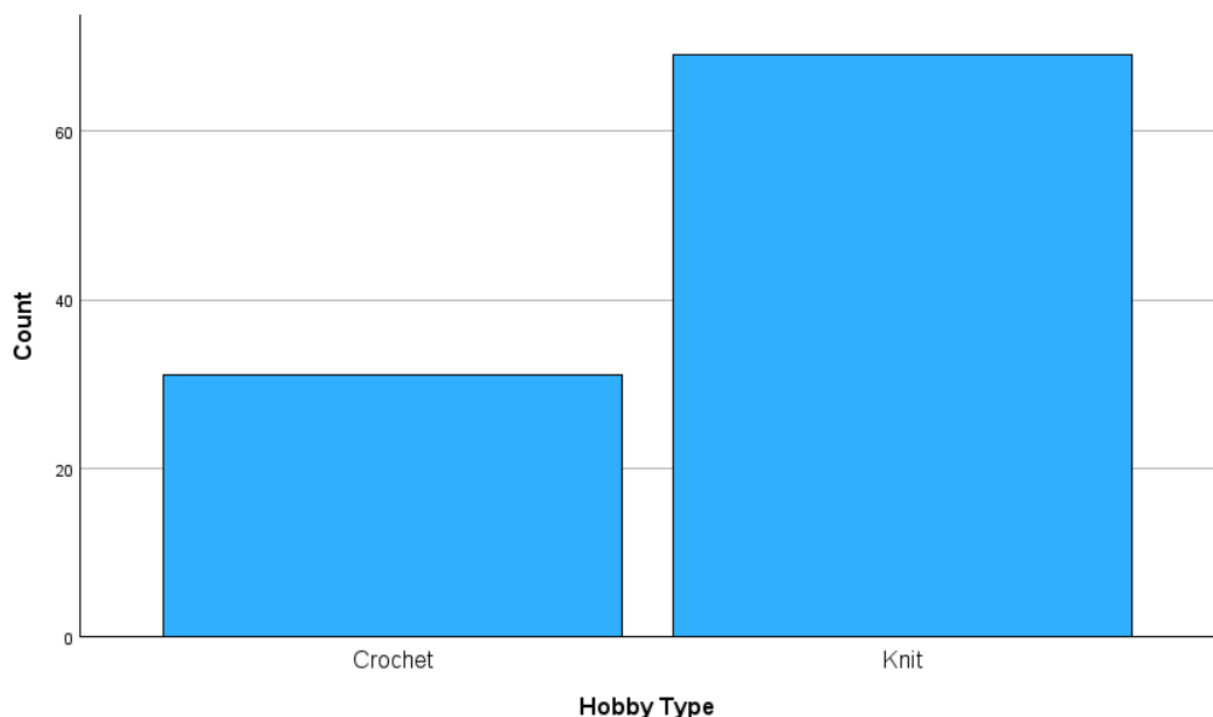
Crochet = 0

Mid point = 0.5

The proportion of knitting respondents are significantly more than participants who crochet as the mean hobby score is **0.69** which is **0.19** more than the 0.5 (scale midpoint) with **t(99)=4.088** and **p <0.001 < 0.05**.

Managerial Recommendation: The store owner should prioritize satisfying knitters over crocheters as they are more in quantity. He should provide yarn selection as per their liking more than crocheters. Although – he should not neglect crocheters either.

The proportion of crochet respondents are significantly more than participants who crochet. (Mean hobby=0.69)



3) (i) Amount Purchased & Rewards Club Member

Group Statistics

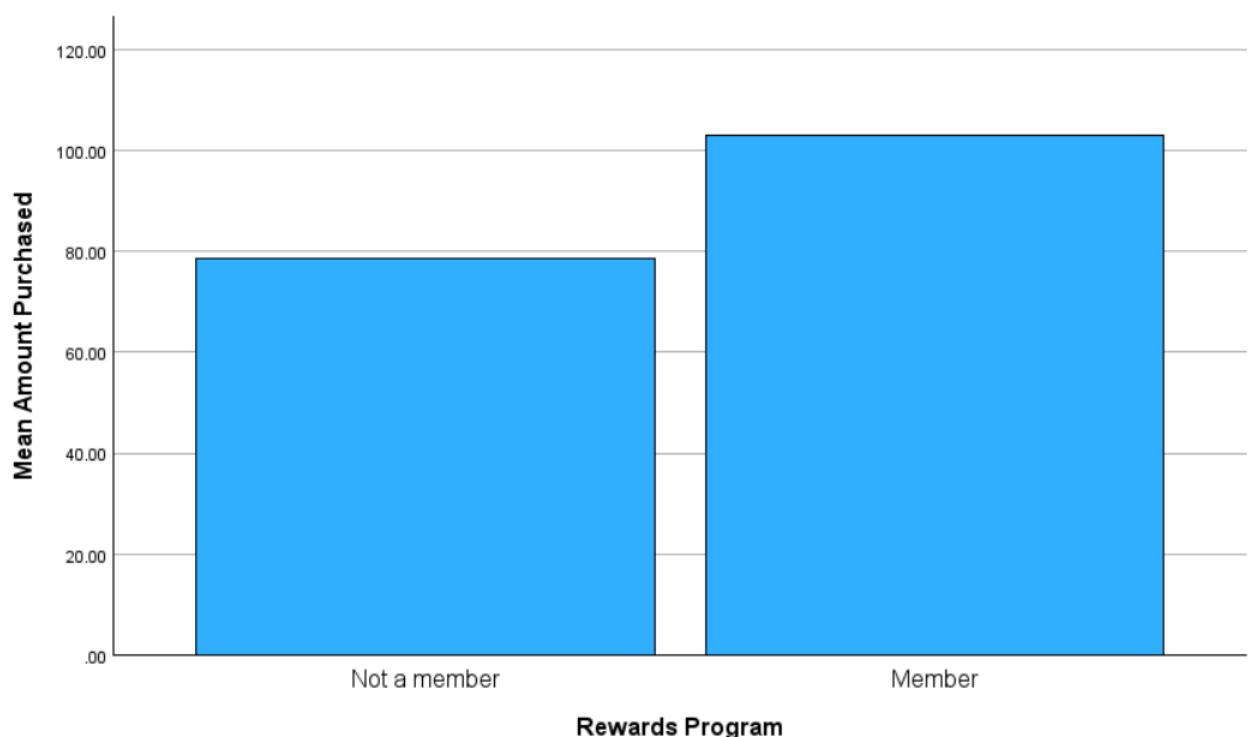
	Rewards Program	N	Mean	Std. Deviation	Std. Error Mean
Amount Purchased	Not a member	48	78.6038	32.12899	4.63742
	Member	52	102.9310	38.97578	5.40497

		F	Sig.	t	df	Significance	
						One-Sided p	Two-Sided p
Amount Purchased	Equal variances assumed	.216	.643	-3.390	98	<.001	.001

The amount purchased by a rewards program member is significantly more than a non-rewards program member as the mean amount purchased by a rewards program member is **102.93** which is more than mean amount purchased by a non rewards program member that is **78.6038** by **24.3262** with $t(98)=-3.390$ and $p = 0.001 < 0.05$.

Managerial Recommendation: The store owner should focus on selling more reward club memberships as they have massive benefits such as more purchase amounts as seen here.

Reward program members buy more than non-reward program members.



(ii) Store Satisfaction & Rewards Club Member

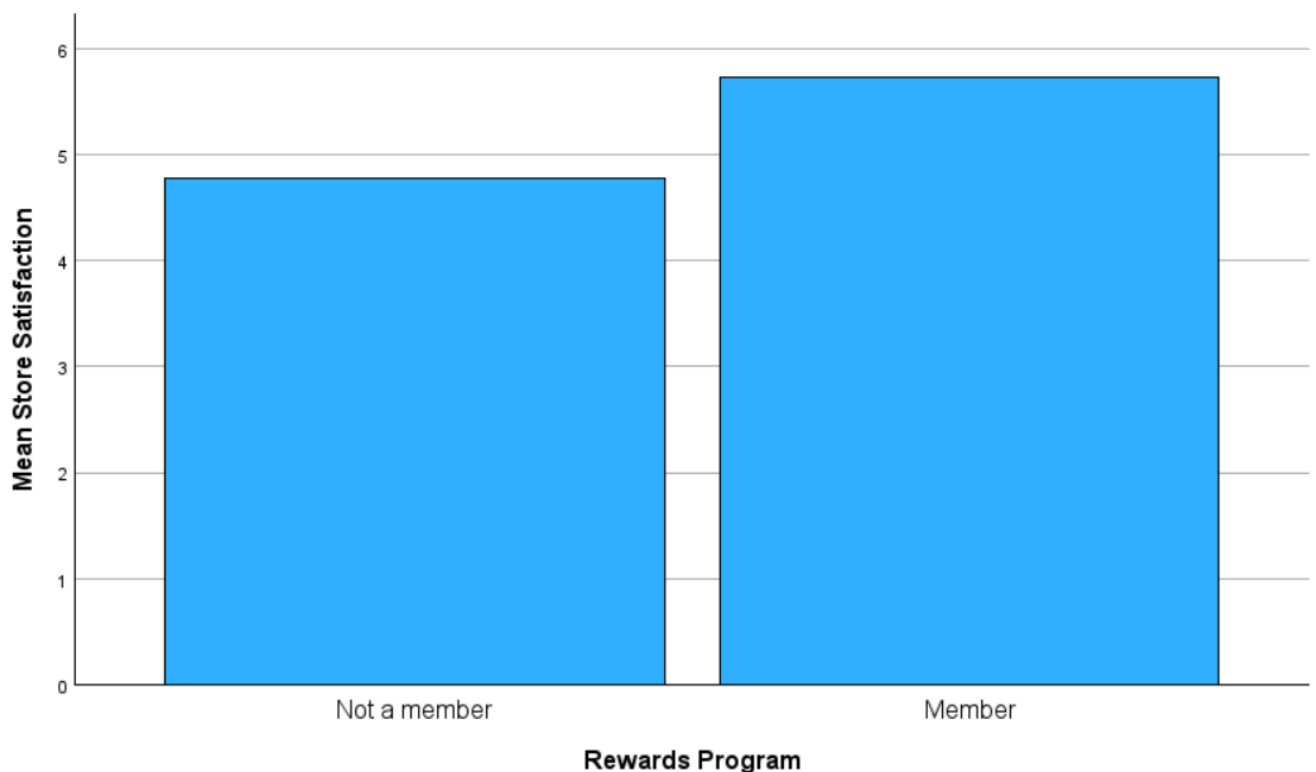
Rewards Program		N	Mean	Std. Deviation	Std. Error Mean
Store Satisfaction	Not a member	48	4.77	1.588	.229
	Member	52	5.73	1.239	.172

		F	Sig.	t	df	Significance	
						One-Sided p	Two-Sided p
Store Satisfaction	Equal variances assumed	5.291	.024	-3.385	98	<.001	.001

The store satisfaction of a rewards program member is significantly more than a non-rewards program member as the mean store satisfaction score of a rewards program member is **5.73** which is **1.01** higher than a non-rewards program member with a mean store satisfaction score of **4.77** with $t(98)=-3.385$ and $p = 0.001 < 0.05$.

Managerial Recommendation: The store owner should focus on selling more reward club memberships as they lead to higher store satisfaction.

Rewards program members are more satisfied with the store than non-rewards program members.



(iii) Yarn Selection Satisfaction & Rewards Club Member

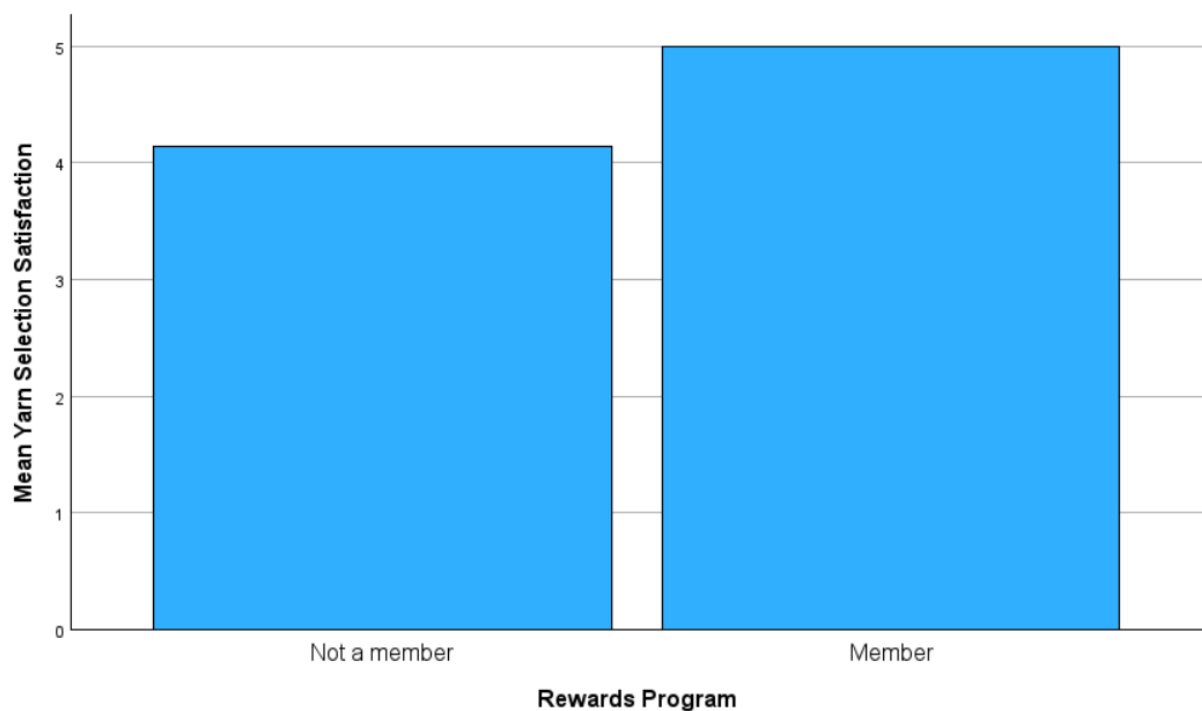
	Rewards Program	N	Mean	Std. Deviation	Std. Error Mean
Yarn Selection Satisfaction	Not a member	48	4.15	1.544	.223
	Member	52	5.00	1.559	.216

		F	Sig.	t	df	Significance	
						One-Sided p	Two-Sided p
Yarn Selection Satisfaction	Equal variances assumed	.000	.997	-2.750	98	.004	.007

The yarn selection satisfaction of a rewards program member is significantly more than a non-rewards program member as the mean yarn selection satisfaction score of a rewards program member is **5.00** which is **0.85** more than a non rewards program member with a mean yarn selection satisfaction score of **4.15** with $t(98)=-2.750$ and $p = 0.007 < 0.05$

Managerial Recommendation: The store owner should focus on selling more reward club memberships as they lead to higher yarn selection satisfaction.

Reward program club members are more satisfied with the yarn selection of the store than non-reward program club members.



(iv) Satisfaction with Salespeople & Rewards Club Member

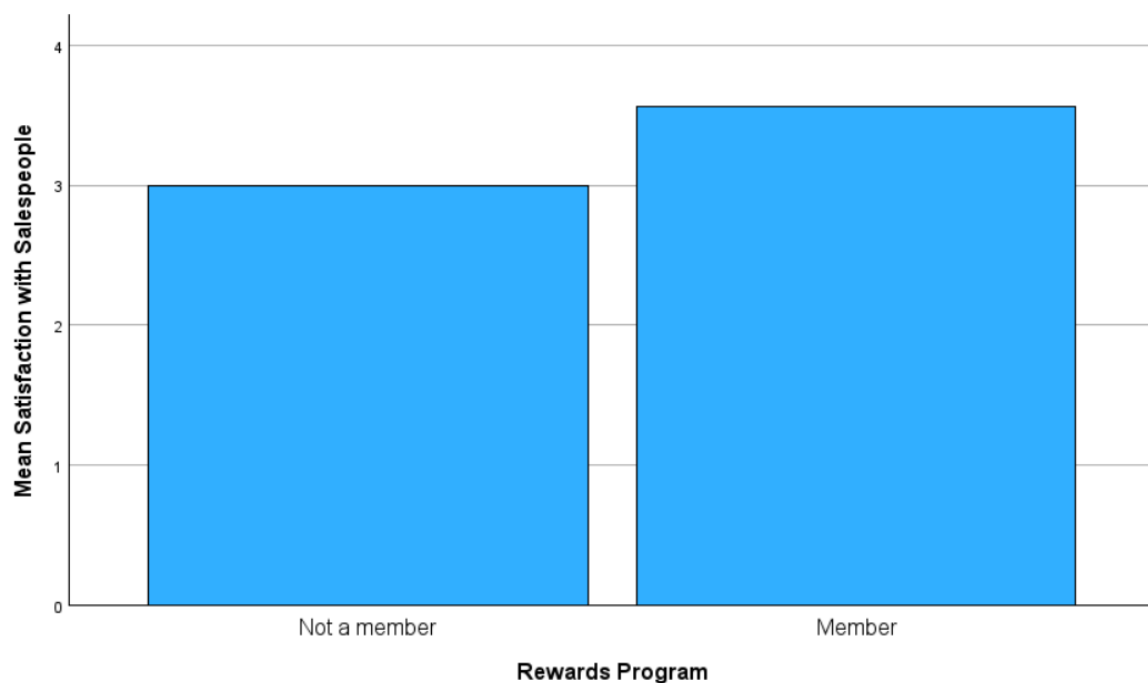
	Rewards Program	N	Mean	Std. Deviation	Std. Error Mean
Satisfaction with Salespeople	Not a member	48	3.00	1.557	.225
	Member	52	3.56	1.602	.222

		F	Sig.	t	df	Significance	
						One-Sided p	Two-Sided p
Satisfaction with	Equal variances assumed	.002	.963	-1.763	98	.041	.081

The satisfaction with salespeople of a rewards program member is **NOT** significantly more than that of a non-rewards program member as the mean satisfaction with salespeople score of a rewards program member is **3.56** which is only **0.56** more than the mean satisfaction with salespeople score of a non-rewards program member of **3.00** with $t(98)=-1.763$ and $p = 0.81 > 0.05$.

Managerial Recommendation: The storeowner should NOT focus on selling more rewards club memberships as they do not significantly impact satisfaction with salespeople.

Rewards club members are **NOT** significantly more satisfied with interaction with salespeople than non-rewards club members.



(v) Recommendation Likelihood & Rewards Club Member

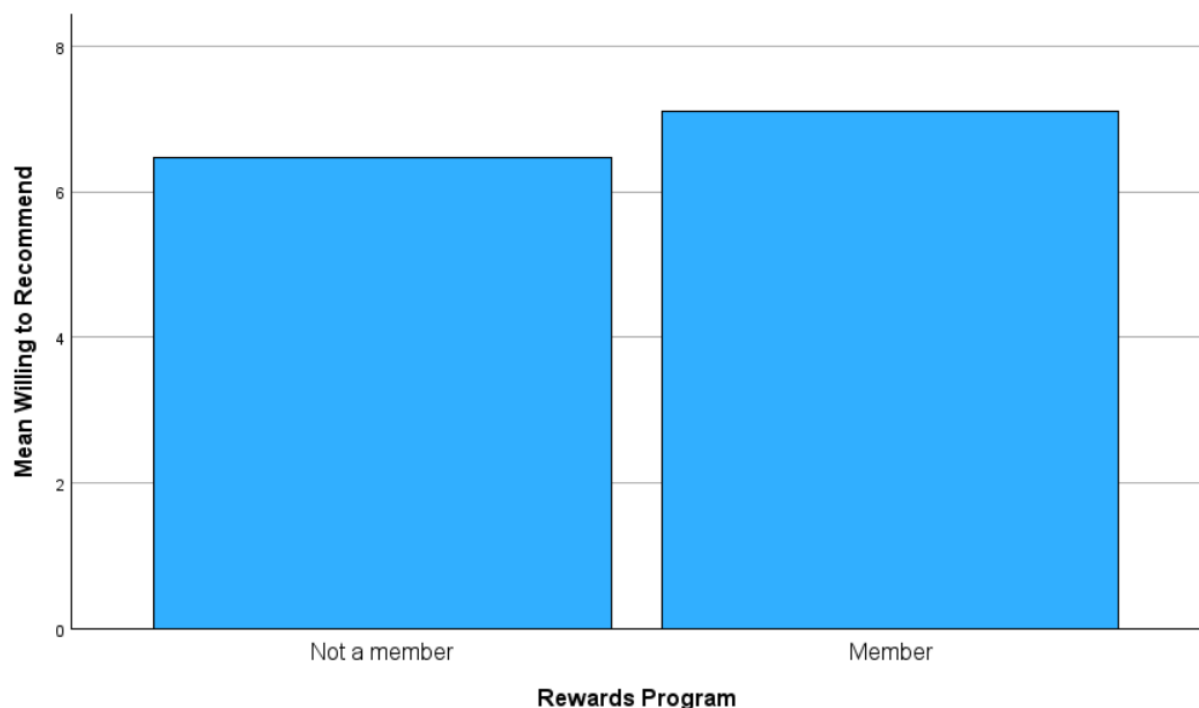
	Rewards Program	N	Mean	Std. Deviation	Std. Error Mean
Willing to Recommend	Not a member	48	6.46	1.701	.245
	Member	52	7.10	1.912	.265

		F	Sig.	t	df	Significance	
						One-Sided p	Two-Sided p
Willing to Recommend	Equal variances assumed	.416	.521	-1.757	98	.041	.082

The recommendation likelihood of the store by a rewards club member is **NOT** significantly more than that of a non-rewards program member as the mean recommendation score of a rewards program member is **7.10** which is only **0.64** more than the mean recommendation score of a non-rewards program member of **6.46** with $t(98)=-1.757$ and $p = 0.82 > 0.05$.

Managerial Recommendation: The store owner should NOT focus on selling more reward club memberships as they do not significantly impact respondent recommendation likelihood.

Reward club members are NOT significantly more likely/willing to recommend the store than non-rewards club members.



Answer 4:

4) (I) Store Satisfaction & Yarn Selection Satisfaction

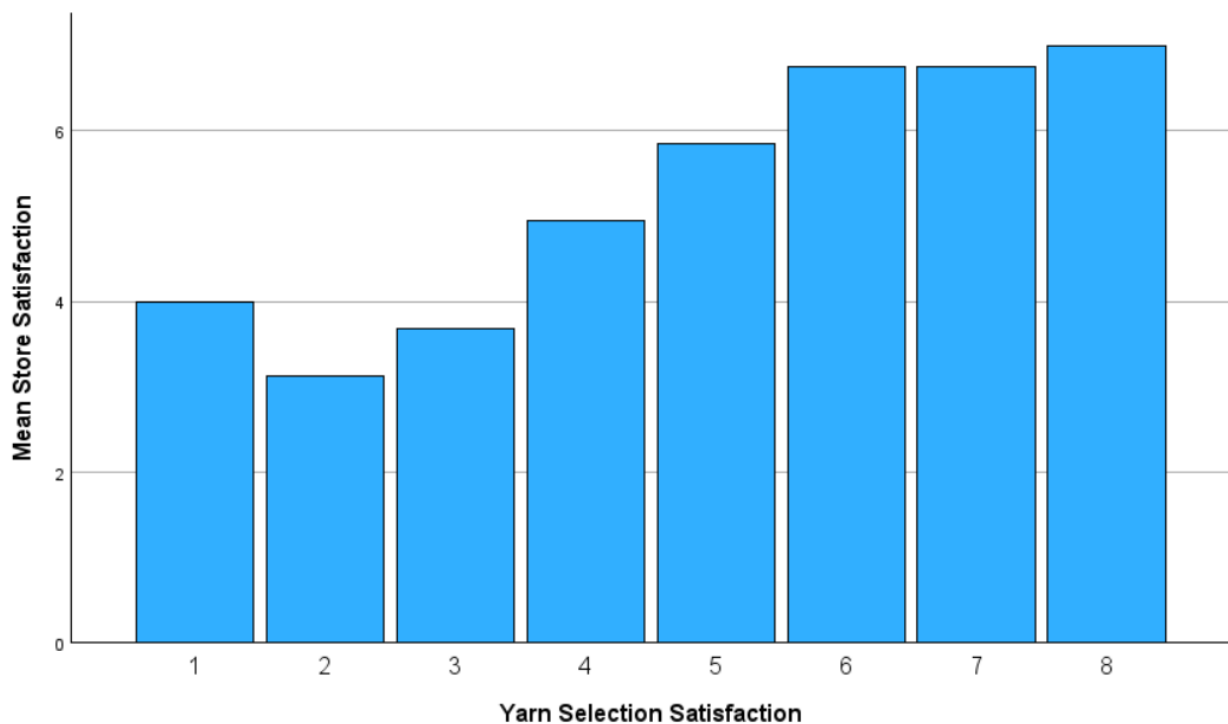
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	One-Sided p	Two-Sided p
Pair 1	Store Satisfaction - Yarn Selection Satisfaction	.680	.931	.093	Lower	Upper	7.306	99	<.001	<.001

		N	Correlation	Significance	
				One-Sided p	Two-Sided p
Pair 1	Store Satisfaction & Yarn Selection Satisfaction	100	.821	<.001	<.001

Store satisfaction of a respondent has an impact on yarn selection satisfaction of that respondent as there exists a positive correlation between them with a score of **0.821** with **t(99)=7.306** and **p < 0.001 < 0.05**.

Managerial Recommendation: The store owner should focus on improving either the store or the yarn selection as both of them positively impact satisfaction of each other.

Store satisfaction has an impact on yarn selection satisfaction.



(ii) Store Satisfaction & Salespeople Satisfaction

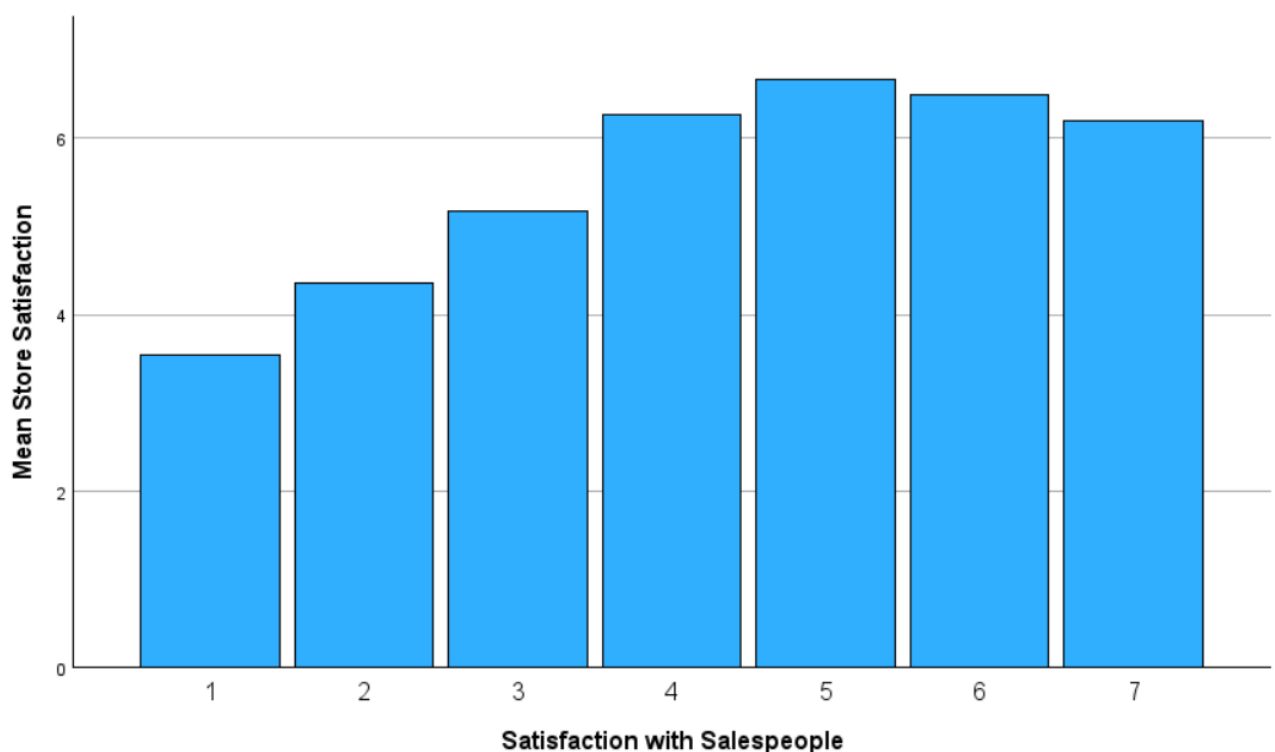
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	One-Sided p	Two-Sided p
					Lower	Upper				
Pair 1	Store Satisfaction - Satisfaction with Salespeople	1.980	1.333	.133	1.715	2.245	14.852	99	<.001	<.001

		N	Correlation	Significance	
				One-Sided p	Two-Sided p
Pair 1	Store Satisfaction & Satisfaction with Salespeople	100	.629	<.001	<.001

Store satisfaction of a respondent has an impact on on satisfaction with salespeople as there exists a positive correlation between them with a score of **0.629** with **t(99)=14.852** and **p < 0.001 < 0.05**.

Managerial Recommendation: The store owner should focus on improving the store or the salespeople as both of them positively impact satisfaction of each other.

Store satisfaction has an impact on satisfaction with salespeople.



(iii) Yarn Selection Satisfaction and Salespeople Satisfaction

		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	One-Sided p	Two-Sided p
					Lower	Upper				
Pair 1	Yarn Selection Satisfaction - Satisfaction with Salespeople	1.300	1.251	.125	1.052	1.548	10.390	99	<.001	<.001

		N	Correlation	Significance	
				One-Sided p	Two-Sided p
Pair 1	Yarn Selection Satisfaction & Satisfaction with Salespeople	100	.694	<.001	<.001

Yarn Selection Satisfaction has an impact on satisfaction with salespeople as there exists a positive correlation between them of **0.694** with **t(99)=10.390** and **p < 0.001 < 0.05**.

Managerial Recommendation: The store owner should focus on improving the yarn selection or the salespeople as both of them positively impact satisfaction of each other.

Yarn selection satisfaction has an impact on satisfaction with salespeople.

