

Biz Stats

Statistical Poster Project

AY1920

Introduction

1. This is a group assignment. There should be 3-4 students in each group.
2. Each group is to investigate a real life problem using real data.
3. Consult your lecturer on the feasibility of your problem before collecting data.
4. This assessment contributes to 20% of ICA.
5. This project runs from week 3 to week 17.
6. Peer evaluation will be part of the project marks.
7. The deadline for poster submission/presentation is **Week 17 and Week 18**. Late submission will result in loss of mark.

Statistical Problem-Solving Process

Step 1

- Formulating research question.

Step 2

- Collecting data.

Step 3

- Analysing data.

Step 4

- Interpreting results.

Step 5

- Presenting results.

Good Example

- Clear and focused research question that can be studied by collecting data.
- Collect relevant primary data or show citations for secondary data.
- Analyse data using numerical/graphical summaries and statistical concepts (confidence interval/hypothesis testing).
- Show correct Minitab outputs.
- PowerPoint slide is well organised and show only relevant results and concise explanations.

Background Information:

According to NIE, most of the ITE students are from Normal Technical stream(NT) and the Government saw the need to equip these students who are deemed less inclined to academic studies with "the requisite skills and attitudes to enable them to contribute to the national economy".Therefore many people believed that O'level students are smarter than ITE students.

Our aim is to investigate whether this belief is true. We hypothesize that ITE students can averagely do better academically in polytechnics than O'level students.

Research Question:

Do O'level students obtain significantly higher GPA points compared to ITE students?

Data:

We went around Singapore Polytechnic to conduct our survey and sharing our survey via whatsapp to our friends.The survey was done using google forms.

In our survey, from Fig B we ask them who do they think would achieve a better GPA after completing their diploma based on their personal perspective. Surprisingly, almost half of the student from ITE picked student with O Level Cert ,while students with O Level cert picked themselves more than student with ITE Cert

Conclusion:

It seems that O'level students are more biased in their perception of ITE students' academic capability compared to ITE student's perception on O'level academic capability.

Reference:

[https://repository.nie.edu.sg/bitstream/10497/3360/1/CRP26_05JA_Conf06\(ERAS\)_Albright.pdf](https://repository.nie.edu.sg/bitstream/10497/3360/1/CRP26_05JA_Conf06(ERAS)_Albright.pdf)

<https://www.google.com.sg/intl/en-GB/forms/about/>

Done by: Leonard and Rui Sheng

Fig A

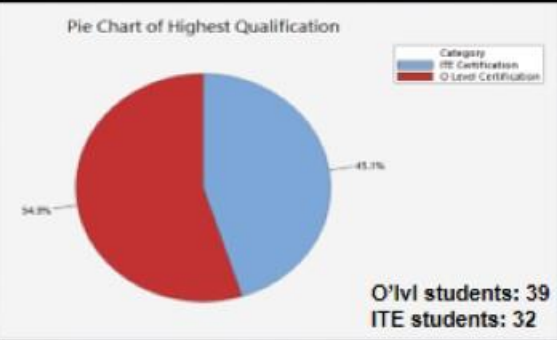


Fig C



Fig F

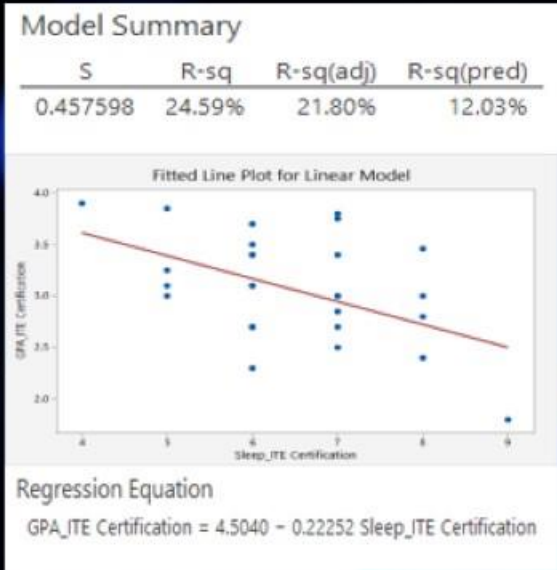


Fig B

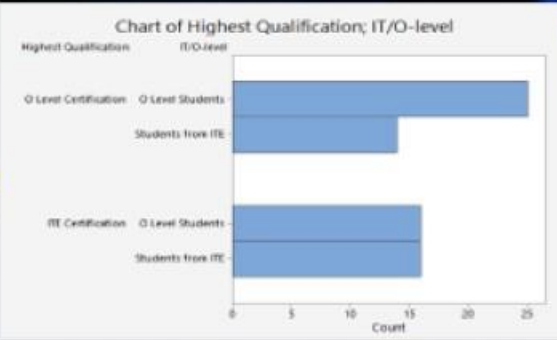


Fig D

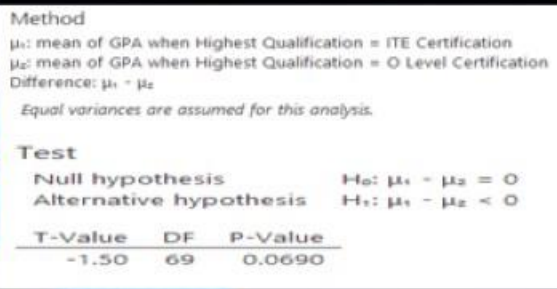
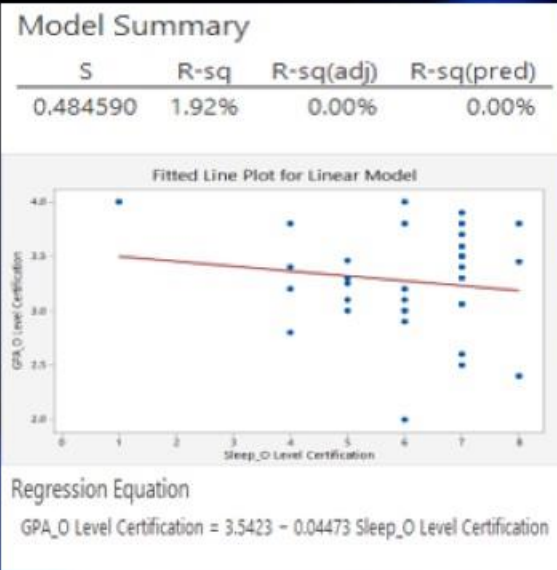


Fig E

Statistics

Variable	N	Mean	StDev	Median
Sleep_ITE Certification	29	6.5172	1.1533	6.0000
Sleep_O Level Certification	32	5.9688	1.4916	6.0000

Fig G



From Fig C, the box plot, we can see from the upper quartile that students with O Levels Cert obtain a slightly higher gpa than students with ITE cert, in fact the lower quartile of the O'level student is almost the same as the interquartile of the student with ITE cert. The upper 75% gpa of O'Level Cert is higher than the lower 50% of GPA by the ITE students.

From the Hypothesis Testing shown in Fig D, we can see that although on average the O'Level students get numerically higher GPA than the ITE students, the difference is not statistically significantly higher (P-Value : 0.0690)

Conclusion:

It seems to suggest that on average O'Level students do have higher GPA compared to the ITE students. However, upon deeper analysis as shown in Fig D, the hypothesis test generated a P-value of 0.0690. This shows that there is not enough evidence to show that the mean GPA of O'level students is statistically significantly higher than the mean GPA of the ITE students.

We now want to find if amount of sleep affects students GPA performance. From Fig F & G, it seems that about 25% of the variation in ITE students GPA can be explained by the regression equation with number of hours of sleep as the predictor variable and only about 2% of the variation in O'Level students GPA can be explained by the regression equation with number of hours of sleep as the predictor variable.

Conclusion:

We can see the relationship between the average number of hours a student sleeps could likely affects their GPA, such that for every additional one hour an O'Level student sleeps, it will reduce their GPA by 0.04473. On the other hand, for every additional one hour an ITE students sleeps, it will reduce their GPA by 0.22252. This shows that ITE students should perhaps sleep lesser in order for them to obtain a result better or as good as O'Level students.

From Fig E, we also found that ITE students sleeps an average of about half an hour more than O'Level students. In a week, it would approximately be about three and a half hours more. If the ITE students were to use that time to study, their GPA might increase.

Limitations:

- We only conducted our survey within Singapore Poly
- It is hard to look for students from ITE in the premises because the proportion of O'Level students seems to be higher than ITE students.

Claim:

“Youths only spend 1.5 hours in day with their family members”

Background

According to a survey done by MSF in 2015, youths only spend 1.5 hours with their family in a day. Also, 74% of the youths surveyed in 2013 agreed that maintaining strong family relationships is a very important life goal.

Research Question:

“What is the typical number of hours that youth spend with their family?”

We did a survey titled “Youth and Family Time” Our research participants vary from students of polytechnic, junior colleges and ITE.

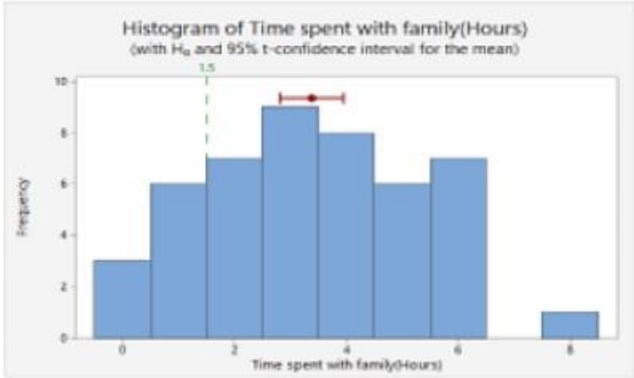
The survey questions are:

- 1. What is your age?
- 2. How many hours do you spend with your family in a day?
- 3. How many hours do you spend in school / outside of home in a day?
- 4. How many times do you dine with your family in a week?
- 5. Do you know about “Eat with your family day”?
- 6. If yes, have you experienced it?
- 7. What activities do you wish to do with your family?

Citation:App.msf.gov.sg. (2016). [online] Available at: <https://app.msf.gov.sg/Portals/0/Files/SSPC%20-%20Overview%20of%20Singapore%20Families-%20Final25th.pdf> [Accessed 14 Aug. 2016].

Team Members: Huril Jannah (P1541670), Myo Minn Thiha (P1530924), Woravuth Chong (P1531235)

Data



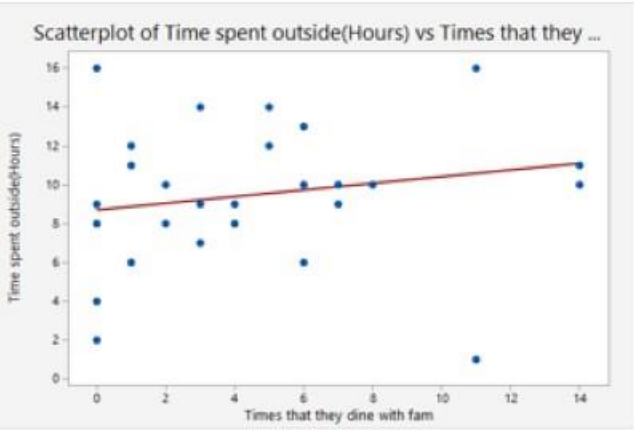
Descriptive Statistics

N	Mean	StDev	SE Mean	95% CI for μ
47	3.3830	1.9287	0.2813	(2.8167, 3.9493)

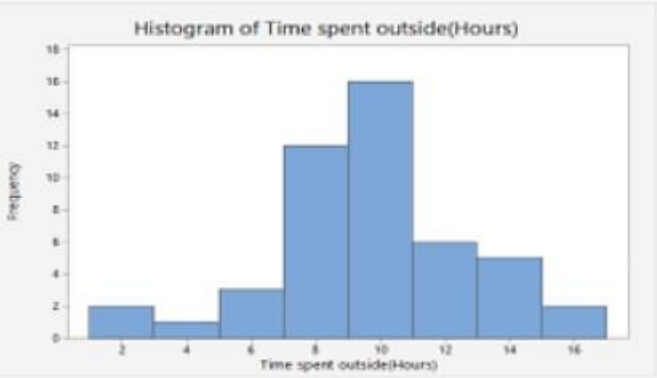
μ : mean of Time spent with family(Hours)

Test

Null hypothesis	$H_0: \mu = 1.5$
Alternative hypothesis	$H_1: \mu \neq 1.5$
T-Value	P-Value
6.69	<0.0001



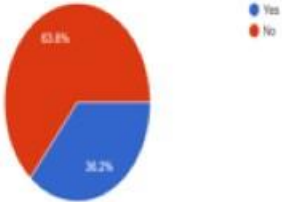
Regression Equation
Time spent outside(Hours) = 8.7066 + 0.1714 Times that they dine with fam



Descriptive Statistics

N	Mean	StDev	Minimum	Maximum
47	9.4468	3.0984	1	16

Do you know about "Eat With Your Family" Day? (47 responses)



Limitations:

youths who are being home-schooled and a larger group of youths can be surveyed.

Interpretation of results

From the data obtained, it is observed that on average youths spend about 3.3 hours with their families in a day. This contradicts the claim of youths spending only 1.5 hours a day with their family members.

A P-value of 0.0001 indicates that it is rare to see youths spend on average 1.5 hours a day with their family and hence, the claim that we got from the web can be rejected. We can say status quo is not true for our sample size.

However, as we can see from the scatter plot, even though they spend more hours with their family, it doesn't mean that they will dine with their family.

Centre for Fathering has been promoting “eat with your family” day to enhance family bonding annually but it seems that only 36% of the youths know about this annual event. Therefore, if the MSF would want to enhance family bonding through dining, they should work hard to ensure more organizations and schools are on board to promote this annual event and subsequently increase the occurrence.

Background information: A post by The Huffington Post claims that by uploading a photograph onto Instagram at the time of 5pm will result in the most number of viewership. We want to investigate and see if this claim is true.

Our Question: 🤔

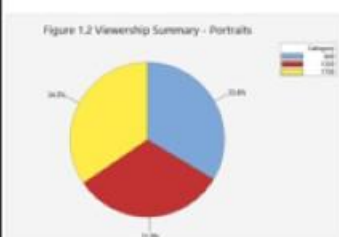
Does uploading a photograph onto Instagram at 5pm result in more viewership than uploading the photograph at other times of the day?

To set things right: 🧐

We would also like to investigate and see if there is a relationship on how different types of photograph to see if the claim is valid. In our investigation, we have decided to choose the genre of Food and Portraits.

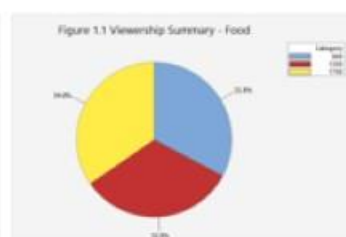
Our primary source of data comes from the viewership option that is made available in Instagram. Over the span of 1 month, we have uploaded a total of 84 photographs at 0900H, 1300H and 1700H. We have recorded the total viewership for each timeslot for a duration of 4 hours each.

The number of 'likes' have been recorded as well to determine the popularity between Food and Portraits.



Summary Statistics

Uploaded Time	Count	Percent
0900	3333	33.33%
1300	3333	33.33%
1700	3333	33.33%
Total	10000	100.00%



Summary Statistics

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0900	3333	33.33%
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1700	3333	33.33%
Total	10000	100.00%

A pie chart of the viewership summary for both Food and Portraits are shown in Figure 1.1 and Figure 1.2 respectively. From both the figure we can tell that the total viewership for Food is more than the viewership for Portraits. However, the viewership for both Portraits and Food had the most number of views at the time of 1700H, and the least during 1300H. This could be due to the social media habits of the netizens whereby the usage of mobile phone increased tremendously immediately right after working hours.



Instagram viewership?



Fun Fact!
Do you know that Portraiture photography garner more likes than Food photography? The next time you want to get more likes on your Instagram, upload photos of people!

In conclusion, we our research have shown that uploading a photograph regardless of the genre at 5pm will result in the highest number of viewership, in which correspond to the article's claim. So the next time you want to get massive viewership for your product advertisement, upload it at 5pm! Statistics have shown that there will be a heightened viewership when you upload your pictures at this 'golden hour'!

Citation:
Group 1: <https://www.huffpost.com/entry/instagram-viewership-at-5pm>
Group 2: <https://www.huffpost.com/entry/instagram-viewership-at-5pm>
Group 3: <https://www.huffpost.com/entry/instagram-viewership-at-5pm>
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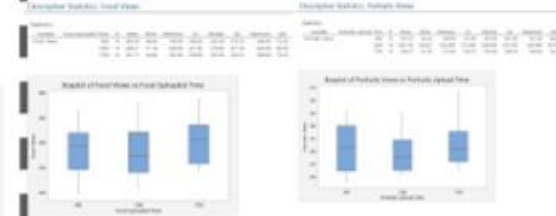
Done by:
Sri Mayang
(P1630738)
Teo Shao Zun
(P1631106)



Our limitations: Viewership can be inconsistent in certain cases as the the viewers may have irregular browsing habits and patterns. For example, an individual may choose to browse through his phone only on weekends. This will result in some minor inconsistency.



These linear regression graph shows us the relationship between the number of likes and the number of viewership. The result of both linear regression graph are not very promising as the R-square results tells us that the data is not very useful in determining the number of likes for every unit of viewerships. It is however, that for the food photography, the number of likes will be 0.13143 times of the viewership obtained. Similarly, for portraiture photography, the number of likes will be 0.03844 times of the viewership obtained.



The use of descriptive statistics(refer to the 2 tables above) helps us with the analysing of important details such as the average viewership that was obtained across the 3 different uploading times. From the statistics we can see that a photograph that was uploaded at the time of 1700H had more mean viewership regardless of the type of photography involved. In addition to that, both Food and Portraits had the most number of viewership when uploaded at 1700H. It is interesting to note that the spread of viewership were moderately consistent for photos that were uploaded at 5pm. From this descriptive statistics it does indeed shows that the viewership were ranked first among both types of photography at a uploading time of 1700H.



2-Sample t: Food Uploaded Time 1700, Food Uploaded Time 0900

Test

Test	Null Hypothesis	Alt Hypothesis	Test Stat	P-value
t-test	$\mu_1 - \mu_2 = 0$	$\mu_1 - \mu_2 \neq 0$	0.00	0.0000

2-Sample t: Food Uploaded Time 1700, Food Uploaded Time 1300

Test

Test	Null Hypothesis	Alt Hypothesis	Test Stat	P-value
t-test	$\mu_1 - \mu_2 = 0$	$\mu_1 - \mu_2 \neq 0$	0.07	0.9400



2-Sample t: Portraits Uploaded Time 1700, Portraits Uploaded Time 0900

Test

Test	Null Hypothesis	Alt Hypothesis	Test Stat	P-value
t-test	$\mu_1 - \mu_2 = 0$	$\mu_1 - \mu_2 \neq 0$	0.42	0.6770

2-Sample t: Portraits Uploaded Time 1700, Portraits Uploaded Time 1300

Test

Test	Null Hypothesis	Alt Hypothesis	Test Stat	P-value
t-test	$\mu_1 - \mu_2 = 0$	$\mu_1 - \mu_2 \neq 0$	1.31	0.0001

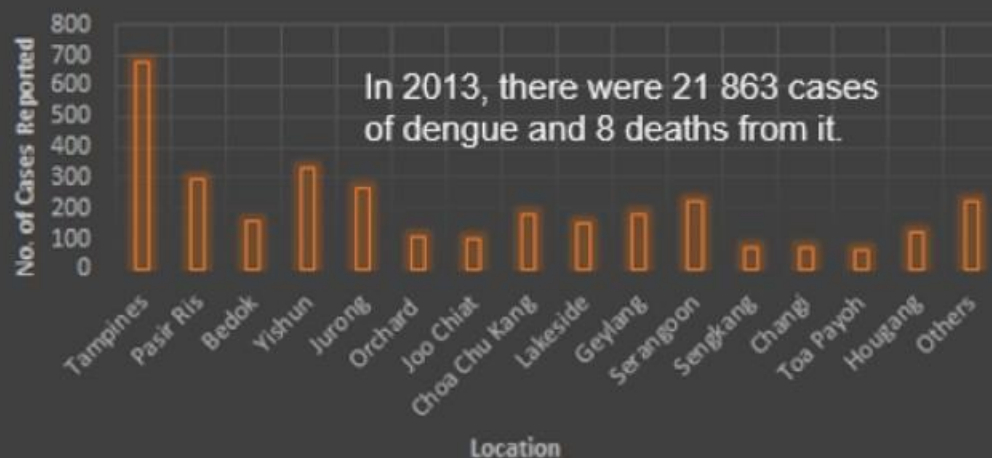
We have conducted Hypothesis testing on both Portraits and Food where our Null Hypothesis is the viewership at 1700H and our alternative hypothesis is the viewership at either 1300 or 0900H (refer to the attached table above). From the results, we can see that the p-value is significantly large and is greater than 5%. It is not surprising to see a result like this and there is insufficient evidence to reject the claim(refer to "background information"). We thought that it may only be applicable to Food photography only but the results are consistent throughout even with Portraiture.

Below Average Example

- Vague research question.
- Data collection are not done properly.
- Data analysis are erroneous.
- Graphs are not clearly labelled. Wrong choice of graphs.
- Explanations are not relevant to task.
- PowerPoint slide is cramped with unnecessary information.

Dengue Cases In Singapore, By Month and Area (2013)

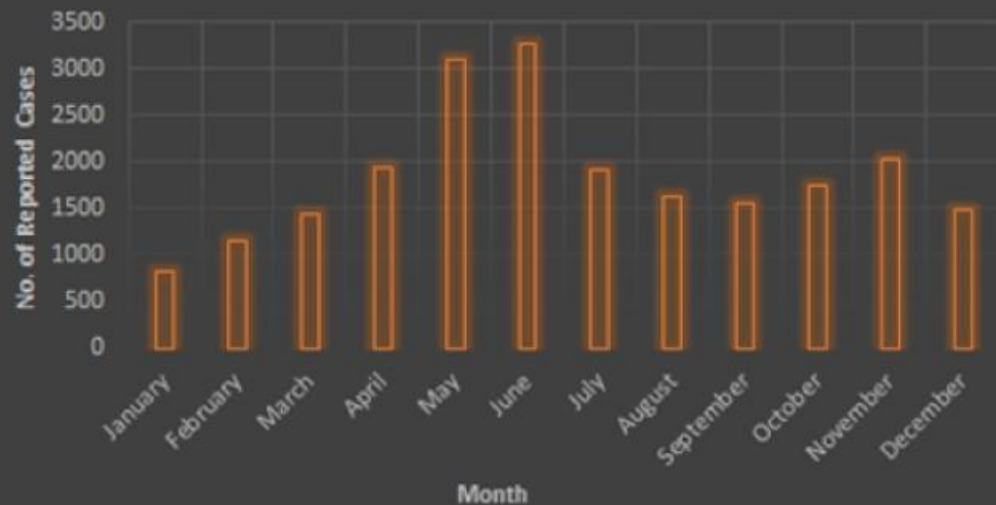
Dengue Cluster Cases (Only Data of More than 50 Cases) in 2013



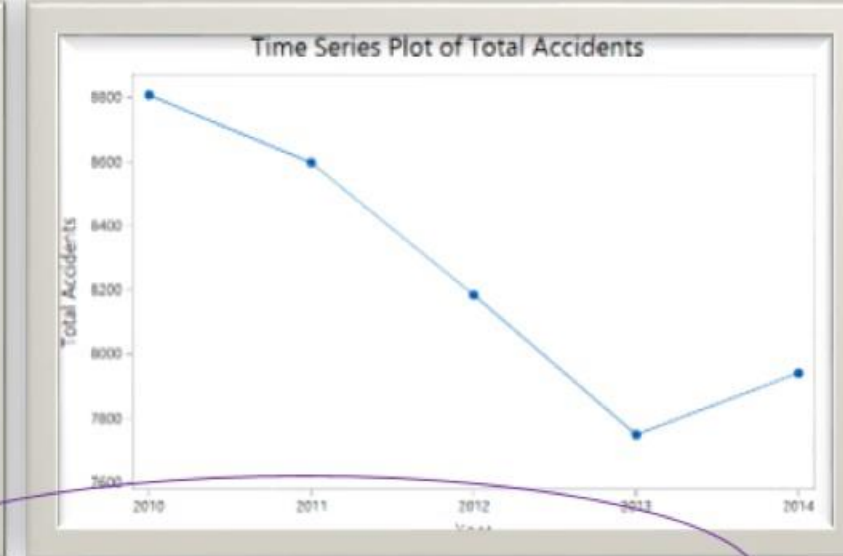
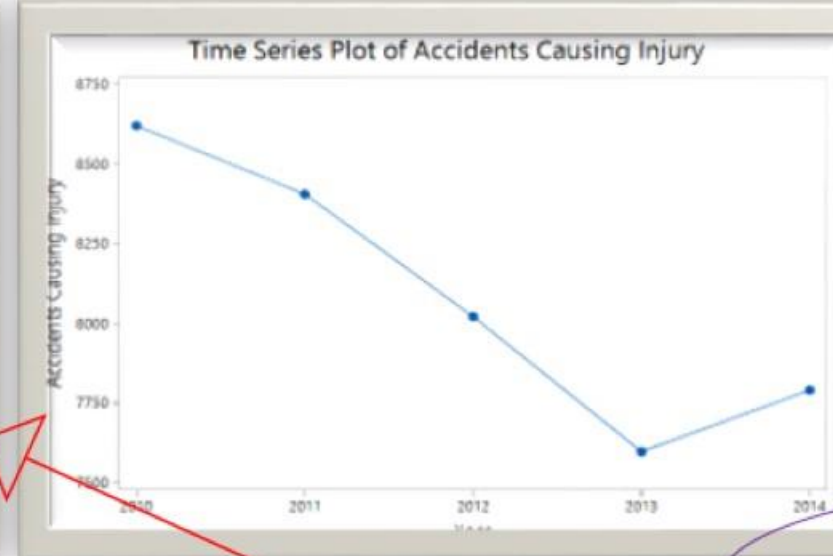
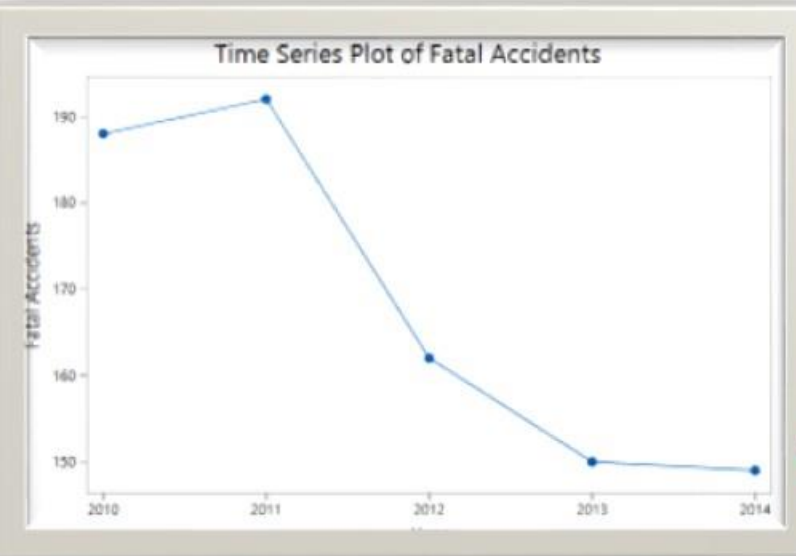
The most number of dengue cases reported in 2013 is during June, whereby approximately 3259 cases were reported and in Tampines with approximately 679 cases with an average of 200 cases in each area.



No. Of Cases Categorized Monthly in 2013



We can conclude that the month of May and June has the most number of dengue cases due to the dengue breeding season.



YEAR	FATAL ACCIDENTS	ACCIDENTS CAUSING INJURY	TOTAL ACCIDENTS
2010	188	8620	8808
2011	192	8405	8597
2012	162	8022	8184
2013	150	7598	7748
2014	149	7791	7940

QUESTION- How many accidents causing injuries and fatalities were there from 2010-2014?

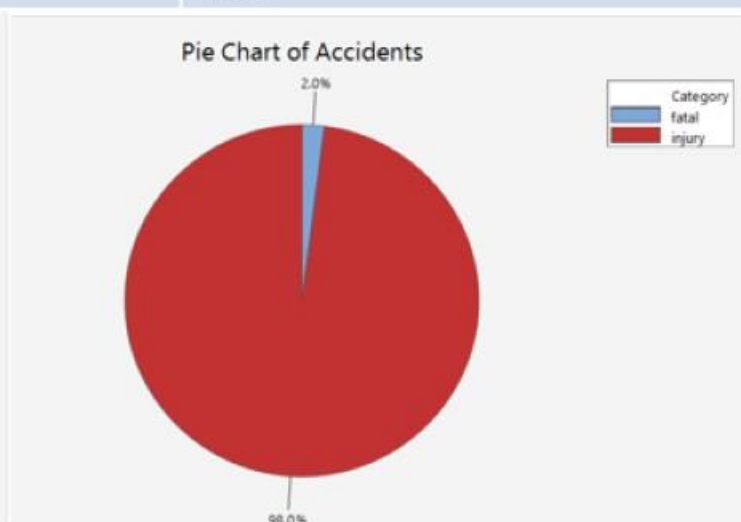
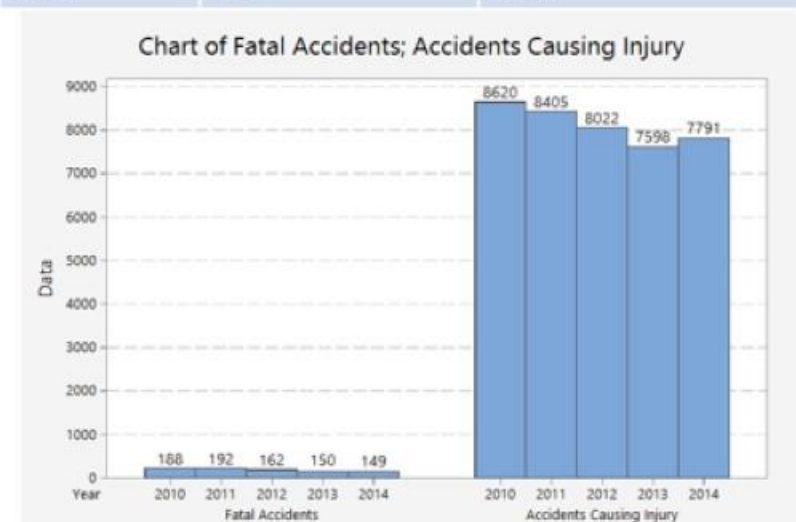
-For fatal accidents, as you can see from the graph, there was an increase in the first year from 2010-2011. However, it started to decline drastically from 2011-2012, and declined at a slow rate over the rest of the years from 2012-2014.

-For accidents causing injury, there was steady decline from 2010-2013, but a sudden increase from 2013-2014.

-Overall, for total accidents, there was a steady decrease from 2010-2013, however an increase from 2013-2014 mainly due to the increase in accidents causing injury from 2013-2014.

-As you can see from the pie chart, injury prone accidents make up most, to be exact 98%, of total injuries over the 5 years, while fatal accidents only make up a very small portion of 2%.

CITATION : http://driving-in-singapore.spf.gov.sg/services/driving_in_singapore/documents/Annual_Road_Traffic_Stats.pdf



Examples of past topics (for your reference)

Are "Monday Blues" Real?

The mystery behind your blues

Introduction

"Monday Blues" is defined as experiencing negative emotions, such as low-spirited, sluggish, annoyed mood of workers, students or employees who feel that a machine resembles a spring, then they going back to work, killing their joys and pleasing them. This could be due to anything from *boredom* to having no interest in the things that they do.

We would like to investigate if polytechnic students experience "Monday Blues" and why this would be two outcomes or perhaps on Mondays, which may affect students' spirits as that level of concentration during lessons and impact their performance in school. We also decided to make comparisons between Singapore Polytechnic students VS students from the other 4 polytechnics in Singapore.

Data Collection

We surveyed 201 Singapore Polytechnic (SP) students and 179 students from all the other polytechnics in Singapore through an online survey titled "Are 'Monday Blues' Real?". The survey includes questions such as "Do you think 'Monday Blues' exist?", "how much are you on Mondays compared to other days of the week?", "Do you look forward to Monday?" etc. We used this method as we can reach out to more students as compared to other methods such as face to face interviews. This method generated sufficient responses and served as a good base for our conclusion with at least 100 for each polytechnic.

SP VS Non-SP

Figure 6: Table of Number of Students' Monday Blues with Expected Count of Responses

	1	2	3	4	5	Total
Singapore Polytechnic	9	34	112	32	24	201
	6.89	24.86	103.67	36.61	26.38	
Non-SP Polytechnics	4	23	84	41	27	179
	6.12	22.14	92.39	34.99	24.02	
Total	13	47	196	73	51	380

Results

Figure 1: Bar Chart on how many students felt compared to other days of the week

Figure 1 shows that most polytechnic students chose either 3, 4 or 5 as a measurement of how much they were on Monday as compared to other days of the week, proving that students feel more "blues" on Monday.

Figure 2: Pie Chart on whether students look forward to Monday

Figure 2 shows a large proportion of polytechnic students who do not look forward to Mondays, implying that they are not eager to start the school week. This proves that majority of students go to school with a negative emotion.

Figure 3: Bar Chart on which day students felt the most change

Figure 3 shows that most polytechnic students felt a most change on Mondays, concluding that students do feel more "blues" than other days.

Conclusion

Polytechnic students DO indeed experience "Monday Blues".

Is Durian the King of Fruits in Singapore?

INTRODUCTION

Over 1 in 10 in S'pore is a fruit that has been crowned by many in the Southeast Asian region as the King of Fruit. It is likely that it is the largest and most expensive and it is, in fact, known as the King of Fruits in Singapore. In this study, we aim to identify the factors which may have an effect on preference for Durian. Other factors which may also have an effect on the preference for Durian. Other factors which may also have an effect on the preference for Durian.

METHODOLOGY

Data was collected from 100 respondents through an online survey and was analysed using SPSS. The data was collected from 100 respondents through an online survey and was analysed using SPSS. The data was collected from 100 respondents through an online survey and was analysed using SPSS.

DO SINGAPOREANS LIKE DURIANS?

Among the 100 respondents, 50% (50) reported that they like Durian, 50% (50) reported that they do not like Durian. This suggests that Durian is the King of Fruits in Singapore.

SINGAPOREANS' FAVOURITE FRUIT

Of all the fruits, Durian is the most favourite fruit in Singapore. This suggests that Durian is the King of Fruits in Singapore.

AGE DISTRIBUTION VS DURIAN PREFERENCE

Age distribution vs Durian preference. The chart shows that Durian is the most favourite fruit in Singapore.

GENDER VS DURIAN PREFERENCE

Gender vs Durian preference. The chart shows that Durian is the most favourite fruit in Singapore.

CONCLUSION

Durian is the King of Fruits in Singapore. This suggests that Durian is the King of Fruits in Singapore.

Social media and Self-esteem Do I really care?




Introduction

Self-esteem is a subjective evaluation of one's self-worth. In today's society, social media reaches out to millions of individuals of all ages daily, especially the younger generations. They often use the number of likes, views and shares as a tool of validation of acceptance amongst their peers when providing a tangible boost in self-esteem. Therefore, many believe that a negative correlation exists between social media and self-esteem; whereby, individuals may be pressured to portray themselves differently and lose the idea of self in order to seek approval online. Interestingly, studies have shown that males have a higher self-esteem than females. Thus, it is of our interest to find out if social media does affect self-esteem among the young people and if there is a difference in self-esteem level between males and females.

Objectives

- To find out if social media usage affects self-esteem of young people aged 17 – 21.
- To find out if the impact of social media on self-esteem differs between males and females.

Methodology

Referring to related studies, survey questions were developed to better understand the mindset of young people in Singapore, with regards to social media and their self-esteem. The chosen target population was individuals between the ages of 17 – 21 because they tend to be more actively involved with social media on a regular basis. To draw comparisons between both sexes, we recruited 50 males and 50 females volunteers. Volunteers were asked to rate each statement on a scale of 1 (Strongly disagree) – 5 (Strongly agree). These responses were then further categorized into 'Yes' and 'No'. 'Yes' refers to responses 'Agree' and 'Strongly agree' while 'No' refers to 'Neutral', 'Disagree' and 'Strongly disagree'. Chi-Square Test for Homogeneity (two-way table) was subsequently conducted for further analysis. We will use proportions to answer both questions.

Hypotheses

H0: There is no association between gender and self-esteem ($P_{male} = P_{female}$)
 H1: There is association between gender and self-esteem ($P_{male} \neq P_{female}$)

- Formulates the proportion of volunteers and the population whose response was "Yes".
- Hypothesis is applicable for all the questions.

Results

Based on Figure 1, the most popular social media platform used is Instagram while the least favourite one is Twitter.

An example of how we collated and analysed our data:
Item 4: Social media has gradually made me feel more self-conscious and dissatisfied with my physical appearance.

Table 1: Two-way table for Item 4		
	Yes	No
Male	12	38
Female	26	24

Chi-Square Test:
 Test statistic: 8.333
 Degrees of freedom: df = 1
 P-value: 0.004 ($\alpha = 0.05$)

Interpretation:
 Since P-value is lesser than 0.05, we can reject the null hypothesis. The test result is statistically significant at 5% significance level. There is some evidence that the proportion of males whose response were "Yes" is different as compared to that of the females. This tells us there is association between gender and self-esteem. Based on Item 4, we can see that the there is a higher proportion of females who responded "Yes" as compared to the males.

Conclusion

The results obtained suggests that there is a possibility that social media does indeed have a negative impact on one's self-esteem. For example, 40% of participants agreed that social media has made them feel less self-confident and dissatisfied with their physical appearance. Also, a fairly large difference in the self-esteem levels exist between males and females. Females seem to be more affected by what goes on in social media. For example, 41 responses to Item 4, 62% of the females agreed, 34% of the males agree as compared to Item 5, 40% of the females agreed, 24% of the males agree as compared to Item 6, 40% of the females agreed, 24% of the males agree as compared to Item 7, 40% of the females agreed, 24% of the males agree as compared to Item 8, 40% of the females agreed, 24% of the males agree as compared to Item 9, 40% of the females agreed, 24% of the males agree as compared to Item 10, 40% of the females agreed, 24% of the males agree as compared to Item 11, 40% of the females agreed, 24% of the males agree as compared to Item 12, 40% of the females agreed, 24% of the males agree as compared to Item 13, 40% of the females agreed, 24% of the males agree as compared to Item 14, 40% of the females agreed, 24% of the males agree as compared to Item 15, 40% of the females agreed, 24% of the males agree as compared to Item 16, 40% of the females agreed, 24% of the males agree as compared to Item 17, 40% of 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[illegible]

Do you think you are BEAUTIFUL?

Introduction

What is Beauty? The answer to this question is not the same for everyone. It is a subjective concept that varies from person to person. It is a complex concept that is influenced by many factors, including culture, society, and personal experiences. In this paper, we will explore the concept of beauty and its various dimensions.

The first step in understanding beauty is to define it. There are many different definitions of beauty, but most of them agree that it is a subjective concept. Some people define beauty as a combination of physical and mental attributes, while others define it as a state of mind. Some people believe that beauty is a universal concept, while others believe that it is a relative concept. In this paper, we will explore the various dimensions of beauty and how they are perceived by different people.

Analysis of Beauty

There are many different ways to analyze beauty. One way is to look at the physical attributes of a person, such as their face, body, and hair. Another way is to look at the mental attributes of a person, such as their personality, intelligence, and emotions. A third way is to look at the social attributes of a person, such as their status, wealth, and power. In this paper, we will explore the various dimensions of beauty and how they are perceived by different people.

One of the most common ways to analyze beauty is to look at the physical attributes of a person. This is often done by looking at the face, body, and hair. However, it is important to remember that physical attributes are only one part of a person's overall beauty. A person's mental and social attributes are also important factors in determining their overall beauty.

Conclusion

Beauty is a complex and subjective concept that is influenced by many factors. It is a concept that is often used to describe a person's physical attributes, but it is also used to describe a person's mental and social attributes. In this paper, we have explored the various dimensions of beauty and how they are perceived by different people. We have seen that beauty is a relative concept that varies from person to person. It is a concept that is often used to describe a person's overall appearance, but it is also used to describe a person's inner qualities. Beauty is a concept that is both simple and complex, and it is a concept that is often used to describe the most beautiful thing of all: a person.

References

1. Smith, J. (2010). The Psychology of Beauty. New York: Oxford University Press.

2. Jones, A. (2005). The Social Construction of Beauty. London: Routledge.

3. Brown, C. (2008). The Evolution of Beauty. New York: Basic Books.

4. Davis, E. (2012). The Cultural History of Beauty. New York: HarperCollins.

5. White, F. (2009). The Science of Beauty. New York: Hachette.

6. Black, G. (2007). The Art of Beauty. New York: Abrams.

7. Green, H. (2006). The Philosophy of Beauty. New York: Routledge.

8. Grey, I. (2004). The Psychology of Beauty. New York: Oxford University Press.

9. Hall, J. (2003). The Social Construction of Beauty. London: Routledge.

10. King, L. (2002). The Evolution of Beauty. New York: Basic Books.

11. Lee, M. (2001). The Cultural History of Beauty. New York: HarperCollins.

12. Miller, N. (2000). The Science of Beauty. New York: Hachette.

13. Moore, O. (1999). The Art of Beauty. New York: Abrams.

14. Parker, P. (1998). The Philosophy of Beauty. New York: Routledge.

15. Quinn, R. (1997). The Psychology of Beauty. New York: Oxford University Press.

16. Ross, S. (1996). The Social Construction of Beauty. London: Routledge.

17. Taylor, T. (1995). The Evolution of Beauty. New York: Basic Books.

18. Thomas, U. (1994). The Cultural History of Beauty. New York: HarperCollins.

19. Turner, V. (1993). The Science of Beauty. New York: Hachette.

20. Walker, W. (1992). The Art of Beauty. New York: Abrams.

21. Ward, X. (1991). The Philosophy of Beauty. New York: Routledge.

22. Webb, Y. (1990). The Psychology of Beauty. New York: Oxford University Press.

23. Wheeler, Z. (1989). The Social Construction of Beauty. London: Routledge.

24. White, A. (1988). The Evolution of Beauty. New York: Basic Books.

25. Williams, B. (1987). The Cultural History of Beauty. New York: HarperCollins.

26. Wilson, C. (1986). The Science of Beauty. New York: Hachette.

27. Wood, D. (1985). The Art of Beauty. New York: Abrams.

28. Wright, E. (1984). The Philosophy of Beauty. New York: Routledge.

29. Young, F. (1983). The Psychology of Beauty. New York: Oxford University Press.

30. Ziegler, G. (1982). The Social Construction of Beauty. London: Routledge.

Examples of past topics (for your reference)

- Is Uber cheaper in its estimated rides compared to Grab Car?
- Is there such a thing called “Home Team Advantage”?
- What are the factors affecting the winning position in F1 races?
- Are Singaporean teens living an unhealthy lifestyle?
- Is the percentage of teens speaking mother tongue at home lower than adults?
- Does education affect the rate of marriage in Singapore?

(refer also to the “Guide and rubric” document for further info)

	Statistical Poster Project	Students To do:
Week 1		
Week 2		
Week 3	Formulate Questions	<ul style="list-style-type: none"> •Form groups (3-4 persons per group) •Find a claim about a context / hypothesis to be challenged •Decide on one or two research questions based on the context
Week 4		
Week 5		<ul style="list-style-type: none"> •Get approval from Tutor regarding the research area/research question
Week 6		
Week 7		
Week 8	MST Week	
Week 9	Vacation	<ul style="list-style-type: none"> •Design survey forms & data collection plan, or, search and select a data set in archives •May decide to change research questions (subject to Tutor's approval)
Week 10		
Week 11		
Week 12		
Week 13	Analyze Data & Interpret Results (Descriptive Statistics)	<ul style="list-style-type: none"> •Import data into Minitab •Generate numerical and graphical summaries & interpret the results •Report results/interpretation into poster
Week 14		
Week 15	Analyze Data & Interpret Results (Statistical Tests)	<ul style="list-style-type: none"> •Generate Statistical tests such as Confidence Interval, Hypothesis testings etc & interpret the results •Report results/conclusions into poster
Week 16		
Week 17		
Week 18	Submission/Presentation	<ul style="list-style-type: none"> •Poster Ready for presentation
Week 19	EST Week	

Before you start collecting data, make sure your lecturer has approved your research question and data collection plan.

What to do now?

- Form groups, 3-4 persons per group.
- Go to Blackboard now to take a look at the poster templates.
- Find a claim about a context / hypothesis to be challenged
- Decide on one or two research questions based on the context

