THE EFFECTS OF LIGHTING AND SEATING DENSITY OF CAFÉS ON CUSTOMERS' PERCEPTION OF CROWDING: A STUDY OF MOZART CAFÉS IN BILKENT UNIVERSITY, ANKARA

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ABSTRACT

In this study, the effects of lighting and seating density on crowding in a café are examined. Lighting level and seating density of a café are expected to influence the customer's perception of crowding. In order to test these factors, two surveys are conducted in two Mozart cafés located in Bilkent University. Each factor is tested with a likert type questionnaire. Results from 50 participants show that when the lighting level increases, crowding decreases. When seating density increases crowding is also increases. Also the results from 22 male and 28 female participants show that perception of crowding is affected by gender.

Keywords: Café, perception of crowding, lighting, seating density

INTRODUCTION

Crowding is a fact that affects customers' perception about a space. There are many researches related with crowding and factors that affect crowding (Harrell et al. 1980; Machleit et al., 2000; Eroglu et al., 2005; Mehta, 2013; Pons et al., 2014; Kusumowidagdo et al., 2015). Recent findings focused on human and spatial factors that affect perception of crowding (Machleit et al., 1994; Kaya, Erkip, 2001; Ariffin et al., 2010; Mehta, 2013; Rasoolimanesh et al., 2015). It is also found that crowding is not always a negative factor. Medium level of crowding is desired by customers to experience a space more positively (Pan & Siemens, 2011).

In addition to previous studies this study focus on lighting and seating density as spatial factors and gender as human factor. In order to test these factors two Mozart cafés located in Bilkent University was selected. The main reason for the selection of these two cafés is to minimize possible variances that may affect the results. Each factor is tested with a likert type questionnaire.

The experimental design was conducted in two stages and the aim of this paper is to provide new awareness of crowding issues. In addition, our paper addresses concerns raised by Yıldırım, Akalın-Baskaya (2007) who did their researches about crowding in the same place with changing its layout, this research is trying to compare the differences between two spaces with similar layouts.

LITERATURE REVIEW

There are many environmental factors that affect human pleasure in a space. Previous researches (Harrell et al. 1980; Machleit et al., 2000; Eroglu et al., 2005; Mehta, 2013; Pons et al., 2014; Kusumowidagdo et al., 2015) in that field show that crowding is one of them. Crowding is a psychological situation that occurs when the expectation of a person from a particular space is in conflict with the existing space (Stokols, 1972; Eroglu et al., 2005). Stokols stated that crowding is an experiential situation that perceived by individuals in a limited space (1972). Crowding should not always have to affect customers in a negative way. There are three degrees of crowding; low, medium and high crowding. Customers perceive a space as desirable in optimal level. There is an inverted u shape relationship between low, medium and high crowding. Preferences of individuals about a space increase from low to medium crowding and it decreases from medium to high. Customers tend to enter a shop with medium crowding more than shops that have high and low crowding. According to the research conducted by Pan and Siemens medium-crowding level is an optimal crowding for customers (2011). As crowding level increases or decreases from that optimal level customers develop negative attitudes towards shops. In addition to levels of crowding, density can be another factor that affects people's perception.

Crowding should not be confused with density. When a place is dense it is also perceived as crowded. Density is the number of people and objects per m^3 in a specific space (Eroglu et al., 2005). In order to perceive a space dense, there should be 9 people flow in that space per minute. Likewise, 3 people per m^3 is perceived uncrowded (Helbing et al., 2007). Crowding occurs when a place has a high density (Milgram, 1970; Desor, 1972). On the other hand, a dense space should not have to be perceived as crowded. As an example, customers expect a fast food restaurant to be denser and usually it is not perceived as crowded. Crowding can be affected by environmental elements and human characteristics (Eroglu et al., 2005).

Spatial factors is one of the factors that affect crowding, which arises from the environmental elements such as layout, color, lighting, and furnishing of a space and their relationships with the humans (Machleit et al., 1994; Kaya, Erkip, 2001; Ariffin et al., 2010; Mehta, 2013; Rasoolimanesh et al., 2015). Layout and furnishing is one of the spatial

factors that affect crowding which are covered in this article. Open plan arrangement and side furniture cause users to perceive a space less crowded. Over usage of furniture might cause higher level of complexity. As a result, satisfaction level of users diminishes (Yildirim, Akalin-Baskaya, 2007). Side furniture arrangements facilitate more circulation spaces and clear the aisles than central arrangements. Also, people who prefer seating elements closed to the service counter perceive the space more crowded (Heung, Gu, 2012). Levy and Weitz stated that different layout types, such as grid and free-flow, aisle tables, and cash registers are some of the physical environment elements that should be considered since they affect crowding (2001). Layout of a café also affects perception of people. For instance people that are seated close to the selling counter tend to perceive the space more crowded than others, because of the human traffic in front of the counter (Joshi et al., 2015). Studies show that seating areas interrupted by circulation axes are perceived as crowded. The disturbance is much higher in those situations (Yildirim, Akalin-Baskaya, 2007). Dense usage of furniture might cause an undesired level of complexity that result feeling of crowdedness. Customers have positive reactions about moderate density than high density of furnishing elements (Yildirim, Akalin-Baskaya, 2007).

The other factor that affects spatial crowding is lighting. Mehrabian stated that lighting is an important factor in the effect of environment on individuals. According to him bright places are more attractive than dim ones and customers want to spend more time in places that they are attracted to (1976). Other researches (Heung, Gu, 2012; Mehta, 2013) show that there is negative relationship between lighting level and perceived crowding. For example, customers perceive the space less crowded if the lighting level is high. Adequate lighting in a restaurant may result in customers having more positive experiences and perceptions on this space (Ariffin et al., 2010). These positive responses may eliminate feeling of crowdedness.

Gender is one of the human factors that affect people’s perception of crowding which is covered in this article. It should be considered while examining effects of crowding. Some approaches among gender and crowding issue are that males and females experience spaces differently. For example, males are more tolerant in moderate and dense shops than females. For males it is not important to be surrounded by females or males in a limited space while females are less tolerant to the male crowded around them (Rustemli, 1992). In a research conducted by Yildirim and Akalin-Baskaya (2007) reveals male customers perceive a limited space more positively than females. Another point of view by

Stokols et al. is male customers perceive a limited space more negatively and affected more than females (1972).

Research Questions and Hypotheses

Based on the above discussion, it is expected lighting and seating density affect customers' perception of crowding. The research questions in this study were asked to see whether or not lighting, seating density and gender affect crowding in cafes. The research questions are:

1. Does lighting of a space affect crowding in Cafés?
2. Does seating density affect crowding in Cafés?
3. Does perception of crowding change according to gender?

According to those research questions three hypotheses were formulated:

H1: When the illuminance level increases crowding decreases.

H1a: When the natural lighting level increases crowding decreases.

H1b: When the artificial lighting level increases crowding decreases.

H1c: There is a dependency between natural lighting and artificial lighting levels.

H2: When the seating density and number of the seating units increases crowding increases.

H3: Crowding is affected by gender.

H3a: Females are more tolerant towards crowding than males.

METHOD OF THE STUDY

Aim of the Study

The main aim of this study is to understand the effects of different factors on crowding. Two of the spatial factors that effects crowding are, lighting and seating density. Lighting factor refers to illuminance level, natural lighting and artificial lighting. Seating density refers to the density of seating units.

Sample Group

Participants of this research were members of Bilkent University. Samples were selected randomly from the customers of these cafes and they participated in this survey voluntarily. A questionnaire was given to customers while they are eating. It took approximately two minutes for each participant to answer the questions. 50 people were given the questionnaire, 22 of them were male and 28 of them were female between the ages of 17 to 40.

Experimental Settings

In order to understand the effects lighting and seating density on crowding, two Mozart cafes located in Bilkent University are examined. Both of the Mozart Cafés are faced to Northeast and one is located in basement floor of B building at the main campus. The other one is located in first floor of Music and Performing Arts Faculty building at the middle campus. They have different lighting conditions because of their locations. They both sell the same kind of products with same price and have the same kind of furniture. In the B building Mozart Café there are 25 rectangular shaped tables for four people, six square shaped tables for two people and two circular shaped tables for four people exist. In the Music and Performing Arts Faculty building Mozart Café there are 24 square shaped tables for four people and 10 circular shaped tables for four people exist. Also their floor plans are similar like crescent-shaped.

Instruments

A five point likert type questionnaire consisted of four parts and total of ten questions were given to participants. Questionnaire includes two parts. First part is to assess crowding and its relation with spatial factors. Second part is to have general information about the participants. For measuring crowding one bipolar question, from very crowded to very uncrowded, was asked. For measuring lighting properties three bipolar questions, from very light to very dim and from enough to not enough, were asked. For measuring seating density two bipolar questions, from dense to not dense and from enough to not enough, were asked (See Appendix 1).

Procedure

The study was conducted in between 4-8 April 2016 from Monday to Friday. Time zone was selected on purpose after the observations. 1:00 PM is the lunchtime for all of the campus and the cafes have the maximum capacity of students at this hour.

This study was carried out in two stages Experiment 1 and Experiment 2. In Experiment 1 questionnaire was given between 12:30 PM and 1:00 PM in the Mozart café located in B building. Same technic was used as an Experiment 2 with the same questions at the same hour in the Mozart café located in Music and Performing Arts Faculty. For understanding the effects of lighting on crowding this research was conducted in two different places, which has different lighting conditions. In both cafés illuminance levels are measured through Konica Minolta T-1 Illuminance Meter (range of 0.01 to 99,900 lux). The measurements are taken from three points on the longitudinal axes and means of the illuminance levels were calculated every day (See Table 1).

Table 1

Lighting

Building	Day	Mean	N
B Building	1	74.50	4
	2	127.00	4
	3	54.20	5
	4	52.17	6
	5	59.43	7
	Total	69.46	26
Mssf Building	1	499.00	2
	2	533.20	5
	3	194.60	5
	4	401.67	6
	5	802.67	6
	Total	494.29	24

Statistical analyzes for these data sets were performed in SPSS program. Each of the independent variables was tested with the dependent variable using the Multiple Regression test in SPSS. Also to verify the lighting results and to understand the hierarchical order between the independent variables (natural and artificial light) hierarchical multiple regression test was conducted. At first, the data collected from both data sets. There are two independent variables and one dependent variable exists. Lighting and seating density are the independent variables while crowding is the

dependent variable. Multiple regression test was used for these data. This test is used when predicting the value of one dependent variable based on the value of two or more independent variables. Multiple regression test is useful while determining the overall fit of the model and to understand the level of impact of the independent variables on the dependent variable. Also some of the independent variables, natural light and artificial light, may have an impact on each other. In order to understand this relationship hierarchical multiple regression test was used. This is a type of linear (multiple) regression that “separate blocks of independent variables are entered into the regression analysis in sequential stages”(Argyrous, 2011). It is preferred when there may be dependence between independent variables.

According to the findings in the literature review gender is another independent variable that may affect perceived crowding of customers. In order to test the effect of the gender a separated multiple regression test with data/split file command was used. This modification enables to understand the possible impact of the third categorical variable. SPSS tests were run again with this third category.

RESULTS

In order to understand the overall relationship mean values of questions are calculated. The results in Table 2 show that there are differences between perception of female and male participants (See Appendix 2).

Table 2

Statistics

Gender			Q1	Q2	Q3	Q4	Q5	Q6
Female	N	Valid	28	28	28	28	28	28
		Missing	0	0	0	0	0	0
	Mean		2,61	3,25	3,39	3,54	2,54	2,54
	Std. Deviation		1,100	,645	,832	,793	1,071	,881
Male	N	Valid	22	22	22	22	22	22
		Missing	0	0	0	0	0	0
	Mean		2,45	3,50	3,00	3,32	2,68	2,36
	Std. Deviation		,963	,740	,976	,945	,945	,727

Multiple regression test was used for testing the hypotheses. For the first hypothesis crowding and illuminance level were examined. According to the multiple regression results given in Table 3, the relationship between independent variable (illuminance level)

and dependent variable (crowding) is negative at 95% significance level. According to this result H1 is not rejected.

Table 3

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,643	,721		5,053	,000
	Q2	-,328	,210	-,220	-1,561	,125

a. Dependent Variable: Q1

For the hypothesis 1a crowding and natural lighting level were examined. According to the multiple regression results given in Table 4, the relationship between independent variable (natural lighting level) and dependent variable (crowding) is negative at 95% significance level. According to this result H1a is not rejected.

Table 4

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4,360	,476		9,163	,000
	Q3	-,565	,142	-,497	-3,972	,000

a. Dependent Variable: Q1

For the hypothesis 1b crowding and artificial lighting level were examined. According to the multiple regression results given in Table 5, the relationship between independent variable (artificial lighting level) and dependent variable (crowding) is positive at 95% significance level. According to this result H1b is rejected.

Table 5

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,339	,614		3,811	,000
	Q4	,058	,173	,049	,337	,738

a. Dependent Variable: Q1

For the hypothesis 1c hierarchical lineer regression test is used to understand if there is a significant difference on the effect of illuminance level, natural lighting and artificial lighting together on the perceived crowding. According to the hierarchical multiple regression results given in Table 6 and Table 7, there is a dependency between independent variables (illuminance level, natural and artificial lighting level). According to this result H1c is not rejected. The results show that illuminance level and natural lighting level are the two most affective lighting properties on the perceived crowding.

Table 6

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,643	,721		5,053	,000
	Q2	-,328	,210	-,220	-1,561	,125
2	(Constant)	4,266	,671		6,356	,000
	Q2	,044	,216	,029	,202	,841
	Q3	-,581	,165	-,512	-3,533	,001
3	(Constant)	4,094	,774		5,289	,000
	Q2	,008	,232	,005	,033	,974
	Q3	-,570	,168	-,502	-3,399	,001
	Q4	,075	,163	,062	,458	,649

a. Dependent Variable: Q1

Table 7

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	Q3	-,512[b]	-3,533	,001	-,458	,763
	Q4	,129[b]	,871	,388	,126	,903
2	Q4	,062[c]	,458	,649	,067	,884

For the hypothesis 2 crowding and seating density were examined. According to the multiple regression results given in Table 8, the relationship between independent variable (seating density) and dependent variable (crowding) is positive at 95% significance level. According to this result H2 is not rejected.

Table 8

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,770	,394		4,492	,000
	Q5	,296	,141	,289	2,092	,042

a. Dependent Variable: Q1

Multiple regression test was used with data/split file command for testing the hypothesis to understand the effect of gender and illuminance together on the perceived crowding. For this hypothesis crowding and illuminance level were examined. According to the multiple regression results given in Table 9, there is a negative relationship between perceived crowding (Q1) and illuminance level (Q2) in both female and male. This negative relationship is stronger in male than female. According to this result H3 is not rejected.

Table 9

Coefficients[a]

Gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
Female	1	(Constant)	2,968	1,104		2,688	,012
		Q2	-,111	,334	-,065	-,333	,742
Male	1	(Constant)	4,281	,952		4,496	,000
		Q2	-,522	,266	-,401	-1,958	,064

a. Dependent Variable: Q1

Multiple regression test was used with data/split file command for testing the hypothesis to understand the effect of gender and natural lighting together on the perceived crowding. According to the multiple regression results given in Table 10, there is a negative relationship between perceived crowding (Q1) and natural lighting level (Q3) in both female and male. This negative relationship is stronger in male than female. According to this result H3a is not rejected.

Table 10

Coefficients[a]

Gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
Female	1	(Constant)	4,547	,816		5,570	,000
		Q3	-,572	,234	-,432	-2,444	,022
Male	1	(Constant)	4,405	,522		8,436	,000
		Q3	-,650	,166	-,659	-3,919	,001

a. Dependent Variable: Q1

Multiple regression test was used with data/split file command for testing the hypothesis to understand the effect of gender and artificial lighting together on the perceived crowding. According to the multiple regression results given in Table 11, there is a negative relationship between perceived crowding (Q1) and artificial lighting level (Q4) in females and a positive relationship between males. According to this result H3 and H3a are not rejected.

Table 11

Coefficients[a]

Gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
Female	1	(Constant)	3,672	,962		3,817	,001
		Q4	-,301	,266	-,217	-1,133	,268
Male	1	(Constant)	1,249	,732		1,706	,104
		Q4	,363	,213	,357	1,708	,103

a. Dependent Variable: Q1

Multiple regression test was used with data/split file command for testing the hypothesis to understand the effect of gender and seating density together on the perceived crowding. According to the multiple regression results given in Table 12, there is a positive relationship between perceived crowding (Q1) and seating density (Q5) in females and males. According to this result H3 is not rejected while H3a is rejected.

Table 12

Coefficients[a]

Gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
Female	1	(Constant)	1.797	.526		3.419	.002
		Q5	.319	.191	.311	1.669	.107
Male	1	(Constant)	1.714	.621		2.758	.012
		Q5	.276	.219	.271	1.260	.222

a. Dependent Variable: Q1

DISCUSSION

Results of this research show how illuminance level and seating density in a café affects crowding. According to the findings of this study illuminance level and crowding of a café has a negative relationship, while seating density and crowding has a positive relationship. Gender is another factor that has an impact on people's perception of crowding.

Findings of literature reveal that if the illuminance level is higher this may positively affect the customers' perception of crowding (Mehrabian, 1976; Ariffin et al., 2010; Heung, Gu, 2012; Mehta, 2013). Results of the recent study also supported the findings. In order to broaden the scope of previous researches, this research examined the lighting factor from different sources that are natural and artificial lighting. According to the results customers' perception of crowding is lower when the illuminance and natural lighting level is high in a café while their perception of crowding is higher when the artificial lighting level is high.

As suggested by Yıldırım and Akalin-Baskaya, customers' perception of crowding increases when seating density increases in a café (2007). The results are in line with the literature review. It is proved that customers' perception of crowding is higher when the café has high seating density. In the study by Yıldırım and Akalin-Baskaya the effects of seating density on crowding was calculated in the same space with two different settings. In addition, in this research two different spaces with similar seating density is used in order to calculate the effects of seating density on crowding. Therefore, if this relationship is taken into account moderate seating density may positively affect customers' perception of crowding.

The results from a study by Yıldırım and Akalın-Baskaya, show that male customers' tolerance to crowding is higher than females (2007). In contrary, Stokols stated that female customers' are more tolerant to crowding in limited spaces (1972). The findings of this study show that the perception of crowding is affected by gender. For both female and male customers' there is a negative relationship between illuminance level and crowding in cafés. In this research the results show that female customers' are more tolerant to crowding in low illuminance level in cafés while male customers' perception of crowding is higher according to female customers'. With this study the statement of Yıldırım and Akalın-Baskaya is rejected while it supports the result of the research by Stokols.

This study examined the effects of illuminance level, natural and artificial lighting level and seating density on crowding, which were not much investigated for a café. The two settings in this research increase the reliability of the results. In future studies, it can be suggested to test the effects of different variables like ceiling height and color choice on crowding in a café. In order to increase the reliability of study, the sample size may be increased. It may enable the results to be more generalized. There are two limitations in this study. One is limited time that the study is conducted. It is conducted in first week of April. In this time zone the weather and natural lighting conditions are similar. If the same study is conducted throughout the year in different seasons, the results may be more accurate. The other limitation is selection of cafés. The both cafés are located in university campus and address to same kind of customers. If the same study is conducted in different cafés except university campuses, the range of customers' ages and demographics may alter the results.

CONCLUSION

This research was conducted to understand the effects of illuminance level and seating density on crowding. The survey was conducted in two Mozart cafés, located in Bilkent University, in order to increase the reliability. The results show that these factors affect crowding. According to the finding when the lighting level increases, crowding decreases. When seating density increases crowding is also increases. Also in addition to these factors, it is found that gender is also affects perception of crowding.

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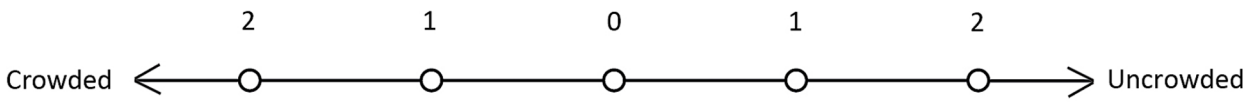
Appendix 1

This research is conducted by Masters Students in Bilkent University Interior Architecture and Environmental Design Department. The aim of the study is to understand the effects of spatial factors on perceived crowding in Mozart Café at Bilkent University.

Personal information that you provided will be used for only educational purposes.

Part I - Crowding

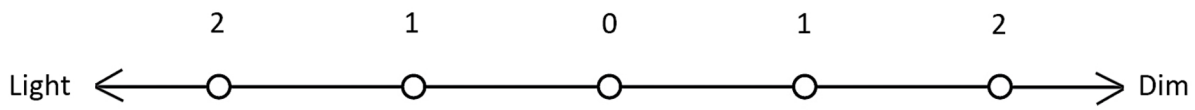


1. Assess the crowdedness level of this place.

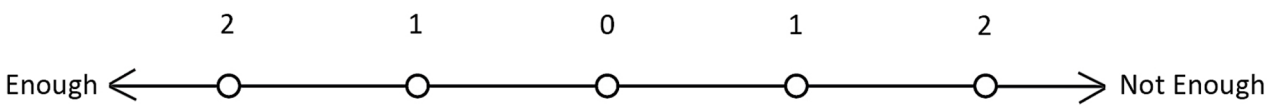
Part II - Lighting

Assess the value of the below factors on crowding in this space.

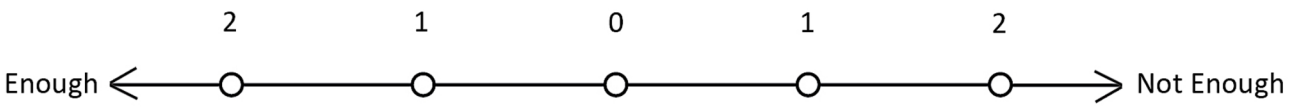
2. General lighting of this space:



3. Natural lighting of this space (Daytime):



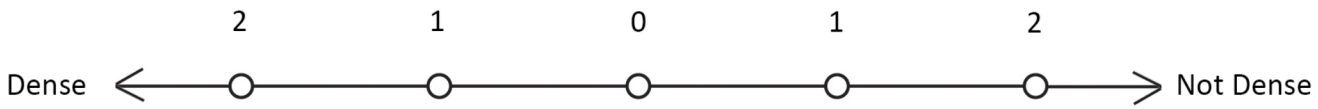
4. Artificial lighting of this space (Daytime):



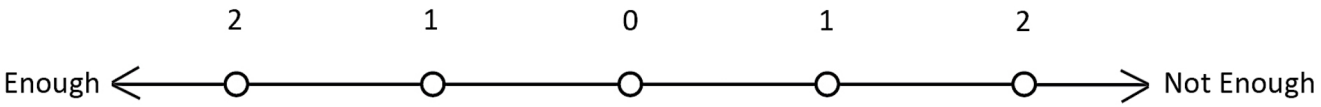
Part III - Seating Density

Assess the value of the below factors on crowding in this space.

5. Seating density of this space:



6. The number of the seating elements in this space:



Part VI - General Information

7. Gender: □ Female □ Male

8. Education: □ Elementary School □ High School □ University □ Masters/ Doctorate

9. Department:.....

10. Age:.....

Appendix 2

Table 1

Lighting

Building	Day	Mean	N
B Building	1	74.50	4
	2	127.00	4
	3	54.20	5
	4	52.17	6
	5	59.43	7
	Total	69.46	26
Mssf Building	1	499.00	2
	2	533.20	5
	3	194.60	5
	4	401.67	6
	5	802.67	6
	Total	494.29	24

Table 2

Statistics

Gender			Q1	Q2	Q3	Q4	Q5	Q6
Female	N	Valid	28	28	28	28	28	28
		Missing	0	0	0	0	0	0
	Mean		2,61	3,25	3,39	3,54	2,54	2,54
	Std. Deviation		1,100	,645	,832	,793	1,071	,881
Male	N	Valid	22	22	22	22	22	22
		Missing	0	0	0	0	0	0
	Mean		2,45	3,50	3,00	3,32	2,68	2,36
	Std. Deviation		,963	,740	,976	,945	,945	,727

Table 3

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,643	,721		5,053	,000
	Q2	-,328	,210	-,220	-1,561	,125

a. Dependent Variable: Q1

Table 4

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4,360	,476		9,163	,000
	Q3	-,565	,142	-,497	-3,972	,000

a. Dependent Variable: Q1

Table 5

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,339	,614		3,811	,000
	Q4	,058	,173	,049	,337	,738

a. Dependent Variable: Q1

Table 6

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,643	,721		5,053	,000
	Q2	-,328	,210	-,220	-1,561	,125
2	(Constant)	4,266	,671		6,356	,000
	Q2	,044	,216	,029	,202	,841
	Q3	-,581	,165	-,512	-3,533	,001
3	(Constant)	4,094	,774		5,289	,000
	Q2	,008	,232	,005	,033	,974
	Q3	-,570	,168	-,502	-3,399	,001
	Q4	,075	,163	,062	,458	,649

a. Dependent Variable: Q1

Table 7

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	Q3	-,512[b]	-3,533	,001	-,458	,763
	Q4	,129[b]	,871	,388	,126	,903
2	Q4	,062[c]	,458	,649	,067	,884

Table 8

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,770	,394		4,492	,000
	Q5	,296	,141	,289	2,092	,042

a. Dependent Variable: Q1

Table 9

Coefficients[a]

Gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
Female	1	(Constant)	2,968	1,104		2,688	,012
		Q2	-,111	,334	-,065	-,333	,742
Male	1	(Constant)	4,281	,952		4,496	,000
		Q2	-,522	,266	-,401	-1,958	,064

a. Dependent Variable: Q1

Table 10

Coefficients[a]

Gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
Female	1	(Constant)	4,547	,816		5,570	,000
		Q3	-,572	,234	-,432	-2,444	,022
Male	1	(Constant)	4,405	,522		8,436	,000
		Q3	-,650	,166	-,659	-3,919	,001

a. Dependent Variable: Q1

Table 11

Coefficients[a]

Gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
Female	1	(Constant)	3,672	,962		3,817	,001
		Q4	-,301	,266	-,217	-1,133	,268
Male	1	(Constant)	1,249	,732		1,706	,104
		Q4	,363	,213	,357	1,708	,103

a. Dependent Variable: Q1

Table 12

Coefficients[a]

Gender	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
Female	1	(Constant)	1.797	.526		3.419	.002
		Q5	.319	.191	.311	1.669	.107
Male	1	(Constant)	1.714	.621		2.758	.012
		Q5	.276	.219	.271	1.260	.222

a. Dependent Variable: Q1