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Exploring an Association between Socioeconomic Status and Social Media Addiction.

Section Page #

Abstract

To understand social media addiction, we must first consider the preexisting literature that describes the harmful effects of problematic social media use. Essentially, my review covers literature that has associated depression, anxiety, relationship satisfaction, sleep quality and academic success to heavy social media use. Problematic social media use opened the discussion of social media addiction, especially amongst adolescence. Current literature extends the ongoing conversation of mental disorders associated with social media addiction. However, studies fail to recognize potential factors that cause social media addiction to develop. In specific, an overlooked factor is socioeconomic status in relation to accessibility to digital technologies such as smartphones and stable internet connection. to explore a correlation between social media addiction and socioeconomic status. This is relevant to geography in that there may be a social inequality caused by varying socioeconomic status such as low and high. Socioeconomic status needed to be conceptualized in terms of accessibility to social media technologies. I proposed a study Seattle in which we conduct probability sampling between a low poverty high school and a high poverty high school.

Intellectual Benefits

Current literature fails to acknowledge potential variables that may lead to social media addiction. If my research is executed correctly, my findings will extend the conversation by introducing socioeconomics as a relative factor in social media use. Furthermore, by utilizing census income data, my research is nested within geographies of inequality. I'm not only presenting a case for problematic use can generate addiction, but I am also contributing to the intellectual conversation on social inequalities.

Practical/Policy benefits

Social media addiction studies have been redundant in that depressive like symptoms are positively correlated with social media use. It is also common for the addiction to develop among adolescents. Therefore, the practical benefits of my research would be gaining a new perspective on how social media addiction develops; and what factors to be weary of. By gaining awareness of the potential factors that lead to the development social media addiction, we can take steps to create a culture in which adolescents are less susceptible to addiction. For example, if it becomes common knowledge that heavy social media use is correlated to depression and anxiety— people would use social media less if they knew it was affecting their mental health.

Introduction

Within the past couple of decades, social media has seen a great increase in usage. Many people use social media, in fact, out of 7.7 billion people in the world, approximately 58% of people have used at least one form of social media (Dean 2021). Knowing that, it is hard to deny that social media has become an integral part of our society. At the surface level, social media can be perceived as ubiquitous and harmless, however, studies have shown that there are consequences derived from excessive use. Furthermore, we may fail to identify possible factors that lead an individual to become addicted to social media. Current studies on social media have typically focused on the after effects of social media addiction, such as psychological distress and mental health wellness. Griffeth's studies explore the association between social media addiction and relationship satisfaction levels, in which they explain how addiction can affect social development (Griffeths et al 2021). In relation to sleep quality and academics, Gica's research claims that social media addiction harms academic success (Gica et al 2020). And finally, Arikan's research explains how social media addiction is associated with depression and anxiety amongst young adults.

It is fairly evident that current discourse regarding social media addiction has been in regard to the negative effects. Thus, to gain a better understanding of what factors lead to social media addiction, I shall focus my literature review by dissecting existing literature and explore other variables that have not been discussed yet.

How Social Media is Used

Social media was first introduced around the late 1990s. A limitation to social media is that users need access to stable internet connection. Once connected, people use social media as a medium to socialize virtually. Social media use can vary for different populations, some use it for information seeking, some use it to engage with others, and some just use it for browsing.

Social media use has had profound positive influence globally. I would like to preface with the notion that social media use has provided opportunities in bringing exposure to unjust inequalities, and has helped connect communities across the world almost entirely virtually. While these are great ways to utilize social media, there are also ways that social media can do harm.

Social Media and Relationship Quality

Social media can become dangerous when overused, more specifically, when an addiction has begun to develop. Addictive behaviors can consist of, “preoccupation, mood modification, tolerance, conflict, withdrawal, and relapse” (Meshi, 2021). As previously mentioned, many of the current studies have shown varying negative effects. Most social media users are from the younger generation; therefore, it is worth looking into how social media addiction affects an adolescent’s development. In a study that explores the association between social media addiction and relationship satisfaction among young adults, Griffeths describes it as, “older aged adolescents and emerging

adults are inextricably connected with technology in terms of their social media use" (Griffeths et al., 2014). As adolescence transition into adulthood, it is during this time period where establishments of close relationships significantly affect emotional and social development. The study found that a high level of social media addiction leads to a decrease in relationship satisfaction and relationship quality. Furthermore, it was discovered that it is likely that the addiction can create deception between couples, and consequently cause breakups. These findings are in line with current literature, in that social media addiction can cause severe psychological distress, leading to anxiety and depression (Griffeths et al., 2014). This study is integral in understanding that social media addiction can cause unhealthy relationships, depression, anxiety, and ultimately harm emotional development among adolescence.

Social Media and Academic Success

Social media can be distracting, especially in an academic environment where students must utilize technology such as smartphones and laptops to complete school assignments. In Gica's study, they explore how social media addiction can negatively impact academic success amongst 226 medical students. One of the early findings is that excessive social media use at night has proven to harm sleep quality (Gica 2020). Good sleep quality typically suggests higher alertness, which would aid in academic studies. In addition, researchers found that medical students who spent more time on social media during the day performed on average more poorly in their studies (Gica, 2020). Surprisingly, they found that a correlation exists between sleep quality and social media use as opposed to sleep quality and smartphone use. This suggests that it is

exclusively the use of social media that hinders sleep quality, which ultimately negatively impacts academic success.

Social Media and Mental Health

Gica hypothesizes the use of social media as a means of escaping from the real world or redefining life. In this context, Gica claims that, “since people who use social media spend more time on it and are negatively affected by the lives of others in social media, their academic life may also be negatively affected,” Gica extends this by saying, “on the other hand, it may also mean people who see themselves as unhappy or unsuccessful in real life are more inclined to use social media” (Gica, 2020 p.316). These claims introduce the topic of personality traits and emotion and the association with social media addiction. For example, in a different study of 23,532 Norwegians, research suggested “a positive correlation between the narcissistic personality, measured by the Narcisstic Personality Inventory-16 questionnaire (NPI-16), and social media addiction” (Szczygieł 2020). However, on the other hand, “self-esteem assessed by the Rosenberg Self-Esteem Scale (RSES) was negatively correlated with social media addiction (Szczygieł 2020). [18] In contrast to the typical literature, Gica and Szczygieł begin the conversation of potential factors (such as depression, anxiety, self-esteem) that cause social media addiction, as opposed to only researching the harmful effects of social media addiction.

To conclude, the negative effects of social media addiction are well established, “However, an important question that remains unanswered is whether social media

addiction precedes or is a consequence of the distress felt [from said addiction]" (Szczygieł 2020).

While the literature I have presented thus far have extended the conversation on the harmful effects of social media addiction, I believe the current discourse fails to take into consideration an individual's socioeconomic status. Current literature does not explore why, nor how people become addicted to social media. Therefore, I intend to explore if socioeconomic status is an indicative factor in why people become addicted to social media.

Social Media and Socioeconomic Status as a Relevant Factor

To summarize, social media addiction at its worst is correlated with mental illnesses such as depression and anxiety, relationship dissatisfaction, poor sleep quality, and academic failure. However, as I have stated before, literature fails to explore the potential factors that cause social media addiction to develop. More specifically, literature fails to acknowledge that young people are susceptible to social media addiction at different levels. I have reason to believe that socioeconomic status is a relevant factor in social media addiction. I am curious to see if we can observe a disparity in social media addiction levels across areas of different socioeconomic status.

Firstly, I am conceptualizing socioeconomic status in relation to access to technology in a household. In this context, socioeconomic status can be described as, "a complex and multi-layered concept that refers to a hierarchical ranking according to the extent to which the family possesses or controls valuable resources such as

education, wealth, and social status. Thus, the concept of [socioeconomic status] reflects the family's access to real or potential resources" (Cao 2021). To elaborate, we can hypothesize that individuals are more likely to be addicted to social media if they are of high socioeconomic status-- they have full access to the internet, smartphones, and other technological gadgets as opposed to people with lesser access and of low socioeconomic status. However, Gang's research claims that, "adolescents who live in families with low [socioeconomic status] would face more economic pressure and challenges, which can increase the risk for depression. In contrast, adolescents who live in families with high [socioeconomic status] would have more resources to solve problems and deal with stressful events. Therefore, they would have higher life satisfaction and less risk for symptoms of depression than adolescents with low family [socioeconomic status] Chen et al., (2016, cited in Cao 2021).

Cao's findings are somewhat contradictory to my theory in that accessibility to technological resources may not be as significant as depression in correlation with social media addiction. Current literature has consistently correlated depression and social media addiction. The contradiction between my theory and current literature occurs when you consider depressive symptoms caused from low socioeconomic status can also be a driving factor in social media addiction and vice versa, people that have higher life satisfaction because of high socioeconomic status may not feel the need to use social media (Gica 2020). So, are depressed adolescents more susceptible to social media addiction? Or does accessibility to technology play a more significant role. **Thus begs the question, <u>is socioeconomic status a relative factor in social media addiction among adolescence?</u>**

METHODOLOGY

As social media addiction is most likely to develop in adolescence and emerging adulthood, the best approach is to conduct research on students enrolled in high school. This is because the students are likely similar in socioeconomic status which allows for a more reliable sample. Furthermore, since I want to assess if a disparity exists in social media addiction levels between areas of low socioeconomic status and high socioeconomic status, it makes the most sense to conduct research on a high poverty high school and compare them to a low poverty high school. According to USNews, Franklin High School in the Mount Baker neighborhood is 72% economically disadvantaged, whereas 12 miles North, Ingraham High School is only 29% economically disadvantaged (Pittman 2019).

Purpose of Research

Current studies have helped us understand the negative effects of social media addiction; however, they have failed to explain why and how social media addiction develops. Hence, my purpose of research is to explore and develop a rough understanding on how social media addiction develops. More specifically, my intention with my research is to explore if a correlation exists between my predictive variables (socioeconomic status, depression levels), and my response variable (social media addiction level) reason being it has not been researched closely yet.

My hypothesis is that students from the low poverty (wealthier) high school, Ingraham, will have higher levels of social media addiction. Vice versa, I hypothesize

that students from the high poverty (poorer) high school, Franklin, will have lower levels of social media addiction. Current literature however suggests that depression can be a strong factor in correlation with social media addiction. Therefore, in order to explain why social media addiction develops, I must explore if a correlation exists between students from low & high income background and social media addiction levels.

Population

Social media is relatively new, and its consequent studies have been historically conducted on young people for the reason that young people use social media the most. In Europe, it is estimated that 93% of 15–16-year-olds have a profile on any social media site (Livingstone, Mascheroni, Ólafsson, & Haddon, 2014, cited in Spilkova 2017). In addition, Spilkova's regression model confirmed that gender plays a role in selected online activities. The findings suggest that girls typically prefer online communication and are more likely to use social media (Bonetti, Cambell, & Gilmore 2010, cited in Spilkova 2017). Furthermore, said model found that the type of school an individual attended had a significant influence on differing levels of social media use. Spilkova explains it as, students at grammar schools typically have higher academic aspirations, this would give reason to utilize the internet for studying purposes, and other informational seeking purposes. Alternatively, vocational training schools provide more technical skills that are applicable to the job. Vocational training schools are typically less academically demanding, have more frequent problems, and a higher engagement in risk behavior-- such as developing a social media addiction. (Dzúrová, Csémy, Spilková, & Lustigová 2015, cited in Spilkova 2017).

Thus, in view of the fact that school choice has a significant effect on internet and social network use, I hypothesize that by comparing students from poor to rich highschools, I can expect to see varying levels of social media addiction. My population would be the sum of students at both Franklin, and Ingraham. As far as sample size, I will be building a regression model with the data that I will collect. Since my research only uses a couple of predictive variables, I have found that it is more than sufficient to cap my sample size to 50 students.

Mode of Observation

As I will be conducting research on students between two high schools, my preferred mode of observation would be survey research. I must preface that this mode of observation is susceptible to bias in the form of selection bias, response bias and non-response bias. With the help of some volunteer friends, I plan to request permission from the school's principal to hand out paper QR codes that are linked to a google form, throughout random classes on campus. Selection bias will occur here as only students with access to internet, smartphones, or a computer will be able to respond to my survey, potentially neglecting some students with less accessibility (effectively working against my research question).

However, in addition to the QR codes, I plan to attend some classes and manually collect data by pen and paper. This method ensures validity and representativeness of my sample. Response bias will occur because some students may not know the answer to my questionnaire—such as "What is your family's

combined household income?". In response to this bias, I plan to ask other questions that will serve as a proxy to determine socioeconomic status amongst the students.

I want to collect as much data digitally because the data will be much more accessible for me when I conduct my regression models using computer software. By setting up my online questionnaire to receive pre-coded responses, I can manage the data and manipulate it more easily free of outliers and wonky data.

Units of Analysis and Units of Observation

Since I am curious if socioeconomic status plays a factor in varying social media addiction levels, I intend to conduct analysis on students within their respective high schools. Therefore, my unit of observation is the student—as I will be directly observing the student's responses to my online survey. I will be talking, handing out my papers to students.

My units of analysis however would be the student's socioeconomic status which can be associated with the high school they reside in. I will be analyzing the socioeconomic status of students with relation to their school's poverty level. Therefore, my unit of analysis will be the student's high school, as I will be conducting analysis on the socioeconomic status of students and its relation to their household income. Which connects to geography in that socioeconomic status conceptualized as household income can be referenced as geographic areal data available from census.

Sample type and Strategy

Fortunately, since I am conducting research on students within their respective schools divided by high and low poverty levels, it is likely that students share similar socioeconomic status amongst their peers; this means that variance in the data collected may be lower, which is a good thing. Furthermore, since I will be building a regression model with the data I collect, it is an added bonus if my sample is representative of the population. Therefore, to ensure high reliability, it is very convenient for me that I can utilize a probability sample because the sample is representative of the population.

Also, since I know my sample will be representative of the population because students are already prematurely classified through their choice in high school, I can conduct a simple random sample. The benefits of this sample type and strategy are that it will be easy, convenient, and representative of my population. However, as I mentioned before in the research purpose section, my survey is inherently biased as it favors those with high accessibility to technological resources such as smartphones and computers. I am hopeful that by conducting a probability sample, I can mitigate that bias at least a little.

Although some of my data will be qualitative, I can quantify it by assigning numerical values and converting it into ordinal data. I plan to build a linear regression model with bootstrapping to increase validity and reliability of my research.

Introduce Variables

For my research, I will introduce three variables that I hypothesize correlate with social media addiction, some variables may be more significant – and in that case, the linear regression model will display a higher R^2. In order of most significance to lowest significance, my first variable will be socioeconomic status. Secondly, would be poverty level of high school. Thirdly, would be gender (although this variable may not have as much significance as the other two variables, I hope that it can provide some benefit in the case that my research will be used as secondary data for others).

Explanatory Variables

-Socioeconomic Status:

Conceptualization:

Socioeconomic status is subjective, as mentioned in my literature review, it is the combination of multiple aspects such as financial wealth, accessibility to resources, and parental education. However, for my research, I am conceptualizing socioeconomic status in relation to access to technology, more specifically, how easy is it for a student to have access social media technology? (smartphone, internet, cameras, tripods, laptops, etc). This is my predictive

variable, an indicator. These variables would be: household income, number of devices

Operationalization:

I plan to operationalize socioeconomic status as a combination of smaller variables that relate to accessibility to social media technologies. Firstly, I will inquire about their yearly household family income. I am aware that this is susceptible to validity issues as some students may not know their household family income. Therefore, I find it more intuitive to ask the student what their household income is in *comparison* to Seattle's median household income. For example, I would ask: "How does your household income compare to Washingtons median household income of $76,687?" (See Appendix I page 22, Prompt #1 Question 1.)

a.) I don't know / refuse to answer

b.) Less than

c.) Similar

d.) Greater than

This way, what would have been varying open responses with room for potential outliers, such as string data or null data (it happens). By giving pre coded responses, it becomes ordinal data once I operationalize it as numerical values such as: I don't know = 0, less than = 1, similar = 2, greater than = 3.

Operationalizing income data as ordinal data will affect my model significantly, as it will lose a lot of interpretability since values are pre coded. Furthermore, I included an “I don’t know/refuse to answer” option because I want to exhaust all possible responses. Some students may not know, as I have said earlier, and some students are not comfortable sharing that information, therefore by providing a response like this, it allows for me to exhaust all possible responses.

Secondly, I can calculate socioeconomic status in their response to my second survey question, “how many smartphones, tablet devices do you regularly use?” (See Appendix I page 22, Prompt # 1 in Question 2.) This question serves as a proxy, in the case that the first question yields an “I don’t know/refuse to answer” response, I can still determine socioeconomic status by the amount of smartphone/tablets a student uses. The responses would be pre-coded as such:

a.) 0

b.) 1

c.) 2

d.) 3+

By now I should have two data points collected: household income, and number of devices. I operationalize socioeconomic status as the combination of these two datapoints as such:

Socioeconomic status* = household income (0,1,2,3) + number of devices (0, 1, 2, 3)

From here, I will classify student’s socioeconomic status* as:

< 2 = Lower Class (no phone, but median household income)

3 – 4 = Middle Class (1 phone, but median household income)

> 4 = Upper Class (1 phone, but greater than median household income)

Some of the limitations of this operationalization is that it is extremely sensitive to 0 values. If a student responds with 0 in any of the prompts, it can result in an untrue assessment of the student's socioeconomic status. However, because I am conducting a regression model with bootstrapping, I'm confident that the distribution of responses will be normal. However, if there's an obvious skew in the data, I can simply redefine my equation for socioeconomic status. Therefore, this operationalization of socioeconomic status may suffer from construct validity.

Scale of Measurement

While household income is ratio data, as it has a defined 0 point, I operationalized the responses so that it can be ordinal data instead. Furthermore, with the addition of the second variable, number of devices (ratio data) my calculated variable for Socioeconomic Status* becomes Ordinal, as higher values signify an order to socioeconomic status. This method of classification will help make my regression model simpler to interpret.

Response Variable

-Social Media Addiction Level

Conceptualization:

I believe using the term social media addiction may result in students changing their response because they do not want to be considered addicted, this could be a validity issue as students may underexaggerate their social media use. Therefore, I find it more pleasant to ask, “How many hours do you use social media in a day?” The response to this prompt will provide ratio data—as there is a meaningful 0. Zero hours means that you do not use social media at all.

Operationalization:

I will measure social media addiction levels through their response to my survey question. For example, my survey will ask, “Throughout the day, how many hours do you spend on social media?” (See Appendix I page 22, Prompt #1 Question 3.) This will be an open-ended response locked to continuous data (some people may respond in string such as “a lot”).

Again, I will classify my results similarly to the previous variables:

0 = None

1 - 2 = Mild

2 - 5 = Moderate

5+ = Severe

Scale of Measurement:

My response variable, social media addiction levels is considered ratio data—as there is a meaningful 0. However, once I classify them and operationalize it into qualitative data – it becomes ordinal. The benefit of ordinal data is that it is easy to interpret in the regression model. A limitation of this variable is reliability, there may be days where there's an event in school in which social media use would spike for that day. Therefore, the results could be inconsistent depending on the day that I conduct my survey.

Timetable

ID	Task	End Date	12/05 – 12/15	12/16 – 12/25	12/25 – 1/1	1/ 1 – 2/ 1	2/1 – 2/8	2/9 – 4/2	4/3 – 4/20	4/21 – 5/20	5/21 – 6/1
#01	**Preparation Work** Get at least 5 Volunteers (friends, classmates, siblings)	12/15									
#02	Create Online Survey	12/ 25									

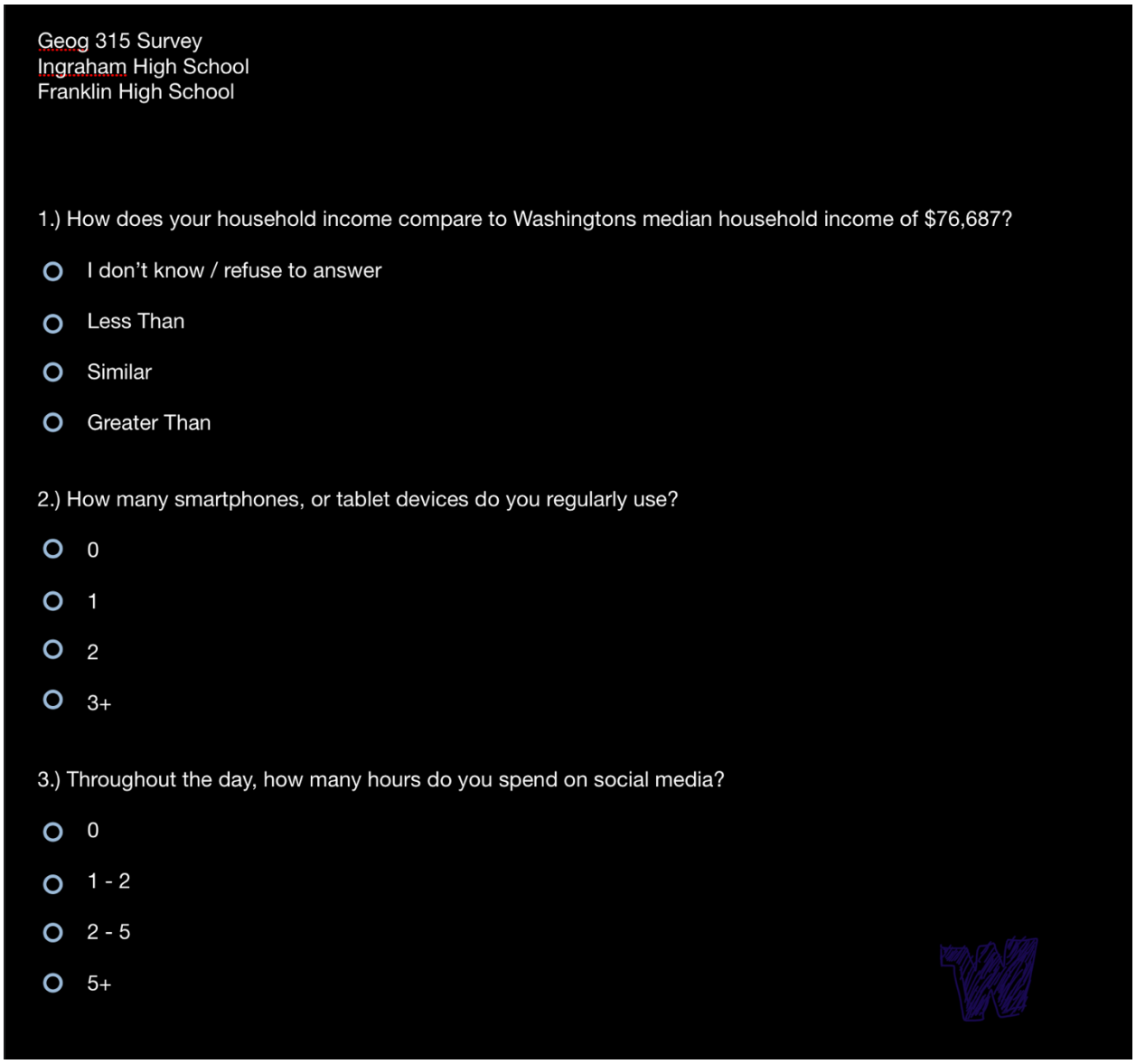
#03	Test if QR Code and Survey are functional	1 / 1									
#04	Request Permission from principals to conduct research on students and WAIT for response.	2 / 1									
#05	Ensure proper transportation and logistical work for the research	2/8									
#06	Field Work Data & Survey Collection Handing out QR codes and pen and paper surveys throughout the school	4/2									
#07	Data Cleansing Classification, filtering outliers	4/20									
#08	Data Analysis Create regression model, bootstrap, hypothesis testing	5/20									
#09	Summarize Results	6/1									
#10	Present Results	6/1									

#11	Feed Back	6/2									
#12	Next Steps	6/3									

Budget

	BUDGET NAME	Overall Time Frame Month or Quarter 1	Month or Quarter 2	Month or Quarter 3	Month or Quarter 4	TOTALS
01-Salaries					$1,000	
	Include yours if you would be paid. Also include any research assistants you would need.					
					$100	
02-Personal Service Contracts					$100	$1200
	Do you need to pay anyone for their services (e.g. Translators, Transcribers, Consultants)	NO				
03- Other Contractual Services						
	Do you need to pay an outside company (e.g. for advertisements)	NO				
04 - Travel						
	local travel, assume 0.25 cents per mile. Include airfare and accomodation.		$123.76 GAS	$123.76 GAS		$247.52
05 - Supplies and Materials						
	e.g. Software, Hardware, Instruments, Postage, Office Supplies	$14.99 PaperCardStock				$14.99
06- Equipment						
	Hardware, Instruments. (e.g. GPS)					
07 - Benefits						
	Calcuate 14.2% of your salary. Otherwise consult A&S instructions				$142.20	$142.20
08 - Student Aid and Other Grants and Services						
	e.g. your tuition	$25,000?				$25,000
	Total Direct Costs:					
	Amount Subject to F& A Costs: Typically this would be amounts in 01 thru 06					
	Indirect Costs (UW Overhead) : multiply Total Direct Costs by 54.5% to get total budget amount					
Total	**Total Amount of Budget:**	$14,499.56				

Appendix



Geog 315 Survey
Ingraham High School
Franklin High School

1.) How does your household income compare to Washingtons median household income of $76,687?

- I don't know / refuse to answer
- Less Than
- Similar
- Greater Than

2.) How many smartphones, or tablet devices do you regularly use?

- 0
- 1
- 2
- 3+

3.) Throughout the day, how many hours do you spend on social media?

- 0
- 1 - 2
- 2 - 5
- 5+

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