



ΠΡΟΓΡΑΜΜΑ ΜΕΤΑΠΤΥΧΙΑΚΩΝ ΣΠΟΥΔΩΝ ΣΤΗΝ
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ΠΑΝΕΠΙΣΤΗΜΙΟ ΜΑΚΕΔΟΝΙΑΣ

THEME:

“Influencers and their Contribution to the Effectiveness of the Covid-19 Vaccine Campaign”

ΘΕΜΑ :

«Πρόσωπα Επιρροής και η Συμβολή τους στην Αποτελεσματικότητα της Καμπάνιας για το Εμβόλιο Κατά του Covid-19»

A Thesis:

Submitted for partial fulfillment of Master's Degree in Business Analytics and Data Science
to the Department of Business Administration, University of Macedonia

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Date: July 20, 2023

Αφιερώσεις

Η εργασία αυτή είναι αφιερωμένη στα τρία μου παιδιά την Αννέτα, τον Γιάννη και την Ναταλία που με στηρίζουν καθημερινά και με παροτρύνουν να κάνω τα όνειρά μου πραγματικότητα, αλλά και στα αγαπημένα ζώακια μου που γεμίζουν τη ζωή μου με την ενέργεια και την αγάπη τους.

Dedications

This work is dedicated to my three children Anneta, Giannis, and Natalia who support me every day and urge me to make my dreams come true, and to my loving animals who fill out my life with their energy and love.

Ευχαριστίες

Θα ήθελα να ευχαριστήσω θερμά τον καθηγητή κ. Χατζηθωμά Λεωνίδα, Επίκουρο Καθηγητή του Πανεπιστημίου Μακεδονίας, που με ενθάρρυνε και με καθοδηγούσε σε όλη την πορεία αυτής της εργασίας και τον Καθηγητή του Πανεπιστημίου Μακεδονίας, Χρήστο Βασιλειάδη για τη γενναιόδωρη στήριξή του.

Special Thanks

I would like to thank Mr. Hatzithomas Leonidas, Dr., Assistant Professor at the University of Macedonia who encouraged and guided me throughout the course of this thesis, and Mr. Christos Vassiliadis, Dr., Professor at the University of Macedonia, for his generous support.

Declaration by student

I, Theodora Deligiorgi, hereby declare that the work presented herein is original work done by me and has not been published or submitted elsewhere for the requirement of a degree program. Any literature date or work done by others and cited within this thesis has given due acknowledgment and is listed in the reference section.

Theodora Deligiorgi

Place: University of Macedonia

Date: July 20th, 2023

Summary:

The master's thesis on "Influencers and their Contribution to the Effectiveness of the Covid-19 Vaccine Campaign" examines the prospect of implementing an Influencer Marketing strategy to support vaccination willingness in conditions similar to the pandemic Covid-19. This survey was based on the responses to a questionnaire that was distributed randomly to 304 people with internet access. The responders were requested to answer a series of exploratory mainly closed questions, intended to distinguish attitudes between Influencer Followers and Influencer Non-Followers. The literature review revealed two main variables. On the one hand, pandemic fear, and alternately, social anxiety factors were the variables to be considered for further analysis.

The scope of this research focused on gaining valid feedback as to the possibility to have Influencers shaping and directing public opinion amid the midst of a future pandemic crisis as presented from our recent findings about the Covid-19 pandemic. Statistical analyses such as Descriptive Statistics were performed to investigate the sample regarding demographics. Initially, the Normal Distribution Curves were applied to assess normality and charted with various Histograms for visualization. At a later phase, a Factor Analysis was carried out to elucidate the relationship between two or more variables. Linear Regression Analysis was used as a statistical method to examine correlation and degree of significant dependence of variables. Finally, independent t-tests for statistics were surveyed to compare the means of independent groups based on gender and Influencer followers or non-Influencer followers on social media platforms to determine the statistical correlation with the relevant population. The data showed that most of the population does not follow the influencers nor consider them credible and trustworthy regarding Covid-19 post content. However, the fear of Covid-19 and social anxiety are manifested with a majority of believers attesting that Covid-19 vaccines are protective and safe.

Keywords: influencers, pandemic Covid-19, social media, infodemic, opinion leaders, healthcare, Facebook, Instagram, covid-19 vaccines, fear of Covid-19, social anxiety

Περίληψη:

Η μεταπτυχιακή εργασία με θέμα «Πρόσωπα Επιρροής και η συμβολή τους στην αποτελεσματικότητα της καμπάνιας για το εμβόλιο κατά του Covid-19» εξετάζει τη δυνατότητα να χρησιμοποιήσουμε το Influencer Marketing για να επηρεάσουμε τις συνθήκες αποδοχής εμβολίων σε συνθήκες πανδημίας όπως η πανδημία Covid-19. Η συγκεκριμένη έρευνα βασίστηκε στην συμπλήρωση ενός ερωτηματολογίου που μοιράστηκε τυχαία σε 304 άτομα με πρόσβαση στο ίντερνετ, τα οποία απάντησαν σε μία σειρά από κλειστές διερευνητικές ερωτήσεις. Ο διαχωρισμός σε ακόλουθους και μη ακόλουθους των influencers επηρεάζονται από διάφορες μεταβλητές και κρίνονται με βάση την πρόσφατη πανδημία του Covid-19. Δύο βασικές μεταβλητές όπως ο πανδημικός φόβος, και το κοινωνικό άγχος προέκυψαν ως ενδείξεις για περαιτέρω ανάλυση από την ανασκόπηση της βιβλιογραφίας.

Η δομή του ερωτηματολογίου είχε ως βάση την εξέταση αυτών των μεταβλητών κατά πόσο μπορούν να διαμορφώσουν ή ακόμα και να επηρεάσουν ενδεχομένως την αποδοχή του εμβολιασμού ως κοινωνικό όπλο προστασίας κατά μίας νέας πανδημικής απειλής στο μέλλον και της συσχέτισης του δείγματος με τον σχετικό πληθυσμό. Με τη βοήθεια αναλυτικών εργαλείων όπως το στατιστικό εργαλείο SPSS, πραγματοποιήθηκαν αναλύσεις όπως Περιγραφική Στατιστική (Descriptive Statistics) για την ανάλυση των δημογραφικών στοιχείων του δείγματος μας. Στην συνέχεια, ερευνήθηκαν οι καμπύλες κανονικής κατανομής (Normal Distribution Curves) με την βοήθεια σχεδιαγραμμάτων, όπως Ιστογράμματα και η Παραγοντική Ανάλυση (Factor Analysis) για τον προσδιορισμό του αριθμού παραγόντων που προκύπτουν. Ανάλυση Γραμμικής Παλινδρόμησης (Regression Analysis) χρησιμοποιήθηκε ως στατιστική μέθοδος για να εξετάσουμε τη σχέση μεταξύ δύο ή περισσότερων μεταβλητών ενδιαφέροντος. Τέλος, η ανάλυση των ανεξάρτητων ομάδων στατιστικών δοκιμών (Independent t-tests for statistics) εξετάστηκαν για να συγκρίνουμε τους μέσους όρους των ανεξάρτητων ομάδων με βάση το γένος. Τα στοιχεία έδειξαν ότι ο μεγαλύτερος πληθυσμός δεν ακολουθεί τους influencers, δεν τους θεωρεί αξιόπιστους ως προς τα δημοσιεύματά τους όσον αφορά τον Covid-19. Επίσης, ο φόβος για τον Covid-19, και το κοινωνικό άγχος υπάρχει και μπορεί να αποτελέσει βάση για μία καμπάνια εμβολιασμού. είναι ακόλουθος ή όχι των influencers στις πλατφόρμες κοινωνικής δικτύωσης.

Λέξεις Κλειδιά : ινφλουένσερς, Covid-19 πανδημία, μέσα κοινωνικής δικτύωσης, διαμορφωτές κοινής γνώμης, τομέας υγείας, Facebook, Instagram, εμβόλια Covid-19, φόβος Covid-19, κοινωνικό άγχος

MOTIVATION:

The coronavirus pandemic caused a devastating economic and health crisis worldwide. The pure skepticism on vaccination that was evident at the beginning of the pandemic grew to be a strong rivalry among groups of contra-believers. The dynamics of social media interaction and the hidden power of spreading the news instantly through the social media network strongly influenced public sentiment and decision-making about Covid-19 vaccines. For the first time in history, we witnessed humans refuse treatment out of fear of the disease or even taking their own lives out of despair because they were victims of conspiracy theories. Opinion leaders and Influencers played a meaningful role in defining the course of the pandemic. Political ramifications existed for taking sides either pro or against vaccination. At the beginning of this health crisis various members of the Greek Orthodox clergy publicly took a stance against the vaccination, therefore making their congregation reluctant to abide by health regulations.

During these difficult times, it was mandatory to comprehend the reasons that affected decision-making about vaccination willingness in order to plan future crisis strategies against a new virus. Our objective is to research whether Influencer Marketing can be effectively implemented to lead society toward vaccine acceptance in health crisis management.

Definition of Research Aims and Objectives

An evaluation of how people perceived the pandemic will be given with the completion of this survey. To what extent influencers' presence on social platforms plays a significant role in forming public acceptance of vaccines is under consideration. This study attempts to compare recent findings to the past and function as a guide for future strategic implementation in a pandemic crisis by effectively communicating the necessity of vaccines.

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CHAPTER 1- Introduction

The Covid-19 pandemic caught humanity off guard, unable to face a globalized, highly transmitted, and lethal virus. Humans all around the globe were indifferent to a virus coming from Wuhan, China, and refused to predict as to the effect of the outcome. As the coronavirus increased in proximity, it became a matter of daily re-occurrence and extreme importance. In the beginning, only the Chinese authorities were serious about the severity of this health matter. Coronavirus grew into a tenacious and challenging research subject for health professionals. An enormous knowledge gap in the international and national level research appeared as humanity was unprepared for this Covid-19 crisis.

The topic of this pandemic broke society to its ground as families were split down in the middle in disagreement over the terms of how to deal with the coronavirus regulations. A new reality was forced into our lives. Public sentiment management in a pandemic era was found to be essential in order to implement innovative health regulation rules. The absence of specific guidelines to follow for managing the masses, in a health crisis had detrimental results. From our recent experience, the importance to pinpoint the factors affecting public opinion toward vaccination acceptance is enormous so as to be better prepared for future health outbursts of similar kinds..

The novelty of this pandemic demonstrated that deeper societal issues pre-existed that endangered and marked the course of this Covid-19 pandemic. The high momentum in the internet news spread and the inaccuracy and misinformation of their content concerning the Covid-19 pandemic was a barrier in the containment of the coronavirus. It was more apparent than ever before that public opinion and behavioral management were mishandled. In retrospect, the necessity to address the components that are responsible for effectively applying a health campaign in pandemic times must be considered.

As we still experience the aftermath of the pandemic of Covid-19, we need to assess whether the virus was the real threat or whether society was the real victim. At all levels, people were victims of the unprecedented phenomenon of fake news, an infodemic, so harmful in itself against the fight of the Coronavirus disease. The abundance of information online exchanged on social media platforms makes it quite challenging to control the sources of information in validity and origin. Globalization affected the pandemic management and

made it more difficult to implement uniform health strategies, due to ethnic differences in cultural beliefs, and domestic regulations.

This research aims to fill in this gap by completing a survey in order to discover the dependent variables under consideration in achieving vaccination willingness and acceptance. The Greek people were the target group in order to inquire and draw general conclusions about the population.

The survey's intent is to identify the role of Influencers as public opinion menders and how their internet presence on Facebook, Instagram, Twitter, YouTube, and other social media platforms affects the followers' public opinion on health issues concerning Covid-19. Another issue of primary concern is the ability of influencers to play a protagonist role in the crisis management of a pandemic by affecting vaccination predisposition, and to what extent their opinion is considered valuable, trustworthy, and dependable. It is worth investigating the negative rumors, and fake news on Social Media Platforms, thus minimizing any effect conspiracy theories hold. Research on the public reactions to the news posted by influencers on social media platforms is compared to the traditional ways of news information. Attitudes toward vaccination acceptance can be studied concerning the power of influence positively inflicted by Social Media Influencers are affected in their opinion formation about Covid-19 vaccines based on past historical events as to their pro-choice or against standpoint of view or are they operating based solely on the fear of the unknown? Society is imposing rules and regulations to overcome a health crisis and people are in need to conform.

A serious question posed in this research is whether the demographics of the population can demonstrate a dependency on shaping Influencer Marketing in order to assist in vaccination campaigns. How are social factors such as social anxiety, the fear of the unknown, and vaccination predisposition actually affected by the Covid-19 pandemic? This study will search further the variables that can be included in formulating the best mechanisms to influence the majority in order to adapt favorably to a vaccination campaign in a future endeavor against a world pandemic.

CHAPTER 2: LITERATURE REVIEW

2.1 Corona Virus Disease (Covid-19) -a world pandemic

In 2019, our lives were so abruptly disrupted by the known virus Sars-Cov 2 that led to the Coronavirus Virus Disease known as Covid-19, still prevalent today. Humanity faced a virus that grew fast into a pandemic, causing unprecedented global public health and economic crisis (Chen et al., 2022). In a time of world despair, scientists globally cooperated in an unprecedented manner in the discovery of the vaccine that would shield humankind in its fight against the disease of Covid-19. The nature of this global health crisis and its different geopolitical environmental backgrounds led to scientific globalism through international collaboration and the free exchange of scientific information (J. J. Lee & Haupt, 2021). Nevertheless, people became skeptical of this recent health crisis that led to unforeseen and cruel measures. As the number of fatalities from Covid-19 gradually increased, people became victims of conspiracy theories. This recent pandemic was compared to the devastating 1918 H1N1 flu the deadliest pandemic of the 20th century. Noteworthy is the fact that the “Spanish flu” pandemic took a death toll of fifty million people worldwide. In approximation, more than five hundred million were infected, close to one-third of the world’s population back in those days (The Discovery and Reconstruction of the 1918 Pandemic Virus, 2019).

At present, according to statistical data presented by the World Health Organization up to April 12th, 2023, a total of almost 6.9 million deaths resulted from the Covid-19 virus as provided by WHO Dashboard (Fig.2-*WHO Coronavirus (COVID-19) Dashboard*, n.d.) with reaching the highest pick on December 19, 2022, in the Western Pacific (Fig.1-*WHO Coronavirus (COVID-19) Dashboard*, n.d.). The World Health Organization’s statistical figures show that the pandemic is nonetheless still a part of humanity and is yet to see the end of this pandemic ([*WHO Coronavirus \(COVID-19\) Dashboard*, n.d.](#)).

Until November 2021, two hundred million confirmed and more than five million deaths from Covid-19 (Dong et al., 2020) were apparent. The Coronavirus Disease -19 (Covid -19) pandemic is one of the worst contemporary health crises. To stop the virus’ spread, governments around the world had to implement harsh and intrusive measures, like

lockdowns and curfews (Hale et al., 2021). Stay-in-home sanctions with severe implications, if failed to comply with the new rules, were inflicted on countries worldwide. South Africa was such an extreme case of enforcing exceptionally strict lockdown regulations while suffering from low levels of well-being (Greyling et al., 2021). Social media platforms played a crucial part in spreading the news and forming public opinion, causing their members to become rivals, and dispersed into two groups, the pro-vaccine group, and the anti-vaxxers. The second group known as Anti-vaxxers is known as the people opposing vaccination because they consider it to be harmful (Oxford Advanced Learner’s Dictionary, 2023).

During the time of the analysis of the research results, on May 5th UN. The World Health Organization officially declared the termination of Covid-19 as a “global health emergency”. According to the WHO’ Coronavirus Dashboard presenting the compilation of relevant data since the start of the pandemic, the overall number of reported cases worldwide is 765,222,392 with the most current figure of 6,921,614 mortalities and 13.3 billion dosages of vaccine administered. An ending with a warning, as Director-General of WHO, Tedros Adhanom Ghebreyesus explains in his official statement, “that the risk remains of new variants emerging that cause new surges in cases and deaths” and continues to reflect on the impact of the pandemic that it had “exposed political fault lines, within and between nations. It has eroded trust between people, governments, and institutions, fuelled by a torrent of mis- and disinformation.” ([WHO Coronavirus \(COVID-19\) Dashboard, n.d.](#)).

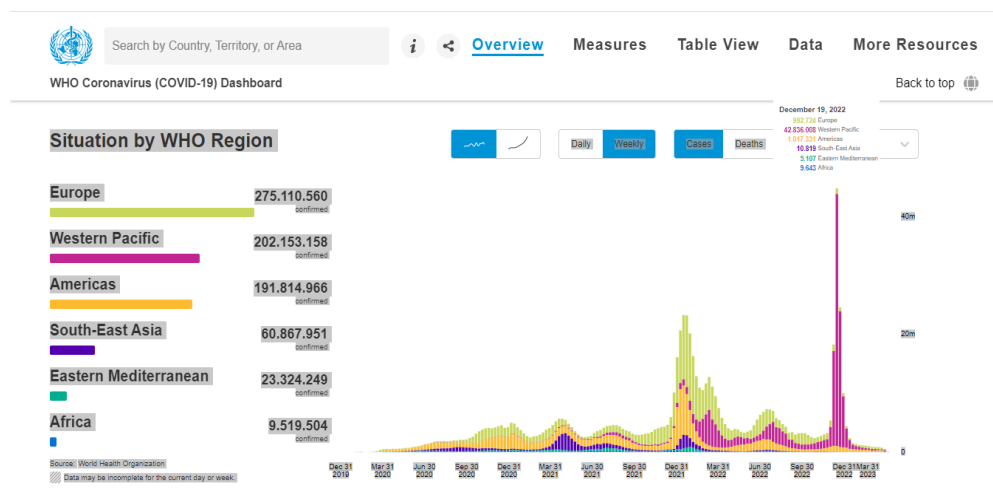


Figure 1 Global Situation Covid-19 as presented on April 12th, 2023 (WHO Coronavirus (COVID-19) Dashboard, n.d.).

Source: WHO Coronavirus (COVID-19) Dashboard. (n.d.). WHO Coronavirus (COVID-19) Dashboard With Vaccination Data.

<https://covid19.who.int/>

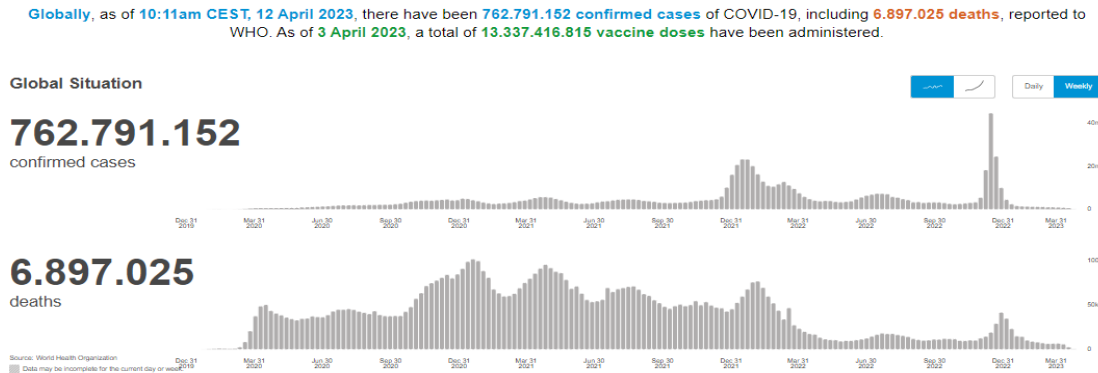


Figure 2 Globally confirmed cases and deaths on April 12, 2023 (WHO Coronavirus (COVID-19) Dashboard, n.d.).

Source: WHO Coronavirus (COVID-19) Dashboard. (n.d.). WHO Coronavirus (COVID-19) Dashboard With Vaccination Data. <https://covid19.who.int/>

The emergence and widespread use of social media platforms has brought about a considerable shift in the way people communicate with each other (Coombs, 2009). Individuals can easily and freely interact with one another through numerous social media sites, opinion-sharing online, forums, blogs, or multimedia messaging and share their personal experiences or feelings about diverse subjects of common concern (Bamakan et al., 2019).

Research shows that social media has altered interpersonal communication among contemporary people as they benefit from free access to knowledge and information. What was formerly a Sunday newspaper reading to see the daily news, now it is Twitter just one click away from today's trends. Modern society uses online communication constantly. According to the author Defede (2021) in the article: "How Social Media is Influencing the Way People Communicate Verbally and Written", social media influences the way people communicate (Defede et al., 2021). Social media platforms are cost-effective and efficient means of communication that can connect people across the globe by intercommunication. In the survey by Defede et al. (2021), Instagram is regarded to be the most popular platform with 81.3% (160 participants) with Facebook following second with 60.1% (122 participants) and WhatsApp third with a score of 57.6% (117 participants), and in the fifth place was Twitter with 30% of the votes. LinkedIn ranked last in participants' preferences (Defede et al., 2021 Journal of Marketing Studies Vol. 13, No. 2 2021 5).

2.2 Influencers, the Opinion Leaders on Social Media Platforms

On social media, certain individuals possess a great capacity for influencing others based on their individual experiences, opinions, emotions, and feelings related to miscellaneous topics, including products, services, politics, and economics. This free flow of information gives certain users the ability to sway the opinions of others or guide them toward a related topic. The opinion leader's personal experience, mindset, goals, or charismatic personality are all factors that enable them to evoke strong emotions in their followers (Bamakan et al., 2019). In this study by Bamakan et al. (2019), a concern was raised that techniques must be found to see deeper into the problem of identifying opinion leaders due to its "wide applications in reality" for marketing and societal analytics (Bamakan et al., 2019). According to Goff, (2003), a leader is widely accepted by society, has radiant or inherent charisma, and has specific characteristics. In times of crisis, Weber (1978) states that the appearance of a charismatic leader is evident under extreme economic situations or intense political upheavals (Sanders, 2015).

2.3 Community Containment and Social Media Influencers

The authors Wilder-Smith, A., MD, and Freedman, O., MD drafted an article in a medical travel journal investigating what measures should be taken against Covid-19 at a time close to its outburst when the vaccines or treatments were not yet discovered to restrain the pandemic and its effects. These "old-type public health tools over SARS" remedies were primarily "isolation" that is the separation of the contaminated people from the non-infected (Tognotti, 2013). Secondly, "quarantine" a word originating from the Italian word "Quaranta" meaning forty, (Tognotti, 2013) is one of the oldest practices dating back to fourteenth-century Italy to fight the plague when all vessels had to anchor the ports in Venice for 40 days until releasing any passengers. Another measure for fighting the pandemic was to administer social distancing which is to reduce daily interactions among people. If that action has an adverse result, then "community containment" prevails. In this case, the whole community is subject to confinement. The authors strongly believe that during such a societal quarantine, it is highly recommended to wisely rely on social media usage as a provider for

communicating the necessity for such measures. To reassure the public and prevent false rumors from spreading panic, social media can be a good means to support the implementation of such extreme measures resurfacing from the past to delay the Covid-19 virus from spreading (Wilder-Smith et al, 2020).

2.4 Types of Influencers on Social Media Platforms and How to Identify Them

Opinion leader detection known as (OLD) can be a leading factor in identifying these “non-ordinary and influential individuals” as the people who have a lot of power and ability in their network to shape the opinions of those they are connected to. In the two-step flow of communication model, the opinion leader’s impact is significant as information is passed on from mass media to the public through their communication channel. Opinion leaders function as intermediaries in this two-step communication flow, and mainly affect the influence and people’s opinion formation (Parau et al., 2017).

Types of influencers that have more effect on their followers can exert narcissistic behavior. Many personality or social researchers have evidently shown that a narcissistic personality is identified as one of the main traits of influencers (Corry et al., 2008). Opinion leaders and their leadership status might change over time and in relation to different domains, according to Parau et al. (2017).

Recent research explores how influencer promotional actions affect their credibility, follower attitudes, and behavioral responses toward them, such as continuance to follow, imitate, and recommend them to others. For example, if an influencer gets paid to take part in a promotional activity that would harm credibility, which is valuable to generate positive attitudes toward the influencer (Belanche et al., 2021). Journalists are increasingly using social media data to manipulate public views by reposting the same content on other social networks that are of interest to the general audience. In this way, they are presented as influencers to shape public sentiment, which in turn is shown as evidence in future data reports. Thus, the citizen’s opinions are shifted in a recursive loop. Inferring public opinion by approaching openly available social media data, modern journalists use these social media analytics to shape public opinion without raising awareness. There is a positive correlation

between the frequency of political posts and the acceptance of this emerging journalism on social media (Dubois et al., 2020).

Another essential factor that emerged during the Covid-19 outbreak was the e-word of mouth (EWM) on social media becoming an important communication tool during the quarantine. The key components affecting e-word of mouth on social media became the objective of online survey research. Three variables such as convenience, information quality, and social interaction shaped the EWM model. Results showed that convenience and information quality both have a high correlation with the existence of e-word of mouth on social media during the pandemic of Covid-19 (Khasawneh et al., 2021). In another study, an attempt was made to show the meaning of societal protection during an epidemic outbreak of the role of E-government and Covid-19 word of mouth. In this survey of a randomly selected group of 683 participants, results revealed that both E-government and Covid-19 word of mouth show a positive correlation to presence online (Yasir et al., 2020).

2.5 Social Media Influencers' Perceived Authenticity (SMI)

In the quest of finding the right influencers to campaign in forming public opinion on health issues in the challenging times of dealing with a pandemic, several factors must be taken into account. Social Media Influencers were portrayed as ordinary consumers who gradually gained the confidence of their followers through their talent creation of post content on Social Media platforms by presenting themselves as experts in fashion, fitness, or lifestyle. This group of brand endorsers is believed to be the most powerful digital brand advocates presently. They are responsible for shaping consumers' attitudes, behaviors, and beliefs on Social Media Networks (SMN). According to Freberg et al. (2011), public perceptions of social media influencers' authenticity (SMIs) play a significant role in the latter's effectiveness as brand ambassadors. Evidently, according to a study on the way social media influencers foster relationships with their online followers, a parasocial connection between themselves and their online followers exists. An online survey with 355 participants demonstrated a positive relationship between the followers' perceived attractiveness to their influencers in relation to the bond of their parasocial relationship with them. A mechanism

was apparent in influencers' behavioral fostering relationships with their acquired followers (Yuan & Lou, 2020).

Despite its importance, no measurement scale currently is found to exist for the perceived authenticity of social media influencers known as PASMI. They are social media influencers who are perceived as being genuine and trustworthy. Apparently, there is severe difficulty in evaluating the followers' perception of social media influencers' level of authenticity. This study creates and validates the PASMI scale in an effort to investigate the connections between the scale's underlying dimensions and significant follower behavior variables in order to provide better guidance prior to a potential partnership (Lee & Eastin, 2021).

2.6 Social Media Influencers and Health Issues

During a time of public health emergency, similar to the Covid-19 pandemic, it is profound to follow an appropriate model framework that aims to utilize the influencers as intermediaries in public opinion formation. These specialists on health issues are essential to be explored at different stages of the spread of health information over brief periods of time. In social media, susceptible users, opinion leaders as well as common followers may have a variety of effects on public opinion. In China, during the outbreak of Covid-19, a team by Yin et al. (2020) constructed a dynamics immune model based on the social media's involvement of opinion leaders called an opinion susceptible-forwarding (OL-SFI) model. In order to address this study, different contact rates and forwarding probabilities were considered at different stages, and the propagation mechanism was evaluated with the participation of opinion leaders at various times (Yin et al., 2020).

Health information online influencing human behavior is a constant modern phenomenon, which is so accessible nowadays. Traditional public health approaches to fight the pandemic of Covid-19 like contact tracing, quarantine, and isolation became available due to the technological advancement of the internet. A crucial element of public health interventions is accurate information that is effectively communicated through social media (Yin et al., 2020).

Users can find a variety of sources of information on health issues today thanks to the expansion of the Internet. There are profiles of health professionals on social media who share information that gains credibility when written by authorities in the field, such as pharmacists who propagate and create content based on scientific knowledge. On Instagram, pharmaceutical influencers contribute their knowledge on cosmetics, nutrition, and health-related topics. Researchers in Spain found that pharmaceutical influencers had an active role in crisis management during the pandemic of Covid-19. However, it is concluded that not all pharmaceutical influencers focused on creating content about Covid-19 during the current health crisis and failed to increase their followers (Romo et al., 2020).

Portugal's Directorate-General of Health has been using influencers for guiding the nation through pandemic public health measures, according to the website <https://www.who.int/europe/news/item/27-09-2021-influencers-navigate-covid-19-measures-for-communities-in-portugal> (Joly, 2022). The Directorate-General of Health has been involved in this project's five thousand micro-influencers since May 2020. Teachers, firefighters, scoutmasters, university society representatives, mayors, and other respected members of the community were involved in an effort to educate and inspire the general public to comply with the changes of Covid-19. The initial intention was to act as a human early-warning system protection measure for the elderly, however, this network of influencers across the Portuguese nation gained the support of the WHO/Europe Behavioural and Cultural Insights (BCI) to sustain this community "sentinels" in a multidirectional way of communication with influencers providing feedback to the DGH on a range of Covid-19 health-related issues (<https://www.who.int/europe/news/item/27-09-2021>).

In the context of health decision information behavior, a question-based questionnaire survey collected information from adults about factors impacting their evaluation of the issue of reliability of online health information. Based on Rowley et al. findings (2017), this survey showed that "men appear to be more concerned with the comprehensiveness and accuracy of the information, the ease with which they can access it, and its familiarity, whereas women demonstrate greater interest in cognition, such as the ease with which they can read and understand the information". It is impressive that the differences between the sexes are in line with the demographic information, with women consulting more sources and using tablets

more frequently than men, who are more likely to be looking for specific health information complaints (Rowley et al., 2017).

2.7 Influencer Marketing and Covid-19 vaccines

Influencer Marketing strategy can be viewed as a tool for implementing a vaccine marketing approach. According to the Influencer Marketing Hub website the State of Influencer Marketing Benchmark Report 2023 publication with more than 3500 participants from marketing agencies and brand affiliates globally showed the conclusions regarding the industry's current state. The report illustrates that the influencer industry's growth is eminent in 2023 rising from 16.4 billion than it was last year to 21.1 billion. More than 83% of the respondents in the survey believe in the efficacy of influencer marketing despite the existing overall skepticism. Another 80% intend to dedicate their spending to influencer marketing, compared to 67% that are willing to increase it. Higher than 60% of those surveyed intend to use AI or ML in their influencer marketing campaign to identify influencers. TikTok is the most predominant platform and is expected to deliver the best ROI for Short-Form videos in 2023 and holds the favorite place among 13-24 years old. Instagram is the most preferred among males in the age group 25-34 years old. A decline in Instagram Influencer Fraud is apparent since 2019, the so-called pro-Covid19 era, as companies were harmed by this phenomenon and implemented prevention measures. There is a strong preference for working with small identified as nano (39%) and micro (30%) influencers instead of the expensive macro-influencers (19%) and various celebrities (12%). The key emphasis is on the cost-effectiveness factor. It is worth mentioning that there is a preference to pay an influencer than offer a free giveaway (Geyser, 2023). These findings can be proven useful for the implementation of future vaccine promotional campaigns.

2.8 Covid-19 Pandemic, an Infodemic of Fake News

The spread of fake news and unfavorable rumors occurred at an incredible speed globally, affecting the course of the Covid-19 pandemic by reducing vaccination endorsement. Negativity on the news had a greater appeal to the audience. One of the causes

was the use of Social Networking Media as merely reproductive platforms without any limitation or control. Opinion leaders can be the means to shape public opinion in managing the health crisis or the pandemic on social media platforms. An issue to consider is how to differentiate influencers based on the degree of trust and credibility. The ability of an influencer to reshape and prevent negative rumors from spreading can be seen in achieving their containment and control and calming these controversial rumors by relying on their influence (Jain, 2022).

Rumors of public health crises are connected to viral research, pandemic prevention, and control. Other connections are made to confirmed cases, overseas disease outbreaks, government involvement, and social assistance. Different rumor-bunking methods to achieve efficacy must be implemented as dissimilar types of rumors have distinct characteristics. Verbal communication was responsible for spreading rumors in the past. In the present era of social media communication, actively engaged wide audiences open to information, have accelerated rumor spread with a click of a button (Yang et al., 2022).

Health rumors can cause adverse health behaviors as they often mislead people and may result in severe consequences for people's health cognition especially in public health emergency responses as are necessary for a pandemic. A false piece of information soon turns into a health rumor. It is particularly important to study what are the causes that make people believe rumors. Through leveling, sharpening, and assimilation, information may transform into a rumor. Three are the essential health communication tactics that must be used to prohibit it from spreading, by ensuring information accuracy, enhancing information credibility, and restraining information intelligibility. Correcting the perception level in the family, and in the broader community, can assist in passing on information apprehensible to many (Zhang et al., 2020).

The rumor transmission can be described as a disease transmission by the rumor propagation model. In the basic rumor propagation model, the population falls into three categories: the Ignorants who are people who do not know the rumors, the Spreaders the people who know and spread rumors, and the Removers fall into the category of people who know rumors, but do not spread them (Shuzhen et al., 2020). These categories of people must be thoroughly considered for the debunking process of rumors appearing on social platforms.

The long-lasting effect of a rumor appearing as an initial post is the degree of the after-effect after repeat reposts can differ. There is the repressed degree and the diffuser degree of a rumor. According to Jain et al. (2022), studies showed that the influence of an opinion leader is extremely significant in debunking rumors during a pandemic like Covid-19. During the Covid-19 pandemic, an entropy-based approach was tried to manage rumors about the disease through online social networks by using opinion leaders. The Reputation Based opinion Leader Identification known as the ROLI algorithm was manufactured as people spread rumors and hoaxes in relation to Covid-19 that adversely influenced human behavior toward vaccines through online social networks (OSN) (Jain, 2022).

This unique and innovative approach to control rumors is partitioned into two phases that primarily use the novel Reputation which is a unique voting method to identify the top opinion leaders (T-OL) in the online social networks (OSN). The second stage finds the user's trust, the post entropy, and its validity by measuring the aggregated polarity score of each tweet or post and calculating each user's reputation. As mentioned in the report, if the experimental entropy of the post is less than the empirical threshold value, the post is more likely to be classified as a rumor. The ROLI algorithm was examined for validation on various platforms such as Twitter, Instagram, and Reddit and scored 91% accuracy, 93 % precision, and 95% recall. The F1-score was 94% compared to other Social Network Analysis (SNA) measures. This algorithm proved to be of significance to prove that opinion leaders are found to be exceptionally important in controlling Covid-19 rumors (Jain, 2022).

2.9 Vaccination Acceptance Based on Demographics and the Social Media Effect

The worldwide acceptance of a vaccine was a major step in the battle against the coronavirus disease 2019 pandemic. Achieving high vaccination participation was a challenge as the fight was against an unseen online enemy, the misinformation spread through social media platforms. On September 2020, scientists in the UK and USA are conducting a randomized controlled clinical trial to measure the effect of Covid-19 online misinformation on vaccination intention, self-defense, and immunity. Results showed that misinformation induced a decline in the intent of 6.2 percentage points in the UK and 6.4 points in the USA.

Even more alarming was that scientific like sounding misinformation was more strongly associated with a decline in the intent to get vaccinated (Loomba et al., 2021). As we proceeded in the time of the pandemic from January to late March 2021, data from a telephone survey was collected and analyzed using t-tests and multivariable logistic regression models. The analysis showed disparities in vaccine intent continued to exist among groups according to age, race or ethnicity, and other socioeconomic characteristics. In addition, adults were less likely to get vaccinated if they previously obtained coronavirus or even if they were uncertain of such an outcome. At the same time, the overall belief that a vaccine against Covid-19 is not substantial anymore increased in that period (Nguyen et al., 2021)

The Covid-19 vaccines were discovered in a fast-produced way, but not all people received them. Making more people vaccinated to achieve herd immunity was a major goal in the containment of this pandemic. Identifying factors influencing people's preferences to persuade them to vaccinate, was proven to be valuable information for governments to implement health programs to increase effective vaccination. Data was used from twenty-four different vaccination datasets, which were collected by U.S. Census Bureau in partnership with the CDC via the Household Pulse Survey (HPS) for America from January 2021 to May 2022. Statistical analysis techniques, including an analysis of variance (ANOVA), Tukey multiple comparisons tests, and hierarchical clustering (HC), were methods used to analyze the HPS vaccination data in the R language. Two hundred and fifty million participated, respondents with a range of characteristics, including age, gender, sexual orientation, race, level of education, marital status, number of people living in the household, income level, and resources, as well as spending needs, and different reasons for delaying vaccination.

Findings showed that sexual orientation, gender, age, and education have a considerable influence on vaccination. Higher vaccination rates were among Asian Americans and larger household sizes. In the marital category, the unmarried group had a lower vaccination rate, as did respondents who relied on borrowed money compared to people with regular incomes. Groups such as gays/lesbians were vaccinated at a higher rate than the straight group, and also the female or male groups outranked the transgender people in vaccination preference. Older people preferred to vaccinate and so did the ones with higher education levels. Vaccination hesitancy during the pandemic was impacted by two major

reasons, the issue of the safety of the vaccines and their side effects. Lack of belief in the government's actions or in the vaccines were other factors that emerged later in the pandemic to influence the vaccination (Chen et al., 2022). In the future, organizations and governments can use a number of these studies' findings to enhance vaccination campaigns and ways to implement vaccine management.

A further quantitative study on social media vaccine knowledge and beliefs attempted to examine the relationship between the dissemination of information about vaccines and social media use. A series of questions were posed to Twitter, Facebook, and Instagram users over the age of eighteen around the world via a link, and a sample of 2515 people was questioned on vaccine knowledge and beliefs. With increasing scores, knowledge scores were ranked from low knowledge to high knowledge. This score was then analyzed across demographics and social media-related questions using a Welch test and post hoc testing, as essential. Facebook was used by most participants, but Twitter users are shown to be more knowledgeable. Evidently, increased knowledge and belief scores were correlated with higher levels of education (Benoit & Mauldin, 2021). Overall, these correlations are important in determining ways to intervene in the anti-vax movement using social media.

2.10 Fear of Covid-19 and Vaccination

Fear is another factor to be discussed in relation to vaccination acceptance. One must distinguish between Fear of disease or Fear of conformity to gain social acceptance. Fear is “an unpleasant often strong emotion caused by anticipation or awareness or danger.” as best described in the Merriam-Webster dictionary. According to Adolphs (2013) in the “Biology of Fear”, the definition of the term “fear is an intervening variable between sets of context-dependent stimuli and suites of behavioral response”. Fear has always been thought of as an evolutionary adaptation that serves to safeguard the human body from harm. It evolves in a way that could be considered to be a consistent set of values within the person. It differs systematically between individuals, thus making it a “candidate” for a personality trait (Adolphs, 2013).

The actual threat of the COVID-19 pandemic as illustrated by the number of infections, hospitalization, and actual deaths, shifted throughout the pandemic. In this useful study, the development of fear levels during the pandemic of Covid-19 is examined along with potential predictors of chronic fear, the progression of fear levels, and any factors associated with increased chronic fear. Between April 2020 and June 2021, a sizeable online longitudinal study (N = 2000) was carried out using a robust platform where residents of 34 different countries voluntarily provided response samples. The Fear of the Coronavirus Questionnaire (FCQ) containing demographic and psychological topics was completed monthly. Overall, results showed a steady decrease in fear since April 2020. Further research revealed that elevated fear was more pronounced in North America than in Europe. Also, other traits such as anxiety, gender, general health, media consumption, and the mediating risk for loved ones, had a profound impact on fear propensity (Mertens et al., 2023).

Pandemic panic was measured for the survey's purposes on the Peri-Traumatic Distress Scale (CPDI) and the Fear Scale (FCV-19S), as both were used to measure psychological reactions at that time. The sample group was N=1844 participants asked to fill out an online questionnaire, four groups in total. The predominant group was people with chronic health conditions, then there were patients with psychological issues, ones with cardiovascular diseases, and lastly, diabetic patients. The group with cardiovascular issues scored higher on the Fear Scale and on the CPDI scale than the others. After this study, it was safe to conclude that the Covid-19 pandemic had a greater impact on Brazilian patients with heart diseases and they presented the highest numbers of stress and fear compared even to those who suffered from psychological distress (De Paiva Teixeira et al., 2020).

2.11 Social Anxiety and Pressure on the Vaccination Process

Although vaccine hesitancy has been the subject of several quantitative studies, qualitative research on the causes of vaccination attitudes is still evolving. Another study sought to close this gap by using a qualitative approach to look into how the Italian population generally perceived the COVID-19 vaccines. Seven hundred Italian participants who responded to an online survey made up the sample. The following seven major themes were connected to vaccination: ambivalence, mistrust, ethics, safety, healthcare, vaccine delivery,

and progress. Those who had received vaccinations more frequently reported words with a safety theme, while those who hadn't received vaccinations more frequently reported words with a mistrust concept. Governments, health policymakers, and media organizations should work together to manage vaccine hesitancy and infodemics and foster public trust in vaccination. Additionally, general practitioners can be crucial in reversing people's false beliefs through counseling and in-depth informational actions, which can start a process of empowerment in the community. More study is required to determine what elements contribute to the efficacy of informational campaigns intended to lessen skepticism and ambivalence toward vaccination (Boragno et al., 2023).

As we've already mentioned, the Covid-19 vaccines were developed more quickly than other vaccines, which raised questions about their efficacy, safety, and potential side effects. There is currently no information on the long-term effects. Because they are known to have a higher intolerance of uncertainty (IUS), greater fears of side effects, and worries that the vaccine won't prevent Covid-19, people with anxiety disorders may have greater vaccine hesitancy (VH) for the Covid-19 vaccine. In order to determine whether anxiety status has an additive effect on factors that are known to predict vaccine hesitancy, this study examined the degree level of vaccine hesitancy (VH), in people with (n=96) and without (n=52) anxiety disorders. The findings revealed no differences between the groups in regard to vaccine hesitancy, but those without anxiety appeared to have a greater intolerance of uncertainty, and less hesitancy in those with anxiety. Influenza, vaccine historical evidence, conspiracy theories, individualism, and trust were predictors of reluctance for both groups (McNeil & Purdon, 2022).

Although vaccines were found to be a valuable tool to contain and curb the Covid-19 pandemic, a massive portion of the world population was hesitant to get vaccinated. In a longitudinal study that was in progress from April 2020 until June 2021 on N=938 subjects aiming to examine whether fear of Covid-19 can predict vaccination willingness (Mertens et al., 2022). In this study, fear of Covid-19 was assessed in April 2020 and later, in June 2021, 14 months later vaccination willingness was measured. Only 11% of the sample were not willing to get vaccinated. Logistic regression analysis showed that increased fear of Covid-19 predicts vaccination willingness even after 14 months have passed. Vaccination readiness becomes apparent when certain variables are controlled, such as anxious personality traits,

perceptions of infection control, risk of losing family or friends, self-well-being, media use, and specific demographic variables. The study's findings make it clear that fear of the COVID-19 virus is an important factor to take into account when predicting and influencing vaccination willingness (McNeil & Purdon, 2022).

When examining psychological factors that influence people's intention to receive COVID-19 vaccinations, researchers in Northern India looked at attitudes, subjective norms, perceived behavioral control, belief in COVID-19 misinformation, and vaccine confidence. This research was completed on people's intention to get Covid-19 vaccines and their contributing psychological factors during the period of February to March 2021, where 400 Indians participated in an electronic data collection study. It was an effort to find ways to facilitate vaccination by using as a background theoretical framework the theory of planned behavior (TPB). Key components of this theory of planned behavior were attitudes, subjective norms, and perceived behavioral control. A relationship between people's intention to get vaccinated against Covid-19 became more apparent. During the study, it was found necessary to add the components of misinformation related to Covid-19 issues and vaccine confidence. Hierarchical regression analysis showed that all three original components that were used originally had a 41% intention to get a vaccine and were not affected by misinformation or vaccine confidence (Husain et al., 2021). In a study conducted in China in August 2021, women and people who practiced preventive measures like social isolation were more likely to accept the vaccine (Kezhong et al., 2021).

In the American Psychological Association, an article with the title "The Psychology of the COVID-19 Pandemic: A Group-Level Perspective" referred to people's need to belong as essential to other basic life values such as hunger or thirst. In most circumstances, humans will choose to affiliate with others than face loneliness and would resist being isolated or secluded. When people face uncertainty in the form of an illness, an eminent catastrophe, a natural disaster, or an economic crisis, according to Rofé (1984), they seek to join other people in support and comfort (Marmamosh, n.d).

Furthermore, in a survey examining the role of societal factors in COVID-19 vaccine hesitancy in Hong Kong, respondents were heavily influenced by their families' decisions and less influenced by their friends. Societal factors have been as crucial to vaccination decisions as they have been in the general perception of vaccines. In addition, the participants of this

online survey (N=2753 complete responses) who had a tendency to accept the vaccine had a weaker response if they felt that the act is less supported by the public authorities and stronger resistance if they had the constitutional trust (Lau et al., 2022).

2.12 The Case of Greece in the Covid-19 Pandemic

Greece has been illustrated to be a success story in the handling of the Covid-19 pandemic, according to the author of the article in the Journal of European Studies “Cultural responses to the COVID-19 crisis in Greece: The first wave (March-May 2020)”. Greece's cultural responses to the COVID-19 pandemic during the initial wave in the spring of 2020, when the virus was causing widespread fear, were quite impressive. Due to the threat of the pandemic, Greeks were placed under a lockdown despite the small number of cases that occurred historically (Zestanakis, 2023). The Greek government followed a communication strategy having as its core the Greek family and cultural implications, disregarding the financial implementations. It was the common belief that the pandemic at the beginning had a projection of a two-month period of incubation. The Greek people were among the few European countries to impose such strict measures of confinement. Prime Minister, Mr. Konstantinos Mitsotakis was the primary opinion leader who tried to influence the Greek public opinion that he must bear the weight to go to work and the rest of the family stayed home (Zestanakis, 2023). As a member of the committee of experts, Sotiris Tsiodras, a professor of medicine at the University of Athens, suggested measures and served as a media spokesperson. In addition to the Deputy Minister of Civil Protection, Nikos Chardalias appeared as a knowledgeable spokesperson of the Government whereas the Minister of Health, Vassilis Kikilias, appeared less in the media (Zestanakis, 2023). The youngsters were targeted in an ethnic appeal to serve and protect the elders in society by minimizing risk, assuming the motto “STAY HOME-STAY SAFE” and getting the vaccine.

On November 30th, 2021, it was nationally announced that unvaccinated Greeks over the age of sixty years old will be fined fifty euros in January 2022, and then one hundred Euros in February 2022 on the Euronews website (Joly, 2022). To attract the younger population into the vaccination process, Prime Minister Mitsotakis gave 150€ coupons to be validated on tourism attractions to youth from the age of 18 to 25 if they administer the first

dosage of the vaccine (Reuters, 2021). Reuters reported that the Prime Minister offered Greek young people a 150€ card and a month of free phone data to get their first Covid-19 shot and assist the tourism industry that was suffering from the economic implications of Covid-19. It was a government effort to drive to boost vaccination rates during summer that the risk of contamination was greater as a new variant Delta appeared at that time. This communication strategy and giveaways to the younger population proved to be successful and raised public trust in the government and health professionals at that stage time of the pandemic (Reuters, 2021).

CHAPTER 3- METHODOLOGY

The distribution of a questionnaire to a group of people was the best quantitative approach for this survey in the aftermath of the Covid-19 pandemic. Beyond skepticism and relative awareness, people learned to live with the virus and now openly discuss the conditions that followed this health crisis. The economic and social implications were enormous. However, the negative climate had subsided. To proceed with this survey, the subject sample focus group had to have as a requirement an internet presence on social media platforms. To ensure the validity of collecting data from this group of participants, specific rules were applied according to its content, the face, the criterion, and the construct (Del Greco, 1987). The questionnaire was distributed via personal emails, and inbox messages to members of Facebook and/or Instagram without discriminating against age or sex, or other. The questions were posed in the Greek language, as the primary target group was of Greek origin, so it was a prerequisite that the participants were able to speak and understand the language. As a third action, the secretary's department offices of The University of Macedonia were requested to distribute the questionnaire to all University students and faculty via their student emails.

All groups from different social backgrounds, education, gender, and age were welcome to participate in this survey and encouraged to forward the questionnaire to a friend on the internet and ask if they would like to participate. In this process, the risk of bias was minimized, and the survey received 304 completed responses.

The questionnaire under the title "Opinion Leaders and their Contribution to the Effectiveness of the Covid-19 vaccine campaign" and in the context of anonymous research,

was formed to abide by the General Data Protection Regulation (EU) 2016/679. The data collection's purposes were to be used exclusively for research purposes only.

3.1 QUESTIONNAIRE

The questionnaire had four units in total for participants to complete in this survey:

3.1.1 UNIT 1: DEMOGRAPHICS

The questions from 1-6 to answer about their age group, sex group, family status, educational background, and profession. Another significant question number 7 enquired about which of the following Media/or Communication channels the participants prefer for their daily information. The responders had to choose among:

- the traditional ways such as Newspaper, Radio, Television,
- the Internet
- or Social Media Platforms such as Facebook, Instagram, Twitter, and YouTube.

3.1.2 UNIT 2: INFLUENCERS AND THEIR ROLE PART A'

In this section a question was posed to the participants to answer if they are familiar with the term "influencer" and to that question, they were given three choices to respond, a positive "Yes," a negative "No," and a third option "I do not know/I do not respond. Responders then were asked a follow-up question as to whether they follow a person, or group as an "influencer" on Social Media Platforms, and they were given the same three choices. By their answers again in a positive, negative, or other, it was determined from the structure of the questionnaire whether the participants would continue to Unit 2-part B' or would be transported to the latter section of Unit 3-Pandemic Covid-19.

3.1.3 UNIT 2: INFLUENCERS AND THEIR ROLE PART B'

A positive answer to the previous question would lead the participants to continue finishing Unit 2 and answer questions number 9-15. These questions were formed to examine what their most preferred Social Media Platforms were, on what platforms they engage in their social activity, and if they follow the influencers. To this question, the choice of Instagram, Facebook, Twitter, and YouTube was given beforehand, in addition to the option to comment on other preferred social platforms. To the question risen as to how they choose whom Influencer to follow, they were given the options from the following characteristics such as a) if they are influenced by the number of followers the influencer has, b) whether the content of the influencer's postings is found interesting and appealing, or c) what category the influencer of their choice belongs to, d) if friends or relatives following an influencer can make the participants their choice to select. In addition, an option of commenting on this question was given to the responders to express any other elements that would influence them in their choice.

The rest of the questions in this Unit 2 Part B' were in relation to whether the group trusts the opinion of the influencers they follow on social media regarding issues related to Covid-19. Another question posed was related to whether they consider the influencer to be honest and trustworthy in terms of the content of his/her posts on topics related to Covid-19. The respondents were also asked whether they trust the content of the posts of the influencer that they follow on social media to be dependable on matters related to Covid-19. A question concerning the content of the influencer's posts is useful in terms of their information about Covid-19 and whether the responders find the influencer to be experienced and an expert on topics that he/she projects and presents on his/her account about Covid-19. A 5-Likert scale from "Absolutely disagree" to "Completely Agree" was used to make it easier for respondents than the 6-Likert scale used by Rietzschel et al (2007) followed in their study (Rietzschel et al., 2007).

It is worth mentioning that this section was mandatory only for the group who answered positively to be an influencer follower. The original group had 304 responders, but only 130 followed an influencer on Social Media Platforms. It would not be recommended to direct the participants to answer questions that did not apply to them. This action would result

in a higher degree of dropouts and unwillingness to submit complete answers.

3.1.4 UNIT 3: PANDEMIC COVID-19

This section was obligatory to all 304 participants and its questions aim to find the connection between psychological status and Covid-19. The questions from 16-23 were directed to the sentiment in the form of statements that one would have to follow a 5-Likert scale from “Absolutely disagree” to “Completely Agree.”

The statements to be evaluated were the following:

- 16. I am very afraid of Covid-19,
- 17. The Covid-19 vaccine is effective and safe,
- 18. Family and friends, the people most important to me will _____get the Covid-19 vaccine.
- 19. I feel social pressure to get the Covid-19 vaccine.
- 20. To what extent do you agree that the information posted on social media (Twitter, Facebook, Instagram, YouTube) regarding the Covid-19 pandemic is reliable and true?
- 21. To what extent do you agree that the information posted on the Internet about the Covid-19 pandemic is reliable and true?
- 22. To what extent do you agree that the information presented in the Mass Media such as Radio, TV, and newspapers, about the Covid-19 pandemic, is reliable and true?
- 23. I believe that the COVID-19 vaccines are important for protection against COVID-19.

The questions were easy to comprehend and aimed to grasp the sentiment of the responders in the aftermath of the pandemic (Ahorsu et al., 2020)

3.1.5 UNIT 4: SOCIAL ANXIETY

In the final Unit 4, a set of questions aiming to sense the social anxiety spectrum of the sensor group of this survey was constructed. A 5-Likert scale form of choices was given beginning from “Absolutely Disagree” to “Completely Agree” in order to grasp the deeper feelings of the participants and if this social anxiety positively correlates with their inclination to vaccinate against Covid-19 (Corry et al., 2008).

The group of 304 participants was asked to answer the questions on a personal level. The

questions numbered 24 to 33 were as follows:

- 24. I worry about what other people think of me.
- 25. I fear that others will notice my insecurities.
- 26. I am afraid that others will not approve of me.
- 27. I worry about saying or doing the wrong thing.
- 28. I feel embarrassed and ashamed when I am the center of attention.
- 29. I have difficulty communicating with other people.
- 30. It upsets me to be in a situation without knowing what to expect from it.
- 31. I am not bothered by things that interrupt my daily life.
- 32. I like to have a place for everything and everything in its place.
- 33. I enjoy being spontaneous

3.1.6 MODEL OF ANALYSIS

The methods of analyzing the questionnaire data are shown in Fig.3, in the following flowchart Model of Analysis. Firstly, a presentation of the construction of the questionnaire is described to discuss the questions involved in this process of data collection.

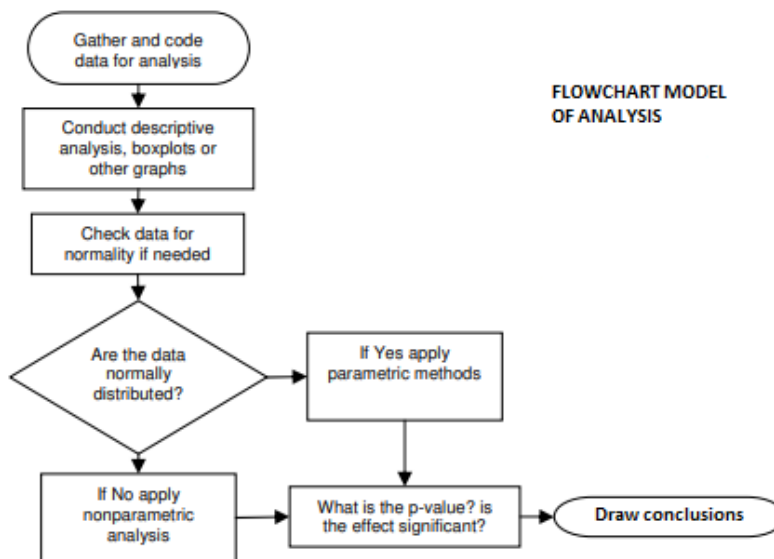


Figure 3-FLOWCHART MODEL OF ANALYSIS GARTH ANDREW Analyzing data using SPSS (A practical guide for those unfortunate enough to have to actually do it.) Andrew Garth, Sheffield Hallam University, 2008 p.8

CHAPTER 4- RESEARCH ANALYSIS

The results from the Google Form questionnaire were collected and placed for analysis and evaluation in IBM SPSS Statistics 23. The total respondents were N=304 in Unit 2 and were split into influencer followers and non-influencer followers. which was dedicated to influencers and the questions were restricted to followers on Social Media Platforms gave us only 130 results. The extremely negative feelings about the pandemic Covid-19 were less apparent now as the pandemic was reaching its end. The study group was very willing to participate without any hesitations in this survey.

After the literature review, the key questions to this research targeted the demographics of the study group and how they play a key role in an influencer follower, and the preferred choices as to whom to follow on Social Media Platforms. The pandemic of Covid-19 and the predisposition to the Covid-19 vaccines are in what way related to the fear of the pandemic, the social pressure, and the social anxiety to conform with what is socially acceptable. In this way, conclusions as to relationships among dependent and independent variables can be utilized to design influencer marketing campaigns using influencers on Social Media Networks to introduce a new vaccine.

The data analysis is run on SPSS, to examine normality, factor analysis with reliabilities, logistic regression, and means comparison, via tables, and graphs such as pie-charts, bar charts, histograms, and Q-Q plots in order to comprehend the connection among variables.

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	ID	Numeric	10	0	ID	None	None	9	Right	Nominal	Input
2	DATE	Numeric	10	2	DATE	None	None	3	Right	Nominal	Input
3	Q01	Numeric	10	0	Q01 AGE	{1, 18-29}...	None	13	Right	Ordinal	Input
4	Q02	Numeric	10	0	Q02 SEX	{1, Male}...	None	8	Right	Nominal	Input
5	Q03	Numeric	10	0	Q03 FAMILY_STATUS	{1, Single}...	None	13	Right	Nominal	Input
6	Q04	Numeric	10	0	Q04 EDUCATION	{1, Seconda...	None	10	Right	Ordinal	Input
7	Q05	Numeric	10	0	Q05 PROFESSION	{1, Student ...	None	11	Right	Nominal	Input
8	Q06	Numeric	10	0	Q06 INFORMATION MEDIA	{1, Tradition...	None	8	Right	Nominal	Input
9	Q07	Numeric	10	0	Q07 INFLUENCER TERM	{0, No}...	None	10	Right	Nominal	Input
10	Q08	Numeric	10	0	Q08 INFLUENCER FOLLOWER	{1, Follower}...	None	12	Right	Nominal	Input
11	Q09	Numeric	10	0	Q09 INSTAGRAM	{0, No Insta...	None	15	Right	Nominal	Input
12	Q092	Numeric	10	0	Q092 FACEBOOK	{0, No Face...	None	9	Right	Nominal	Input
13	Q093	Numeric	10	0	Q093 TWITTER	{0, No Twitt...	None	9	Right	Nominal	Input
14	Q094	Numeric	10	0	Q094 YOUTUBE	{0, No YouT...	None	9	Right	Nominal	Input
15	Q095	Numeric	10	0	Q095 OTHER	{0, No Other...	None	11	Right	Nominal	Input
16	Q10	Numeric	10	0	Q10 How do you choose an influe...	{1, Follower...	None	19	Right	Ordinal	Input
17	Q11	Numeric	10	0	Q11 How much do you trust Influe...	{1, Trust Co...	None	14	Right	Ordinal	Input
18	Q12	Numeric	10	0	Q12 Do you find influencers trustw...	{1, Absolute...	None	15	Right	Ordinal	Input
19	Q13	Numeric	10	0	Q13 Do you trust Influencer's post...	{1, Absolute...	None	19	Right	Ordinal	Input
20	Q14	Numeric	10	0	Q14 Is the influencer informative a...	{1, Absolute...	None	11	Right	Ordinal	Input
21	Q15	Numeric	10	0	Q15 Is the influencer expert and e...	{1, Absolute...	None	24	Right	Ordinal	Input
22	Q16	Numeric	10	0	Q16 I am afraid of Covid-19	{1, Absolute...	None	24	Right	Ordinal	Input
23	Q17	Numeric	10	0	Q17 The Covid-19 vaccine is effect...	{1, Absolute...	None	8	Right	Ordinal	Input
24	Q18	Numeric	10	0	Q18 Family and friends will give a...	{1, Absolute...	None	8	Right	Ordinal	Input

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
25	Q19	Numeric	10	0	Q19 I feel social pressure to get t...	{1, Absolute...	None	12	Right	Ordinal	Input
26	Q20	Numeric	10	0	Q20 Is the information posted on ...	{1, Absolute...	None	4	Right	Ordinal	Input
27	Q21	Numeric	10	0	Q21 Is the information posted on t...	{1, Absolute...	None	4	Right	Ordinal	Input
28	Q22	Numeric	10	0	Q22 Is the information posted on ...	{1, Absolute...	None	7	Right	Ordinal	Input
29	Q23	Numeric	10	0	Q23 COVID19 vaccines are import...	{1, Absolute...	None	9	Right	Ordinal	Input
30	Q24	Numeric	10	0	Q24 I Worry about people's opinion	{1, Absolute...	None	5	Right	Ordinal	Input
31	Q25	Numeric	10	0	Q25 I fear of people noticing my in...	{1, Absolute...	None	6	Right	Ordinal	Input
32	Q26	Numeric	10	0	Q26 I fear of people's disapproval	{1, Absolute...	None	8	Right	Ordinal	Input
33	Q27	Numeric	10	0	Q27 I worry about saying or doing ...	{1, Absolute...	None	6	Right	Ordinal	Input
34	Q28	Numeric	10	0	Q28 I don't like being the center of...	{1, Absolute...	None	7	Right	Ordinal	Input
35	Q29	Numeric	10	0	Q29 I have difficulty communicatin...	{1, Absolute...	None	8	Right	Ordinal	Input
36	Q30	Numeric	10	0	Q30 It upsets me to be in an unex...	{1, Absolute...	None	5	Right	Ordinal	Input
37	Q31	Numeric	10	0	Q31 I am not bothered by things t...	{1, Absolute...	None	8	Right	Ordinal	Input
38	Q32	Numeric	10	0	Q32 I like to have a place for every...	{1, Absolute...	None	12	Right	Ordinal	Input
39	Q33	Numeric	10	0	Q33 I enjoy being spontaneous.	{1, Absolute...	None	9	Right	Ordinal	Input
40											

Table 1- SPSS Variable Set Up

Starting with the SPSS variables set up and coding on the IBM SPSS Data Editor, as illustrated in Table1-SPSS Variables Set Up. Following is the Descriptive Statistics Analysis:

4.1 DESCRIPTIVE STATISTICS

4.1.1 DEMOGRAPHICS

VARIABLES STATISTICS-FREQUENCIES SEX MALE

		Q01 AGE	Q02 SEX	Q03 FAMILY_STAT US	Q04 EDUCATION	Q05 PROFESSION	Q06 INFORMATION MEDIA	Q07 INFLUENCE R TERM	Q08 INFLUENCE R FOLLOWER	Q09 INSTAGRAM	Q092 FACEBOOK	Q093 TWITTER	Q094 YOUTUBE
N	Valid	134	134	134	134	134	134	134	134	134	134	134	134
	Missing	0	0	0	0	0	0	0	0	0	0	0	0
	Mean	2,28	1,00	1,70	2,69	3,44	2,22	,98	1,68	,27	,11	,04	,22
	Median	2,00	1,00	1,00	3,00	3,00	2,00	1,00	2,00	,00	,00	,00	,00
	Mode	1	1	1	3	3	2	1	2	0	0	0	0
	Std. Deviation	1,336	,000	,942	1,140	1,341	,618	,148	,469	,445	,316	,190	,413
	Variance	1,784	,000	,888	1,300	1,797	,381	,022	,220	,198	,100	,036	,171

Q095 OTHER	Q10 How do you choose an influencer	Q11 How much do you trust Influencers on covid issues	Q12 Do you find Influencers trustworthy and honest	Q13 Do you trust Influencer's post content on Covid19 to be reliable	Q14 Is the influencer informative and useful on Covid issues	Q15 Is the influencer expert and experienced on Covid issues	Q16 I am afraid of Covid-19	Q17 The Covid-19 vaccine is effective and safe	Q18 Family and friends will give an opinion to get the Covid-19 vaccine	Q19 I feel social pressure to get the Covid-19 vaccine	Q20 Is the information posted on SMN on Covid-19 reliable and true	Q21 Is the information posted on the Internet on Covid-19 reliable and true
134	134	134	134	134	134	134	134	134	134	134	134	134
0	0	0	0	0	0	0	0	0	0	0	0	0
,02	67,50	67,63	67,45	67,39	67,34	67,18	2,62	3,48	3,76	2,99	2,38	2,73
,00	99,00	99,00	99,00	99,00	99,00	99,00	3,00	4,00	4,00	3,00	2,00	3,00
0	99	99	99	99	99	99	3	4	4	4	3	3
,148	45,224	45,043	45,298	45,384	45,449	45,685	,964	,963	,886	1,201	,793	,824
,022	2045,184	2028,882	2051,873	2059,683	2065,596	2087,126	,929	,928	,785	1,443	,628	,679

Q22 Is the information posted on Mass Media on Covid19 reliable and true	Q23 COVID19 vaccines are important for protection	Q24 I worry about people's opinion	Q25 I fear of people noticing my insecurities	Q26 I fear of people's disapproval	Q27 I worry about saying or doing the wrong things	Q28 I don't like being the center of attention	Q29 I have difficulty communicating with other people	Q30 It upsets me to be in an unexpected situation	Q31 I am not bothered by things that interrupt my daily life	Q32 I like to have a place for everything and everything in its place.	Q33 I enjoy being spontaneous.
134	134	134	134	134	134	134	134	134	134	134	134
0	0	0	0	0	0	0	0	0	0	0	0
2,61	3,61	2,41	2,37	2,22	2,79	2,30	1,93	3,06	2,80	3,46	3,67
3,00	4,00	2,00	2,00	2,00	3,00	2,00	2,00	3,00	3,00	4,00	4,00
3	4	2	2	2	3	2	2	4	2	4	4
,917	1,011	1,063	1,001	1,043	1,084	1,033	,939	1,046	1,010	,994	,839
,841	1,021	1,131	1,003	1,088	1,174	1,068	,882	1,094	1,019	,987	,703

Table 2-Descriptive Statistics Male Group

VARIABLES STATISTICS-FREQUENCIES SEX FEMALE

		Q01 AGE	Q02 SEX	Q03 FAMILY_STAT US	Q04 EDUCATION	Q05 PROFESSION	Q06 INFORMATION MEDIA	Q07 INFLUENCE R TERM	Q08 INFLUENCE R FOLLOWER	Q09 INSTAGRAM	Q092 FACEBOOK	Q093 TWITTER	Q094 YOUTUBE
N	Valid	170	170	170	170	170	170	170	170	170	170	170	170
	Missing	0	0	0	0	0	0	0	0	0	0	0	0
	Mean	2,29	2,00	1,94	2,55	3,92	2,22	,99	1,52	,44	,18	,02	,20
	Median	2,00	2,00	2,00	3,00	3,00	2,00	1,00	1,50	,00	,00	,00	,00
	Mode	1	2	1	3	3	2	1	1	0	0	0	0
	Std. Deviation	1,175	,000	1,081	1,115	1,722	,648	,188	,535	,497	,387	,132	,401
	Variance	1,380	,000	1,168	1,243	2,964	,420	,035	,287	,247	,150	,017	,161

Q095 OTHER	Q10 How do you choose an influencer	Q11 How much do you trust Influencers on covid issues	Q12 Do you find Influencers trustworthy and honest	Q13 Do you trust Influencer's post content on Covid19 to be reliable	Q14 Is the influencer informative and useful on Covid issues	Q15 Is the influencer expert and experienced on Covid issues	Q16 I am afraid of Covid-19	Q17 The Covid-19 vaccine is effective and safe	Q18 Family and friends will give an opinion to get the Covid-19 vaccine	Q19 I feel social pressure to get the Covid-19 vaccine	Q20 Is the information posted on SMN on Covid-19 reliable and true	Q21 Is the information posted on the Internet on Covid-19 reliable and true
170	170	170	170	170	170	170	170	170	170	170	170	170
0	0	0	0	0	0	0	0	0	0	0	0	0
,05	50,56	50,74	50,36	50,25	50,19	50,02	2,86	3,25	3,76	2,98	2,61	2,89
,00	4,50	5,00	5,00	4,50	4,00	4,50	3,00	3,00	4,00	3,00	3,00	3,00
0	99	99	99	99	99	99	3	4	4	4	3	3
,212	48,021	47,848	48,218	48,329	48,387	48,550	,975	1,009	,865	1,171	,747	,697
,045	2306,047	2289,474	2324,989	2335,714	2341,266	2357,136	,950	1,018	,749	1,372	,558	,486

Q22 Is the information posted on Mass Media on Covid19 reliable and true	Q23 COVID19 vaccines are important for protection	Q24 I Worry about people's opinion	Q25 I fear of people noticing my insecurities	Q26 I fear of people's disapproval	Q27 I worry about saying or doing the wrong things	Q28 I don't like being the center of attention	Q29 I have difficulty communicating with other people	Q30 It upsets me to be in an unexpected situation	Q31 I am not bothered by things that interrupt my daily life	Q32 I like to have a place for everything and everything in its place.	Q33 I enjoy being spontaneous.
170	170	170	170	170	170	170	170	170	170	170	170
0	0	0	0	0	0	0	0	0	0	0	0
2,63	3,56	2,66	2,59	2,51	2,98	2,76	2,02	3,41	2,80	3,41	3,66
3,00	4,00	3,00	2,00	2,00	3,00	3,00	2,00	4,00	3,00	3,00	4,00
3	4	2	2	2	4	2	2	4	2	4	4
,869	1,048	1,071	1,006	1,004	1,109	1,132	,853	,971	1,012	,964	,761
,755	1,099	1,147	1,013	1,009	1,230	1,282	,727	,942	1,025	,929	,579

Table 3- Descriptive Statistics Female Group

-Q01 AGE-Q02 SEX:

In this survey, the participants were in total three hundred and four (N=304). Males are 134 which is 44.1 % and the female group is 170 females which is a percentage of 55.9. Males have a mean value of 2.28, a median of 2.00, a standard deviation of .336, and a variance of 1.784. Females have a mean of 2.29, a median of 2.00, a standard deviation of 1.75, and a variance of 1.380. The largest ranking group for both sexes is the first age group a) 18-29 years old, ranking a total of 114/304 participants which is 37.5 % of the total. A percentage of 41% of those 55 are males, and the rest 59% are females. In the second group in the ranking for both sexes, that is 30-44 years old are 63 participants 20.7 %, the third group is 45- 54 with 65 participants that is the %, the 55-64 yrs. old has 51 participants which is 16.8%, and 65-74 years old with 9 participants and 3%, and only 2 participants fall into the last 75+-year-old group which is a.7% of the total (shown in Table2 and Table3 above).

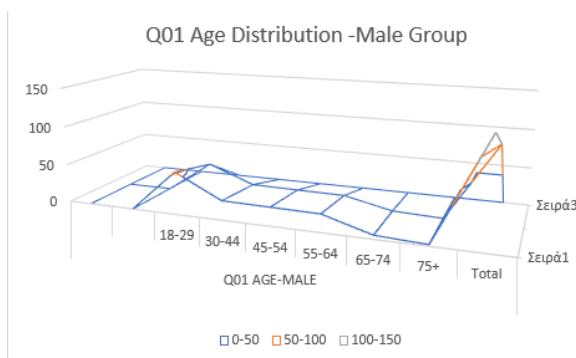


Figure 4 Age Distribution Male Group Surface Graph

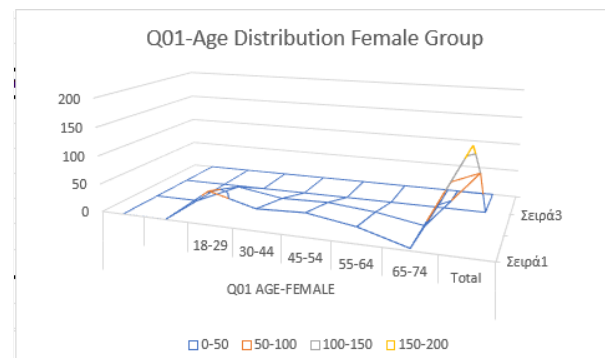


Figure 5 Age Distribution Male Group Surface Graph

-Q03 FAMILY STATUS:

The category “Single” under family status has 143 participants with the largest percentage of 47%, the married are 110 people in the survey reaching 36.2% of the total, the divorced responders are just 34, reaching 11.2%. Participants, thirteen in number, are with a partner, and that accumulates 4.3%, whereas the widowers are only four in total just 1.3%, ranking last in this category of family status.

-Q04 EDUCATION:

Concerning the educational level of the study group, most are university graduates 40.5%, a total of 123 out of 304 participants, at least 27.3%, that is 83/304 have finished secondary education, 24%, 73/304 participants are post-graduates either holding a Master’s or a Ph.D. degree. Another 8.2% accounts for 25/304 have an institute diploma either from a Greek IEK or KEK. Overall, the group of this study has a cumulative percentage of 76% up to a university degree level. It is a well-established group that has a good educational background.

-Q05 PROFESSION:

Under the Profession variable, a larger percentage of 37.5% that is 114 of the total 304 are privately employed; secondly, 67 of the total participants, which is 22% are university students. Thirdly, 15.8% of the group, just 48 in the group are entrepreneurs. The public officers follow with 12.2 % which is 37 out of 304. Retired are 5.3% with 16 respondents, the unemployed are 13, 4.3%, and the household is 9 participants in total with 3% cut.

-Q06 INFORMATION MEDIA:

Under question Q6 the group was asked to choose from three choices, which is their preferred means of Media and Communication in their daily search for information. One hundred and sixty-eighty participants (168) chose the Internet as their preferred means of information, thus the Internet reaching a significant percentage of 55.3 %. The Social Media Networks were the choice of 101 giving that category a value of 33.2 %. Thirty-five people (35/304) out of the total group chose traditional means as their preferred means of information such as newspapers, television, and radio reaching 11.5 % of the total cases.

-Q07 INFLUENCER TERM:

When the group was asked to answer whether they are familiar with the meaning of the term "Influencer", a significant total of ninety-seven (97 %) answered "yes" that is two hundred ninety-five (295) out of three hundred and four responders (304). Only seven (7) chose "No" and two people were not familiar with the term thus as a group form the remainder three percent (3%).

-Q08 INFLUENCER FOLLOWER- Q09 INSTAGRAM, FACEBOOK, TWITTER, YOUTUBE, OTHER:

In this question Q08, the responders had to choose whether they follow an influencer, a person, or a group, on Social Media Networks. One hundred and seventy-three of the responders (173/304) that is fifty-six-point nine percent (56.9%) are not following any influencers and only one hundred and twenty-two of the responders do follow an influencer on Social Media Networks. Three participants chose to give "No Answer." This question determines whether the responders will follow to complete the question applied to Influencers or skip and continue to Unit 3 of the pandemic Covid-19. The followers of Influencers proceeded to complete part B of the questionnaire.

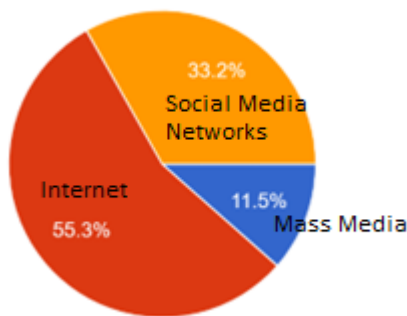


Figure 6-Pie Chart Information Media, Q06

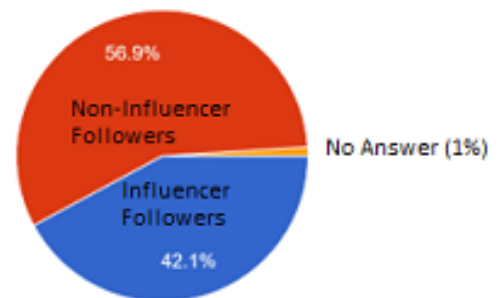


Figure 7-Pie Chart Influencer Followers, Q08

The first output of the analysis for the descriptive statistics on the demographics was investigated. According to the table, the profession has the higher mean of 3.71 and then follows education with 2.61, with both having respectively the higher and same median of

3.00. Those two variables are of most importance to our dataset as the least valuable variable is the influence term as 97% know the term and the lowest mean appears on the table.

The predominant age group is 18-29 with males at 41% and females ranking at 34.7%. The female group is well distributed in groups 1-3 with 81,2 % being from 18 to 54 years of age compared to a cumulative 77.6% of males. On the family status, 51% are male singles compared to a high of 43.5 % of female singles. 41.8 % of males have a university degree in comparison to a 39.4 % of females group. 37.1% of females are private employees and so is the 38.1 % of our male group. Internet-preferred participants are 57.5 % males and 53.5% are females. The male group of 32.1 % is informed by Social Media Networks compared to 34.1 % of females. The traditional means of information is the choice of only 10.4 % of males and 12.4 % of females. The same 96.5 % of females knew the term influencer in comparison to 97.8% of males. 32.1 % are male followers and 67.9 % choose not to follow an influencer on Social Media Networks, whereas 50% are female followers and 48.2 % are non-followers and 1.8% chose not to answer

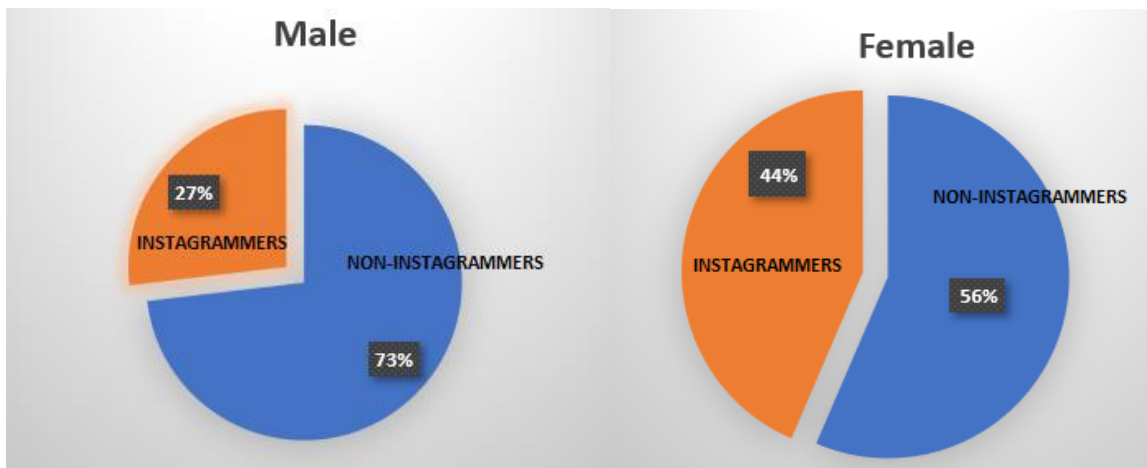


Figure 8-Pie Chart MALE-INSTAGRAM, Q09

Figure 9-Pie Chart FEMALE-INSTAGRAM, Q08

Female followers are 43.5 % Instagrammers, 18.2 % Facebook followers, 1.8% hold Twitter accounts, 20% YouTubers, and 4.7 % other such as LinkedIn, TikTok, and Twitch. In contrast, the male group is more Instagrammers at 26.9 % like the females, but more YouTubers at 21.6 %, fewer Facebook followers at 11.2%, with more Twitter accounts at 3.7 %, and fewer of the other platforms like the above-mentioned LinkedIn, TikTok, and Twitch at 2.2% (See Table2- Table3 Descriptive Statistics Male-Female Group).

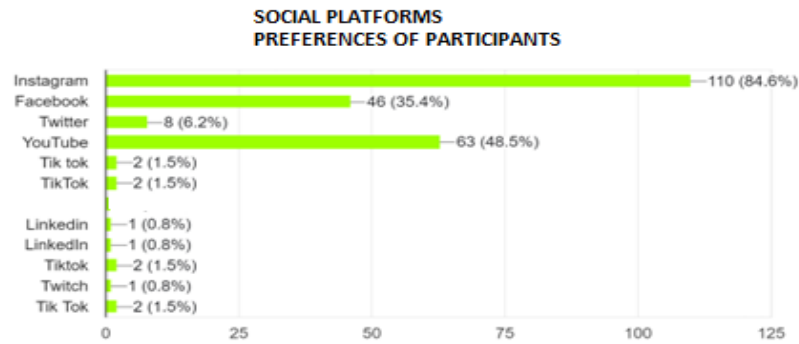


Figure 10-Bar Chart Social Platforms Preferences, Q09

4.1.2 INFLUENCERS

-Q10 How do you choose an influencer

In relation to the question concerning how they choose the influencer to follow (Q10), the male group chose based on post content (17.2%) and category (14.9%) to which the Influencer belongs. The female group has a high preference for content the influencer posts at a percentage of 30.6% and secondly, on category with a percentage of 18.2%. Mainly, the content of the posts has a higher percentage of 24.7% overall people's choice of an influencer on Social Media Networks.

Q10 How do you choose an influencer

		Frequency	Percent
Valid	Followers Number	1	,3
	Category	51	16.8
	Friends or Relatives	2	,7
	Content SMN	75	24.7
	Other	1	,3
	No Answer	174	57.2
	Total	304	100,0

Table 4-Frequencies of Variable Q10 "How do you choose an influencer"

-Q11 How much do you trust Influencers on Covid-19 issues

Regarding trust in the Influencer’s posts on Covid-19 issues (Q11), the female group shows no trust at 15.9% frequency, and the rest relatively, little, and very little trust at 11.2%, 12.4%, and 10.6% respectively. The male group shows little trust at 1.9 %, relative trust at 6.7 %, and very little trust at 3.7 %, thus an overall 23.10 % trust. No trust issues have a 9.7% of the males in this survey.

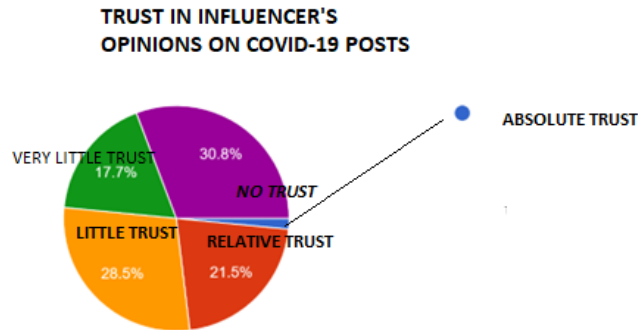


Figure 11- Trust in Influencers’ Opinions on Covid-19 posts

-Q12 Do you find Influencers trustworthy and honest

Concerning the trustworthiness and honesty of the Influencers on issues of Covid-19 (Q12), 9% of male followers of Influencers disagree or absolutely disagree, in relation to the opposing side 6.7 % agree or absolutely agree that Influencers are trustworthy and honest. Of the total males that follow influencers, 17.2 % are neutral and raise no opinion on this matter. The female group stands at 28.2 neutrality, and 14.10% choose to disagree or absolutely disagree and on the other extreme side, 8.8% are positive to agree or absolutely agree.

-Q13 Do you trust Influencer's post content on Covid-19 to be reliable

On the reliability of the content of Influencers on Social Media Networks on issues of Covid-19 (Q13), 24.7% of females are neutral, 19.4% disagree or take the negative side and only 6.5% are in agreement that the content is reliable. The male group is 15.7% neutral and does not take sides on this matter, 12% of them disagree with the reliability of the content of Influencers on SMN, and only a.2% find it reliable.

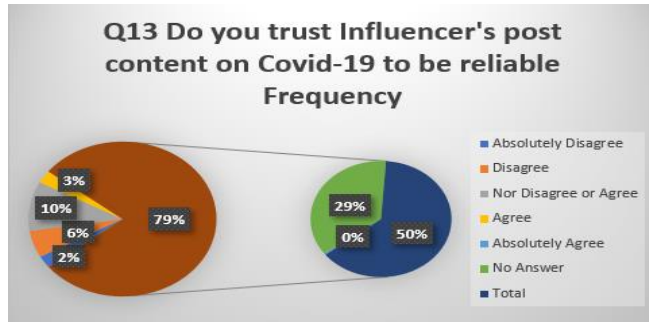


Figure 12-Variable Q13 "Do you trust Influencer's post content on Covid-19 to be reliable "Pie Chart-Frequency Illustration

-Q14 Is the influencer informative and useful on Covid-19 issues

The question about the informative and useful nature of Influencers' posts on social media 16.4% disagree or absolutely disagree and 9.7% remain at nor agree or disagree and only 6.7% of males agree and absolutely agree on this issue. The female group agrees at 5.3% with 25.9% taking the other side and 19.4% taking no side.

-Q15 Is the influencer expert and experienced in Covid-19 issues

Regarding the expertise and experience of the Influencer (Q15), the female group strongly disagrees at a percentage of 34.7%, and 12.9% remain indifferent. The rest 3.0% are in agreement that the influencer is an expert and experienced on issues concerning Covid-19. The male counterparts are 21.7% in disagreement, 7.5% indifferent, and only 3.7% are found in agreement.

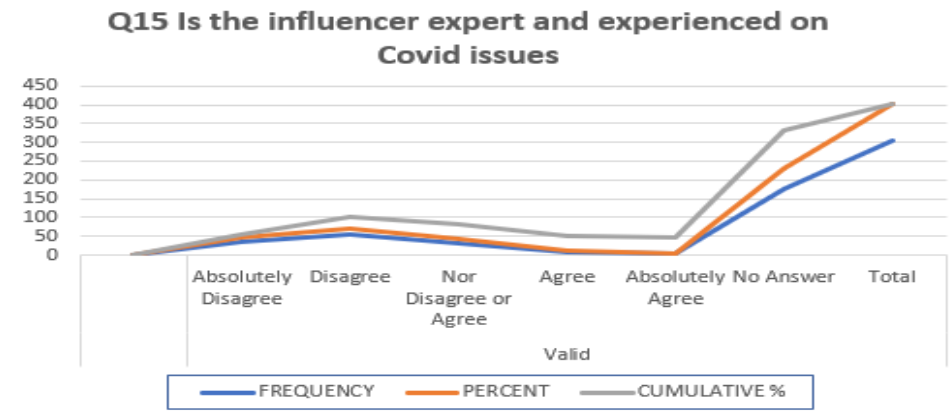


Figure 13- Linear Representation 2-D Variable Q15 "Is the Influencer expert and experienced on Covid-19 issues"

4.1.3 COVID-19 PANDEMIC AND VACCINES

-Q16 I am afraid of Covid-19

On the issues concerning the pandemic of Covid-19 (Q16), the males showed no fear of Covid-19 at a 44%, 38.1% remain neutral that is not afraid or afraid of the disease, and 17.9% would agree that they are afraid of Covid-19. Of the female counterparts in this survey 35.8% are not afraid of Covid-19, 38.8% are indifferent, and 25.3% show fear of Covid-19 that is a lot higher than the male group.

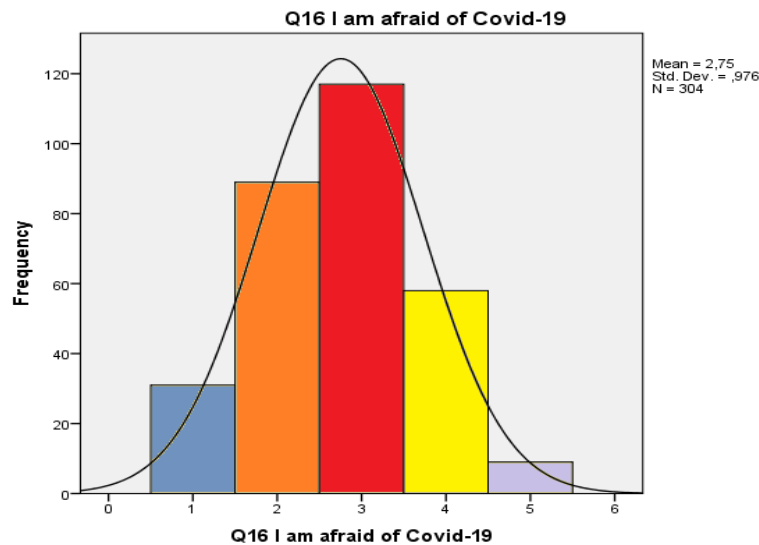


Figure 14-Histogram of Variable Q16 "I am afraid of Covid-19" Normal distribution-Histogram

-Q17 The Covid-19 vaccine is effective and safe

The vaccine for Covid-19 is effective and safe (Q17) is the choice of 46.5% of females and 32.9 % remain neutral and raise no opinion. 20.6 % will disagree with this statement. In the male group, 53.7% find the vaccine for Covid-19 effective and safe, 14.10% feel disagree on this matter, and 32.1% are neutral.

4.1.4 SOCIAL ANXIETY AND CONFORMITY

-Q18 Family and friends will give an opinion to get the Covid-19 vaccine

On the issue (Q18), the sex group male has 70.2 % agreeing and absolutely agreeing that family and friends or people closer to them would agree in their opinion to get the Covid-19 vaccine, only 9.7% would disagree meaning that their closest ones would not interfere or give an opinion and 20.1% are neutral. The female group agrees with this notion at a rate of 71.8% and 8.2 % of them are in disagreement and the rest 20% remain neutrally indifferent.

-Q19 I feel social pressure to get the Covid-19 vaccine

Question 19 (Q19) intends to get the feeling of social pressure by stating “ I feel social pressure to get the Covid-19 vaccine” 29.9% of males would agree and another 9% would absolutely agree, a total of 38.9% which is a very high score. 26.1% remain neutral and 35.1% would disagree or absolutely disagree. It is apparent that in this question we have a normal distribution of opinions on either side. The female group on the other side said 41.8% that they are in agreement and feel this social pressure to get the vaccine. Only 18.1% take no sides and give no answer and again 40% say that feel no such pressure. In general, we see both male and female groups give the same feeling as social pressure is concerned.

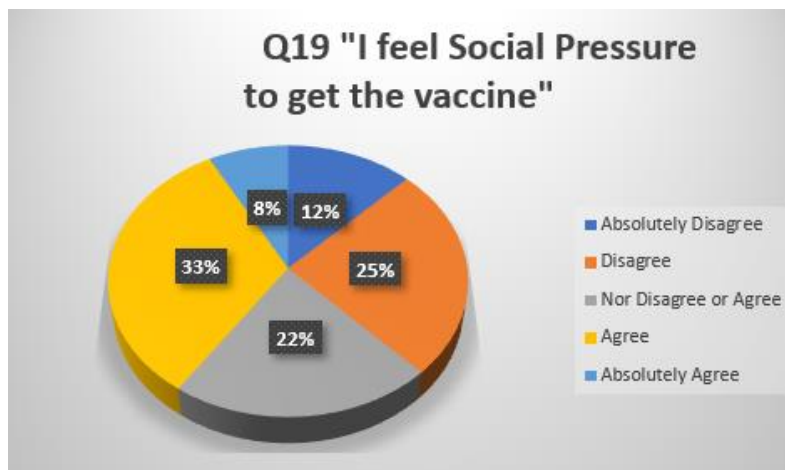


Figure 15-Pie Chart Variable Q19 "I feel social pressure to get the Covid-19 vaccine

-Q20 Is the information posted on SMN on Covid-19 reliable and true;

-Q21 Is the information posted on the Internet on Covid-19 reliable and true;

-Q22 Is the information posted on Mass Media on Covid19 reliable and true

On the issue of information on Covid-19 as presented in Social Media Networks, in comparison to mass media, and lastly to the Internet (Q20-Q22) to the degree the news is believed to be reliable and true, results show a large scale of neutrality. When social media is concerned a cumulative 91.2% percent of the female group shows either disagreement or indifference. (42.4% disagreed and 48.8% did not answer). Only 8.8% would agree that Social Media information on Covid-19 is reliable and true. The male counterparts seem to be in the same direction with a cumulative 95.5% showing 51.5% disagreeing and 40.5% remaining impartial, and the rest 4.5% of the male agreeing on the subject.

Internet information is believed by 15.7% of the male group to be reliable and true. A large 50% of the male group is indecisive and another 34.3 % totally object. The female group consents on a percentage of 14.2%, 24.7% fails to agree and 61.2% avoid deciding on the side. The online information on issues about Covid-19 is found to be dependable and true only by 14.2% of females. 61.2 % are completely impartial and 24.7% oppose this issue.

On the mass media issue, the female group avoids siding with any of the possibilities at a sizable percentage of 46.5%, and only 13% consent that they will find reliable and true information on Covid-19 in daily traditional news. However, 40.6% of the female group in this survey repudiate the reliability and truthfulness of the information given on Covid-19 issues. Regarding mass media, 17.1% of the men accept the information to be reliable and true. 37.3% of the male group avoid deciding, and 45.5% of the male group contradict that view.

-Q23 COVID-19 vaccines are important for protection

Covid-19 vaccines are important for protection (Q23) is a side that is supported by 63.5% of males and 58.2% of females in this survey. The study group has 14.1% females and 12.7% males in contradiction, and 27.6% and 23.9% impartiality, respectively.

-Q24 I Worry about people's opinion

The results show that 28.3% of the females worry about people's opinions in contrast to 18.7% of the male participants (Q24). The impartiality is approximately the same at 24.6% for males and 24.1% for females in this group. A significantly significant percentage of opposing this argument was evident by both sexes 56.7% male and 47.7% their female counterparts.

-Q25 I fear of people noticing my insecurities

The people most afraid that others will notice their insecurities (Q25) are the females with 23%, whereas the males only match 15.7%, The male group opposing this argument is reaching 56% and 54.2% of the females contradict it. Neuter is 28.4% male and 22.9% responders from the female group.

-Q26 I fear of people's disapproval

Regarding fear of people's disapproval (Q26), 67.3% of males oppose and only 14.9% find it applicable to them. The females responded in an analogous way with a high percentage of 55.1% diverging and 19.40% showing positive feelings toward this statement. Neutrality in males is at 17.9 % whereas the females stand at 26.5%

-Q27 I worry about saying or doing the wrong things

The statement posed "I worry about saying or doing the wrong things" showed a positive reaction from the women in this study as they reached 41.3 % in agreement. On the other hand, men also responded with a positive 29.1%. The negative reactions were 40.3% for males and 37.7% for females, thus letting us conclude that more women than men are positively affected by this statement. The men are more prone to reject this statement, but also

to remain indifferent at 30% of the total. The women were more involved and only 20% decided not to raise an opinion.

-Q28 I don't like being the center of attention

Most women dislike being in the center of attention (Q28) at a 28.9% frequency compared to the men at 14.2% in this survey, 64.9 % of males disagree and therefore like to be in the center of attention to 55.8% of females. Indifferent remain 20.9% of the males and 25.3% of the females in this focus group.

-Q29 I have difficulty communicating with other people

Difficulty communicating with other people (Q29) has a low 5.9% of males and only 5.3% of women. 78.3% and 74.3% respectively disagree with this statement. Neutral remains a total of 35.1% of the responders in both sexes.

-Q30 It upsets me to be in an unexpected situation

Upsetting being in an unexpected situation (Q30) find themselves 58.3 % of women and 41.8% of men, in contrast to the negative side of 20.6 % and 33.6% of women and men, respectively. 45.8% of the total group decided not to give their opinion.

-Q31 I am not bothered by things that interrupt my daily life

People not bothered by things interrupting their daily life (Q31) are 27.6% men and 31.8% women. However, 41.8% and 44.1% are in disagreement with their respective sex groups and feel bothered. The non-respondents are still at 54.7% of the total survey group.

-Q32 I like to have a place for everything and everything in its place.

In the statement “I like to have a place for everything and everything in its place” (Q32) a similar positive reaction was apparent from both males and females at 55.2% and 49.4% respectively. A comparatively low percentage of 15.6% of men and 17% of women contradicts this statement. In addition, 32.1% of men and 33.5% of women fail to take sides.

-Q33 I enjoy being spontaneous.

Spontaneity (Q33) is measured in the final question where 41.8% of males and 35.8% of females do not enjoy being spontaneous. This personality trait is in agreement with 16.4% of the men and 10% of the women in this study group. Again, a high degree of neutrality and not choosing sides is found at 41.8% in men and 54.10% in women.

4.1.5 SUMMARY OF BASIC RESULTS DEMOGRAPHICS AND FREQUENCIES.

N=304 respondents in the questionnaire survey:

GROUP DEMOGRAPHICS:	
•	55.9% are in the Female Group
•	44.1% are in the Male Group
•	37.5 % belong to the age group between 18-29 years old.
•	59.5 % have no Partner in life
•	76% have an above-secondary educational level
•	37.5 % of the respondents are privately employed
•	55.3% Internet is the daily means of information for Covid-19
•	97% know who influencers are
•	56.9 % are non-influencer followers

INFLUENCER FOLLOWERS:	
•	24% choose their influencer based on content
•	13.2% have no trust in Influencers on Covid-19 issues
•	11.8 % find Influencers are not to be trusted or honest
•	16.1% find Influencers' post content not reliable
•	21.7% find Influencers are not informative or useful on Covid-19 issues
•	19% find Influencers to be not experts nor experienced in Covid-19 issues

COVID-19 PANDEMIC:
<ul style="list-style-type: none"> • 39.5% are not afraid of Covid-19 at the end of the pandemic vs 22.1% who are afraid
<ul style="list-style-type: none"> • 49.7% believe the Covid-19 vaccine to be effective and safe
<ul style="list-style-type: none"> • 71% believe that the family or relatives or close friends will have an opinion about vaccination
<ul style="list-style-type: none"> • 40.5% feel social pressure to get the Covid-19 vaccine
<ul style="list-style-type: none"> • 46.4% have strong disbelief that the content on Social Media Networks on Covid-19 is reliable or true (46.7% are undecided)
<ul style="list-style-type: none"> • 56% are undecided on whether the information posted on the Internet on Covid-19 is reliable or true
<ul style="list-style-type: none"> • 42.8% disagree that information presented in Mass Media on Covid-19 issues is reliable or true
<ul style="list-style-type: none"> • 60.6% agree that the vaccines against Covid-19 are important for protection

SOCIAL ANXIETY
<ul style="list-style-type: none"> • 51.6% of respondents do not worry about people's opinion
<ul style="list-style-type: none"> • 54.9% of respondents have no fear of people noticing their insecurities
<ul style="list-style-type: none"> • 59.9% of the participants are unafraid of people's disapproval
<ul style="list-style-type: none"> • 38.8% do not worry about saying or doing the wrong things vs 36.5% that do worry
<ul style="list-style-type: none"> • 54.3% in this survey feel that they like being the center of attention
<ul style="list-style-type: none"> • 76.7% find themselves in difficulty communicating with others
<ul style="list-style-type: none"> • 51% find it upsetting to be in an unexpected situation
<ul style="list-style-type: none"> • 43.1% are bothered by interruptions in their daily life
<ul style="list-style-type: none"> • 61.5% enjoy being spontaneous

4.2 FACTOR ANALYSIS

Our sample data is tested for our further analysis, by imputing the data into the IBM SPSS STATISTICS Version 23 and examining all variables of the questionnaire.

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) determines that the responses given with the sample are adequate at $.879 > .5$. Bartlett's Test shows a strength of the relationship among the variables at 17263.188 with degrees of freedom 667 and Sig. .000, so there is a significant correlation in our sample. The identity matrix shows all the diagonal elements are one and all off-diagonal elements are close to .0 so we can reject the null hypothesis. The significance of .00 is $< .05$ to lead us to reject the null hypothesis. In the process of factorization, results of the initial Eigenvalues > 1.0 showed nine sample components to be reduced. As shown in the table of Total Variance Cumulative the level of 67.568% percent. The extraction method is Principal Component Analysis, Rotation Method Varimax with Kaiser Normalization with a rotation converged in fifteen iterations (Chetty, 2022).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.879
Bartlett's Test of Sphericity	Approx. Chi-Square	17263,188
	df	667
	Sig.	.000

Table 5-KAISER-MEYER-OLKIN MEASURE AND BARLETT'S TEST -FACTOR ANALYSIS

Now, in examining the Communalities (see Table 6), the extractions $< .5$ were not to be considered for further study. Those variables were Q093 Twitter with a value of .296, the Q06 Information Media variable at .498, Q094 YouTube with a value of .495, Q16 "I am afraid of Covid-19" variable with an extraction value of .477, the Q19 "I feel social pressure to get the Covid-19 vaccine" and Q29 "I have difficulty communicating with others" variable at .468. Values more than $> .5$ are to be considered for further analysis. The variables are to be removed from further steps of factor analysis. Thus, Q06, Q093, Q094, Q16, Q19, and

Q29 should be excluded from further analysis. Q092 Facebook is very border limit, but it is a variable that needs further consideration.

By proceeding to analyze the reliability of each component, the results show the variables under C1, C2, and C3 to have respectively Cronbach's Alpha coefficient should be $> .7$ (DeVellis, 2012). Cronbach Alpha values are quite sensitive to the number of items in the scale below ten items compared. In fact, component C1 has Cronbach's Alpha of .925 for the ten items, component C2 has Cronbach's Alpha of .868 for seven items, and component C3 has Cronbach's Alpha of .548 for five items. Cronbach's Alpha for component C4 is .659 for four variables. Component C5 has a score of Cronbach's Alpha of .707 for three variables. The components C6, and C7, are below zero values of Cronbach's Alpha and C8 has only one variable. These values are negative due to a negative average covariance among items that are in violation of the reliability model assumptions (See Table 7).

TABLE OF COMPONENTS MATRIX RESULTS

C1	Q10	Q13	Q14	Q12	Q15	Q11	Q08	Q09	Q094	Q092
C2	Q26	Q25	Q27	Q24	Q28	Q30	Q29			
C3	Q17	Q23	Q18	Q22	Q19					
C4	Q01	Q03	Q05	Q16						
C5	Q22	Q20	Q21							
C6	Q31	Q32	Q33							
C7	Q07	Q06								
C8	Q04	Q095								
C9	Q02									

Table 6- Factor Analysis Rotated Component Matrix Results for Reliability

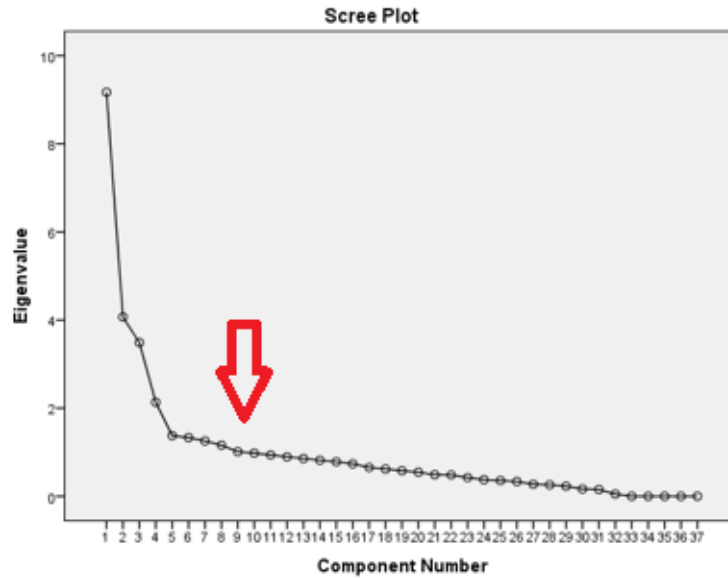


Figure 16- Scree plot Factor Analysis-9 Component

Communalities				
	Initial	Extraction		
Q01 AGE	1,000	,728	Q19 I feel social pressure to get the Covid-19 vaccine	1,000 ,400
Q02 SEX	1,000	,539	Q20 Is the information posted on SMN on Covid-19 reliable and true	1,000 ,705
Q03 FAMILY STATUS	1,000	,535	Q21 Is the information posted on the Internet on Covid-19 reliable and true	1,000 ,687
Q04 EDUCATION	1,000	,838	Q22 Is the information posted on Mass Media on Covid19 reliable and true	1,000 ,640
Q05 PROFESSION	1,000	,575	Q23 COVID-19 vaccines are important for the protection	1,000 ,809
Q06 INFORMATION MEDIA	1,000	,498	Q24 I Worry about people's opinion	1,000 ,685
Q07 INFLUENCER TERM FOLLOWER	1,000	,946	Q25 I fear people holding my insecurities	1,000 ,721
Q09 INSTAGRAM	1,000	,798	Q26 I fear people's disapproval	1,000 ,735
Q092 FACEBOOK	1,000	,505	Q27 I worry about saying or doing the wrong things	1,000 ,727
Q093 TWITTER	1,000	,296	Q28 I don't like being the center of attention	1,000 ,617
Q094 YOUTUBE	1,000	,495	Q29 I have difficulty communicating with other people	1,000 ,468
Q095 OTHER	1,000	,521	Q30 It upsets me to be in an unexpected situation	1,000 ,555
Q10 How do you choose an influencer	1,000	,990	Q31 I am not bothered by things that interrupt my daily life	1,000 ,685
Q11 How much do you trust Influencers on covid issues	1,000	,989	Q32 I like to have a place for everything and everything in its place.	1,000 ,629
Q12 Do you find Influencers trustworthy and honest	1,000	,989	Q33 I enjoy being spontaneous.	1,000 ,539
Q13 Do you trust Influencer's post content on Covid19 to be reliable	1,000	,989		
Q14 Is the influencer informative and useful on Covid issues	1,000	,990		
Q15 Is the influencer expert and experienced on Covid issues	1,000	,989		
Q16 I am afraid of Covid-19	1,000	,477		
Q17 The Covid-19 vaccine is effective and safe	1,000	,809		
Q18 Family and friends will give an opinion to get the Covid-19 vaccine	1,000	,550		
Q19 I feel social pressure to get the Covid-19 vaccine	1,000	,400		

Extraction Method: Principal Component Analysis

Table 7- Factor Analysis Communalities

Dependent-Independent Variables and their Components

- Q01 AGE (c4) - Independent variable
- Q02 SEX (c9) - Independent variable
- Q03 FAMILY_STATUS (c4) - Independent variable
- Q04 EDUCATION (c8) - Independent variable
- Q05 PROFESSION (c4) - Independent variable
- Q06 INFORMATION MEDIA (c7) - Independent variable
- Q07 INFLUENCER TERM (c7) - Independent variable
- Q08 INFLUENCER FOLLOWER (c1) - Independent variable
- Q09 INSTAGRAM (c1) - Independent variable
- Q092 FACEBOOK (c1) - Independent variable
- Q093 TWITTER (-) - Independent variable
- Q094 YOUTUBE (c1) - Independent variable
- Q095 OTHER (c8) - Independent variable
- Q10 How do you choose an influencer (c1) - Dependent Variable
- Q11 How much do you trust Influencers on covid issues (c1) - Dependent Variable
- Q12 Do you find Influencers trustworthy and honest (c1) - Dependent Variable
- Q13 Do you trust Influencer's post content on Covid19 to be reliable (c1) - Dependent Variable
- Q14 Is the influencer informative and useful on Covid issues (c1) - Dependent Variable
- Q15 Is the influencer expert and experienced on Covid issues (c1) - Dependent Variable
- Q16 I am afraid of Covid-19 (c4) - Dependent Variable
- Q17 The Covid-19 vaccine is effective and safe (c3) - Dependent Variable
- Q18 Family and friends will give an opinion to get the Covid-19 vaccine (c3) - Dependent Variable
- Q19 I feel social pressure to get the Covid-19 vaccine (c3) - Dependent Variable
- Q20 Is the information posted on SMN on Covid-19 reliable and true (c5) - Dependent Variable

- Q21 Is the information posted on the Internet on Covid-19 reliable and true (c5) - Dependent Variable
- Q22 Is the information posted on Mass Media on Covid19 reliable and true (c3) (c5) - Dependent Variable
- Q23 COVID-19 vaccines are important for protection (c3) - Dependent Variable
- Q24 I Worry about people's opinion (c2) - Dependent Variable
- Q25 I fear people noticing my insecurities (c2) - Dependent Variable
- Q26 I fear of people's disapproval (c2) - Dependent Variable
- Q27 I worry about saying or doing the wrong things (c2) - Dependent Variable
- Q28 I don't like being the center of attention (c2) - Dependent Variable
- Q29 I have difficulty communicating with other people (c2) - Dependent Variable
- Q30 It upsets me to be in an unexpected situation (c2) - Dependent Variable
- Q31 I am not bothered by things that interrupt my daily life (c6) - Dependent Variable
- Q32 I like to have a place for everything and everything in its place. (c6) - Dependent Variable
- Q33 I enjoy being spontaneous (c6) - Dependent Variable

4.3 LINEAR REGRESSION ANALYSIS

This research's findings showed a correlation between independent variables such as age, sex, education level, family status, profession, information media preference concerning Covid-19 news, and the participant's status as an influencer follower. These descriptive variables should be examined further in relation to the dependent variables that prescribe fear, perceived belief in Covid-19 vaccine safety, and social anxiety and conformity, as shown in Fig.17 demonstrated below. Under the true assumption that our sample is randomly selected, a data analysis plan is set up for further analysis.

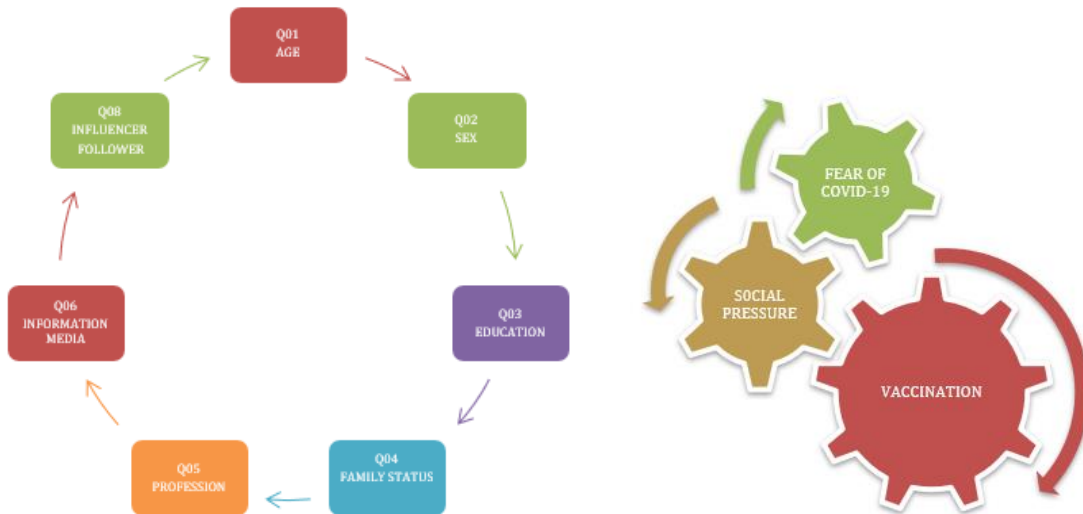


Figure 17- VARIABLES TO BE EXAMINED - Dependent Variables VS Independent Variables

In our model, we are examining the following hypotheses to test what factors affect them by running a linear regression analysis using the stepwise method to narrow down the dependency relation between variables.

- H0: Descriptive attributes such as age, sex, education, profession, or being an influencer follower have no effect on the degree of Fear of Covid-19 as a factor in vaccine tendency.
- H1: Descriptive attributes such as age, sex, education, profession, or being an influencer follower play a role in managing Fear of Covid-19 to achieve vaccination.

The model is based on 95% accuracy if the test p-value of sig. < 0.05, the null hypothesis H0 must be rejected. The Descriptive Statistics show that in a group of N=304, we have the Mean and Standard Deviations as Sex and Influencer Follower having the smallest values. In the correlations table, we see the Pearson Correlation coefficient to be higher in Q01 Age and Q03 Family Status, followed by Q05 Profession and Q02 Sex. The Influencer Follower variable has no significant dependency.

Correlations								
	Q16 I am afraid of Covid-19	Q01 AGE	Q02 SEX	Q03 FAMILY_STAT US	Q04 EDUCATION	Q05 PROFESSION	Q08 INFLUENCER FOLLOWER	
Pearson Correlation	Q16 I am afraid of Covid-19	1,000	,300	,122	,206	,114	,186	,041
	Q01 AGE	,300	1,000	,004	,530	,071	,491	,311
	Q02 SEX	,122	,004	1,000	,116	-,059	,150	-,157
	Q03 FAMILY_STATUS	,206	,530	,116	1,000	,019	,281	,141
	Q04 EDUCATION	,114	,071	-,059	,019	1,000	,168	,100
	Q05 PROFESSION	,186	,491	,150	,281	,168	1,000	,144
	Q08 INFLUENCER FOLLOWER	,041	,311	-,157	,141	,100	,144	1,000
Sig. (1-tailed)	Q16 I am afraid of Covid-19	.	,000	,017	,000	,024	,001	,240
	Q01 AGE	,000	.	,471	,000	,109	,000	,000
	Q02 SEX	,017	,471	.	,022	,153	,004	,003
	Q03 FAMILY_STATUS	,000	,000	,022	.	,372	,000	,007
	Q04 EDUCATION	,024	,109	,153	,372	.	,002	,041
	Q05 PROFESSION	,001	,000	,004	,000	,002	.	,006
	Q08 INFLUENCER FOLLOWER	,240	,000	,003	,007	,041	,006	.

Table 8- Correlations "Q16 I am afraid of Covid-19"

Durbin-Watson is at 2.100 between a margin of 1.5 to 2.5, so there is a significant correlation between the dependent variable Q16 values fear of Covid-19, and the independent variables entered. The R is <.4, however at a level of .344 with predictors constant all. The results of the Model Summary are shown as R Square at .119 and Adjusted R Square at .101 with a Std Error of the estimate .925. In the case of the stepwise method, Q01 Age and Q02 Sex are the two best predictor models, Q01 Age as sole in Model 1 and in Model 2 a combination of them. This is also evident in the table of Coefficient at the sig. level of age and sex. The Anova Table shows at Sum of Squares at 34,190 with df 6 and M2 at 5,698 and F at 6,655 and Sig. <.05 at .000. There is a large F value, and the sig. level can discredit the null hypothesis. The variance shows the group means are different and scattered, so the sample can assist in drawing conclusions for the population.

In the same way, the same hypothesis of whether the above-mentioned descriptives are affecting social anxiety and vaccination propagation by accepting vaccines to be effective and safe was tested separately to the:

- Q17 dependent variable “the Covid-19 is effective and safe” (Covid-19 vaccines)
- Q23 dependent variable “The Covid-19 vaccines are important for protection” (Covid-19 vaccines)

- Q19 dependent variable “I feel Social Pressure to get the Covid-19 vaccine” (Social anxiety)
- Q24 dependent variable “I worry about people’s opinion” (Social anxiety)

Results showed that the predictors for the effectiveness and safety of vaccines can be the Information Media and Sex, and Information Media and Family Status. The predictors for the social pressure factor can be Instagram and Information Media with all at sig. level .00

4.4 CROSSTABULATION

As Instagram was the most popular among other platforms, crosstabulation to this variable regarding sex, family, education, profession, and age primarily will be discussed below.

The Chi-Square test on *Sex-Instagram* conducted on the data was significant at the .003 level (2-tailed $p < .05$ of significance. (N=304, $\chi^2 = 9,011$, $df = 1$) $\chi^2(1)=9.011$, $p = .003$, so we conclude that there is a close relationship between sex and Instagram of high significance to the standard normal distribution. (see Appendix for more charts)

The *Family-Instagram* crosstab has a significance at .000 level (2-tailed $< .05$ of significance (N=304, $\chi^2=28,840$, $df=4$) $\chi^2(4)= 28.840$ $p = .000$, normal distribution of the sample and a less fit sample is evident in conclusions

The *Profession-Instagram* crosstab has a significance at .000 level (2-tailed $< .05$) of significance, (N=304, $\chi^2=26,086$, $df=6$) $\chi^2(6)=26,086$ $p < .000$. The data is statistically significant with a lower fit to the population, thus rejecting the null hypothesis and accepting the normality of the sample.

The *Education-Instagram* has a significance level at .499 level (2-tailed $> .05$) and (N=304, $\chi^2=2,371$, $df=3$) $\chi^2(3)=2,371$ $p > .499$, where education has no statistical significance, but our randomly collected sample has a greater correlation to the population.

The *Age-Instagram* Crosstab shows $p = .000$ (2-tailed, $> .05$) at N=304 valid cases Pearson Chi-Square $\chi^2(df5)=47,729$, $p = .000$. This large chi-square test statistic means that the sample data (observed values) does not fit the population data (expected values) very well.

The statistical significance is great as $p = .000$ and the null hypothesis is rejected. So, the conclusion is that there is no significant relationship between Age and Instagram.

In conclusion, Sex and Instagram have a good relationship of statistical significance, and the education variable plays a role in the representation of the sample with a small Pearson Chi-Square but of no statistical significance and we have to accept the null hypothesis. Furthermore, when the independent variables were tested in relation to the rest of the Social Media Platforms such as Facebook, YouTube, etc., the p was in all cases $> .05$ except in the case of Education vs Twitter, and Profession vs Twitter where results showed that the null hypothesis is not assumed based on normal approximation.

4.5 COMPARE MEANS-INDEPENDENCE SAMPLE T-TEST

4.5.1 Sex vs Dependent Variables Q16, Q17, Q19, Q23, Q24

By comparing the means, Std. Deviations and Std Error Mean, the male and female groups have no large differences. The t -values at the Levene's Test for equality of Variance are similar on the equal variances assumed and if we examine the confidence intervals of the Q19 -social pressure to get the vaccine, they cross .0 having a lower limit of $-.261$ and upper limit of $.278$; so there is no difference between sexes but $p > \alpha = .05$ at a value of $.95$ thus of no statistical significance. On Q23-Covid-19 vaccines are important for protection, the results show no difference on both sexes as the confidence intervals are $-.187$ to $.282$ with a $p = .047 < \alpha = .05$ one of statistical significance. A difference of statistical significance is found in Q24, Q26, and Q16, and close to $.05$ for Q17. These are all confidence intervals that do not include the value $.0$ in their confidence intervals. (Table 4-5, below).

Group Statistics SEX-Q16, Q17, Q19, Q23, Q24, Q26

	Q02 SEX	N	Mean	Std. Deviation	Std. Error Mean
Q16 I am afraid of Covid-19	Male	134	2,62	,964	,083
	Female	170	2,86	,975	,075
Q17 The Covid-19 vaccine is effective and safe	Male	134	3,48	,963	,083
	Female	170	3,25	1,009	,077

Q19 I feel social pressure to get the Covid-19 vaccine	Male	134	2,99	1,201	,104
	Female	170	2,98	1,171	,090
Q23 COVID-19 vaccines are important for protection	Male	134	3,61	1,011	,087
	Female	170	3,56	1,048	,080
Q24 I Worry about people's opinior	Male	134	2,41	1,063	,092
	Female	170	2,66	1,071	,082
Q26 I fear of people's disapproval	Male	134	2,22	1,043	,090
	Female	170	2,51	1,004	,077

Table 9 - Compare Means Independent Samples t-Test- SEXES Male-Female

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
								Lower	Upper	
Q16 I am afraid of Covid-19	,480	,489	Equal variances assumed	-2,136	302	,033	-,239	,112	-,460	-,019
			Equal variances not assumed	-2,139	287,057	,033	-,239	,112	-,460	-,019
Q17 The Covid-19 vaccine is effective and safe	,133	,716	Equal variances assumed	1,966	302	,050	,225	,114	,000	,450
			Equal variances not assumed	1,977	291,160	,049	,225	,114	,001	,448
Q19 I feel social pressure to get the Covid-19 vaccine	,164	,686	Equal variances assumed	,063	302	,950	,009	,137	-,261	,278
			Equal variances not assumed	,063	282,274	,950	,009	,137	-,262	,279
Q23 COVID-19 vaccines are	,610	,435	,396	302	,692	,047	,119	-,187	,282	

important for protection	Equal variances not assumed			,398	290,094	,691	,047	,119	-,186	,281
Q24 I Worry about people's opinion	Equal variances assumed	,185	,668	-2,061	302	,040	-,254	,123	-,497	-,012
	Equal variances not assumed			-2,063	286,545	,040	-,254	,123	-,497	-,012
Q26 I fear of people's disapproval	Equal variances assumed	,121	,729	-2,453	302	,015	-,289	,118	-,522	-,057
	Equal variances not assumed			-2,442	280,519	,015	-,289	,119	-,523	-,056

Table 10- Independent Samples Test Sex -Levene's Test of Equality of Variances and t-test for Equality of Means

4.5.2 Influencer follower vs Dependent Variables Q16, Q17, Q19, Q23, Q24

In examining the variable Q08 of Influencers' Followers and Non-Influencer's Followers, we compare their means to the same dependent variables; it is noticeable that again the mean values are with small differentiation like each other except perhaps, the Q19 shows a slight differentiation among the group of Influencer followers and Not-Influencers follower when the social pressure to get the Covid-19 vaccine is concerned. Levene's Test of Equality of Variance by comparing the two independent groups of Influencers' Followers and Non-Influencers' Followers showed that the *p*-value for Levene's Test is Q23 and Q24 have a significant difference in their means.

Homogeneity of variance is assessed using Levene's Test for Equality of Variances, the *p*-value for Levene's Test should be above .05. In this case, Q23 shows to violate homogeneity as *p*-value is below .05 and, the rest of Q16, Q17, Q19, Q24, Q26 yields an as *p*-value is above .05. So the statistical assumption of homogeneity of variance is in effect. (Table 11-below).

Group Statistics					
	Q08 INFLUENCER FOLLOWER	N	Mean	Std. Deviation	Std. Error Mean
Q16 I am afraid of Covid-19	Follower	128	2,69	,986	,087
	Not a Follower	173	2,82	,965	,073
	Follower	128	3,36	,894	,079

Q17 The Covid-19 vaccine is effective and safe	Not a Follower	173	3,35	1,066	,081
Q19 I feel social pressure to get the Covid-19 vaccine	Follower	128	3,09	1,125	,099
	Not a Follower	173	2,89	1,217	,093
Q23 COVID-19 vaccines are important for protection	Follower	128	3,66	,917	,081
	Not a Follower	173	3,54	1,113	,085
Q24 I Worry about people's opinion	Follower	128	2,77	1,096	,097
	Not a Follower	173	2,39	1,032	,078
Q26 I fear of people's disapproval	Follower	128	2,59	1,053	,093
	Not a Follower	173	2,22	,987	,075

Table 11- Compare Means Independent Samples t-Test- Influencer Follower/Non-Influencer Follower

Independent Samples Test										
	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
								Lower	Upper	
Q16 I am afraid of Covid-19	Equal variances assumed	1,928	,166	-1,123	299	,262	-,128	,114	-,351	,096
	Equal variances not assumed			-1,119	270,423	,264	-,128	,114	-,352	,097
Q17 The Covid-19 vaccine is effective and safe	Equal variances assumed	3,148	,077	,058	299	,954	,007	,116	-,222	,235
	Equal variances not assumed			,060	294,302	,952	,007	,113	-,216	,230
Q19 I feel social pressure to get the Covid-19 vaccine	Equal variances assumed	,439	,508	1,481	299	,140	,204	,137	-,067	,474
	Equal variances not assumed			1,498	284,583	,135	,204	,136	-,064	,471

Q23 COVID-19 vaccines are important for protection	Equal variances assumed	5,753	,017	,984	299	,326	,119	,121	-,119	,356
	Equal variances not assumed			1,013	295,475	,312	,119	,117	-,112	,349
Q24 I Worry about people's opinion	Equal variances assumed	1,410	,236	3,079	299	,002	,380	,124	,137	,623
	Equal variances not assumed			3,052	264,403	,003	,380	,125	,135	,626
Q26 I fear of people's disapproval	Equal variances assumed	2,712	,101	3,159	299	,002	,374	,118	,141	,607
	Equal variances not assumed			3,128	263,562	,002	,374	,120	,139	,610

Table 12- Independent Samples Test Influencer Follower -Levene's Test of Equality of Variances and t-test for Equality of Means

CHAPTER 5- CONCLUSIONS

In conclusion, this survey revealed participants' preference for the Internet on Covid-19 information at 55.3 %, while Social Media Networks ranked second. Despite their choices, only 8.8% found the information derived from internet searches and social media platforms to be reliable and true on the Covid-19 subject. Instagram ranked first in the responders' list of choices and Facebook followed. This is also evident in the findings by Defede et al. (2021) where Instagram is apparently the most popular platform and Facebook follows. In our research, female Instagrammers occupy double the percentage of their male counterparts. At Rowley et al. (2017), females demonstrated greater interest in cognition and ease than men who were more involved with the accuracy of the information. Differences between the sexes are in line with the demographics in general.

The entire survey group was familiar with the influencer as a term, but only 43.1% of those were Influencer followers, and from those influencer followers, only 24% are actively

following influencers on social media platforms. Influencers are found to be not trustworthy reliable, lacking in honesty and usefulness in their content for Covid-19 posts. Influencers are not considered to be experienced or experts on the subject of Covid-19. In all questions concerning the Influencers, there is a general neutrality as most of the respondents fail to agree or disagree.

On the issue of the Covid-19 pandemic, 39.5 % are not afraid of Covid-19, nevertheless, 49.7% believed the Covid-19 vaccine to be effective and safe. The percentage of 60.6% in this target group approve that the vaccines against Covid-19 are important for protection. A large portion of responders 40.5 % feel social pressure to get the vaccine as 71% believe that the family or relatives will have a positive opinion about vaccination. The social anxiety section shows the participants generally in difficulty communicating with others and are upset to be in unexpected situations. A close agreement among respondents was about their worry about saying or doing the wrong things. After Covid-19, people enjoy being more spontaneous.

The results of this survey showed a slight differentiation among the group of Influencer Followers and Non-Influencer follower on the subject of social pressure to get the Covid-19 vaccine. Vaccines are important for the protection of both male and female groups on Instagram. Sex and Instagram exhibit a close relationship of high importance in our study sample with a normal distribution. Education manifests a role in the group representation of the sample on Instagram. In contrast, the profession exposes an important statistical significance. Nevertheless, it points to a lower fit to the population and acceptance of the normality of the sample. No evidence of a correlation between age and Instagram exists.

Age is related to the fear of Covid-19 and negatively correlated to worrying about other people's opinions. The variables of age and Sex are proven to be the two best predictor factors for fear of Covid-19. In comparison to Mertens et. Al (2023), traits that appeared to affect profoundly fear propensity were anxiety, gender, general health, media consumption, and the mediating risk for others.

For the effectiveness and safety of vaccines, one can focus on Information Media and Sex, or Information Media and Family Status. On the other spectrum of social pressure to get the Covid-19 vaccine, Instagram and Information media can predict at a great statistical significance level with a slight differentiation among the group of Influencer followers and

the not-Influencer followers.

By debugging any negative rumors, and forming a net of credibility, influencers through diverse mechanisms can market the idea of vaccination. A promotional activity would harm credibility, but it can raise positive feelings toward the influencer. The giveaways play a significant role in the vaccination propagation as was illustrated by the example of the Greek Government to lure youngsters into the vaccination process. The Greek prime minister Konstantinos Mitsotakis uses TikTok to effectively appear approachable and influence the public through the social media platform. This strategy is in accordance with the most recent marketing findings that showed that TikTok is the most predominant platform. TikTok is expected to deliver the best ROI for short videos in 2023. Small influencers identified as nano versus micro-influencers are preferable instead of macro-influencers and celebrities as it is mostly cost-effective.

The outcome of this survey can be proven useful for the implementation of future vaccine promotional campaigns. By strengthening the connections between influencers and their followers, minimizing fraud, and investing in building their credibility and trust, an influencer marketing campaign toward vaccination willingness has a high chance of success. In comparison to previous conclusions, demographics such as age and sex, education, and profession, are in agreement that they have a considerable influence on vaccination. Social pressure and fear of Covid-19 can affect vaccine willingness.

In times of health crises, these results form a guide for implementing a marketing vaccine campaign aiming to create a positive predisposition toward vaccine acceptance. As suggested by Wilder-Smith et al (2020) during the societal quarantine, social media usage can act as a provider for communicating such a marketing strategy for vaccination. Taking into account Weber (1978) who states that a charismatic leader's appearance is evident under extreme conditions, one can embrace the example of Portugal and involve respected members of the community to inspire and influence.

A vaccine campaign should target Instagram users first and Facebook followers second, using different strategies based on gender. It should use Influencers as its primary dependents. More than men, women will look for posts with similar content on Instagram that can be easily understood by their audience. The younger generation shows a more active presence on TikTok.

In the modern era of social media communication, the sole and most effective way to approach wide audiences and correct the perception level in the community effectively is through the presence of Influencers. In the future, organizations and governments could include in their pandemic campaign, the results as enclosed in this thesis to enhance vaccination propagation.

CHAPTER 6- LIMITATIONS

This survey was implemented towards the end of the pandemic of Covid-19 as the grounds were mature and people were more open and responsive. During that time, literature research was available and also statistical data from various countries was accessible on the Internet. The social negativity towards discussing the topic of Covid-19 vaccines subsided as the Covid-19 pandemic progressed and vaccination immunization succeeded. The social media frenzy towards fake news and conspiracy theories lost their intensity in due time as more scientific proof that the Covid-19 vaccines actually shield humankind from the Coronavirus. In case this survey was implemented in the beginning or in the midst of the Covid-19 pandemic, apparently, more limitations and difficulties would be presented in gathering data and reaching conclusions.

The survey questionnaire was based on the original assumption that an internet user is also an account holder on Social Media platforms, and thus an influencer follower. The participants in this survey have shown that although they are active internet users of social media platforms, they are not necessarily following influencers. There is also the likelihood that social media Instagram or Facebook users are negatively predisposed in associating themselves linked to Influencers. This case could exist as there is a hidden adverse connotation to the term “Influencer” usually as it is closely related to a specific group of people mostly found in Showbiz or Sports. Another issue is that the respondents could be following a group or an individual on the social media platforms, casually, but do not identify themselves as followers.

Overall, the respondents were very open and willful to participate in this survey.

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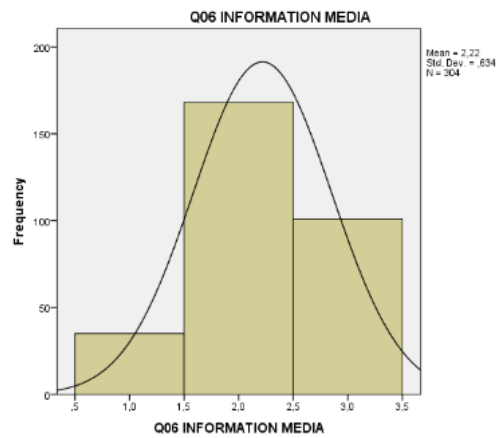
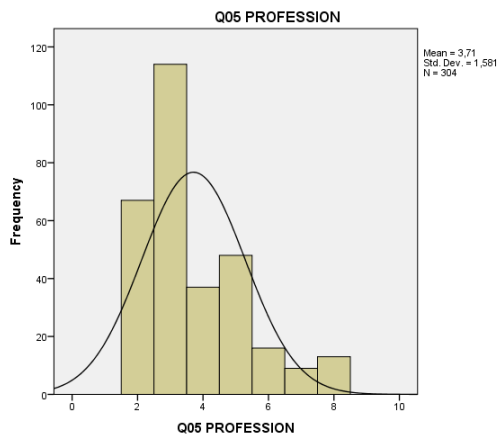
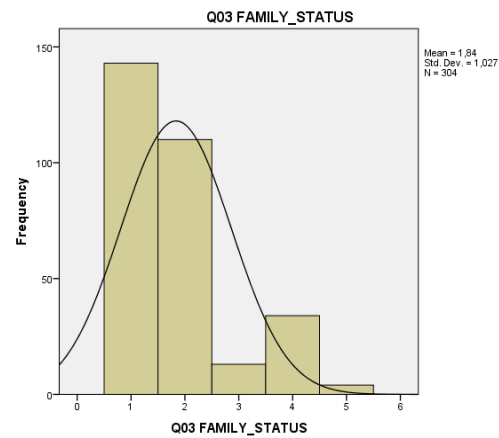
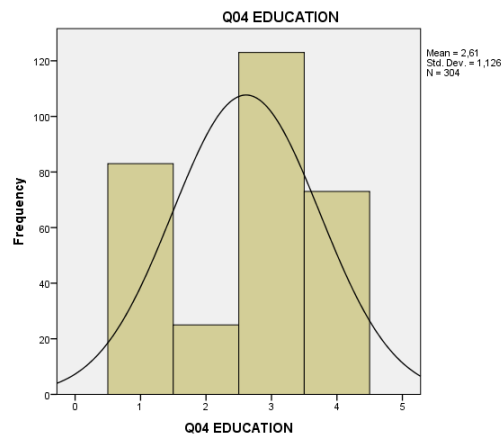
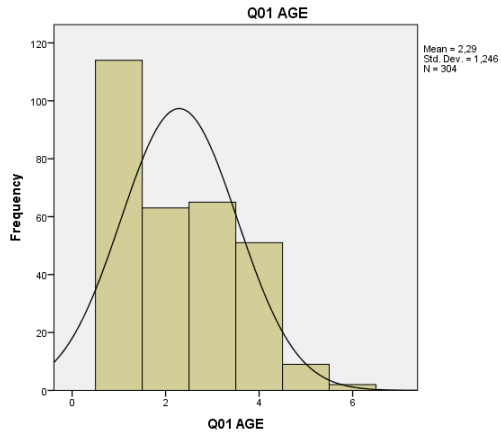
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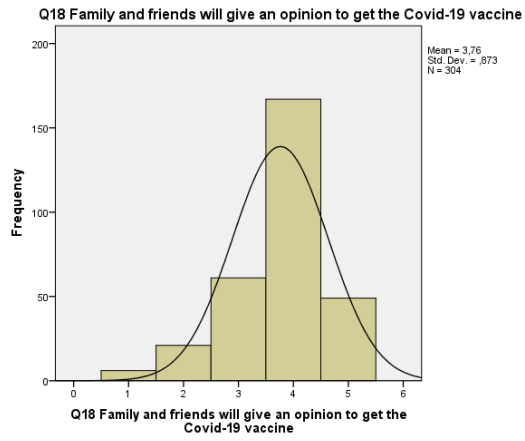
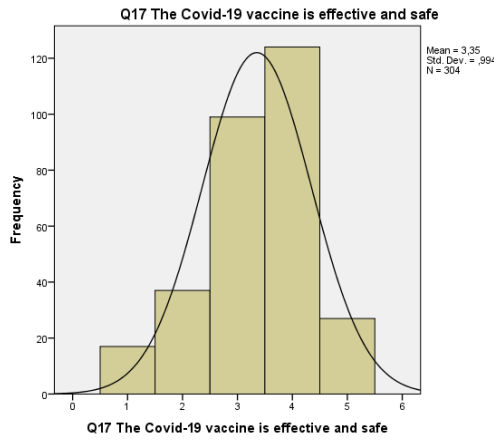
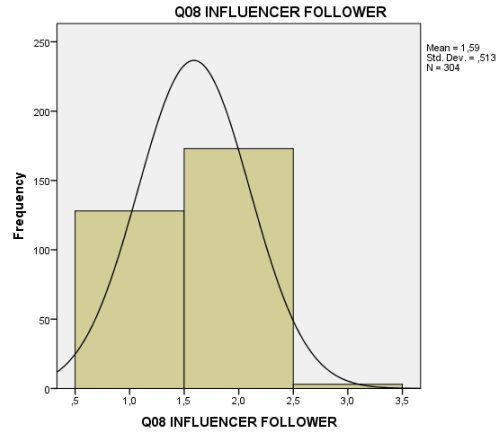
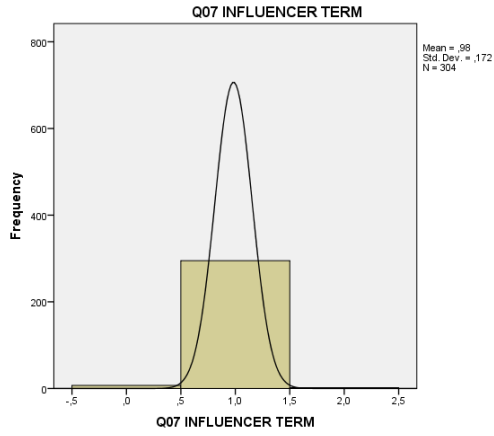
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APPENDIX i SPSS RESULTS

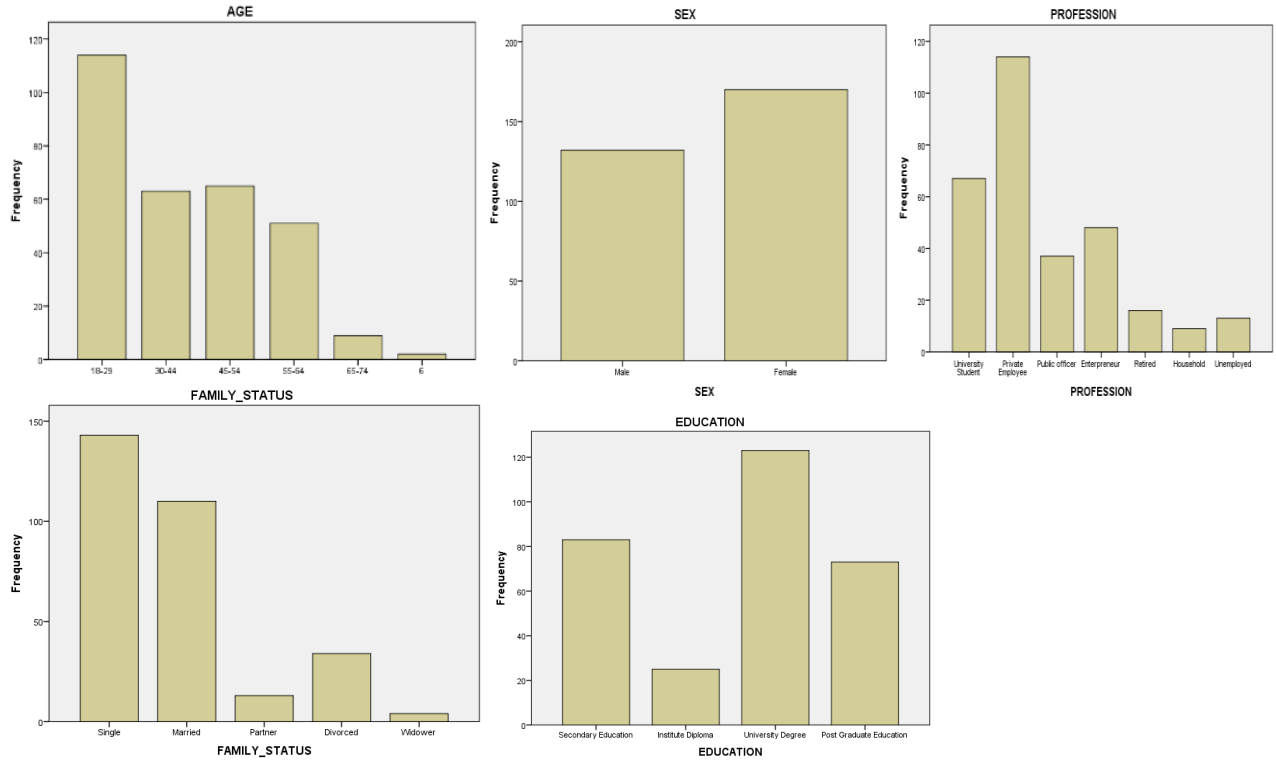
GRAPHS

1. HISTOGRAMS Q01-Q07



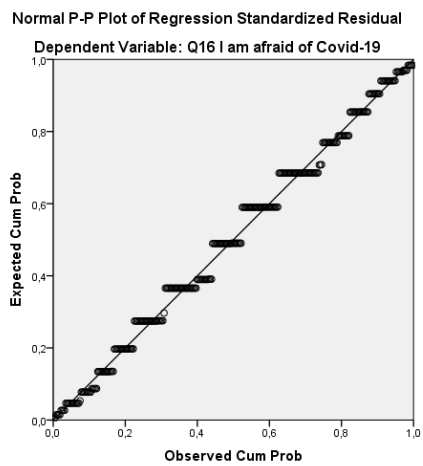
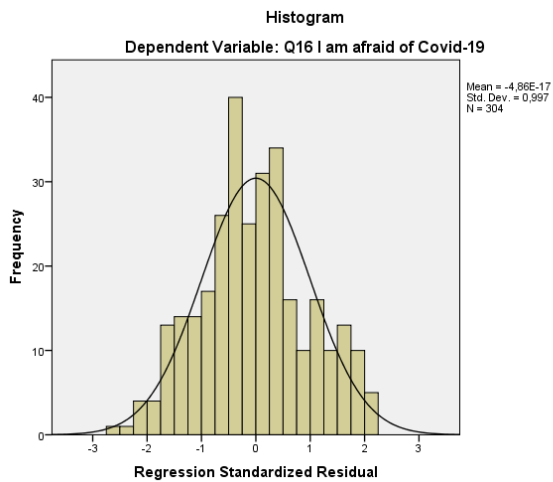


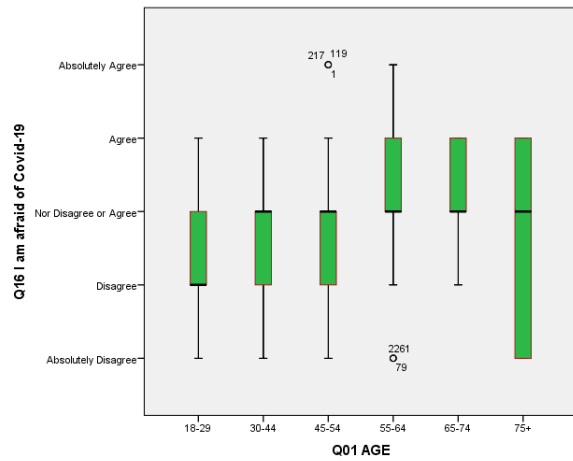
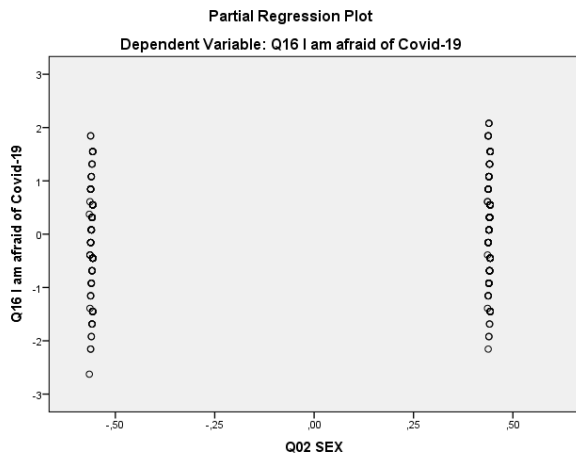
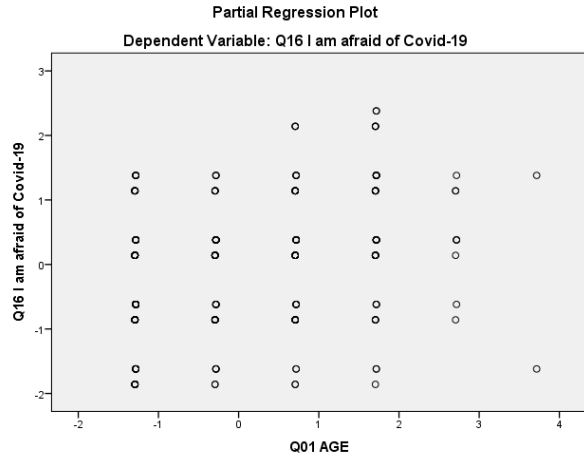
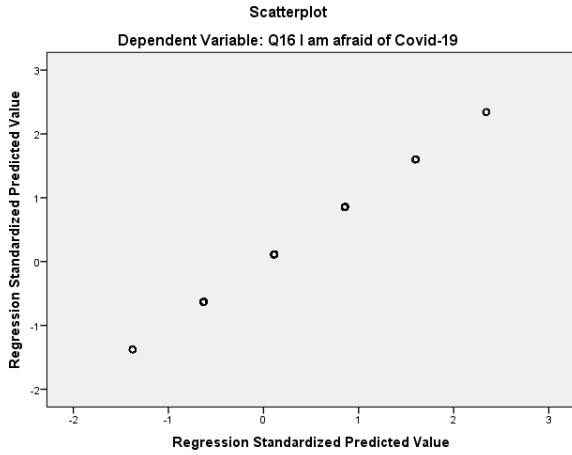
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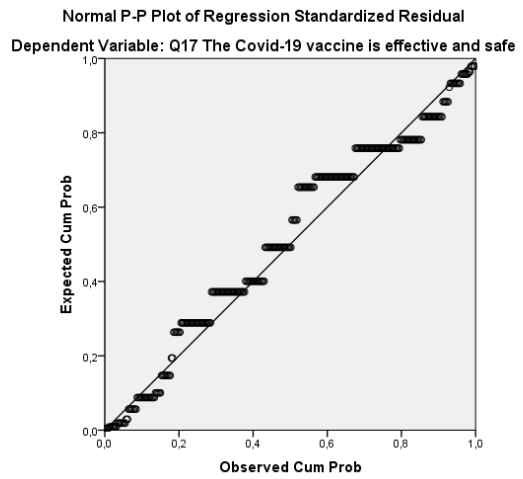
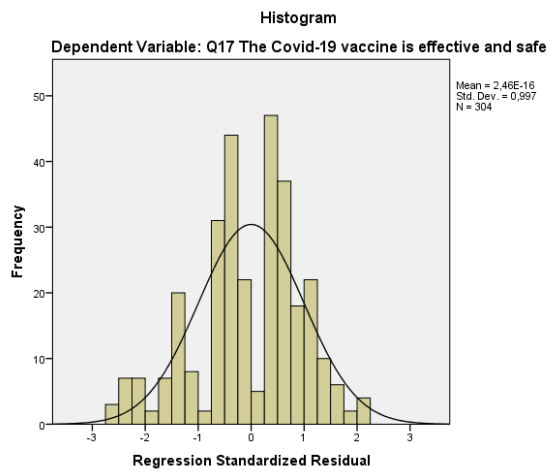
Charts

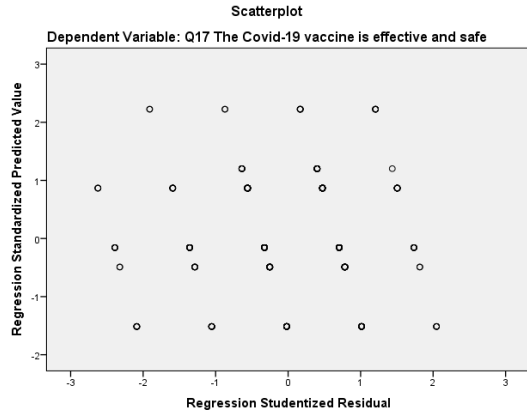
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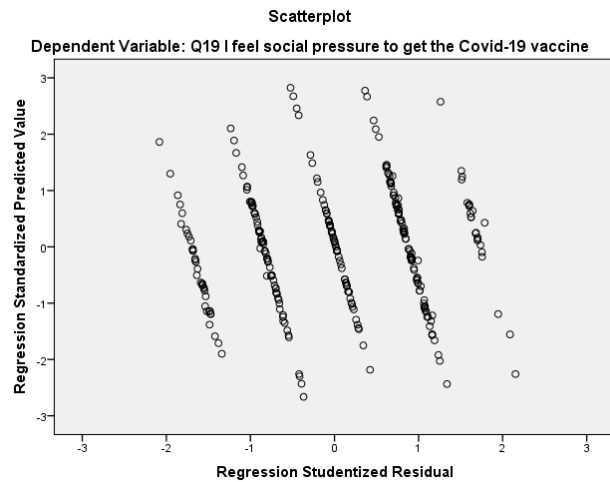
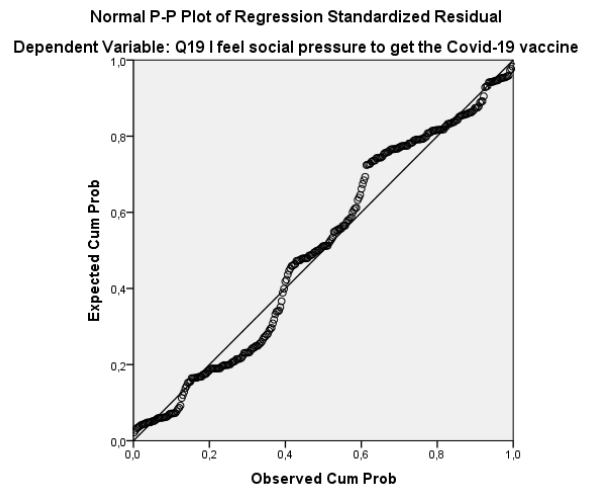
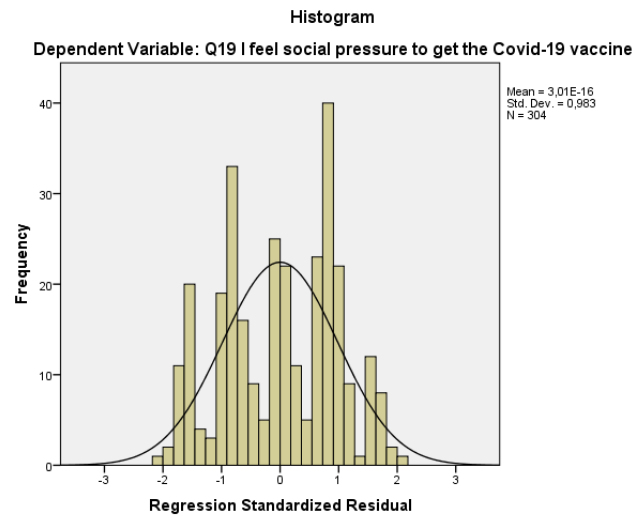


Dependent Variable: Q17 The Covid-19 vaccine is effective and safe

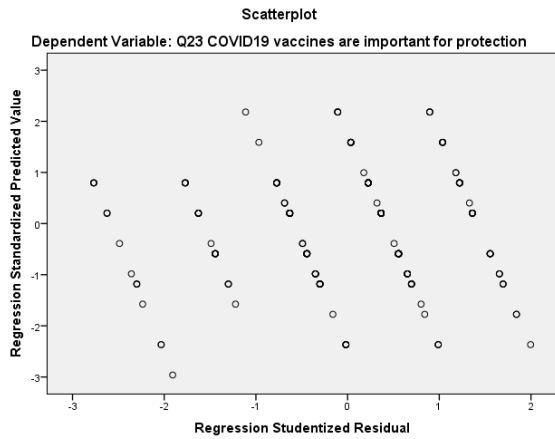
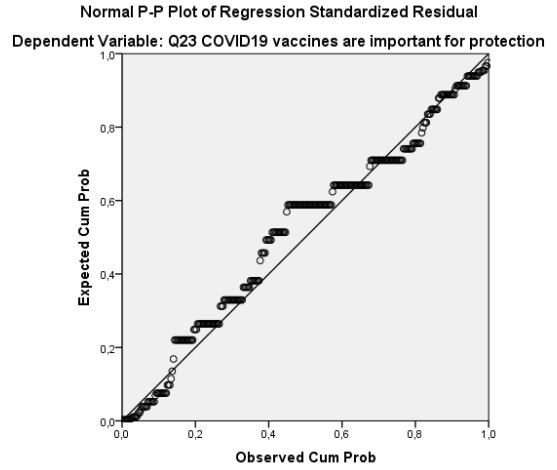
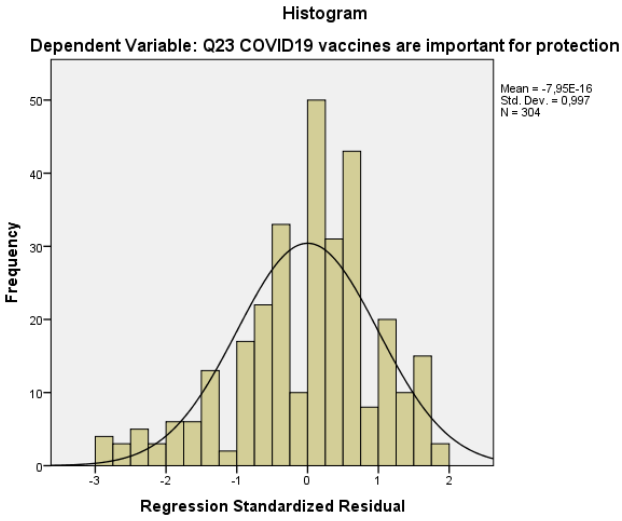




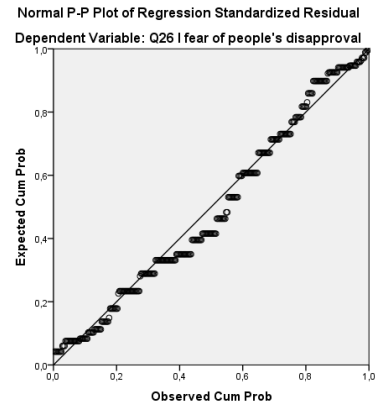
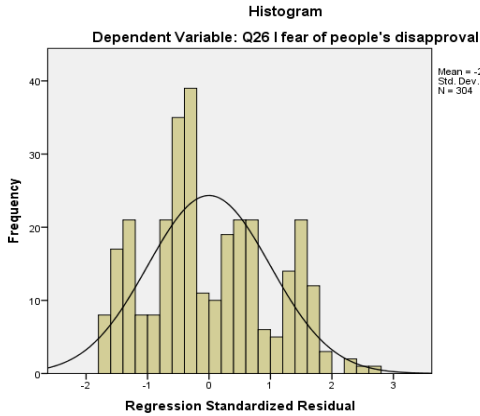
Dependent Variable: Q19 I feel Social pressure to get the Covid-19 vaccine

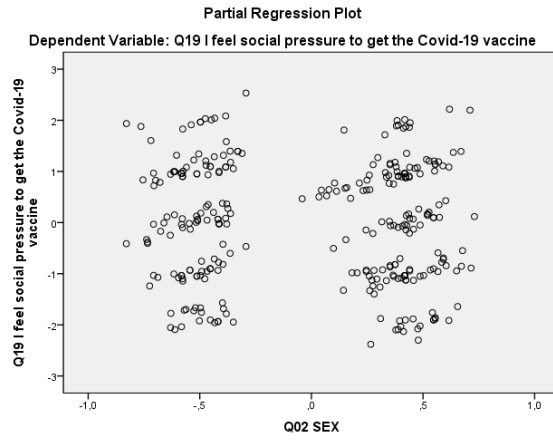
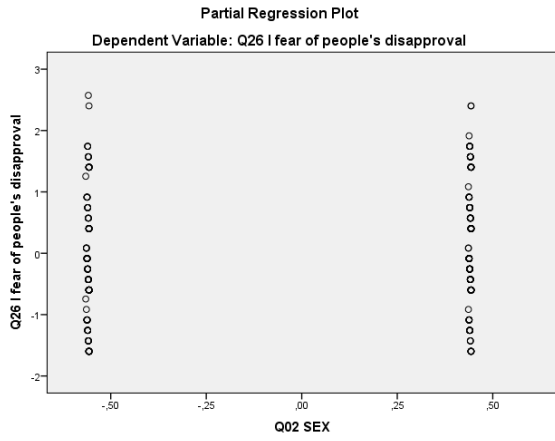
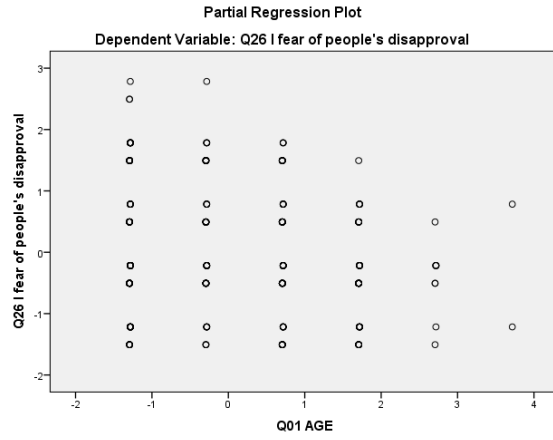
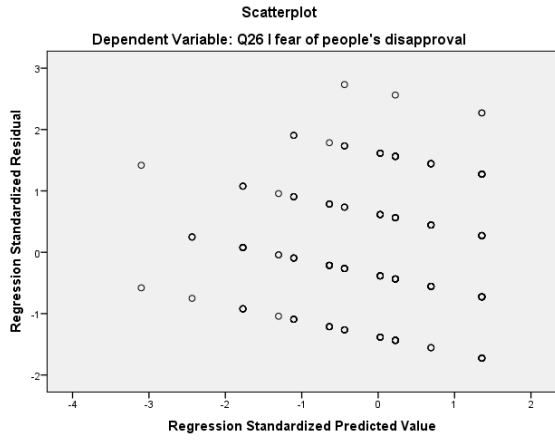


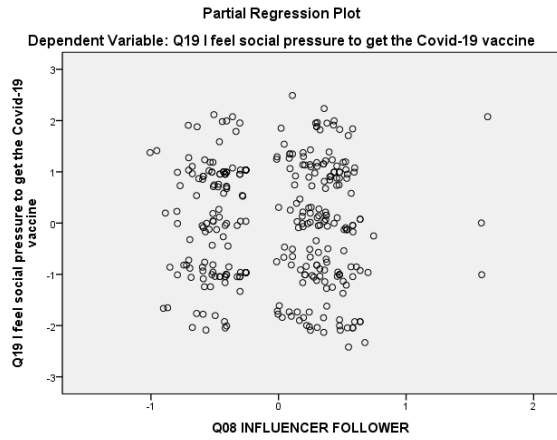
Dependent Variable: Q23 Covid-19 vaccines are important for protection



Dependent Variable: Q26 I fear of people's disapproval







BOXPLOTS DEPENDENTS Q17-Q19-Q24 TO AGE

