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Determinants of American Adults Experiencing and Viewing Online Harassment Differently

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Abstract: With the development of the Internet, online harassment becomes a significant problem nowadays. 41% of U.S. adults have personally experienced some forms of online harassment. Two questions are examined in the paper: First, what kinds of characteristics of adults make them regard offensive content online as a big problem? Second, what kind of characteristics of adults make them prone to online harassment? The data from the American Trends Panel Wave 74 September Survey are used. Logistic regression is applied to these two questions.For the first question, choosing a closer view whether offensive content online is too often excused as not a big deal or many people take offensive content online too serious is the outcome variable with several independent variables: gender variable, age group variable, education level variable, race variable and region variable. For the second question, whether the survey respondents have experienced any kind of online harassment is the outcome variable, with gender variable, age group variable, education level variable, race variable and region variable as independent variables. The results of the models show that gender, education level, and age are all important factors for both questions.

1. Introduction

As the development of the Internet, more and more offensive content appears online. Online harassment, also named cyberbullying, has been a significant public health problem for years. 41% of U.S. adults have personally experienced some forms of online harassment. The severity of online harassment has been increasing since 2017. [3] Besides, 7 in 10 Americans have experienced cyberbullying before they hit 18-years-old [8]. Different types of online harassment, like Physical threats, sexual harassment, stalking, calling offensive name, and etc are surrounding people of all ages.

Same to any kind of bully, online harassment causes severe results. Children targeted would face anxiety, fear, depression, low self-esteem, behavioral issues, and academic struggles. [9] As for adults, it may even lead to criminal consequences.

People are trying to deal with it for a long time, but compared with the situation in 2017, the percentage of people who had suffered more severe harassment and less severe harassment increased in a large scale. The percentage of people who had experienced multiple behaviors increased from 19% to 28% [4] [7]

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The US federal cyberstalking law is published and designed to prosecute people for harassing someone online [2], but there is still a long way to go to solve the problem. By the data from APT W74 (American Trends Panel Wave 74 September Survey held by Pew Research Center), most people still think that it is only fair or even poor to address online harassment or bully on social media platforms. However, many people don't treat it seriously. 55% of Americans claim that many people take offensive content they see online too seriously [4]. It leads to a question: what kind of characteristics make adults regard offensive content online as a big problem?

This paper further studies the online harassment by examining two questions: First, what kinds of characteristics of adults make them regard offensive content online as a big problem? Second, what kinds of characteristics of adults make them prone to online harassment?

Anderson addressed the first question in 2017. The survey that asked respondents to choose which statement came closer to their view: "Many people take offensive content they see online too seriously" or "offensive content online is too often excused as not a big deal." which was the main question examined in the paper. According to Anderson's paper, the data collected in 2017 by Pew showed that Democrats were more likely than Republicans to say that online harassment was a major problem, and women in both parties were more likely to regard online harassment as a major problem than men. [6] This result was given by calculating the percentages of Democrats and Republicans who vote for "online harassment is a major problem" separately. Since online harassment has been more severe since 2017, this question will be re-examined in this paper with the similar population, but more determinants will be tested with logistic regression model in this paper.

Sengupta and Chaudhuri addressed the question," what kind of teenage characteristics and behaviors make them most prone to online abuse", in 2010 using logistic regression. This question is similar to the one I will address in this paper, but only limiting to American teens. The author used the 2006 round of

Pew Internet™ American Life Survey in this paper, focusing on the question whether the teens had been contacted by strangers online or had been bullied in any form. The result of Sengupta and Chaudhuri's paper showed that demographic and behavioral characteristics of teenagers were strong predictors of online abuse. The test subjects will be transferred to American adults in this paper. Besides, likelihood-ratio test will be used to analysis the question. [1]

2. Data

The data from the American Trends Panel Wave 74 September Survey was held by Ipsos Public Affairs on behalf of the Pew Research Center and contacted from September 8, 2020 to September 13, 2020. The data of 10,093 ATP members who completed the survey will be used in this paper. The target population for Wave 74 was non-institutionalized persons age 18 and over, living in the US. The survey focused primarily on opinions on online harassment which is typed by six categories: Offensive name-calling, Purposeful embarrassment, Stalking, Physical threats, Harassment over a sustained period of time, and Sexual harassment. Among all of the questions in the survey, two of them are chosen as the outcome variables: to choose a closer view whether offensive content online being too often excused as not a big deal, value 0, or many people taking offensive content they see online too seriously, value 1, and whether the survey respondents have experienced any kind of online harassment(1 = having experienced online harassment, 0 = not).

For the purpose of this study, several demographic variables are used as independent variables: gender variable(1 = Man, 2 = Woman, and 3 = Other), party-lean variable(1 = Republican Party and 2 = Democratic Party), age group variable(1 = age of 18-29, 2 = age of 30-49, 3 = age of 50-64, and 4 = age of 65+), education level variable(1 = college graduate+, 2 = some college, and 3 = H.S. graduate or less), race(1 = White, 2 = Black or African-American, value 3 = Asian or Asian-

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American, 4 = Mixed Race, and 5 = Other), and region variable(1 = Northeast, 2 = Midwest, 3 = South, and 4 = West).

One of the key determinants for the outcome variables might be party-lean variable. People of different parity lean values might have different attitudes towards the system of government and supervision. Age might be an important predictor for the second outcome variable, because people of different ages have different online experience. They tend to focus on different messages online, which might cause the differences in the probabilities of suffering online harassment. Furthermore, people of different education levels, races, and so on would have different experiences, leading to the different choices when filling the questionnaire for the survey. Hence determinants include other demographic variables like ages, education levels, and genders. We also add categorical variables indicating broad geographical regions such as north-east, west, mid-west and south to control for geographical differences in the use of the Internet.

3. Results

3.1. Determinants of opinion towards online harassment

In the first model, logistic regression is used to address the first question with the outcome variable: whether offensive content online being too often excused as not a big deal or many people taking offensive content they see online too seriously. The independent variables for the model are gender variable, party-lean variable, age group variable, education level variable, race, and region variable. Table 1, calculated by R, contains the result for this model with estimates of log odds and the standard errors. The F GENDER2(female) has a log odds of -0.377 (odds ratio = 0.686), indicating that female group has an odds of regarding online offensive content immaterial versus treating it seriously that are 0.686 that of the male group, indicating that female adults are more likely to treat online offensive content seriously.

Also, the Democratic party-lean variable is significant. the Democratic party-lean group, with a log odds of -1.768 (odds = 0.171), has the odds ratio of disdaining online harassment versus not that are 0.171 that of the Republican Party, which means that adults with Democratic party-lean are much more like to take online harassment seriously. The two findings above are consonants with Anderson's research. [6]

All age groups other than 18 to 29 age group are significant. The age group 30 to 49 has a log odds of -0.076 (odds ratio = 0.927) and the age group 50 to 64 has a log odds -3.07 (odds ratio = 0.046). These gives the adults in age group 30 to 49 and in age group 50 to 64 the odds ratio of showing contempt for online harassment versus judging it as a big problem that are 0.927 and 0.046 that of the reference group(adults in age group 18 to 29) separately.

Furthermore, college education level and H.S graduate or less education level are significant. The adults with college education level, with a log odds 0.402 (odds ratio 1.49), and H.S. graduate or less education level, with a log odds 0.718, have odds ratio of showing contempt for online harassment versus judging it as a big problem that are 1.49 and 2.05 that of the people with college graduate+ education level. From the estimates, people with higher education level are less likely to judge online harassment unimportant.

The results shows that gender, party-lean, education level and age group are significant variables to the Model 1 under 1% significance level.

Compared with variables above, differences in races and the regions people live have less significance for whether people treat online harassment as a major problem or not. Resulted from different statistic methods, the finding is in conformity with Anderson's conclusion [6].

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3.2. Determinants of online harassment

In the second model, logistic regression is used to address the second question with the outcome variable: whether the survey respondents have experienced any kind of online harassment. The independent variables for the model are gender variable, party-lean variable, age group variable, education level variable, race, and region variable.

Table 2, calculated by R, contains the result for this model with estimates of the log odds and the standard errors.

Gender is a significant factor for whether people have experienced online harassment, but the finding in this paper is different from the result given in Sengupta's paper. The female group is significant. The female group has a log odds -0.128 (odds ratio 0.880), which means the odds ratio of suffering from online harassment that are 0.880 that of the male group. This shows that men are more likely to have the experience of being online harassed.

Age is another significant determinant. Younger adults are more likely to experience online harassment than the older adults. Adults in age group 30 to 49, with the log odds -0.558, in age group 50 to 64, with the log odds -1.087, and in age group 65+, with the log odds -1.749, have odds ratios of have experienced online harassment that are 0.572, 0.337, and 0.174 of that of the adults in age group 18 to 29 separately. The result also gives that the college education level with the log odds 0.206, has an odds ratio of being online harassed that are 1.22 of that of the college graduate+ and the H.S. graduate or less education level has the odds ratio that are 1.009 of that of the college graduate+. Asian or Asian American and Mixed race are significant when White is the reference group. Asian or Asian American and Mixed race, with log odds -0.190 and -0.471 separately, have odds ratio of being online harassed that are 0.827 and 0.624 of that of the reference group(White).

Overall, gender, party-lean, age group, education level, and race are important factors in model 2 under 1% significance level.

Table 1: Who is likely to view online harassment a major problem?

Variable	Estimates of log odds	standard error
Gender (omitted category: male)		
F GENDER2(female)	-0.377	0.046
F GENDER3(Other)	-0.329	0.287
party-lean(omitted category: Republican)		
F PARTYLEAN(Democratic Party)	-1.768	0.049
Age Group(omitted category: age 18-29)		
F AGEGROUP2(age 30-49)	-0.076	0.083
F AGEGROUP3(age 50-64)	-0.307	0.084
F AGEGROUP4(age 65+)	-0.54	0.086
Education Level(omitted category: college graduate+)		
F EDUCCAT2(some college)	0.402	0.052
F EDUCCAT3(H.S. graduate or less)	0.718	0.071
Race(Omitted category: White)		

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F RACE2(Black or African-American)	-0.11	0.084
F RACE3(Asian or Asian American)	0.059	0.129
F RACE4(Mixed Race)	0.113	0.112
F RACE5(Other)	0.276	0.125
Region(Omitted category: Northeast)		
F CREGION2	0.185	0.075
F CREGION3	0.206	0.068
F CREGION4	0.091	0.074

Table 2: Determinants of online harassment

Variable	Estimates of log odds	standard error
Gender (omitted category: male)		
F GENDER2(female)	-0.128	0.045
F GENDER3(Other)	0.102	0.31
party-lean(omitted category: Republican)		
F PARTYLEAN(Democratic Party)	0.101	0.047
Age Group(omitted category: age 18-29)		
F AGEGROUP2(age 30-49)	-0.558	0.078
F AGEGROUP3(age 50-64)	-1.087	0.08
F AGEGROUP4(age 65+)	-1.749	0.084
Education Level(omitted category: college graduate+)		
F EDUCCAT2(some college)	0.206	0.05
F EDUCCAT3(H.S. graduate or less)	0.009	0.068
Race(Omitted category: White)		
F RACE2(Black or African-American)	-0.19	0.082
F RACE3(Asian or Asian American)	-0.471	0.128
F RACE4(Mixed Race)	0.677	0.107
F RACE5(Other)	-0.11	0.12
Region(Omitted category: Northeast)		
F CREGION2	0.069	0.072
F CREGION3	0.064	0.065
F CREGION4	0.05	0.071

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4. Discussion and Conclusion

The study based on survey data of American adults supports the view that women are more likely to treat online harassment seriously than men. It also proves that Democrats deal with online harassment more actively than Republicans. Older people are more eager to solve this problem than younger people. Higher education level also gives people much stricter view of online harassment.

It was believed that women are more vulnerable to online harassment than men, because women are at the higher risk of suffering sexual harassment. However, the results show that men are actually more likely to have experienced online harassment than women generally. This finding is different with Sengupta and Chaudhuri's research. The difference in targets might be a reason, since male teens might like to make jokes to female teens online. The jokes, however, might be a kind of online harassment for female teens. In this case, female teens are more likely to experience online harassment than male teens in Sengupta and Chaudhuri's paper. This phenomenon might happen less frequently when the survey respondents change from teens to adults. Furthermore, video games, an important recourse of online harassment, might be another explanation for the finding that male adults are more likely to have experienced online harassment than female adults, because the higher proportion of male adults are playing video games. It is reported that 55% of gamers are male and 45% are female. [10].

Also, younger people face a higher probability of undergoing online harassment than older people, which might led by the fact that younger adults have higher frequencies accessing the Internet. It is remarkable that people with higher education level show less risk of sustaining online harassment.

Improving education development may be a potential way to solve online harassment, the ingrained problem, thoroughly, but it still needs a long time. Future research is needed to find and test more potential methods solving online harassment.

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