Role of Socio-Demographic on Social Media User Believability and Attitude towards Veracity of News about Covid-19 Pandemic

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Abstract

Purpose: Covid-19 is a phenomenon of enormous magnitude and relevance. Since the beginning of this health crisis citizens have been spending more time on social media to get updates about the evolving situation and it is impossible to undermine the possibility of users exposing themselves to fake news. The aim of the paper is to determine to what extent the socio-demographic variables influences the user believability towards a news and tendency to respond in form of like, comment and share.

Design/Method: A sample of 234 respondents participated in the online survey administered to test the research model. The questionnaire reliability was measured using Cronbach's alpha and path analysis and correlation matrix was used to examine the suggested research model.

Findings: The findings suggest the role of age, gender, educational level, religion and employment status and the extent to which they influence user believability and tendency to respond. Age and religion were found to be most significant predictors of user acceptance of a social media news and attitude to respond. Also, user believability influences the attitude to respond in a positive direction.

Practical Implications: This study contributes to society by addressing how the socio-demographics can affect user believability towards a news during pandemic situations.

Originality/Value: By applying theories, traditionally researchers have studied the impact of demographic factors that influences user acceptance of news on social media. We attempt to induce a model of how the socio-demographics variables influences the user believability and attitude to respond during Covid-19 pandemic.
Keywords: social media, sociodemographic, fake news, Covid-19 pandemic, user believability, response.

Introduction

Social media today reflects a global culture of distinct nationalities. It has turned out to be an enormous player in shaping public opinions, perception and attitude towards the information circulated through different platforms. Communication, networking, sharing of information and getting news updates are the prime reasons for social media usage. Today, social media has become a regular and widely accepted source of news. Studies show that 50% of Indian adults read news from social media. (José van Dijck, 2015)

With the growth of smartphone users and people spending considerable amount of time on social media to get the latest news updates, it is impossible to undermine the possibility of users exposing themselves to fake news and producing any serious damage. Different sources on social media like videos, audios and text content plays a major role in spreading of information. Information can be shared in two forms: self- sharing of information to others (self-disclosure) and sharing the information that is posted by other users (re-sharing). While sharing of information of good quality may help in building a well-aware community, resharing of misleading information can have negative effects such as spreading of false information. (Nagi, 2018)

The trustworthiness of the social media news and posts becomes a major issue especially during disaster situations like Covid-19. Covid-19 originated in December 2019 in Wuhan, China and rapidly spread to other countries turning out to be one of the biggest health crises in the world. On 11th March 2020, the World Health Organisation declared the disease as a pandemic as more than 114 countries were affected by it. Covid-19 is a highly infectious disease caused by the corona virus. It spreads from one person to another very quickly and thus the only prevention is social distancing and self-isolation. This has led to actions like imposition of social distancing and quarantine, restrictions on mobility, closing down of educational institutions, organisations and public facilities and even lockdown of an entire country. In such a situation the internet usage is also bound to increase as people move to online platforms for working, getting connected with their family and friends, education, entertainment and getting updates about the evolving situation, as a result getting exposed to fake news (Farid Rahimia, 2020). There exist various factors that influences the user believability and reaction towards the information circulated to them like cultural beliefs, political beliefs, source of the news, headline and format of the article etc. The paper seeks to examine to what degree and how the socio-demographic factors influence the users to evaluate whether the social media post or news related to pandemic Covid-19 is genuine. Given the significant social implications of reading and sharing of information, little research exists on the socio-demographic factors which influence the users to believe a particular news during pandemic situation Covid-19. The study aims to examine an individual's assessment of the "veracity" of social media posts in crisis situation Covid-19 based on the chosen socio-demographic factors.

The perceived believability of a news by the user can affect their response towards the news. The user might respond either by liking, commenting, sharing or opposing a post. Thus, the study aims to determine how likely the user would like, oppose, comment and share the post and the relationship between these variables. The paper also draws on numerous works of literature. The study then provides insights on the factors that contribute to user believability of a news by analysing the primary data using path analysis, hypothesis testing and correlation analysis collected through a questionnaire. We discussed the findings, lastly reported conclusions, and limitations and future scope.

Literature Review

Social Media and its Usage

From a past few years there has been a tremendous growth in use of technology. Internet has now become an integral part of modern society. People use internet for a variety of purposes such as emails, games, social media, entertainment etc. but the users seem to be most interested in social media (Santosh Ray, 2015). 75% of the users on internet use social media, as defined by Forrester research (Kaplan, 2010). Social media is an effective medium which allows the users to read, share and discuss different subjects (Tihomir Vranešević, 2019). Social media can also be termed as a collection of many online based applications where individuals can register themselves and get in touch with their families, friends and influential personalities (Kaplan, 2010).

Covid-19 and its Impact on Social Media Consumption

The outbreak of Covid-19 pandemic was an unprecedented shock to India and in order to curb the disease the government of India announced its first lockdown on 25th March 2020. All non-essential services and businesses including educational institutions, retails, government offices, places of worship, means of travel were stopped (Deblina Roya, 2020). A survey showed that the social media usage before the lockdown was 150 minutes per day on an average but the figures sprung to 280 minutes per day in the week after the lockdown i.e. 87% increase was recorded from a week before lockdown (Coronavirus and social media, 2020). During such a crisis situation many facts continue to evolve and myths and misconceptions are prevalent in the general population about the spread, prevention and treatment of the disease and thus many myths along with false news across Corona have been spreading rapidly. Users are interested in information related to the origin of disease, spread of disease, impact of pandemic on the economy, mortality rate, government decisions, nature and environment, advisories etc (Deblina Roya, 2020). Apart from exchanging general information people also use social medial in such a situation to carry out various kinds of actions such as building social networks, shopping for necessary items, working from home, online education, streaming of videos etc (Linda Plotnick, 2018).

Information Processing of News on Social Media During Covid19

There exist different mediums through which information can be read and shared on social media like video content, audios, photos, user-generated text, system generated content(location) and links to websites (Koohikamali, 2017). The users tend to easily believe the postings of events related to Covid-19 as they are threatened by the severity and the uncertainty of the situation. Negative emotions like anxiety, fear, aversion, stress is likely to arise during such a pandemic, as a result they tend to seek information to reduce uncertainty. This may lead people to accept facts that are inaccurate or deceptive because it can make them feel better or permit them to put the blame about what's happening. Usually the users do not tend to verify the credibility of the source from which they are seeking the information (Sijia Li, 2020) and the news sites transform and resurface the rumours as news which is then shared by the readers on different social media channels like twitter, Instagram, Facebook,

LinkedIn, YouTube etc. which is in turn is shared by their followers through their social media handle (Linda Plotnick, 2018). The facts show that incorrect information spread more quickly than the real information because users tend to believe the posts that match with their existing opinions and align with their beliefs (ANTINO KIM, 2019). Users read and share false information because either they believe it to be true or they intentionally want to spread wrong information and increase fear among citizens (Linda Plotnick, 2018). The believability or non- believability of a particular news or a post can in turn affect actions of the user. They can choose to read or not read the post and provide a feedback on it i.e. like, comment, share, and oppose. The user can like a post, comment on it but may not share it or the user may like the post without even reading it just because the post is shared by someone they believe or the heading of the news match with their existing beliefs. While some users may only read the post but not react on it. These are called as casual readers i.e. these are passive and observable users (Alan R. Dennis, 2019). Two complementary models that emerged in 1980 explain how the information is perceived and processed by the users. The Heuristic Systematic model suggests two ways in which information can be perceived. First, heuristically where the user makes minimal cognitive effort to judge the accuracy of the content and second is systematically which involves in-depth judgement of information. Under Elaborative Likelihood model, the information can be perceived in two different routes – central route where there is careful consideration of the information to examine its true merits and peripheral route where there is less cognitive effort involved to assess the positive and negative cues of information (Patricia Moravec, 2019).

Different Categories of in which Fake News spread during the Covid-19 Pandemic

In India, the primary source of spread of fake news is WhatsApp and then comes Facebook and Twitter (Goswami, 2018). The study showed that during the pandemic, the usage of Facebook, Twitter and WhatsApp increased by 75% (Coronavirus and social media, 2020). The momentum of fake news already took an upward trajectory since the announcement of Janata Curfew by PM Modi and the increase was consistent after the lockdown. The spread of misinformation can be classified in different categories:

Culture- Messages that are related to particular social, ethnic or religious group and have a strong cultural reference.

Prevention and Treatment- Messages suggesting remedies related to the prevention of disease in form of home remedies or herbal treatment and misinformation related to vaccine development.

Nature and Environment- Messages related to the impact of virus on nature, threats to environment and effect of pandemic on animals.

Business and Economy- Messages related to the impact of pandemic on economy, panic among the business, cash shortages, fake shutdown of businesses, salary cuts and employment.

Government Announcements and Policy Impositions- Messages related to government announcements and policy impositions on various events like lockdown, containment zones, different schemes/packages offered, availability of different transport modes to take back citizens to their native places, businesses, steps taken for treatment of disease etc.

doctored statistics- Messages related to the figures on active cases and death counts due to coronavirus (Syeda Zainab Akbar, 2020).

Case studies on fake news related to Covid-19

The consequences of fake news with reference to different categories are reviewed further

a)   Government Announcement message circulation through WhatsApp:
Due to the lockdown many migrants were unable to return to their native places, thus being away from their family without any proper shelter and food. To add fuel to this a WhatsApp message was circulated among the migrants in Delhi that the UP government has made buses available at the Anand Vihar bus terminal to take back the trapped migrants from Delhi to UP. This resulted in mass exodus at the bus stop. Later, Rajesh Chaube, the UP Bhawan manager said that the messages were fake and it was a conspiracy. The migrants being desperate to leave did not even bother to make call at the helpline numbers and confirm the news. The government then decided to quarantine the migrants to prevent any further damage. Thus, WhatsApp put a five-chat limit i.e. a user could now forward a message to not more than five people at once. This was implemented to put a speed breaker to the spread of rumours and fake news (Parashar, 2020).

b)   Curing Covid19 using tea:
A post went viral on different social media platforms claiming that Dr Wenliang had suggested a cure to coronavirus before dying due to same disease. According to him three compounds methylxanthine, theobromine and theophylline can help to cure the disease. All these compounds are present in tea and hospitals in china has started to serve tea 3 times a day to its patients. The message asked the users to share this to more people and make them aware of this but later WHO claimed that there is no evidence that tea is a cure to the disease and advised the users to not forward any such rumours regarding any remedies or tips (Ratna, 2020).

c)   Fake news against Muslims after they attend a religious gathering:
Tablighi Markaz is the regional headquarters of the Tablighi Jamaat in the Nizamuddin district of Delhi. Prediger's from India and abroad visit this place for Islamic texts debates and learning. On 30th March 2020, 300 of its leaders were isolated and screened for COVID-19 after it was found that Malaysians and Indonesians had been included in this meeting. By 4 April 2020, more than thousand people related to the congregation of Tablighi Jamaat were tested positive over the world. Many of the attendees took virus to their native states, threatening for a wider community spread. This led to boycott of Muslim individuals including medical workers and patients and also boycott of their businesses. Later Media Scanner, a fake news detection platform conveyed that more than 69 fake videos against Muslims were released (Sayed A. Quadri, 2020).

Impact of Sociodemographic Variables on Acceptance of a News on Social Media

As per the survey, 23% of users using social media channels have admitted that they have intentionally or unintentionally shared the false content and about 60% of the users report that they get confused over what news is to believed (Patricia Moravec, 2019). According to studies there are three elements make it difficult for the users of social medial to recognize the fake news. First one being people's mindset i.e. users visit social media for hedonic purposes i.e. seeking pleasure (entertainment, connecting with family and friends) rather than a pragmatic mindset (accomplishing work tasks). Second one is that it easy to put up a news on social media as users are given freedom of expressing their views and the news spreads when people read it, like it and share it. The last one being that users do not tend to confirm the source of posts they see, they just believe the posts that go with their beliefs (ANTINO KIM, 2019).

There exists numerous factors that influences user acceptance of a news on different platforms such as knowledge from different sources, direct experience, logic, fear or anger, political support, mental health, cultural beliefs and sociodemographic variables (Catherine Happer, 2013).

Today's generation or youngsters are more tech savvy but the study by Common Sense Media shows 44% youngsters still get confused to recognise whether a particular news or post is fake or not. The same study also stipulates that 31% of the kids between age 10-18 have shared at least one fake or inappropriate news or post. This raises the concern whether age, gender, occupation, literacy level plays any role in assessing and spreading of fake news (Álvaro Figueira, 2017). Researchers suggest that age, gender, education, religion, marital status, employment status, social status, occupation and income are the sociodemographic variables that can influence the acceptance of a news.

Age- Age is associated with greater emotional wellbeing and is inversely proportional to negative effects. Researchers have concluded that youth are more emotional and are more likely to respond to a news.

Education- Education helps in spreading awareness, influences a person's career choice and also transmits social values and ideals to the people in the society but education is indirectly affected by other factors also thus more research needs to be done on impact of education towards acceptance of a news.

Gender- Many studies have proposed that women are slow in adopting new technology and they are less probable to believe respond to social media news. (Giselle Rampersad, 2020).

Religion- Religion shape the lifestyle and mindset of people and the way in which a user consumes the news. It acts as a guiding principle towards the acceptance or rejection of a news. For example, a Christian reaction towards a post on related to the environment will be different than a Muslim. Where Christians are more alarmed by climate change and has a practical approach towards it, the Muslims have more of philosophical and ethical approach towards it (Aimie L.B. Hope, 2014).

Employment Status- The sudden occurrence of covid19 pandemic is an unprecedented shock to economy. This global health crisis is expected to have devasting effects on economy. The international monetary fund has declared that this will lead to a global recession which would be at least as bad as 2007-08 global financial crisis. Thus, many jobs throughout the world are at stake (Peterson K Ozili, 2020). Unemployment has adverse effects on mental health and social well-being of people. The major hit of pandemic in on labourers and workers who earn wages on a daily basis. As a result of unemployment, people are suffering from psychological issues and physical and relational problems. Thus, they are more prone to believe in the news related to the happenings in different sectors and governments announcements that can give them hope of a better future. (David L.Blustein, 2020)

Impact of Sociodemographic factors on News Consumption Pre-Covid-19 vis-a-vis during Covid-19 pandemic

To examine the relationship between sociodemographic variables and fake news consumption during Covid19, a survey was conducted by the researcher to analyse the user behaviour pre-covid19 and during covid19. Three variables were selected for the study – the frequency of news consumption, evaluation of information credibility and the ability to detect fake news.

1)   Frequency of news consumption:
The analysis shows that the news consumption on social media during covid19 increased by 49% with highest increase in the age category 18-29 years. Their news consumption on social media pre-covid19 was 39% and it increased to 86% during covid19. But data shows that as the news consumption about the pandemic seems to be universal as the age increases. Considering the education factor, during covid19 the consumption of news increased the most in least educated categories.

2)   Evaluation of information credibility:
The positive assessment of media coverage increased by 6% on social media platforms. The assessment by age showed that there was no change in figures for young people i.e. although their news consumption increased but the news failed to gain their confidence while for the elderly people assessment of media information observed a growth by 12% as compared to pre-covid19. Considering education, it was observed that low education level category gave more credibility to the information on social media during the crisis whereas the people with a good level of education reduced their trust in the posts related to Corona virus outbreak.

3)   Ability to detect fake news:
Coronavirus along with health crisis came with widespread circulation of fake news. Driven by   Poynter Institute and the International Fact-Checking Network,   the   CoronaVirusFact Alliance database reported 3800 worldwide circulating Coronavirus hoaxes. The results show that the percentage of people who could discover the falsehoods about the news linked to covid19 on social media rose by 25%. Regarding the sociodemographic variables, the younger age groups are the ones who displayed the highest ability to detect fake news and the oldest category (65 and above) were the ones who seemed to believe most of the news that they came across. Citizens with middle level of education were the ones who showed the highest capability in fake news detection

The coronavirus outbreak has led to growth of users using social and has transformed the way in which users consume the news on social media. But a major barrier is spread of fake news (Casero-Ripollés, 2020). Thus, with growing use of internet and social media a salient quote which is always to remembered- "What we learned is that there is no 'they.' 'They' won't tell us if there is danger, 'they' aren't coming to help, and 'they' won't correct bad information. We have to do that amongst ourselves" (Jeannette Sutton, 2008).

Objective

Objective 1: To determine relationship between five sociodemographic factors (age, gender, education, religion, employment status) and user believability and tendency to respond.

Objective 2: To study the relationship between different forms in which the user responds to a news.

Method and Material

The Questionnaire and Survey Administration

A survey was administered to test the research model from 22nd May, 2020 to 15th June, 2020. A total of 234 respondents completed the questionnaire out of 250 invited representing a strong 93% response rate. The respondents were social media users from tier-1 cities in India. Measurement items for the questionnaire were adapted from literature. The questionnaire was divided into three sections where the first section was more focused on getting the information about demographics of respondents which would help to test the proposed model. The second section of the questionnaire was focused on eliciting the responses from users in terms of Likert Scale (1 for least rating, 5 for highest rating). The questionnaire items were designed to capture the perception of users in six categories of news related to Covid19 (Culture, Prevention and Treatment, Nature and Environment, Business and Economy, Government Announcements, Doctored Statistics). This section of questionnaire was used to gather the evidence for the claimed hypothesis. The third section of questionnaire was related to measuring the tendency of user to respond to a news where the respondents were asked to rate how likely they tend to respond to a news by like, share and comment in terms of five-point numbered scale (1 for least rating, 5 for highest rating). This section was used to perform correlation analysis between the different types of responses. A reliability analysis was carried out on the perceived task values comprising of 16 items. Cronbach's alpha showed the questionnaire to reach acceptable reliability, α = 0.87 suggesting that the items have a relatively higher internal consistency. The below tale shows the descriptive data of respondents (Taber, 2018)**.**

Table 1: Descriptive data on respondents 1

		Respondents	
Category	**Sub-Group**	**n**	**%**
Age	Less than 18	10	4.27
	18–24	79	33.7
	25–40	73	31.19
	41–60	52	22.22
	60 and above	20	8.54
Gender	Male	95	40.59
	Female	139	59.40
Education	< High School	4	1.70
	High School	16	6.83
	Bachelor Degree	97	41.45
	Postgraduate	101	43.16
	Uneducated/ Don't know	16	6.83
Religion	Hindu	189	80.76
	Muslim	22	9.40
	Christian	23	9.82
Social Media Usage	< 30 minutes	8	3.41
	1-2 hours	41	17.52
	3-5 hours	124	52.99
	5+ hours	61	26.06

Model Specification

We attempt to specify a research model and analyze the impact of socio-demographic factors on user believability and attitude towards veracity of social media news on Covid-19.
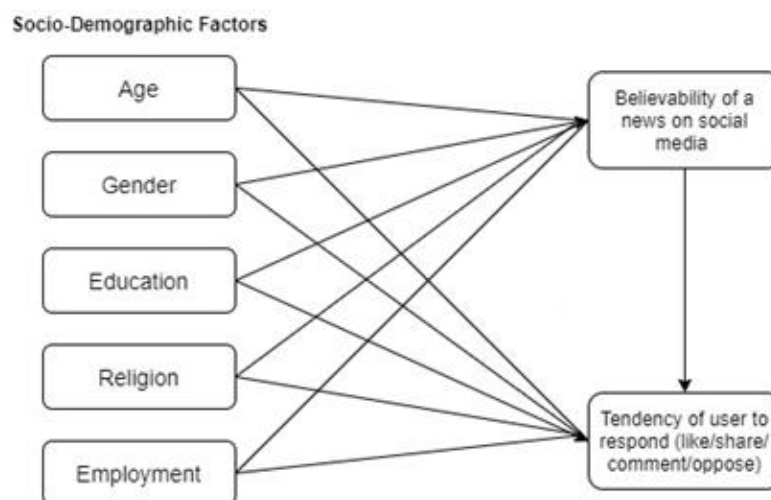
Figure 1: The proposed research model

The first section of the questionnaire was specifically designed to assess the proposed research model. Path Analysis was used to analyse the relationship between five chosen demographic variables and user believability and tendency to respond and how user believability influences user attitude to respond. Path analysis was used as it is well suited to test the complex relationships. R Studio tool was used for path analysis where the data collected through the first section of questionnaire related to the demographics was considered as independent variable and user believability and tendency to respond obtained through a Likert scale (numbered 1 to 5) were considered to be dependent variables. Furthermore, to analyse the hypothesized relationships an output path diagram was constructed. The path coefficients and 'Pr'-values obtained served as a basis to construct the path diagram and to determine how significant the hypothesized relationships are. The percentage of variance in the model was measured using the R-squared value. The final path diagram showed the structural relationships between the variables hence helped in attaining objective-1.

Along with the model assessment, the research also aims to gather evidence in favor of the alternate hypotheses. The second section of the questionnaire was specifically designed to gather the evidence for the hypothesis. Paired sample t test was used to conduct hypothesis testing.

H1: Age has a positive influence on acceptance of a news for citizens 40 years and older.

H2: Users with low education level are more likely to believe in the fake news related to remedies on prevention and treatment of disease as compared to user with high education level.

H3: Unemployed individuals are more likely to believe in the news related to the government announcements and policy impositions that impact the business and economy as compared to employed people.

The third section of the questionnaire was used for correlation analysis between the different forms in which the user can respond. The final correlation matrix generated helped in attaining objective-2.

Structural Model Assessment

For path analysis the data from first section of questionnaire has been used. For believability and tendency to respond the questions asked the respondents to give a rating from 1 to 5.

The Path Analysis results are as following.

```
>  model1 = 'respond ~ age + gender + education + religion + employment + believe
   believe ~ age + gender + education + religion + employment'
   fit1 = cfa(model1, data = rdata)
   summary(fit1, fit. Measures = TRUE, standardized = TRUE, rsquare = TRUE)
```

```
   Estimator                                        ML
   Optimization method                          NLMINB
   Number of free parameters                        13

   Number of observations                          234

Model Test User Model:

   Test statistic                                0.000
   Degrees of freedom                                0

Model Test Baseline Model:

   Test statistic                              356.491
   Degrees of freedom                               11
   P-value                                       0.000

User Model versus Baseline Model:

   Comparative Fit Index (CFI)                   0.960
   Tucker-Lewis Index (TLI)                      0.960

Loglikelihood and Information Criteria:

   Loglikelihood user model (H0)              -440.855
   Loglikelihood unrestricted model (H1)      -440.855

   Akaike (AIC)                                907.711
   Bayesian (BIC)                              952.630
   Sample-size adjusted Bayesian (BIC)         911.426

Root Mean Square Error of Approximation:

   RMSEA                                         0.002
   90 Percent confidence interval - lower        0.002
   90 Percent confidence interval - upper        0.002
   P-value RMSEA <= 0.05                            NA

Standardized Root Mean Square Residual:

   SRMR                                          0.000

Parameter Estimates:

   Standard errors                            Standard
   Information                                Expected
   Information saturated (h1) model         Structured
```

```
Regressions:
                  Estimate  Std.Err  z-value  P(>|z|)  Std.lv  Std.all
  believe ~
    age             0.173    0.047    3.654    0.000    0.173   0.197 ***
    gender          0.175    0.083    2.101    0.036    0.175   0.094 *
    education       0.103    0.055    1.882    0.060    0.103   0.089
    religion        0.556    0.049   11.310    0.000    0.556   0.596 ***
    employment      0.014    0.084    0.168    0.867    0.014   0.008
  respond ~
    age            -0.185    0.049   -3.758    0.000   -0.185  -0.212 ***
    gender         -0.160    0.085   -1.877    0.060   -0.160  -0.087
    education      -0.102    0.056   -1.839    0.066   -0.102  -0.089
    religion        0.397    0.062    6.416    0.000    0.397   0.429 ***
    employment      0.043    0.086    0.502    0.616    0.043   0.024
    believe         0.460    0.066    6.939    0.000    0.460   0.463

Variances:
                  Estimate  Std.Err  z-value  P(>|z|)  Std.lv  Std.all
    .believe        0.380    0.035   10.817    0.000    0.380   0.458
    .respond        0.390    0.036   10.817    0.000    0.390   0.476

R-Square:
                  Estimate
    believe         0.542
    respond         0.524


Signif. codes:  '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Figure 2: Path Analysis Results in R

The path analysis results show that there is 54.2% variance in believability of a news that an individual comes across on social media and 52.4% variance in user tendency to respond to that news. As RMSEA < .06, CFI > .95 and TLI <.95, it indicates a good model-data fit (Xia, 2019). As seen from results obtained above, under the regressions section, for an increase of 1 unit of age the believability increases by 0.17 units and tendency to respond decreases by 0.18 units, similarly for other parameters, an increase of 1 unit of gender, education, religion and employment the believability increases by 0.17, 0.10, 0.55, 0.014 units respectively and tendency to respond decreases by 0.16 and 0.10 for gender and education respectively and increases by 0.39, 0.04 and 0.46 for religion, employment and believability respectively. Using the results, the output path diagram was constructed as shown below. A combination of solid lines and dotted lines was used to indicate the relationships. The significant variables have been indicated using solid lines and the parameters that not strong predictor have been indicated using dotted lines.
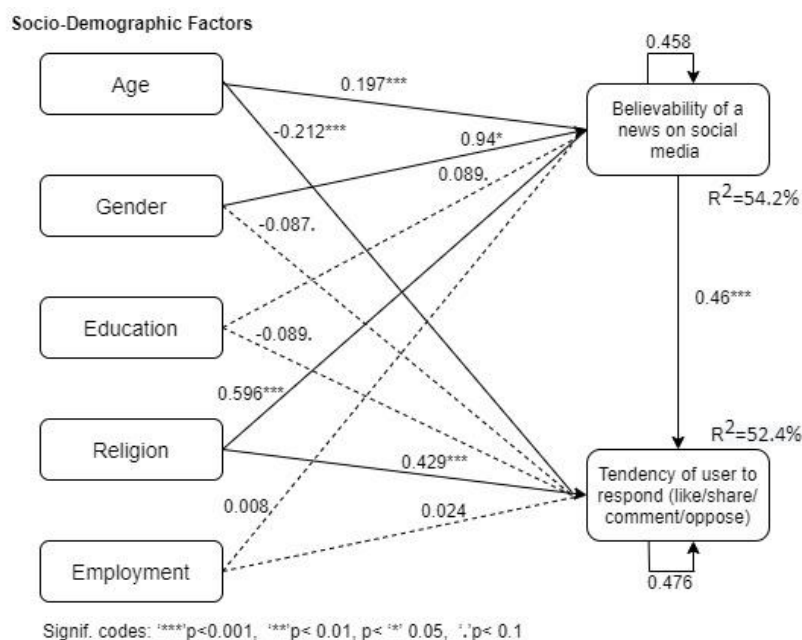
Figure 2: Output Path Diagram

If we consider 'Pr' values of the regressions section, In case of Gender the value is 0.036 and if subtract this value from 1, $1 - (0.036) = 0.964$ or that's equivalent to 96.4%, then it can be said with 96.4% confidence, Gender is a statistically significant variable for believability of a news, similarly health Age (b=0.197, $p < 0.001$) and religion (b = 0.596, $p < 0.001$) are the significant predictors of user acceptance of a news, together explaining 54.2% variance in the believability of the news, whereas Education (b = 0.089, n.s.) and Employment (b = 0.008, n.s.) were found non-significant.

Age (b = -0.212, $p < 0.001$), Religion (b = 0.596, $p < 0.001$) and Believability of a news (b = 0.596, $p < 0.001$) are all positively correlated with user attitude towards responding to a news, together explaining 52.4% variance in the response tendency of the users and Gender (b = -0.087, n.s.), Education (b = -0.089, n.s.) and Employment (b = 0.024, n.s.) have non-significant impacts on intention to respond to a news.

Hypothesis Testing

The data collected in the second part of the questionnaire was used for hypothesis testing by using paired t-test in R studio. The results indicate that H1 ($p < 0.001$) was significant at 0.05 level. Thus, we can say that individuals with age 40 and above are more likely to accept the news on covid19 that they come across on social media. H2 ($p < 0.001$) was also found to be significant. Thus, we say that well educated individuals are less likely to believe in the fake news related to remedies on prevention and treatment of disease as compared to less educated people. For H3, the test was found to be non-significant (p≮0.05), hence we say that employed people are more likely to believe in the news related the government announcements and policy impositions that impact the business and economy as compared to unemployed people as these announcement and polices indirectly affect their sectors and in turn job.

Correlation Analysis

A correlation matrix has been constructed between three main types of responses (like, share, comment) a user can provide on a social media post which helped us to determine how two variables are related to each other.

Table 2: Correlation Matrix Between Different types of responses

	Like a Post	Comment on Post	Share the Post
Like a Post	1.00	0.79***	0.70***
Comment on Post	0.79***	1.00	0.73***
Share the Post	0.70***	0.73***	1.00

The above matrix shows that there is a very strong considerable correlation between liking and commenting on a post (0.79), liking and sharing a post (0.70) and commenting and sharing a post (0.73) i.e. if a user likes a post then it is very likely that the user will comment on the post and share the post. Overall, there is a strong relationship between these variables and they seem to affect each other. R studio has a set of built in correlation diagnostic plot which was used to plot a matrix correlation plot.
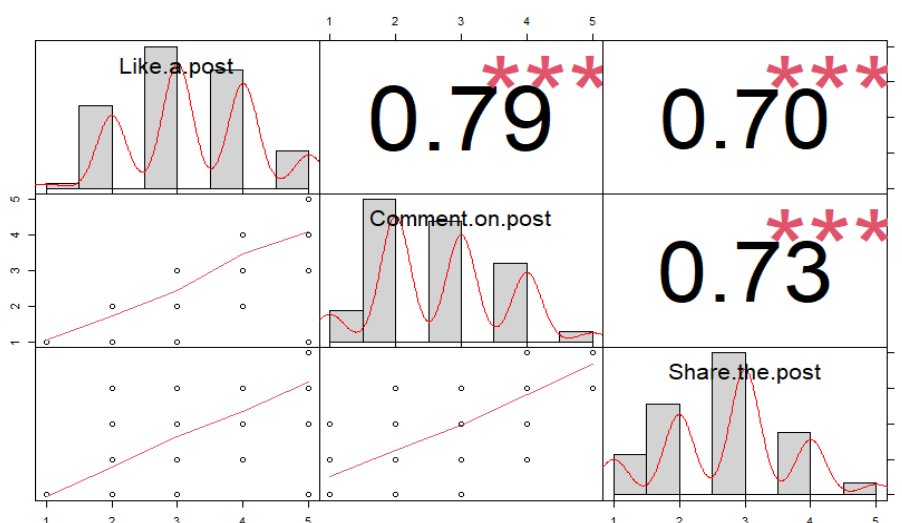

Figure 3. Matrix Correlation Plot

In the above plot, the diagonals represent the distribution each variable. All the three variables like, comment and share seem to follow normal distribution. The bottom side of diagonal represents the bivariate scatter plots with a fitted line and the top of the diagonal represents the correlation coefficients with the significance level determined using p-value.

Findings and Discussion

The study aimed to investigate to what degree the socio-demographic factors influence the user to believe a news during pandemic Covid-19 on different social media platforms and their tendency to respond to information. Out of the five factors chosen, age and religion have the most significant impact (3-star variables) on acceptance and responsiveness towards a

news as compared to other chosen factors. Second is gender which has a positive but weak effect on believability of a news while education and employment status are the least significant predictors. But education, however, can significantly reduce the spread of fake news, as it improves awareness and individuals are less likely to disseminate news without any confirmation of source of news.

Believability of a particular news was found to be a very significant predictors of user behavior towards responding to a particular news i.e. the more user believes a news the higher are the chances of responding on it (in form of like/comment/share). The negative path coefficient of age and education indicates that the as the age and educational level increases, the user tendency to respond to a news will decrease.

The findings of this study relate in both theoretical and practical terms to the literature. From a theoretical perspective, this research is among the first to address the role of socio-demographic factors in determining user believability and their attitude towards veracity of social media information during the pandemic Covid19. Although social media usage research has so far focused primarily on handling personal information and related privacy issues, this study pushes the research agenda towards understanding the social media as a general-purpose tool for disseminating information, where quality of information and socio-demographic factors plays a defining role. The study also has important practical implications. It provides an evidence-based analysis of the effect of demographic factors on adoption of fake news during the pandemic and decision of the user to disseminate the message. For individuals, it raises sensitivity that religion and age will contribute to increased criticisms of online news stories. Within families and society, more educated members have the responsibility of reducing the gullibility of others towards adoption and dissemination of fake news during such disaster situation. In quantitative analysis of the data the path analysis was as per the methods followed previous researches (Koohikamali, 2017) and results showed consistency with the previous studies which also state age and religion to be the most significant variables. The role of gender and education is also in sync with earlier research (Giselle Rampersad, 2020)

Conclusion

The research model presented shows the degree to which the five chosen variables – age, gender, educational level, religion and employment status affects the user believability and attitude to respond. Findings of the research suggest that age and religion influences both believability and tendency to respond. But gender only influences believability of user. User acceptance is also a major determiner of whether and how the user responds to a news. The paper has made a significant contribution in creating awareness that common gender and education stereotypes of those vulnerable to false news may not be always true.

Limitations and Future Scope: The study should be viewed with certain limitations. The study is a baseline attempt to investigate the impact of socio-demographic factors on user acceptance and tendency to respond towards a social media news during Covid-19 pandemic. First, the diversity of our respondents was not ideal - most of them were Hindus, young and

unemployed. However, the variations in responses related to gender, educational level and age indicates that the findings would be similar for a more representative sample of social media users. Second, we used a single online survey instrument and therefore could not achieve triangulation. Third, there are many socio-demographic factors that impacts user behavior and attitude but only a select key factors were considered for the study. In future research, we recommend to use sampling methods to have better representation of the population affected by the fake news. We will also incorporate other sources of information methods, such as focus groups, telephonic and personal interviews, and more literature searches. The researchers should consider more socio-demographic factors those were not considered in this study and specify a model. The survey can also have questions that would help researchers to understand the mindset of people in disaster situations like Covid19 that makes them believe news they come across on various social media platforms.

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