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# ROMANTICISM V/S ANTAGONISM: BATTLE OF MINDS, A CASE OF BEIJING POLLUTION

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# Romanticism v/s Antagonism: Battle of Minds, A Case of Beijing Pollution

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**Abstract**

*This study aims to investigate and identify the underlying dimensions of students' perception towards the Beijing pollution, particularly to identify the future intensions of students towards staying in Beijing and to identify the level of satisfaction and dissatisfaction among students. This study used non probabilistic sampling technique, particularly convenience, quota and judgmental techniques were applied. The sample size for this study is 80, which is the number of respondents who are enrolled in undergraduate, graduate and doctorate program in the universities of Beijing, China. Finally the data was analyzed by using inferential statistics particularly exploratory factor analysis (EFA), one sample t-test, crosstab and descriptive statistics were used in this study. This study revealed extremely surprising results, even though air pollution makes the students unhappy, uncomfortable, sad, Sick extremely frustrated, they would love to settle down and stay in Beijing forever. Significant gender differences were seen in male and female students about overall satisfaction in terms of Beijing environment, and girls in Beijing are more health conscious than boys. Some hypothesis testing results show that air pollution does not make the students absent from their classes, and air pollution does not make students lazy.*

**Keywords**

*Air pollution, health, students' performance, absenteeism, Students' perceptions*

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## 1. Introduction

Environment is the basis for human survival, whereas more and more facts reveal that the deterioration of the environment caused serious disasters to human life. What shall we do to protect environment and realize the sustainable development of the society, is the issue that every person on earth must seriously consider.

In recent years, along with the rapid economic development, environmental pollution problems have become increasingly serious. Air pollution is one of the major problems especially affecting the inhabitants of cities and megacities worldwide. In Beijing, anthropogenic sources, such as industry, traffic, combustion of fossil fuels, and construction activities are abundant.

Ambient air pollution has significant known consequences for human health and life expectancy (Pope et al. 2009, Chay and Greenstone 2003). Researchers have documented that short-term acute exposure to particulate matter decreases circulatory performance and leads to increased illness and hospitalization rates (Pope et al. 1995). Exposure to fine particulate matter is particularly dangerous since these small particles penetrate deep into the lungs and may also affect other aspects of human life, such as cognitive performance, due to their impact on blood flow and circulation (Pope and Dockery 2006). Recent work has also demonstrated a link between carbon monoxide and higher incidents of respiratory and heart related emergency room visits (Schlenker and Walker 2011). Medical research has also identified symptoms that point to a diagnosis of carbon monoxide poisoning, including headaches, dizziness, and confusion (Piantadosi, 2002).

## 2. Literature review

Economy development of China has serious side effects, say, the environmental deterioration caused by coal combustion of factories. The problem brings harm to human health, air and water quality, and agriculture (Energy Information Administration, 2006). China environmental pollution is no more domestic issue, but global problem soon.

According to Beyer 2006, although Environmental law has been in place since the 1970s, and standards established for air, soil, and water along with industry regulations have been in place nearly as long, the pollution never decreases and continues to grow. For example,



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Environmental Impact Assessments (EIA) for new and existing expansion projects have been launched for more than 30 years, but the program was poor implemented and managed among various governmental departments. Early 2003, revision of national law provides a new and unified version of the scattered EIA laws. "According to the law, all programs and plans on land use and development of natural resources are subject to environmental impact assessments" (Beyer 2006).

Emission reduction data by provincial level (2007 - 2008) indicates that almost all regions and provinces achieve the same level of reduction. According to 11th 5-year plan, local governments are required to sign enforcement documents, which strictly require local governments to be responsible for emission reduction. Fail to meet the standard rate of emission reduction will result in severe penalty, from limiting promotion opportunity to dismissal from position.

For all the progress in pollution control, the report cites thirteen different sewage plants "were found incompliant either for lagged construction of the main body of project and supporting networks, or running at low capacity for a long time, abnormal operation without good reasons, substandard outflow or ineffective disposal of sludge" (MEP 2008). Further, the Ministry of Environmental Protection found eleven coal fired power plants had incompliant desulphurization facilities. Even more alarming is the fact that the true amount of COD pollution may be higher because monitoring only covers point source pollution, meaning non-point pollution such as animal wastes and fertilizers are unaccounted for. The monitoring of SO2 pollution has been important as it is one of the main sources of air pollution, but monitoring of other air particulate should be considered. For example, China has one of the fastest growing car markets, and so there must be growing automobile emissions.

To understand the impact of air pollution on human health we have to understand what particles in the air cause air pollution. According to a study done by Wang et al. (2005), a high resolution emission inventory was developed for the study region. The emission inventory includes annual total emissions at the municipality level of carbon monoxide (CO), ammonia (NH3), nitrogen oxides (NOx ¼ NO+NO2), NMVOC (non-methane volatile organic compounds), sulfur dioxide (SO2), and particulate matter smaller than 2.5 mm



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(PM2.5) and smaller than 10 mm (PM10). The Sparse Matrix Operator Kernel Emissions Modeling System (SMOKE) Version 1.3 was used to create the spatial and temporal distribution and chemical speciation of the emission inventory that was used in CMAQ for this analysis. Wang concludes that emissions of NH3 are projected to be 20% higher, NMVOC 50% higher, and all other species 130–250% higher in 2020 BAU than in 2000. Both alternative 2020 emission scenarios would reduce emissions relative to BAU. Adoption of ACGT which meets only 24% of energy service demand in Zaozhuang and provides 2% of energy needs in three surrounding municipalities in 2020 would reduce emissions more than BACT with 100% penetration in Zaozhuang.

For looking further on the impact of pollution on the overall health, Wang (2005) looked at PM (PM2.5 or PM10) which was used to look at the mortality and morbidity effects. It is believed that PM is responsible for the largest attributable fraction of mortalities due to air pollution exposure and because eastern China suffers from particularly elevated PM levels. Hurley Hunt stated we recognize that different components of PM may result in differing health impacts however, the current literature is not sufficient to permit us to characterize these impacts. There is no need to include other pollutants such as SO2, NO2, or CO as the concentrations of these pollutants are often correlated with PM and inclusion of the impacts of all pollutants individually would potentially overestimate the contribution of air pollution to mortality and morbidity.

Recent studies have proven that air pollution has contributed to health effects on students within schools. In article written by Michelle FlorCuz (2013), in the International Business Times, it is stated that Schools in China are struggling to adjust to the increasing amounts of toxic air blanketing cities across the rapidly industrializing country. While children in other parts of the world enjoy snow days, China's severe levels of air pollution bring bad air days, when local governments cancel classes to keep children indoors.

Now a Beijing school has resorted to a temporary solution to avoid missing days because of pollution -- offering classes online. According to the Shanghaiist news blog, a school in the capital has begun using online tools to teach classes to students who stay home on particularly smoggy days.



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(Zhuohui Zhao & Zheng Zhang, 2008) in a survey that was contacted within their study showed some symptoms. Prevalence of respiratory health and home environmental factors for all subjects are given, stratified by sex, as well as prevalence in subsets of participants who were involved in the indoor measurements. Girls accounted for 49.3% of participants, and the mean age for the participants was 13 years. The prevalence of asthma or allergies was low, but respiratory symptoms were common. For daytime attacks of breathlessness, breathlessness after exercise was more common. The prevalence of demographic characteristics, home environment factors, and asthmatic symptoms was similar between total subjects and the subsets of participants. The only sex difference in symptoms was for daytime attacks of breathlessness after exercise, where girls had a higher prevalence than boys ($p < 0.001$). In home environment factors, girls reported new floor at home more often than boys ($p < 0.001$). A small percentage of pupils (11.2%) reported parental asthma or allergy. Pupils with parental asthma or allergy had a higher prevalence of cumulative incidence of asthma ($p <0.05$), wheeze ($p < 0.001$), and daytime attacks of breathlessness ($p < 0.001$) and pollen or pet allergy ($p < 0.05$).

The study conducted by (Zhuohui Zhao & Zheng Zhang, 2008) sheds news on how asthma and breathlessness are more common on students who have taken their survey. It also found that girls are more likely to be effected especially when they are in home environment.

Air pollution has been associated with a number of detrimental health effects for children. One of the main findings of the recent medical and economics literature is that pollution has a positive and significant effect on asthma exacerbation (McConnell et al. 2003).

Pollution has also been associated with respiratory diseases, lower lung function, hay fever (Gauderman et al. 2001,) and infant mortality (Chay and Greenstone 2003a, 2003b, Currie and Neidell 2005). There are four mechanisms by which pollution could affect academic performance: (i) school absenteeism due to illness caused by pollution; (ii) attention problems in school due to illness caused by pollution; (iii) fatigue when doing homework due to illness caused by pollution; and (iv) a direct negative effect of pollution on brain development. Earlier research (Gilliland et al. 2001, Ransom and Pope 1992, and Currie et al. 2007) established a statistically significant relationship between pollution and school absenteeism and thus relate to mechanism (i) above.



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Recent international data indicate that currently the increase of asthma and allergies in children is most pronounced in the more advanced developing countries (Asher et al. 2006). The reasons remain unclear, but this trend could be attributed to changes associated with environment and lifestyle factors during the modernization process (Douwes and Pearce 2002). Studies from Western countries have shown that schools can be contaminated by various indoor pollutants, such as molds, bacteria, allergens, particles, volatile organic compounds, and formaldehyde (Cooley et al; Daisey et al. 2003; Mendell and Heath 2005; Norback et al. 1990; Smedje et al. 1997).

From the background of this study, it is obvious to identify a lot of questions which require great deal of attention of academician and practitioners. So in the past no any attempt had been made in china to address particularly this serious issue. Therefore this study will fill the research gap in the literature.

The main objective of this study is

- To identify the underlying dimensions of students' perception towards the Beijing pollution.
- To identify the factors that measure the level of satisfaction and dissatisfaction on among students.
- To identify the future intensions of students towards staying in Beijing in the future.
- To explore gender differences among students of Beijing.

## 3. Methodology

### 3.1 Sample Selection:

The population for this study consisted of people of all ages particularly the targeted sample comprised of university students enrolled in undergraduate, graduate and doctorate program in the universities of Beijing Including Peking University, Tsing hua University, University of Science and Technology Beijing, China University of Geosciences, China Agriculture University, Beihang University and so on. For this research the non- probabilistic sampling approach was adopted particularly convenience, quota and judgmental sampling techniques were implemented. In addition to that the study was conducted at Capital City of China Beijing.



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**3.2 Sample Size:**

Based on the evidence from the literature Comrey and Lee (1992); Meyers, Gamst and, Guarino (2006); MacCallum, Widaman, Zhang, and Hong (1999); (Hair et al, 1998). A ratio of 1:5 sample sizes of 80 university students was believed to be adequate for the current study.

**3.3 Research Instrument**

The questionnaire consisted of three parts. The first part of the questionnaire contained 11 questions relating to rational factors of users such as how often do you play sports before and after coming to Beijing? And what ways air pollution affects students' performance. The second part of the questionnaire contained 16 items relating to the students perceptions and realities. The third part of the questionnaire contained 8 questions on demographic factors.

**3.4 Instrument Reliability and validity**

The reliability of instrument was checked by Cron bach's coefficient alpha test, As shown in Table 1 relatively high reliability coefficient values .939, for measuring the future intensions of the students to live in Beijing, .892 for measuring present realities and .952 for measuring satisfaction of the students, the much larger than the standard of 0.7 (Churchill, 1979; Nunnally, 1978). To check the validity of measures a pilot study of the questionnaire was conducted to evaluate the validity of these scales. A total of 20 questionnaires were distributed for pre-testing which obtained more than 0.7 score which is evidencing of a high level of reliability.

**Table 1** Instrument Reliability –

| ***Construct*** | ***Number of Items*** | ***Reliability Coefficient*** |
|---|---|---|
| Future Intension | 06 | .939 |
| Present Realities | 07 | .892 |
| Satisfaction | 03 | .952 |



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### 3.5 Data Collection

The primary data was collected through survey questionnaire from big metropolitan city of China Beijing; consequently, the questionnaires were circulated to groups of students in semi-natural classroom settings, mostly before the faculty members. Class-rooms were chosen mainly for two purposes, these being: (1) they provided a conducive and uninterruptible space with all the reading and writing provision in place including ample lighting and environment; (2) The more formal behavior was displayed by the students. This tactic worked well and all most all of the students completed the questionnaire without any major problem. A total of 100 questionnaires were distributed; and 8 respondents were not capable to respond and 12 questionnaires were canceled due to incompleteness and other reasons. The overall response rate was 80%. Finally the data was analyzed by using inferential statistics mainly exploratory factor analysis, One Sample T-Test, Crosstab and descriptive statistics was used in this study.

## 4. Result/Findings and Discussion

### 4.1 Profile of Respondents

30% of respondents who participated in this research are males and 70% are females. And 30% respondents are the students of masters whereas 70% are the students of bachelors. On the other hand 51% of respondents have monthly income between 500 to 1000 RMB, whereas 45% respondents have income between 1100 to 1500. 4% has income above 1500 RMB. Apart from that 63% of the respondents are the students whereas 37% are working as well as studying.

### 4.2 One sample T-Test

#### 4.2.1 One simple T-test for Present Realities of students regarding Beijing.

With the help of one sample T-test, this study analyzed and tested the following hypothesis of Realities of Beijing environment, future intentions of students and overall level of satisfaction of students regarding Beijing.

R-1

H0: the level of agreement about people that they feel air pollution makes them absent from their classes is equal to 3 (means



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respondents don't think that air pollution makes them absent from their classes).

H1: the level of agreement about people that they feel air pollution makes them absent from their classes is not equal to 3 (means respondents feel that air pollution makes them absent from their classes).

R-2

H0: the level of agreement about people that they feel air pollution makes them uncomfortable is equal to 3 (means respondents don't think that air pollution makes them uncomfortable).

H1: the level of agreement about people that they feel air pollution makes them uncomfortable is not equal to 3 (means respondents think that air pollution makes them uncomfortable).

R-3

H0: the level of agreement about people that they feel air pollution makes them unhappy is equal to 3 (means respondents don't think that air pollution makes them unhappy).

H1: the level of agreement about people that they feel air pollution makes them unhappy is not equal to 3 (means respondents think that air pollution makes them unhappy).

R-4

H0: the level of agreement about people that they feel air pollution makes them Sad is equal to 3 (means respondents don't think that air pollution makes them Sad).

H1: the level of agreement about people that they feel air pollution makes them Sad is not equal to 3 (means respondents think that air pollution makes them Sad).

R-5

H0: the level of agreement about people that they feel air pollution makes them ill is equal to 3 (means respondents don't think that air pollution makes them ill).

H1: the level of agreement about people that they feel air pollution makes them ill is not equal to 3 (means respondents think that air pollution makes them ill).



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R-6

H0: the level of agreement about people that they feel air pollution makes them Lazy is equal to 3 (means respondents don't think that air pollution makes them Lazy).

H1: the level of agreement about people that they feel air pollution makes them Lazy is not equal to 3 (means respondents think that air pollution makes them Lazy).

R-7

H0: the level of agreement about people that they feel air pollution makes them frustrated and cannot concentrated on their studies is equal to 3 (means respondents don't think that air pollution makes them frustrated and cannot concentrated on their studies).

H1: the level of agreement about people that they feel air pollution makes them frustrated and cannot concentrated on their studies is not equal to 3 (means respondents think that air pollution makes them frustrated and they cannot concentrated on their studies).

**Table 2.** One sample t-test for Present Realities

| ***Items*** | ***T-value*** | ***df*** | ***P-value*** | ***Mean difference*** | ***lower*** | ***upper*** | ***Alternative hypothesis*** |
|---|---|---|---|---|---|---|---|
| I believe that air pollution makes me absent from my classes | .56 | 82 | .574 | .07 | .33 | .18 | **Rejected** |
| I believe that air pollution makes me uncomfortable | 10.62 | 82 | .000 | 1.20 | .98 | 1.43 | Accepted |
| I believe that air pollution makes me unhappy | 7.96 | 82 | .000 | .94 | .71 | 1.17 | Accepted |
| I believe that air pollution makes me sad | 4.59 | 82 | .000 | .53 | .30 | .76 | Accepted |
| I believe that air pollution | 6.59 | 82 | .000 | .71 | .50 | .93 | Accepted |



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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| makes me Sick | | | | | | | |
| I believe that air pollution makes me lazy | .55 | 82 | .581 | .07 | .19 | .33 | **Rejected** |
| I believe extremely frustrated and cannot concentrated on my studies | 1.90 | 82 | .061 | .22 | .47 | .01 | **Rejected** |

The results of T-test revealed that the alternative hypothesis" I believe that air pollution makes me absent from my classes has p-value .574 greater than 0.05 and t-value .56 less than 2 therefore the alternative hypothesis is rejected which indicates that respondents don't think that air pollution makes them absent from their classes. Further another hypothesis "I believe that air pollution makes me lazy has the p-value of .581 greater than 0.05 and t-value .55 less than 2. So therefore the alternative hypothesis is rejected which shows that respondents don't think that air pollution makes them Lazy. Moreover another hypothesis "I believe extremely frustrated and cannot concentrated on my studies" has the p-value of .061 greater than 0.05 and t-value 1.90 less than 2. So the alternative hypothesis is rejected which revealed that respondents don't think or believe that air pollution makes students extremely frustrated.

Whereas the other four alternate hypothesis which includes I believe that air pollution makes me uncomfortable, I believe that air pollution makes me unhappy, I believe that air pollution makes me sad, I believe that air pollution makes me sick" have p-value less than 0.05 and T-value more than 2 therefore these hypothesis were accepted which ultimately indicates that student thinks that air pollution makes the student uncomfortable, unhappy, sad and sick.

### 4.2.2 One sample T-test for the Overall level of Satisfaction of Students regarding Beijing.

S-1

H0: the level of agreement about people that they are satisfied with Beijing Environment is equal to 3 (means respondents don't think they are satisfied with Beijing Environment).



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H1: the level of agreement about people that they are satisfied with Beijing environment is not equal to 3 (means respondents think they are satisfied with Beijing Environment).

S-2

H0: the level of agreement about people that they like working/staying in Beijing is equal to 3 (means respondents don't think they like working/staying in Beijing).

H1: the level of agreement about people that they like working/staying in Beijing is not equal to 3 (means respondents think they like working/staying in Beijing).

**Table 3.** One sample t-test for Satisfaction

| Items | T-value | df | P-value | Mean difference | lower | upper | Alternate hypothesis |
|---|---|---|---|---|---|---|---|
| All in all, I am satisfied with Beijing Environment | 1.311 | 82 | .193 | .133 | .33 | .07 | **Rejected** |
| In general, I like working/studying in Beijing | 8.682 | 82 | .000 | .952 | 1.17 | .73 | Accepted |

The results of T-test revealed that the alternative hypothesis" All in all, I am satisfied with Beijing environment" has p-value .193 greater than 0.05 and t-value 1.311 less than 2 so therefore the alternate hypothesis is rejected which indicates that respondents don't think that they are satisfied with beijing environment.

On the other hand the hypothesis" In general, I like working and staying in Beijing" has p-value .000 much less than 0.05 and t-value 8.682 greater than 2, so therefore the alternative hypothesis is accepted which indicates that respondents think they like working/staying in Beijing.



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**4.2.3 One sample T-test for Future Intentions of Students regarding Beijing.**

FI-1

H0: the level of agreement about people that they believe that Beijing is very good place for living is equal to 3 (means respondents don't believe that Beijing is very good place for living).

H1: the level of agreement about people that they believe that Beijing is very good place for living is not equal to 3 (means respondents believe that Beijing is very good place for living).

FI-2

H0: the level of agreement about people that they believe they'll settle down in Beijing for forever is equal to 3 (means respondents don't believe that they'll settle down in Beijing for forever).

H1: the level of agreement about people that they believe they'll settle down in Beijing for forever is not equal to 3 (means respondents believe that they'll settle down in Beijing for forever)

FI-3

H0: the level of agreement about people that they believe that they will buy their home in Beijing is equal to 3 (means respondents don't believe that they will buy their home in Beijing).

H1: the level of agreement about people that they believe that they will buy their home in Beijing is not equal to 3 (means respondents believe that they will buy their home in Beijing).

FI-4

H0: the level of agreement about people that they believe that they will buy their Car in Beijing is equal to 3 (means respondents don't believe that they will buy their car in Beijing).

H1: the level of agreement about people that they believe that they will buy their car in Beijing is not equal to 3 (means respondents believe that they will buy their car in Beijing).



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FI-5

H0: the level of agreement about people that they believe that they will do job in Beijing is equal to 3 (means respondents don't believe that they will do job in Beijing).

H1: the level of agreement about people that they believe that they will do job in Beijing is not equal to 3 (means respondents believe that they will do job in Beijing).

FI-6

H0: the level of agreement about people that they believe that they will get marry Beijing ren and stay in Beijing is equal to 3 (means respondents don't believe they will get marry Beijing ren and stay in Beijing).

H1: the level of agreement about people that they believe that they will get marry Beijing ren and stay in Beijing is not equal to 3 (means respondents believe they will get marry Beijing ren and stay in Beijing).

**Table 4.** One sample t-test for Future Intensions

| Items | T-value | df | P-value | Mean difference | lower | upper | Alternate hypothesis |
|---|---|---|---|---|---|---|---|
| I feel like Beijing is very good place for living | 7.32 | 82 | .000 | .75 | .97 | .55 | Accepted |
| I feel like I will settle down in Beijing for forever | 9.46 | 82 | .000 | .88 | 1.06 | .69 | Accepted |
| I feel like I will buy my home in Beijing | 6.78 | 82 | .000 | .79 | 1.03 | .56 | Accepted |
| I feel like I will buy my car in | 7.52 | 82 | .000 | .75 | .96 | .56 | Accepted |



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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Beijing | | | | | | | |
| I feel like I will do job in Beijing | 3.15 | 82 | .002 | .32 | .53 | .12 | Accepted |
| I feel like I will marry a Beijing ren & will stay in Beijing | 5.73 | 82 | .000 | .59 | .80 | .39 | Accepted |

The results of T-test revealed that the hypothesis "I feel like Beijing is very good place for living ", "I feel like I will settle down in Beijing for forever ", "I feel like I will buy my home in Beijing", "I feel like I will buy my car in Beijing ", "I feel like I will do job in Beijing ", "I feel like I will marry a Beijing ren & will stay in Beijing " have p-value less than 0.05 and t-value greater than 2, so therefore all alternative hypothesis are accepted which indicates that respondents think that Beijing is very good place for living, they believe that they'll settle down in Beijing for forever, they will buy their home in Beijing, they will buy their car in Beijing, they will do job in Beijing, they believe they will get marry Beijing ren and stay in Beijing. Overall high future expectation of staying in Beijing is found.

### 4.3. Results of Factor analysis

**Table 5.** Instrument Reliability of Retained items.

| Construct | Number of items | Reliability Coefficient |
|---|---|---|
| Future Intension | 05 | .959 |
| Present Realities | 06 | .899 |
| Satisfaction | 02 | .967 |



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Table 5 shows the reliability and internal consistency of the retained items. Factor 1 present realities of students towards Beijing has the 0.899 cron bach's alpha coefficient that shows credible reliability statistics and internal consistency. Factor 2 Future intentions achieved 0.959 cron bach's alpha coefficient which is considered as excellent for practical significance. Factor 3 satisfaction dimension has achieved 0.967 cron bach's alpha co-efficient which indicates very high reliability and internal consistency among the retained items of the satisfaction, which suggested high internal consistency and reliability among the retained items (more than 0.6 recommended by nunnally, 1978; hair et al, 1998).

**Table 6.** Result of three factor of Students Future intentions and Realities about Beijing

| Factor | Name | % of Variance explained | Eigenvalue | Cumulative % |
|---|---|---|---|---|
| 1 | Realities | 26.342 | 3.424 | 26.342 |
| 2 | Future Intensions | 23.581 | 3.066 | 49.923 |
| 3 | Satisfaction | 16.928 | 2.201 | 66.851 |

Table 6 vividly exhibits the results of factor analysis of the Students realities and future intentions items. The results suggested that the eigenvalue of three factors of realities and future intentions of students are greater than 1 for considering significant as suggested by hair et al, (1998). Further it reveals that factor 1 Present Realities explains 26.342 percent of variance and has a greater eigenvalue of 3.424 among the three factors. Whereas the factor 2 future intentions explain 23.581 percent of variance and has eigenvalue of 3.066. The last factor 3 overall satisfactions of students explain 16.928 percent of variance and has eigenvalue of 2.201. Moreover the KMO which measures the sampling adequacy is 0.811 greater than 0.80 that is considered as a meritorious in explaining the sample used in this factor analysis is adequate.



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**Table 7.** Principal Component Factor Analysis (Varimax Rotation).

| | Factors | | |
|---|---|---|---|
| **Items** | **1** | **2** | **3** |
| Realities<br>R-1-22In General Beijing is best place for living | .839 | | |
| R-4-25-I feel like I will buy my car in Beijing | .833 | | |
| R-5-26-I feel like I will do job in Beijing | .767 | | |
| R-3-24-I feel like I will buy my home in Beijing | .738 | | |
| R-2-23-I feel like I will settle down in Beijing for forever | .697 | | |
| R-6-27-I feel like I will marry a Beijing ren & will stay in Beijing | .684 | | |
| Future Intentions<br>P-3-14-I believe that air pollution makes me unhappy | | .847 | |
| P-2-13-I believe that air pollution makes me uncomfortable | | .843 | |
| P-4-15-I believe that air pollution makes me sad | | .832 | |
| P-5-16-I believe that air pollution makes me Sick | | .715 | |
| P-7-18-I believe that air pollution makes me extremely frustrated and cannot concentrated on my studies | | .549 | |
| Satisfaction<br>S-1-19All in all, I am satisfied with Beijing Environment | | | .614 |
| S-3-21In general, I like working/studying in Beijing | | | .830 |

Extraction method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization

Exploratory factor analysis was carried out with varimax rotation method to confirm the generalizability and the validity of realities and future intentions scale in Chinese context. The items which loaded on more than one factor or the items which had low factor loading (<.30) were removed as they did not meet the minimal level for interpretation of structure (hair et al, 1998). So finally, 13 items were retained: 6 items



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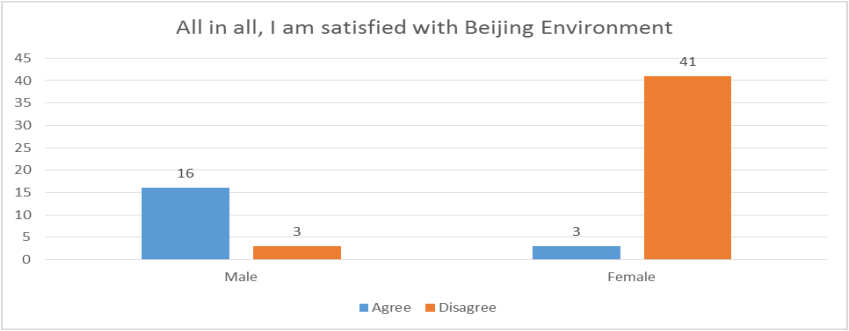
which measures the realities/ perceptions of the students towards Beijing and it environment, 5 items for which measures the future intentions of the students about staying Beijing and 2 items for satisfactions.

### 4.4. Results of descriptive statistic: Crosstab

**Figure 1:**




Respondents through unaided recall were asked about their level of satisfaction with Beijing Environment. There is surprising difference do exist in males and females students of Beijing. There are only 16 males' students who are satisfied with Beijing environment and whereas there are 3 males student who are not satisfied with Beijing environment. On the other hand there are only 3 females student who are satisfied with Beijing environment whereas as 41 females student are dissatisfied with Beijing environment (Figure 1).

**Figure: 2**

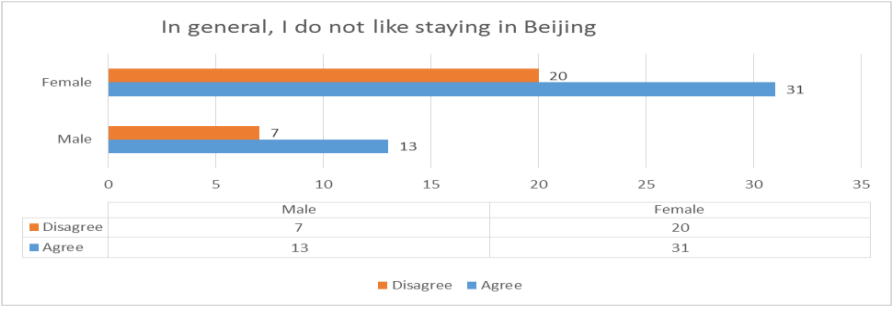





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Figure 2 shows another surprising perception gap in males and females student of Beijing about satisfaction and staying in Beijing. 20 females student disagree with they don't like staying in Beijing, means 20 females students like staying in Beijing whereas 31 females students they don't like staying in beijing. On the other hand 7 males' student they don't like staying in Beijing whereas as 13 males' student they prefer to stay in Beijing.

**Figure: 3**

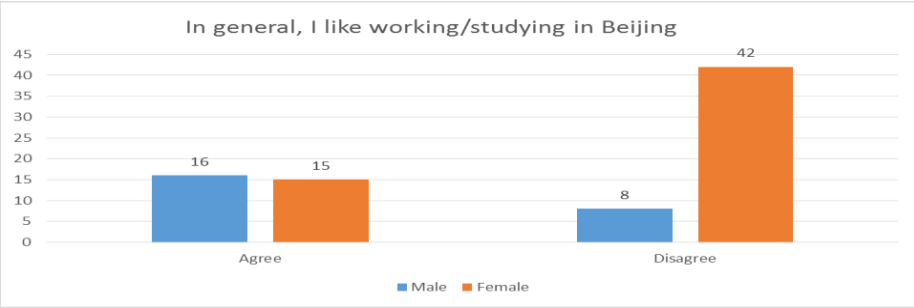


Figure 3 revealed another gender differences between male and female students of Beijing. 16 male students like to work and stay in Beijing whereas 8 male student they don't want to work and stay in Beijing. On the other hand 15 female students agree in terms of working and staying in beijing whereas 42 females students don't prefer to work and stay in Beijing.

**5. Conclusion**

This study produces the several core findings about the students' perception towards Beijing, their future intentions and overall level of satisfaction of students regarding Beijing. One of the extremely surprising results is that even though air pollution makes the students unhappy, uncomfortable, sad, Sick extremely frustrated, they would love to settle down and staying in Beijing for forever. This research also concluded that significant gender differences exist in males and females student about overall satisfaction in terms of Beijing environment, working, staying in Beijing as well. Their style of thinking is surprisingly opposite to each other. Males student are highly satisfied as compare to females student. Girls don't prefer to work and stay in Beijing whereas as



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boys are more satisfied even though Beijing is highly polluted. So therefore girls in Beijing are more health conscious as compare to boys. 3 hypothesis of present realities are rejected out of 7. Whereas 1 hypothesis of overall satisfaction dimension was rejected out of 2. So overall 04 hypothesis were rejected out of 16 which show air pollution does not make the students absent from their classes, and air pollution does not make students lazy and extremely frustrated.

The Chinese government should utilize this body of knowledge to guide their future directions and strategy in order to develop their green environment policy.

As this Study revealed very serious finding that young talented students want to live in Beijing and contribute something valuable but their satisfaction/motivation of working and staying in Beijing is going to be diminish. The Chinese government should reconsider and refocus their environment friendly policy in order to retain highly talented students who are studying in top school of Beijing, which could be proved as an asset of China.

In this study, the targeted sample was students. This study did not include the job holders, and we cannot generalize the results of this study beyond this targeted sample. Future research should include the responses of working class people in order to generalize the results.

The total sample size of this study was 100 respondents, this sample size does not be the representative of the whole population of china, therefore the future study should be carried out in order to get more generalized findings.

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