

MITIGATING INFODEMICS

A working paper on media and communication uses in Lebanon during the COVID-19 pandemic.



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Table of Contents

Authors and Acknowledgements	2
Table of Contents	3
Executive Summary	4
Recommendations	7
Introduction	8
Results	11
Section A: Overall Findings	12
Section B: COVID-19 Indicators	16
Section C: Comparing Between Genders	17
Section D: Comparing Across Age Groups	18
Section E: Comparing Across Income Levels	19
Section F: Comparing Across Education Levels	20
Section G: Comparing Across Media Literacy Training Levels	21
Section H: Comparing Across Lebanese Governorates	22
Section I: Comparing Across Levels of Media Uses	23
Section J: Comparing Across Levels of Media Trust	24
Section K: Comparing Across Levels of Trust in Information Sources	25
Section L: Comparing Across Social Media Posting Levels	26
Section M: Comparing Across Fear Levels	26
Section N: Comparing Across Levels of Perceived Knowledge	27
Methodology	28
Questionnaire	28
Sample	29
Data Analysis	29
Limitations	29
Other Recent and Affiliated IMRT Studies	30
About the Study	31

Mitigating Infodemics: A working paper on media and communication uses in Lebanon during the COVID-19 pandemic

Executive Summary

This working paper explores media and information uses of individuals living in Lebanon during the COVID-19 pandemic. The aim is to understand which media and information sources people prioritize and trust during pandemics, their relation to people's knowledge, perceived knowledge, belief in myths, fears, and compliance with prevention measures. The analysis explores the role of education, media literacy, gender, age, socioeconomic status, and other factors in influencing the level of adherence to prevention measures, the level of knowledge about COVID-19, and the prevalence of believing in myths and false information.

The study uses a cross-sectional researcher-administered phone survey of adults living in Lebanon. The fieldwork was conducted between March 27 and April 23, 2020. The overall sample size of 1,536 participants was calculated based on a population of 6 million, a 95% confidence level, and a $\pm 2.5\%$ sampling error, with a 51.6% response rate. The study adopts a nationally representative simple random sampling technique based on all possible mobile phone numbers in Lebanon.

This section highlights the most important findings, starting with the overall trends. It then presents comparative analysis of different groups based on three COVID-19 indicators the study developed: the COVID-19 Prevention Compliance Score, the COVID-19 Knowledge Score, and the COVID-19 Myth Score.

Media Uses and Trust in Information Sources (See Section A, Figures 1-6)

- Participants mainly receive information about COVID-19 from television but a significant majority also receive the news from social media. However, many more people trust television than social media and interpersonal communication for COVID-19 information.
- Less than one-third of participants post on social media about COVID-19, and most of them say they check original sources or compare the information to expert sources before posting.
- Most participants agree that media coverage of COVID-19 was comprehensive. A significant minority agree that the coverage was contradictory and exaggerated.
- Participants primarily trust doctors and medical experts for COVID-19 information, followed by government sources, while significantly less people trust clerics and religious authorities for COVID-19 information.

Perceived Knowledge and Fear (See Section A, Figure 9)

- Almost all participants agree that they are knowledgeable about COVID-19 and have enough information to inform others about the disease.
- Although only half of the participants agree that the thought of COVID-19 makes them feel scared, almost all agree they are afraid someone in their family may contract the disease.

Media Literacy (See Section G)

- Only 7% of participants say they have received media literacy training at any point in their lives, an extremely low percentage compared to other countries.

Overall COVID-19 Indicators (See Section B)

The study developed three COVID-19 indicators, each with a score ranging between 0 and 10. Each indicator combines several variables into one score.

- The COVID-19 Prevention Compliance Score assesses people’s compliance with COVID-19 prevention measures. The higher the score, the more likely the individual complies with COVID-19 prevention measures.
- The COVID-19 Knowledge Score examines people’s knowledge of the disease symptoms and risk groups. The higher the score, the more likely the individual knows about COVID-19 symptoms and risk groups.
- The COVID-19 Myth Score measures people’s belief in prevalent myths and false information about the pandemic. The higher the score, the more likely the person believes in myths and incorrect information about COVID-19.

COVID-19 Prevention Compliance Score Overall Trends

- The average compliance score for all participants is 9.36 out of 10, a very high compliance level. Indeed, almost all participants consistently say they comply with COVID-19 prevention measures. At least half of them receive a score between 9.2 and 10 out of 10 on the COVID-19 Prevention Compliance Score—a small variability level (Section B).
- Almost all (84% to 99%) say they sometimes or often wash their hands with water and soap, avoid shaking hands, cover their coughs, avoid crowds, stay at home, and avoid touching their face (Section A, Figure 10).

COVID-19 Knowledge Score Overall Trends

- The average knowledge score for all participants is 5.73 out of 10, which reflects a moderate to high score. At least half of the participants receive a score between 5 and 7 out of 10 on the COVID-19 Knowledge Score—a moderate level of variability (Section B).
- Almost all identify older people, immunodeficient individuals, and people with chronic diseases as COVID-19 risk groups. A strong majority also identify smokers as such. In addition, strong majorities name fever and coughing as main COVID-19 symptoms, while around half identify shortness of breath as such. Very few people identify chest pain, confusion, and bluish lips or face as main symptoms (Section A, Figure 7 and 8).

COVID-19 Myth Score Overall Trends

- The average myth score for participants is 4.43 out of 10, reflecting a moderate to low level of belief in myths and incorrect information about COVID-19. However, the indicator has high variability. At least half the participants score between 2.5 to 6.5 out of 10 (Section B).
- Around half the participants identify Chinese and Iranians as COVID-19 risk groups, and a third does the same for children younger than 8, while a small group also identifies people with O+ blood type as such—all three of which are false risk groups (Section A, Figure 7).
- Similarly, a majority say they eat garlic or bananas as prevention measures, while about 1/3 say they wash inside their nose with warm salty water for the same purpose—two common false prevention measures that circulated on social media (Section A, Figure 10).
- Moreover, more than half of the participants agree that COVID-19 is a human-made biological weapon or a punishment from God. A much smaller proportion believes it is created by pharmaceutical companies for profit (Section A, Figure 6).

Comparing COVID-19 Indicators

The study compared the COVID-19 Indicators across demographic groups and behavioral aspects.

- **Comparing COVID-19 Prevention Compliance Score**
 - Governorates: People in Mount Lebanon, Beirut, South Lebanon, and Nabatieh score the highest on prevention compliance, followed by those in Baalbek el Hermel, North Lebanon, and the Beqaa, while those in Akkar score noticeably the lowest.
 - Gender: Women score higher than men on COVID-19 prevention compliance.
 - Media Uses and Trust: Those who follow television and trust television, as well as those who trust social media for their COVID-19 news are more likely to comply with prevention measures.
 - Trusting Sources: Those who trust doctors score higher on COVID-19 compliance than those who do not.
 - Fear and Perceived Knowledge: The higher the self-reported fear of and knowledge about COVID-19, the more likely a person complies with prevention measures.
 - No significant differences emerge for education, media literacy, income, social media use, social media posting, and trust in clerics and government.

- **Comparing COVID-19 Knowledge Score**
 - Education and Media Literacy: Participants with higher education levels and those who had media literacy training are more knowledgeable about COVID-19.
 - Gender and Age: Women and younger participants are also more knowledgeable.
 - Media Uses and Trust: Those who trust television and those who follow and trust social media for COVID-19 news, as well as those who post about COVID-19 on social media average higher on the COVID-19 Knowledge Score.
 - Trusting Sources: those who trust doctors score higher on COVID-19 knowledge, while those who trust clerics and religious authorities score lower.
 - Fear and Perceived Knowledge: The higher the self-reported fear of and perceived knowledge about COVID-19, the higher a person scores on COVID-19 knowledge.
 - No significant differences emerge between different age groups, governorates, income levels, television uses, trust in television, and trust in government.

- **Comparing COVID-19 Myth Score**
 - Education: The higher the education level, the lower is the COVID-19 Myth Score.
 - Governorates: Mount Lebanon and Beirut average lower than other governorates on the COVID-19 Myth Score, while Akkar pointedly averages higher.
 - Income: The lower the income, the higher is the COVID-19 Myth Score.
 - Media Uses and Trust: The higher the trust in COVID-19 news from social media, the more likely the person believes COVID-19 myths and incorrect information.
 - Trusting Sources: Those who trust clerics and religious authorities for COVID-19 information are more likely to believe in COVID-19 myths.
 - No significant differences emerge across genders, ages, TV uses, social media posting, trust in television, trust in doctors, fear, and perceived knowledge.

Recommendations

Based on this working paper's findings, we offer several short-term and long-term recommendations to the Lebanese government, media, education system, healthcare system, and civil society groups.

Short-term recommendations

- Adopt a national crisis communication mode where all media consistently and frequently remind the public of the grave situation and of prevention measures. Elevating fear (without causing panic) and building people's confidence in their perceived knowledge help increase levels of COVID-19 prevention compliance and knowledge.
- Flood media and communication channels with simple, accurate and credible knowledge about COVID-19, and encourage all media outlets to create dedicated websites, shows, and branded health news about the pandemic.
- Proactively counter and debunk myths and false information through fact-checking teams and media alerts, especially targeting Lebanese in rural and historically neglected areas.
- Utilize crowdsourcing strategies and encourage the use of social media for seeking COVID-19 information and for posting and sharing about the disease, and recruit people already active on social media to help in the communication effort.
- Develop rich and diverse multimedia content on COVID-19 effects, particularly as they relate to social, cultural, economic, sports, lifestyle, and other matters.
- Focus campaign messages on COVID-19 threats to individuals (not only to family members), and on countering the stigma of fear from COVID-19, especially among men.
- Train journalists and communication experts, as well as local opinion leaders, clerics and religious authorities on health communication, digital media literacy, and science reporting, focusing on understanding core concepts of scientific methods and processes.
- Enhance collaboration among key institutions, such as UN agencies, ministries, and NGOs, when developing communication campaigns to avoid repetitions and contradictory information, to ensure message coherence and clarity, and to maximize audience reach.

Long-term recommendations

- Incorporate digital and media literacy, health literacy, science literacy, and data literacy into all public and private school curricula and university programs.
- Invest in education on the peripheries, especially in rural and historically neglected areas.
- Train relevant teachers, professors, government personnel, clerics and religious authorities, on digital and media literacy, health literacy, and science literacy.
- Train healthcare professionals on digital and media literacy and health communication.
- Promote the merits of science and scientific research and methods among the public and the importance of scientists and public health experts in advancing society and healthcare.
- Invest in health clinics to help raise awareness about health issues on the peripheries, especially in rural and historically neglected governorates and refugee camps.
- Avoid divisive political rhetoric as well as sectarian interpretations and conspiracy theories that distract from the pandemic mitigation effort, and remind national leaders of their duties towards unifying the public during times of crisis.

Mitigating Infodemics: A working paper on media and communication uses in Lebanon during the COVID-19 pandemic

Introduction

The 2019 novel coronavirus pandemic has consumed our daily activities and caused immense loss of life and wealth worldwide, as well as disruptions at a scale not seen for many decades—arguably not since the 1918 Influenza pandemic. Accurate and effective communication during disease outbreaks is among the most important factors for containing them. In this era’s pervasive fake news and information overload, widespread confusing, false and contradictory information (Infodemics) could thwart national and global efforts to mitigate diseases and save lives, especially at the pandemic scale of the COVID-19 disease.

This working paper explores the media and information uses and trust levels of individuals living in Lebanon, particularly television, social media and interpersonal communication, in relation to the COVID-19 pandemic. The aim is to understand which media and information sources people prioritize and trust during times of distress, as well as the people’s knowledge, perceived knowledge, belief in myths, fears and prevention habits during the pandemic. The analysis explores the role of education, media literacy training, socioeconomic status and other factors in influencing the level of adherence to COVID-19 prevention measures, knowledge about the disease, and the prevalence of believing in myths and false information related to the 2019 novel coronavirus.

The study conducts a cross-sectional survey of a nationally representative random sample of individuals living in Lebanon during the height of the COVID-19 pandemic. The findings of this study will hopefully help guide national media awareness and health communication campaigns and policies that aim to mitigate infodemics and effectively inform and influence behavior among persons whose everyday lives have been marked by uncertainty, fear, information overload, and confusing news.

From Revolution and Economic Collapse to a Technocrat Government and Scientific Pandemic Response

To understand the findings of this report, we must discuss the political and economic contexts in which Lebanon found itself at the onset of the pandemic and the factors that affected the government and media responses. Perhaps the irony in the timing of the COVID-19 pandemic—right after Lebanon witnessed a momentous uprising and a severe economic and political crisis—is that it could not have been any better, albeit from a pandemic mitigation perspective only.

The October 2019 uprising in Lebanon that brought down the former government—which like many before it was characterized by a balance of the various bickering political groups—brought to power a mostly “technocratic” government headed by a university professor and staffed by many academics and specialists, compared to career politicians who historically served the interests of their particular political parties. Technocratic governments that present themselves as politically neutral are rare in Lebanon and usually don’t last long in power—although many reject this characterization and accuse the current government of representing one political alliance.

Nevertheless, the new government received parliament’s confirmation on February 11, 2020, just 10 days before the first case of COVID-19 entered Lebanon on February 21. In addition to the various specialized ministers—who in most previous governments would be mainly representatives of the interests of their corresponding political parties, many academics and scientists (some of whom participated in the October uprising) found themselves as advisors to ministers and members on committees that handled the pandemic. Most important of these was the national committee for COVID-19 (Committee for the Follow up on Coronavirus Preventive Measures and Procedures), which was led and staffed largely by healthcare professionals, scientists and academics. One could only speculate how the pandemic response would have been different if any of Lebanon’s previous governments—typically divided, highly partisan, and distant from academia—was in power.

Of course, the timing could not have been worse from an economic point of view. The country was almost bankrupt, banks were teetering on the edge of collapse, and unemployment was skyrocketing. All this was happening in a country hosting hundreds of thousands of refugees, dealing with a brutal civil war in neighboring Syria, and facing a severe public distrust in government and politicians. The poor were becoming poorer, and posts about widespread hunger and desperate measures to survive were flooding social media channels.

The Lebanese Government and COVID-19: A whole government response

Before even receiving parliament's vote of confidence, the new government established the national committee for COVID-19 on January 31, 2020. Its mission was to strategically handle the national response and preparedness effort as a multi-ministerial public-private partnership that included, among others, NGOs, the WHO, the Red Cross, universities, and the security apparatus. The committee was established three weeks before the first COVID-19 case was detected in Lebanon (February 21) and quickly established subcommittees:

- **Communication:** This subcommittee oversaw the national strategic communication campaign, which was launched February 25, four days after detecting the first infection. Each ministry had its own campaign, which was consistent with the national strategy but focused on its own specialization. For example, the health ministry focused on awareness of symptoms and risk groups, the education ministry handled prevention for students, and the interior ministry dealt with social distancing. Various ministries also collaborated on communication campaigns. For example, the Army and the ministries of health and information coordinated a national awareness campaign that featured short videos of doctors. Produced by the Army, the videos were posted on a [central website](#) established by the Ministry of Information and featured official statistics from the Ministry of Public Health's [website](#).
- **Mitigation:** This subcommittee was responsible for preparing for a potential overwhelming level of infections, such as establishing additional hospitals. However, as of the publication of this report, Lebanon remains in the "containment phase" and has not progressed into the "mitigation phase."
- **Sectors reopening taskforce:** This subcommittee focused on planning the reopening phase. It established a four-phase gradual reopening plan that was continuously updated based on facts on the ground. Ministries dealt with executing and enforcing reopening policies as they relate to their areas of specialization. For example, the Ministry of Interior and Municipalities handled regulating traffic based on odd and even vehicle registration numbers system. The Ministry of Labor dealt with occupational health and public safety matters, and the Ministry of Education and Higher Education managed school and university closure and reopening.
- **Other subcommittees** dealt with containment planning, sectors planning, sustainability and monitoring, refugees and displaced, repatriation and the airport, quarantine sites, and sectors planning. A subcommittee also dealt with medical ethics questions. For example, if Lebanon's healthcare capacity is exceeded, such as what happened in Italy and New York, who gets priority medical care?

The overall vision of the national committee was guided by the principle "a whole government response" with public and private sector partnership. Interviewed government officials attributed the COVID-19 mitigation success to the committee's strategy of transparent communication, flexibility, and early response, particularly in implementing social distancing, closing schools and businesses, and preparing hospitals.

The early decision to close schools, universities and daycares on February 29 (a week after the first infection) was made jointly by the ministers of education and health. At that point, Lebanon only had seven confirmed cases, one of whom was a teacher who visited several schools. School closure was criticized at the onset, by some claiming it was premature and by others saying the partial closure was ineffective since parents were sending kids to malls, public parks, and skiing resorts instead of keeping them at home. A week later (March 6), nightclubs, pubs, gyms, and theaters were closed, and soon after (March 11), all malls, restaurants, touristic sites, and public gardens were shut down. By mid-March, when the infection count reached 108, the government declared "public mobilization" and closed the borders—although partial travel ban to epidemic countries was imposed weeks earlier. On March 26, a 7pm-5am curfew was imposed (we started data collection the next day).

The committee faced some challenges with hospital readiness. At first, only public hospitals were designated for handling COVID-19 cases, particularly the main Beirut public hospital (Rafic Hariri University Hospital). Soon after, academic hospitals and the doctors' syndicate (Lebanese Order of Physicians) collaborated with the government and started preparing. However, many private hospitals at first resisted collaboration and some private clinics closed operations to avoid dealing with patients and tests, but later they all reluctantly complied.

In addition, the committee planned quarantine sites in many Lebanese towns, with funding from the government and the UN and support from the municipalities. In some areas, political parties also joined the effort through their social committees, especially in South Lebanon and Beqaa. These committees were effective in helping control the virus spread by imposing quarantine and managing the containment in their areas of influence.

Finally, for reopening the country, the committee took a positive reinforcement approach. Rather than using security forces and penalties upfront, the committee trained university students as volunteer "health wardens," who helped businesses to abide by prevention procedures (e.g. figuring out maximum number of employees in a certain space, hygiene procedures, etc.). Negative reinforcement and penalties were used as a last resort.

Lebanese Media and COVID-19: From cynical partisan journalism to overzealous mobilizing news

By the third week of February, when the first case of infection in Lebanon was confirmed, public attention became sharply focused on COVID-19 news. At that point, the pandemic became a permanent topic in legacy media and received top priority on the agenda of Lebanese mainstream news, particularly television. Public concern and panic about the disease quickly peaked and caused an explosion of social media postings that facilitated the spread rumors, exaggerated numbers of infections, conspiracy theories, misguided reassurances, and false information about prevention, medication, vaccination, and symptoms.

Using mainly Facebook and WhatsApp, the Lebanese transmitted without scrutiny dramatic fake videos of sick people collapsing in China (supposedly from COVID-19), inaccurate reports about transmission and prevention methods, and fake audio recordings exaggerating the number of infected people across Lebanon.

At first, legacy media, especially the most-watched television stations presented a skeptical and cynical tone, particularly towards the government and often within partisan and sectarian calculations. The fact that the first infected person was a Shia woman returning from pilgrimage in Iran immediately instigated sectarian rhetoric and calls for closing the borders with Iran.

The assurances of the Minister of Public Health that there is no reason to panic did not help in calming the public, but rather turned into material for sarcasm and political mudslinging. Some television stations, such as Al-Jadeed, MTV, and LBCI, questioned government actions and went as far as accusing the Minister of Public Health (who is also Shia and seen as a Hezbollah supporter) of importing the virus into Lebanon and describing trips coming in from Tehran as “death flights.” Social media posts accusing Shia Lebanese of spreading COVID-19 in the country became ubiquitous. Soon after, news about subsequent infections connected to two Jesuit priests generated additional sectarian coverage and social media posting that targeted Christian groups.

The partisan coverage quickly turned into confessional and sectarian polarization, with accusations against the Lebanese government and powerful political groups, specifically Hezbollah, of endangering the safety and health of the public. Various online media also resorted to exaggeration, stigmatization, and politicizing the crisis, with prevalent skepticism about the government’s ability to deal with the crisis. Within this climate, the widespread publishing of inaccurate numbers about infections and casualties led to a mix of fear, panic, confusion, and skepticism among the public.

However, as soon as the WHO declared COVID-19 a pandemic on March 11, legacy media almost overnight sprang into action and forcefully joined the fight against the disease. The “Stay Home” hashtag became ubiquitous on mobile phones, television screens, and social media channels. Al-Jadeed and LBCI launched the Home Quarantine and Social Distancing campaigns using the same label (Stay Home). MTV went even further, beating the government to declaring a state of emergency. Several journalists used violent and vulgar language in their attacks on people who did not shelter at home. For a significant time, Lebanese media led the public mobilization efforts and news about the pandemic drowned but did not fully eliminate partisan bickering.

News reports about treatment methods, stages of the disease, and possible medications and vaccinations recycled through various news outlets. Doctors and medical experts became prevalent guests on TV screens and in social media streams. Legacy media competed to conduct interviews with the most prominent local and international experts. Doctors, who were just recently vilified as greedy and reckless (due to several high-profile medico-legal cases and exorbitant healthcare cost) suddenly became the new heroes. Their negative image gave way to the admired healthcare workers fighting on the frontlines of the pandemic and putting their lives at risk.

Thanks also to the coherent communication strategy of the national COVID-19 committee, earlier contradictory reports about infection rates and casualties gave way to consistent and accurate reporting about the matter. The Beirut public hospital became the official and sole source for monitoring the number of infections and deaths and released daily reports and numbers. As noted earlier, the Ministry of Information established a dedicated COVID-19 website that provided the latest statistics about infections, deaths, testing, etc. The website also provided information about the virus, its symptoms, prevention measures, the latest COVID-19 news, public service announcements, and some basic fact-checking reports that debunked prevalent rumors and false information. Various ministers, including the Minister of Public Health and the camera-shy Minister of Interior and Municipalities increased their media appearances and made frequent announcements.

International news reports that ranked Lebanon’s pandemic response effort among the top in the world—despite the country’s many political and economic problems—were touted widely by government officials and the media and were often dismissed by opposition groups.

By the time the fieldwork for this study was completed (April 23), partisan news and politicization of the pandemic slowly returned, especially as protests returned to the streets and the economic situation continued to deteriorate, with no hope in sight.

Results

The results section starts with overall descriptive statistics analyzing the responses for the whole sample in Section A.

Section B explains the manner in which the three COVID-19 Indicators are constructed and analyzes their distribution for all participants.

The rest of the sections conduct comparative analysis of different groups based on people's compliance with COVID-19 prevention measures ("COVID-19 Prevention Compliance Score"), their knowledge of COVID-19 disease symptoms and risk groups ("COVID-19 Knowledge Score"), and their belief in COVID-19 related myths and false information ("COVID-19 Myth Score").

Section C compares the COVID-19 Indicators and other data across genders, and Section D compares them across age categories.

Section E tests for any relationship between the COVID-19 Indicators and the income categories of the population, while Section F does the same across education levels.

Section G compares those who say they had any media literacy training in their lives to those who say they have never had such training.

Section H focuses on the geographic distribution and compares the COVID-19 Indicators across the eight Lebanese governorates.

Section I compares the COVID-19 Indicators across the three media and information uses measured: Television, social media, and interpersonal communication.

Section J conducts a similar comparison based on the level of trust in the COVID-19 information received from these three media and communication methods, while section K compares the COVID-19 Indicators according to the level of trust in three sources: Doctor and medical experts, the government, and clerics and religious authorities.

Section L compares the COVID-19 Indicators based on people's engagement in social media production and posting of information related to the pandemic.

Section M offers a comparison of the COVID-19 Indicators across the levels of self-reported fear of the 2019 novel coronavirus.

Finally, Section N compares the indicators across the levels of perceived knowledge about the virus.

Section A: Overall Findings

Section A starts with the overall results based on the total sample.

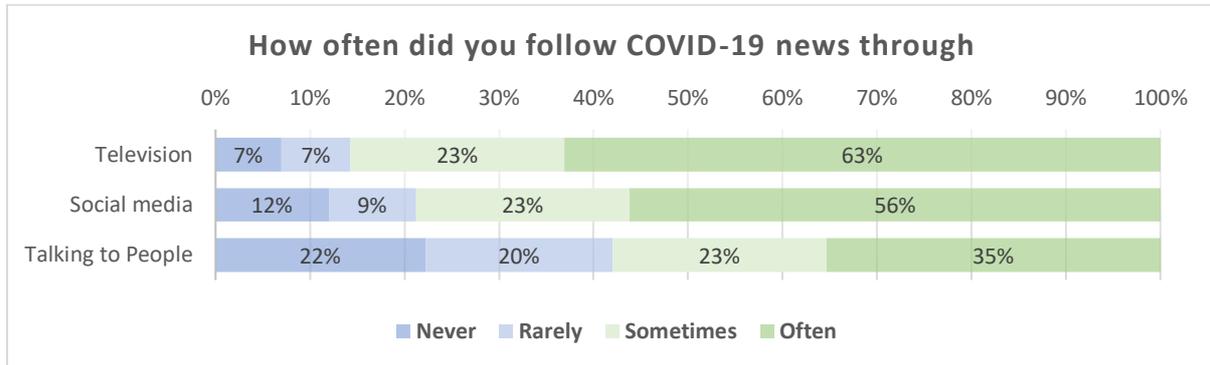


Figure 1: COVID-19 media and information sources

Participants rank television as the top source for COVID-19 news, followed closely by social media. A sizeable minority say they sometimes or often get their COVID-19 information from interpersonal sources (Figure 1).

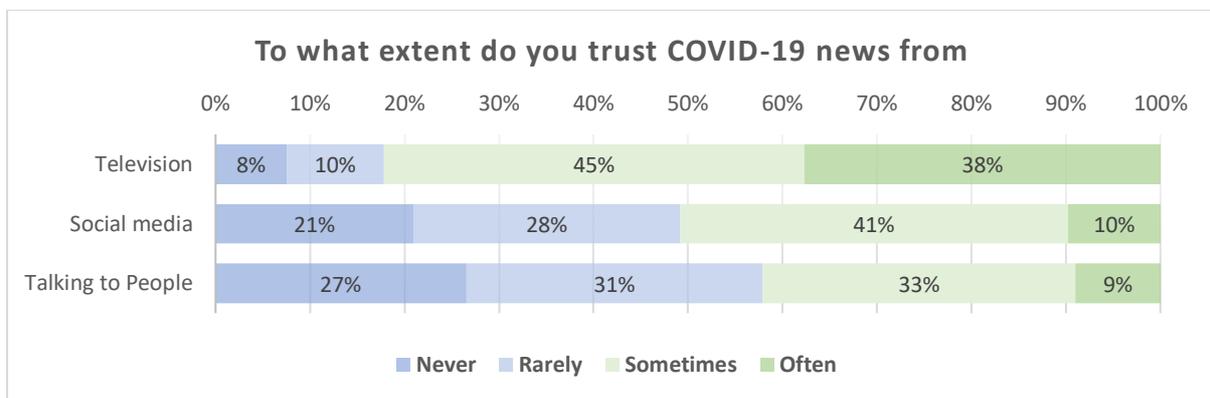


Figure 2: Trust in COVID-19 media and information sources

Similarly, participants trust television the most for news about COVID-19. A much smaller minority trust social media and interpersonal sources for COVID-19 news (Figure 2).

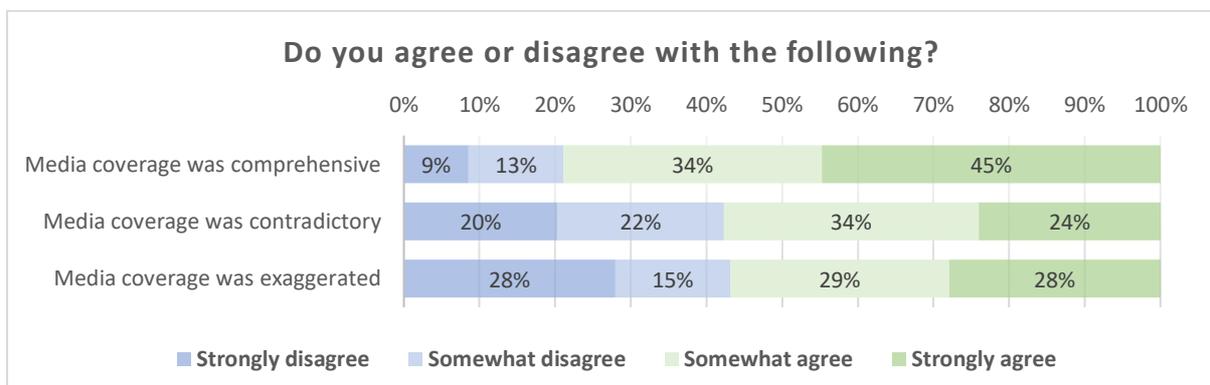


Figure 3: Perception of Media Coverage

The majority of participants believe that media coverage of COVID-19 was comprehensive, but a sizeable minority believe that the media coverage was contradictory and exaggerated (Figure 3).

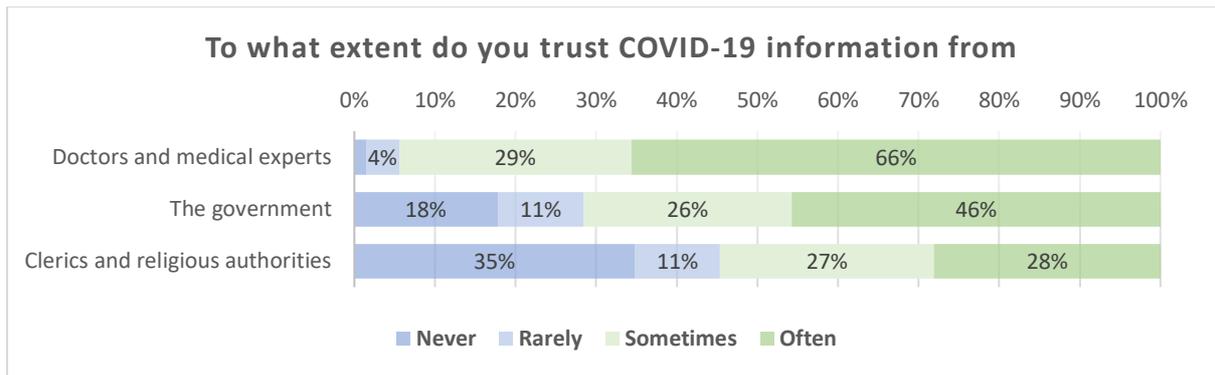


Figure 4: Trusting COVID-19 information sources

Doctors and medical experts are the most trusted source of information for COVID-19 information, followed distantly by the government. Significantly fewer participants trust clerics and religious authorities (Figure 4).

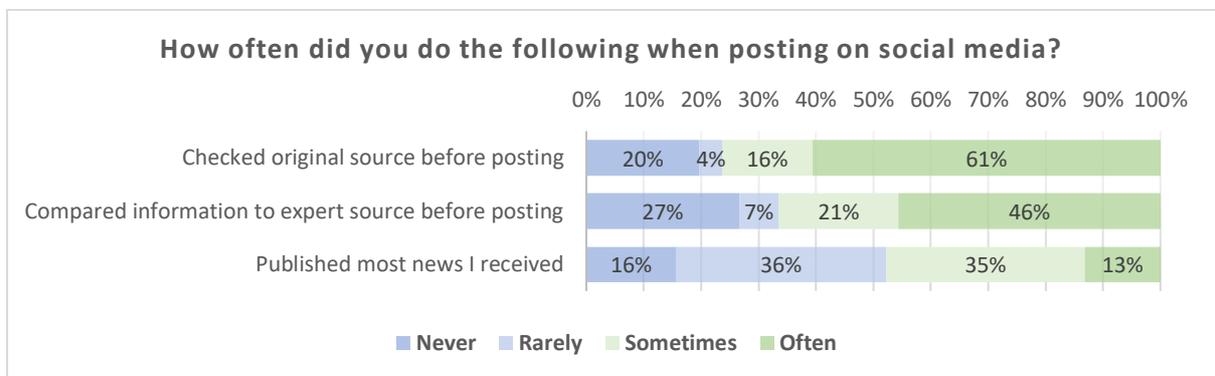


Figure 5: Social media posting practices

Over two thirds 68.1% (537) of participants say they never posted on social media news about COVID-19. The rest, 12.8% (101) say they rarely post, 14% (110) say sometimes, and 5.1% (40) say often.

For those who do post on social media, Figure 5 shows that the majority sometimes or often check the original sources before posting, and a smaller majority compare the information to credible sources before posting. Only a minority post most of the news they receive about COVID-19 (Figure 5).

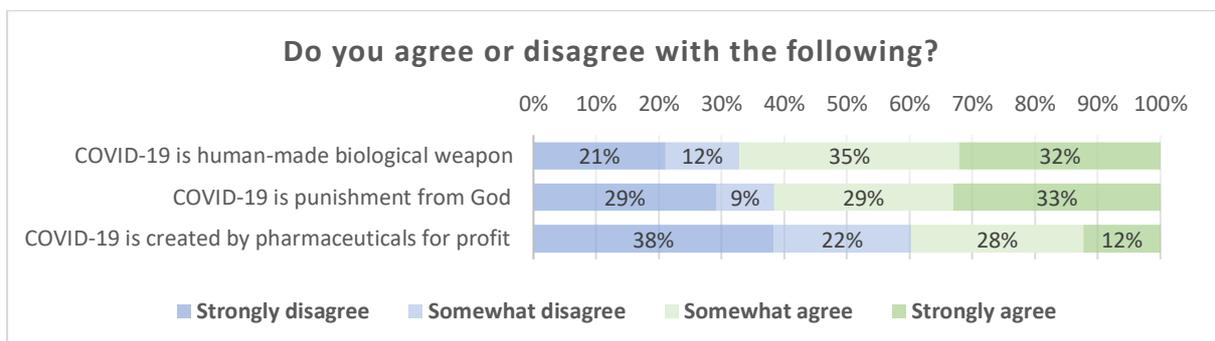


Figure 6: Believing COVID-19 related myths

Participants were asked if they agree or disagree with three myths that were circulated on social media at the onset of the pandemic. A sizeable majority somewhat or strongly believe that COVID-19 is a human-made biological weapon, and a slightly smaller majority agree that the disease is a punishment from God. A minority also agree that COVID-19 is created by pharmaceuticals for profit purposes (Figure 6).

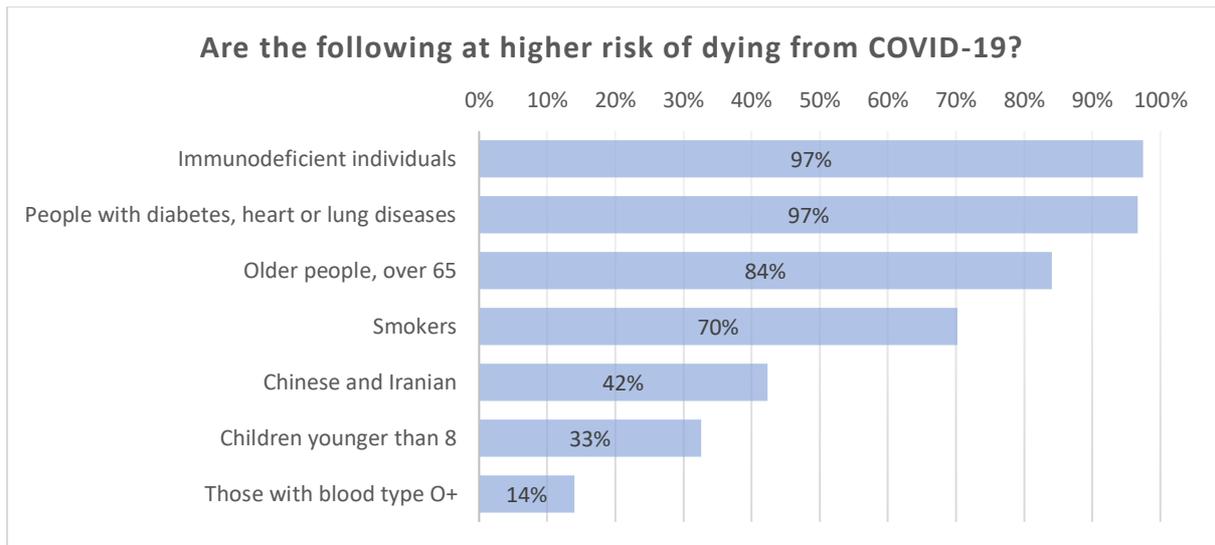


Figure 7: Identifying groups at higher risk of dying from COVID-19

Participants were asked if specific groups are at a higher risk of dying from COVID-19. Almost all identify immunodeficient individuals and people with chronic diseases, such as diabetes and heart or lung disease, as risk groups. An overwhelming majority also identify people above 65 as a risk group, and 70% identify smokers as such.

In addition, more than one-third of participants identify Chinese and Iranians as a risk group, while one-third of participants also identify children younger than 8, and 14% identify people with blood type O+ as a risk group. These latter three groups are intentionally listed to measure the prevalence of believing in false information and myths (Figure 7).

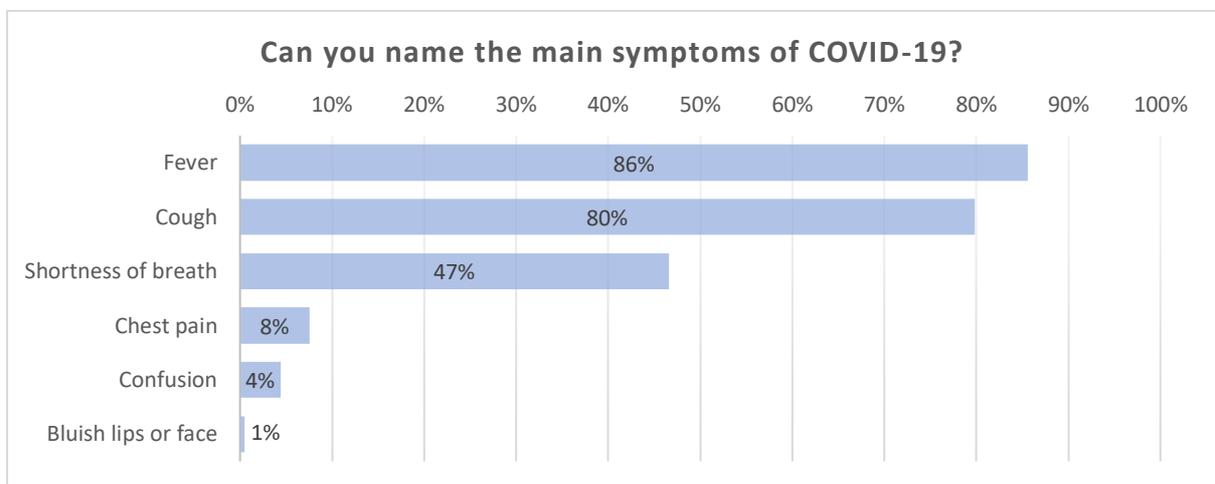


Figure 8: Naming the main symptoms of COVID-19

Participants were asked to name the main symptoms of COVID-19. Researchers did not spell the symptoms out to them.

The vast majority of participants are able to name fever and coughing as symptoms. A little less than half are able to name shortness of breath too, but very small minorities are able to identify chest pain, confusion, and bluish lips or face (Figure 8). These symptoms were listed by the CDC and as COVID-19 symptoms around the time of the data collection.

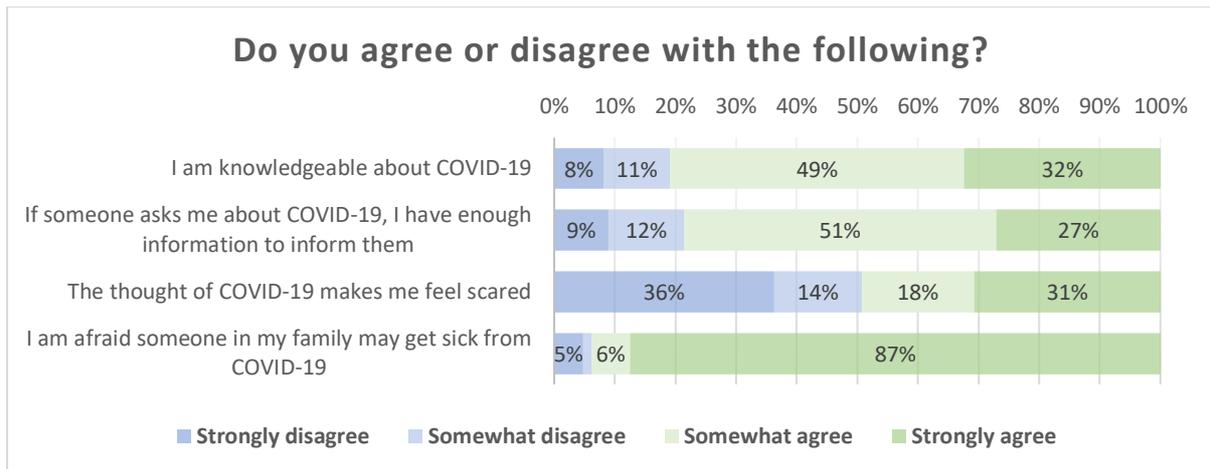


Figure 9: Perceived knowledge about and fear of COVID-19

In addition to measuring actual knowledge, the study assessed people’s perceived knowledge about and fear of COVID-19, both of which are theoretical predictors of adherence to prevention measures. When it comes to fear, a little less than half of the participants admit that the thought of COVID-19 makes them feel scared, but almost all agree that they are afraid that someone in their family may get sick from COVID-19. In addition, when it comes to perceived knowledge, overwhelming majorities agree that they are knowledgeable and have enough information to inform others about COVID-19 disease (Figure 9), which reflects strong confidence and agency among people living in Lebanon.

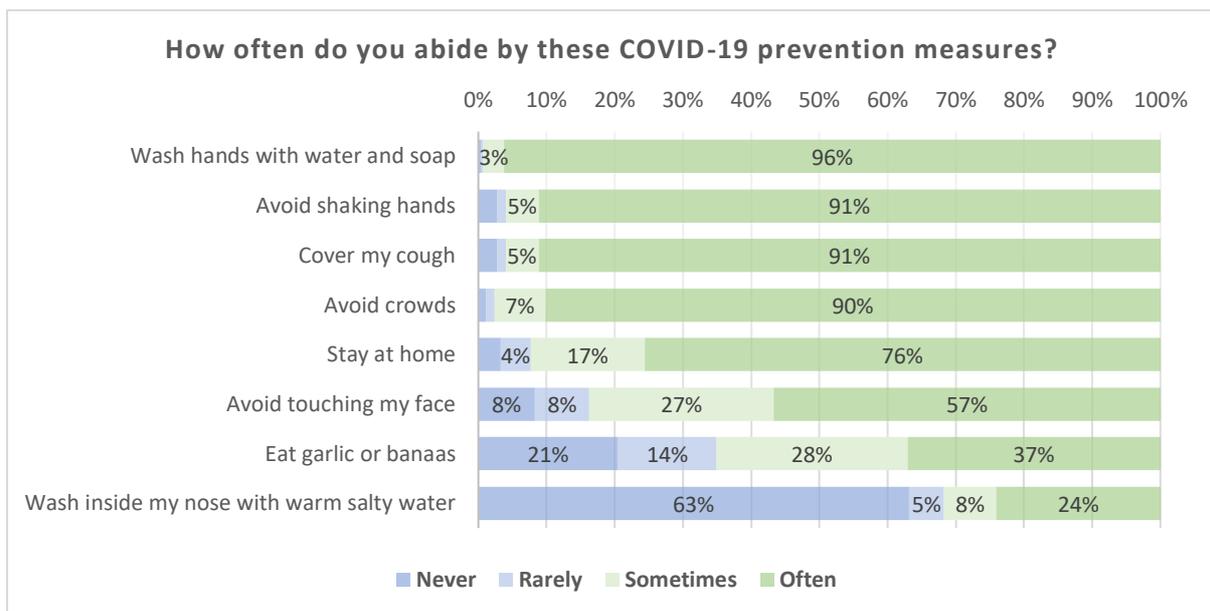


Figure 10: Following COVID-19 prevention measures

Figure 10 shows that when it comes to COVID-19 prevention measures, participants strongly abide by all the main guidelines. Almost all participants say they sometimes or often wash their hands with water and soap, avoid shaking hands, cover their cough, and avoid crowds. Overwhelming majorities also say they sometimes or often abide by staying at home guidelines and avoiding touching their faces.

It is worth mentioning that some participants mention that their work dictates that they leave home. These include security and healthcare professionals, as well as many day laborers working in supermarkets and similar critical establishments.

Interestingly, also a majority say they sometimes or often eat garlic or bananas, and a sizeable minority say they sometimes or often wash inside their noses with warm salty water. The latter two are myths that circulated on social media and carried claims of strengthening the immunity and killing the virus before reaching the lungs.

Section B: COVID-19 Indicators

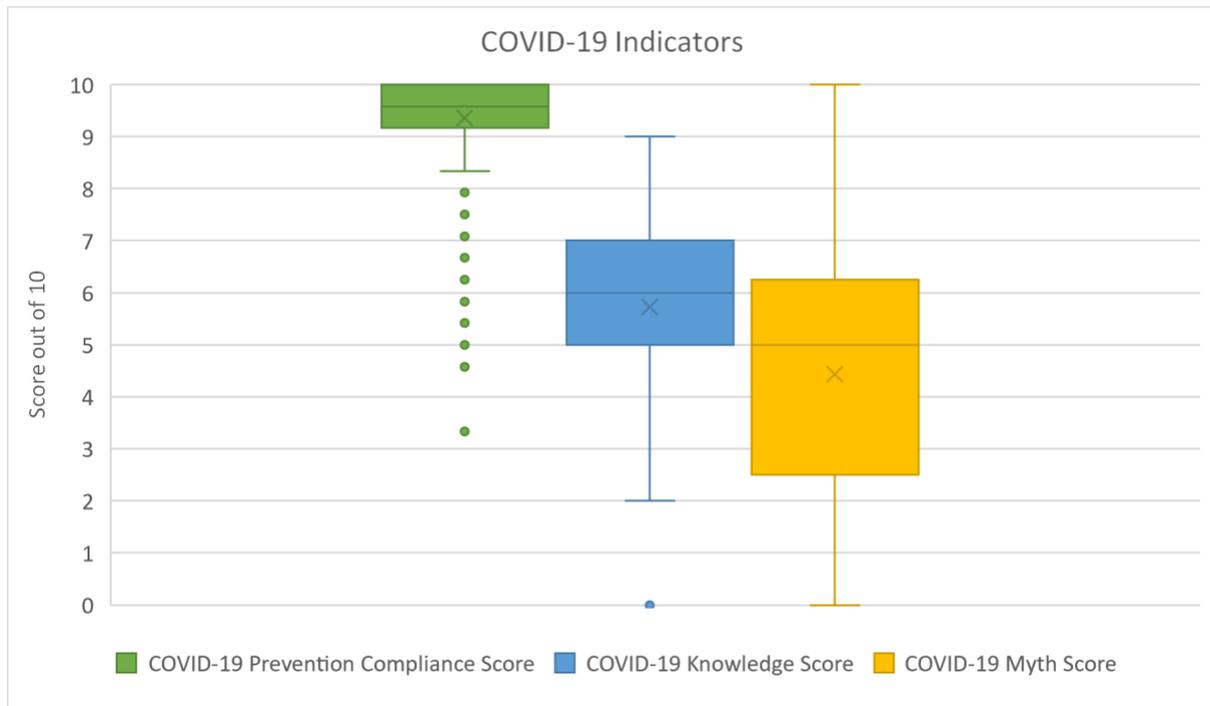


Figure 11: The distribution of COVID-19 Indicators.

The study developed three composite scores that we refer to as the COVID-19 Indicators. Each score ranges between 0 and 10 and the distribution of each score is shown in Figure 11 and explained below.

COVID-19 Prevention Compliance Score: Measuring compliance with COVID-19 prevention measures.

The composite prevention compliance score is calculated based on the arithmetic mean (average) of the first six COVID-19 prevention compliance answers (See Figure 10). The last two false prevention measures are not included. Scores range between 0 and 10. The higher the score, the higher is the level of reported compliance. The mean compliance score for all participants is 9.36, with a standard deviation of 0.81. The median score is 9.58, and upper and lower quartiles range between 9.2 and 10. The data show a very high and consistent level of compliance (low variance).

COVID-19 Knowledge Score: Measuring knowledge of COVID-19 symptoms and risk groups.

The composite knowledge score is calculated based on the sum of COVID-19 knowledge answers (First four options of Figure 7 and all items of Figure 8), where an individual gains 1 point for every correct answer. Scores range between 0 and 10. The higher the score, the more knowledgeable the individual is about COVID-19. The mean knowledge score for all participants is 5.73 with a standard deviation of 1.27. The median score is 6, and upper and lower quartiles range between 5 and 7. The data show a moderate to high level of knowledge about COVID-19 with some variability among the public.

COVID-19 Myth Score: Measuring the belief in COVID-19 myths and false information.

The composite myth score is also calculated based on the sum of COVID-19 myth answers (All of Figure 6, the last three options of Figure 7, and the last two options of Figure 10). Scores range between 0 and 10. The higher the score, the more likely the person believes in myths and false information about COVID-19. The mean myth score for all participants is 4.43 with a standard deviation of 2.1. The median is 5, and upper and lower quartiles range between 2.5 and 6.25. The data show a moderate to low level of belief in COVID-19 myths and false information, with a high level of variability among the participants.

Relationship Between the three COVID-19 Indicators.

A bivariate correlation (Pearson's r) test between the three COVID-19 Indicators shows a slight positive relationship between the COVID-19 Prevention Compliance Score and the COVID-19 Knowledge Score ($r=0.138$, $p=0.0$). This means the higher the level of knowledge about COVID-19, the more likely the person complies with prevention measures (and vice versa), albeit for a small proportion of the public. Neither indicators display an association with the COVID-19 Myth Score. More complex measures that will take into consideration other variables will be published in subsequent studies.

Section C: Comparing Between Genders

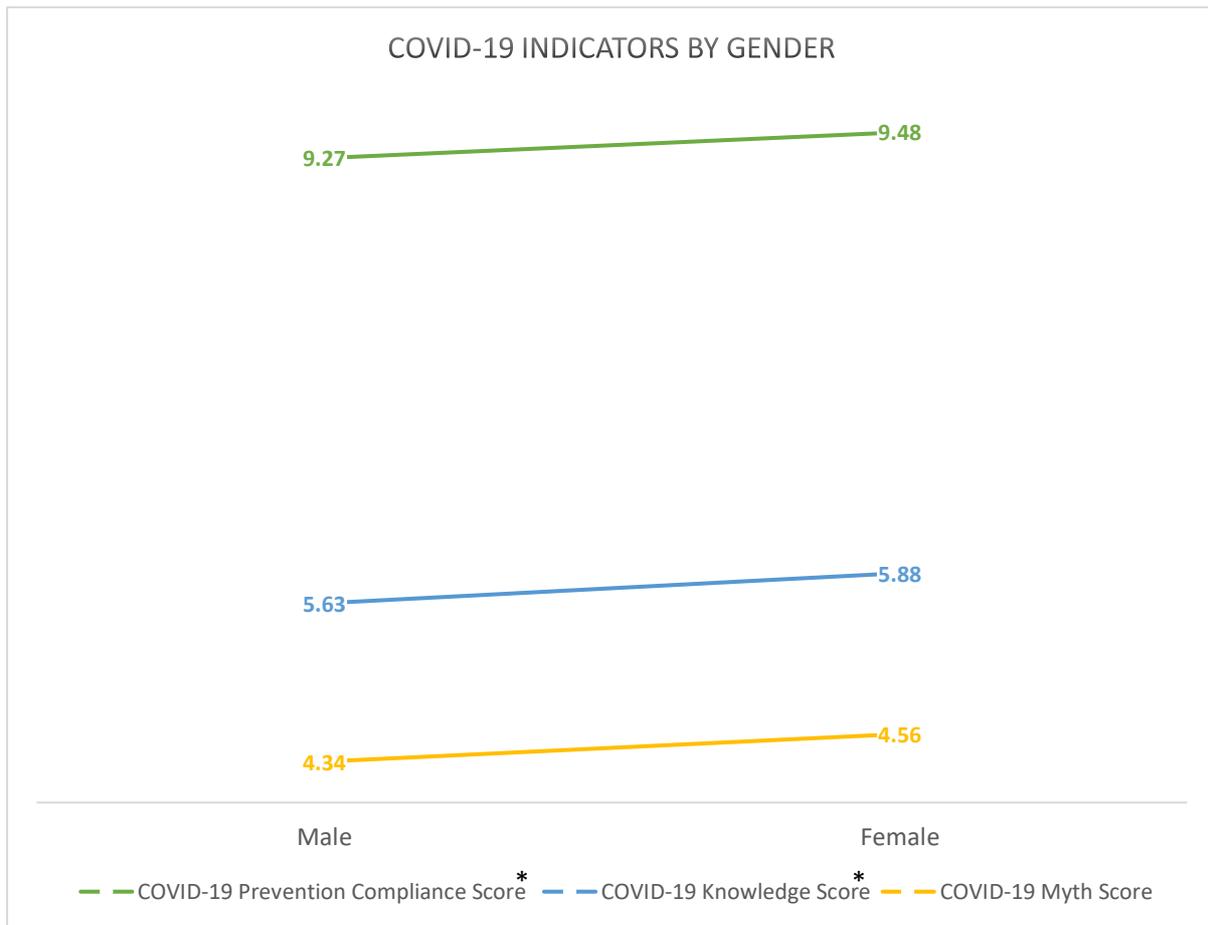


Figure 12: Comparing the average score of COVID-19 Indicators between genders.

* indicates a significant difference at $p \leq 0.05$

Comparing COVID-19 Indicators. Women score on average higher than men on all three indicators (Figure 12), but only two indicators register a statistically significant difference. Women average higher than men on the COVID-19 Prevention Compliance Score ($t=-3.818$, $p=0.0$) and on the COVID-19 Knowledge Score ($t=-2.734$, $p=0.006$). Although women also average higher than men on the COVID-19 Myth Score ($t=-1.444$, $p=0.149$), the difference is not statistically significant.

Other Comparisons. In addition, a few other relevant differences emerge between genders. Women (88.9%, 304) are more likely than men (76.8%, 335) to trust COVID-19 news from television ($p=0.0$).

Women (96.5%, 333) are also more likely than men (92.8%, 411) to trust doctors and medical experts ($p=0.011$) and to trust clerics and religious authorities: 62.6% (214) versus 48.4% (214), $p=0.0$.

When it comes to following prevention measures, women 97.1% (336) are more likely than men 88.5% (391) to say they sometimes or often stay at home ($p=0.0$).

Finally, women 56% (191) are more likely than men 44.1% (193) to say the thought of COVID-19 makes them feel scared.

Section D: Comparing Across Age Groups

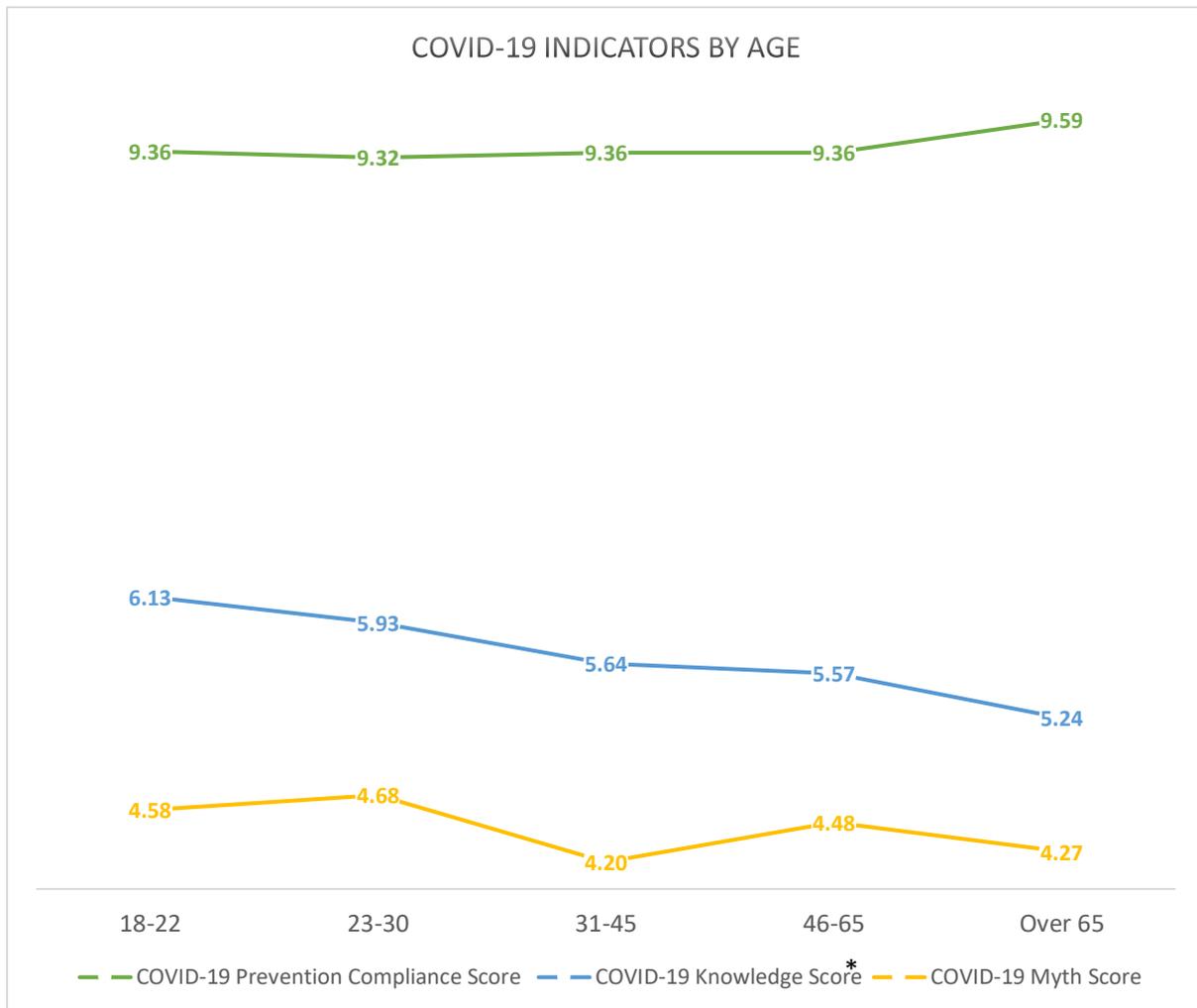


Figure 13: Comparing the average score of COVID-19 Indicators across age groups.

* indicates a significant difference at $p \leq 0.05$

Comparing COVID-19 Indicators. Figure 13 shows that younger participants average significantly higher than older participants on the COVID-19 Knowledge Score ($F=6.562$, $p=0.0$). As for the COVID-19 Prevention Compliance Score and the COVID-19 Myth Score, no significant differences emerge, with the exception of the 65 and older age group, which averages significantly higher on the compliance score.

Other Comparisons. Only few other differences emerge between age groups. Older participants tend to follow COVID-19 news on TV ($r=0.19$, $p=0.0$), while younger participants are slightly more likely to follow the news on social media ($r= -0.14$, $p=0.001$) and trust social media sources ($r= -0.12$, $p=0.001$).

As expected, younger participants are also more likely to post about COVID-19 on social media ($r= -0.11$, $p=0.003$). Interestingly, younger participants tend to trust clerics and religious authorities slightly more than older Lebanese ($r= -0.13$, $p=0.0$), and they are also more likely than older participants to agree that people older than 65 ($r= -0.2$, $p=0.0$) and kids younger than 8 ($r= -0.25$, $p=0.0$) are at higher risk of dying from COVID-19. These trends, however, are weak and only apply to a small fraction of the public.

Section E: Comparing Across Income Levels

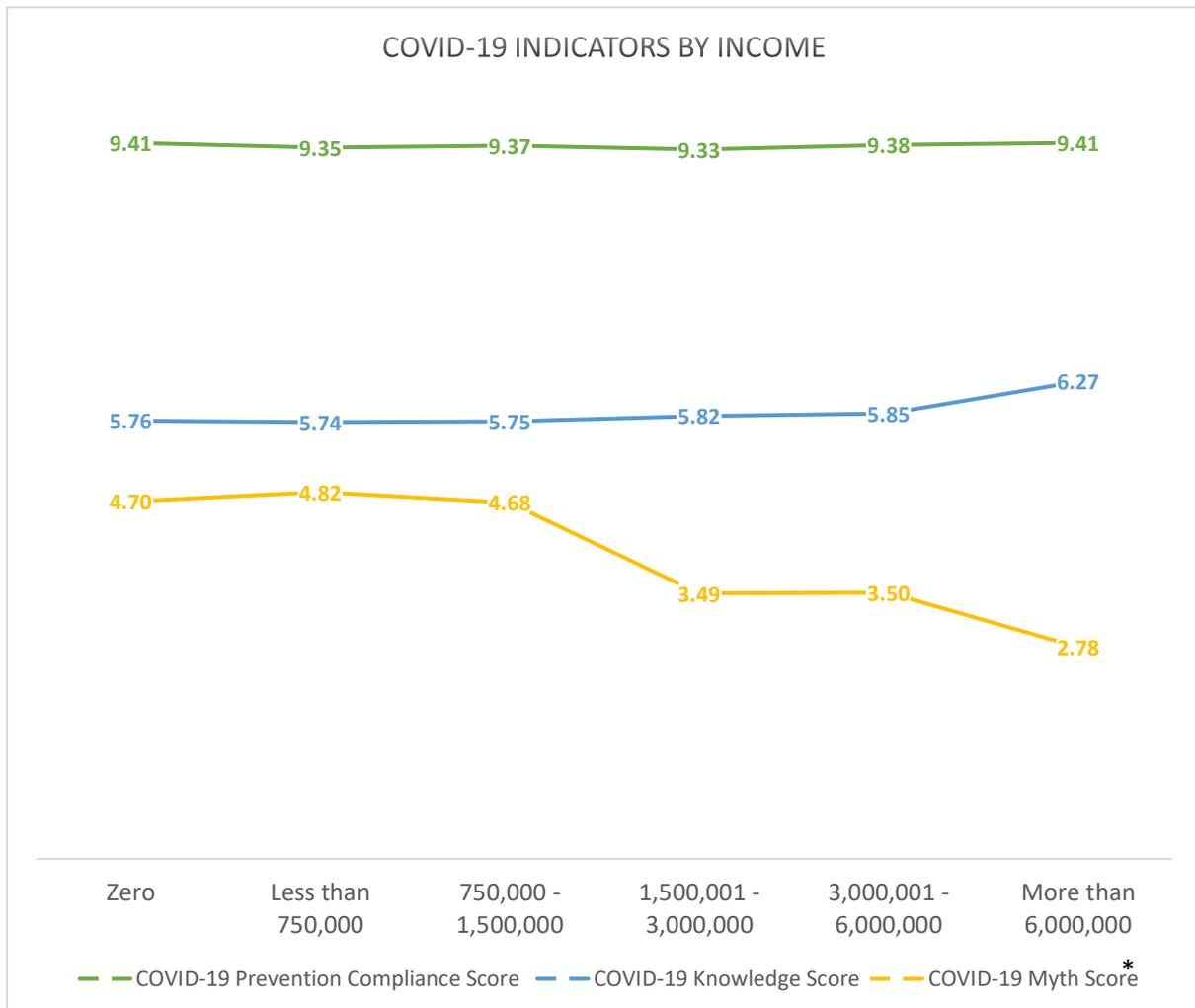


Figure 14: Comparing the average score of COVID-19 Indicators across income groups.

* indicates a significant difference at $p \leq 0.05$

Comparing COVID-19 Indicators. Figure 14 shows a significant relationship between income and the COVID-19 Myth Score. The higher the income, the lower is the myth score on average ($F=10.207$, $p=0.0$). In other words, the lower the income, the more likely a person believes in myths and incorrect information about COVID-19 ($r=-0.21$, $p=0.0$). No significant relationship emerges between income and the COVID-19 Knowledge Score ($F=0.883$, $p=0.492$) nor with the Prevention Compliance Score ($F=0.253$, $p=0.938$).

Other Comparisons. A few other differences emerge based on income. Participants with higher income are more likely to post COVID-19 news on social media ($r=0.17$, $p=0.0$). Participants with higher income are also less likely to trust information about COVID-19 from clerics and religious authorities ($r=-0.26$, $p=0.0$) and less likely to believe that COVID-19 is a punishment from God ($r=-0.17$, $p=0.0$).

Finally, participants with higher income are also less likely to say they stay at home ($r=-0.22$, $p=0.0$) and to believe that media coverage was exaggerated ($r=-0.13$, $p=0.01$).

Section F: Comparing Across Education Levels

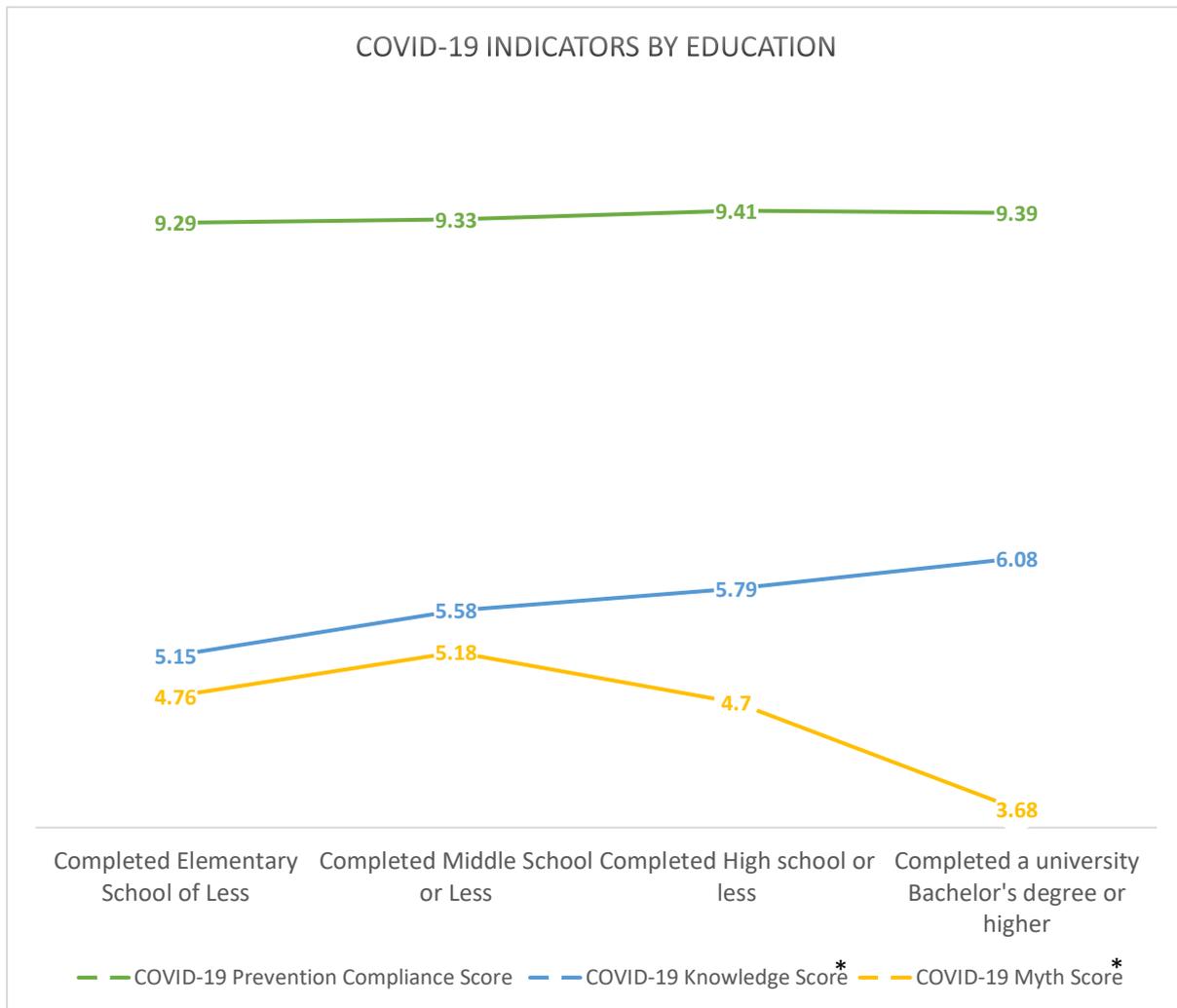


Figure 15: Comparing the average score of COVID-19 Indicators across education levels.

* indicates a significant difference at $p \leq 0.05$

Comparing COVID-19 Indicators. Figure 15 shows a significant relationship between education level and two COVID-19 indicators. Participants with higher education levels average significantly higher on the COVID-19 Knowledge Score ($F=0.16.279$, $p=0.0$) and significantly lower on the COVID-19 Myth Score ($F=23.668$, $p=0.0$). However, there is no significant difference for education level on the Prevention Compliance Score ($F=0.673$, $p=0.569$).

Other Comparisons. Several other differences emerge between education levels. The higher the education attainment, the more likely the person follows COVID-19 news on social media ($r=1.6$, $p=0.0$), trusts COVID-19 information from interpersonal sources ($r=0.19$, $p=0.0$), and posts COVID-19 news on social media ($r=0.17$, $p=0.0$).

Similarly, the higher the education level, the less likely the person publishes most news they receive about COVID-19 ($r=-0.15$, $p=0.014$), the less likely they trust COVID-19 information from clerics and religious authorities ($r=-0.28$, $p=0.0$), and the less likely they believe that COVID-19 is a punishment from God ($r=-0.27$, $p=0.0$).

Section G: Comparing Across Media Literacy Training Levels

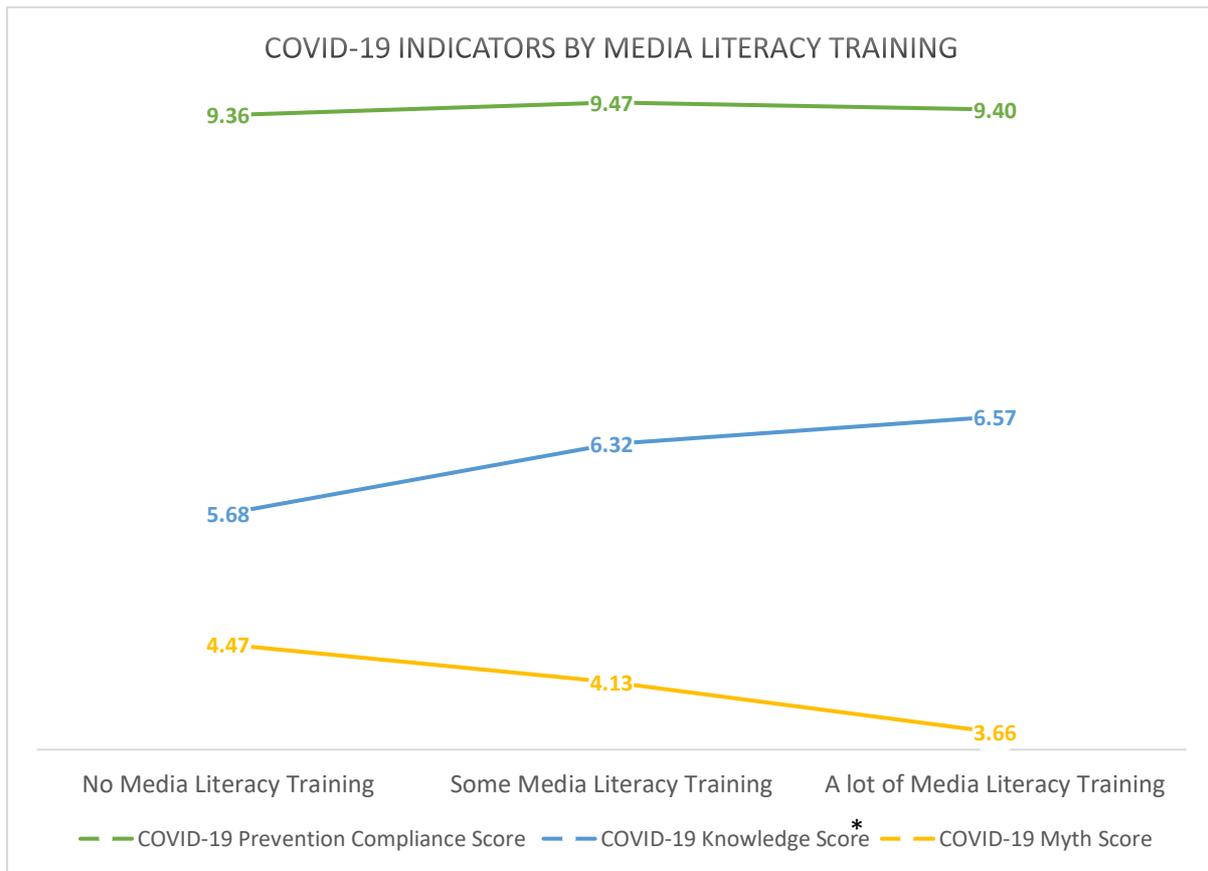


Figure 16: Comparing the average score of COVID-19 Indicators across self-reported media literacy training.
* indicates a significant difference at $p \leq 0.05$

Comparing COVID-19 Indicators. In addition to education, researchers are interested in assessing if participants who have undergone any media literacy training in their lives differ from those who have not.

Consistent with earlier studies the researchers conducted, this study found that only a small minority of participants have attained any media literacy training in their lives. Only 7% (55) of participants say that have received media literacy training at some point in their lives, and 93% (736) say they have not. Among those who say yes, 5.2% (41) say they received a little bit of media literacy training, and only 1.8% (14) say they received a lot of media literacy training. Although the media literacy indicator was simplistic (usually a more engaged media literacy assessment is used), still several significant differences emerged between the three groups.

Figure 16 shows that the media literacy groups average significantly higher on the COVID-19 Knowledge Score ($F=8.101$, $p=0.0$). Although the media literacy groups also average higher on the COVID-19 Prevention Compliance Score ($F=0.424$, $p=0.654$) and lower on the COVID-19 Myth Score ($F=1.497$, $p=0.225$), the differences are not statistically significant.

Other Comparisons. To simplify the media literacy measure, we combined both “yes” responses (some and a lot) for media literacy and found several other differences with those who report never having any media literacy training in their life.

The media literacy group tends to post more often about COVID-19 on social media ($t=-3.576$, $p=0.001$). The media literacy group is also more likely to check the original source of the news before posting ($t=-5.11$, $p=0.0$) and to compare the information to an expert or credible source before posting ($t=-3.871$, $p=0.0$)—two basic competencies on which media literacy curricula usually train.

The media literacy group is also less likely to trust information about COVID-19 from clerics and religious authorities ($t=1.981$, $p=0.048$). Finally, the media literacy group is also more likely to report a higher level of perceived knowledge about COVID-19 ($t=-2.823$, $p=0.005$).

Section H: Comparing Across Lebanese Governorates

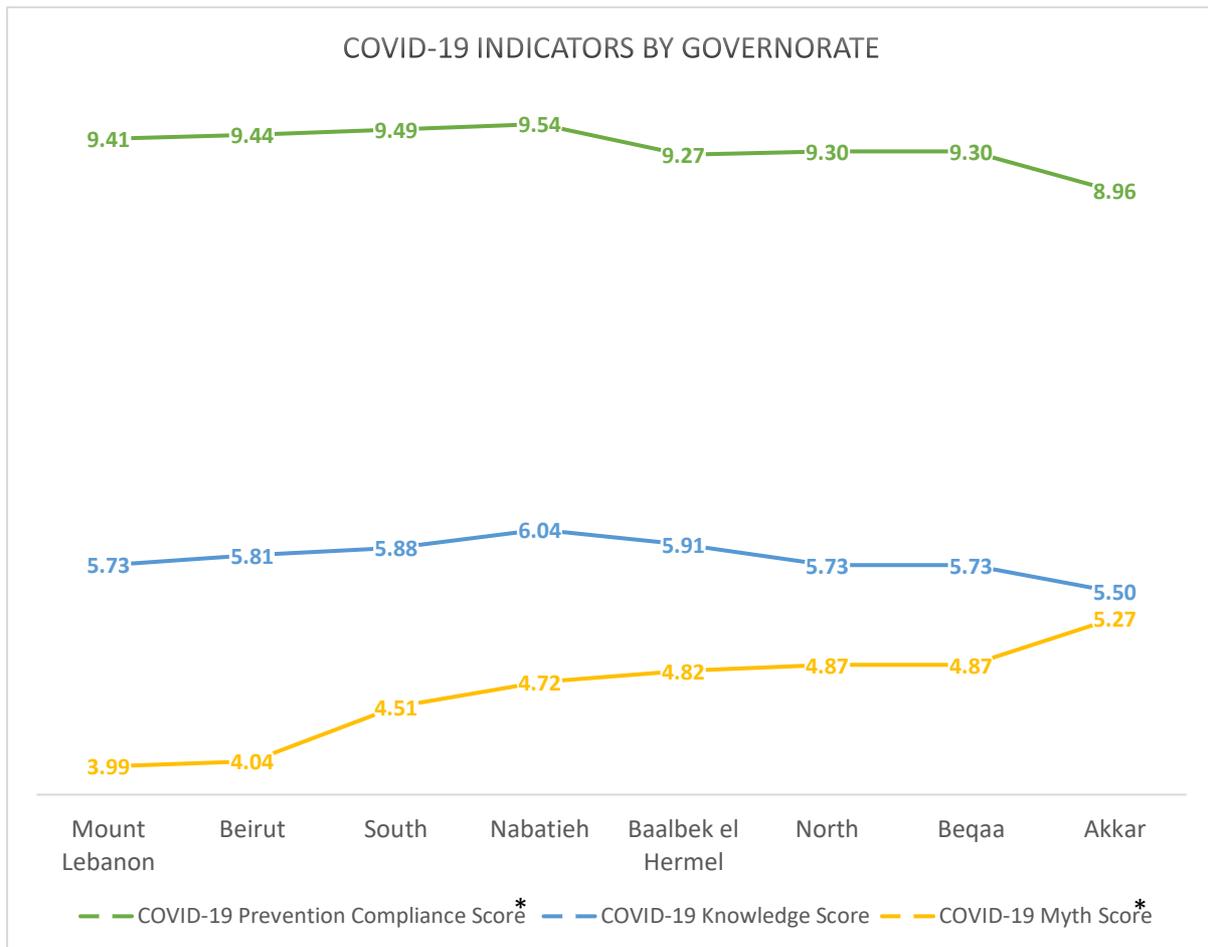


Figure 17: Comparing the average score of COVID-19 Indicators across Lebanese governorates.
* indicates a significant difference at $p \leq 0.05$

Comparing COVID-19 Indicators. When comparing the data across Lebanese governorates, two indicators return significant differences.

The COVID-19 Prevention Compliance Score ($F=2.585$, $p=0.006$) and the COVID-19 Myth Score ($F=4.884$, $p=0.0$) show significant differences between the governorates. Although the chart also shows an interesting trend for the COVID-19 Knowledge Score ($F=0.744$, $p=0.634$) that seems to run opposite to the COVID-19 Myth Score and consistent with the COVID-19 Prevention Compliance Score, the differences between governorates on that indicator (Knowledge) are not statistically significant.

Figure 17 shows that when it comes to the COVID-19 Prevention Compliance Score, Mount Lebanon, Beirut, South Lebanon, and Nabatieh average among the highest, followed by Baalbek el Hermel, North Lebanon, and Beqaa, while Akkar averages distinctly lower than any other governorate.

Similarly, when it comes to the COVID-19 Myth Score, Mount Lebanon and Beirut average distinctly lower than other governorates, while Akkar specifically averages much higher. The rest of the governorates fall in the middle: South Lebanon, Nabatieh, Baalbek el Hermel, North Lebanon and Beqaa.

Section I: Comparing Across Levels of Media Uses

The study compares the three COVID-19 Indicators across the three media uses: Television, social media and interpersonal communication (talking to people).

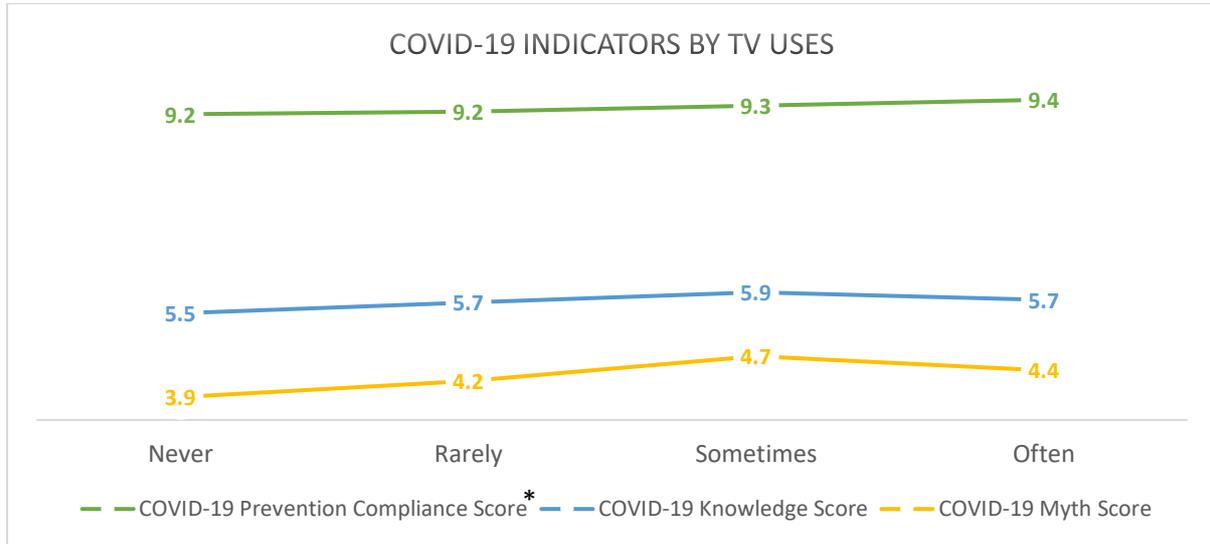


Figure 18: Comparing the average score of COVID-19 Indicators across television uses.

* indicates a significant difference at $p \leq 0.05$

Comparing COVID-19 Indicators. Figure 18 shows that only the COVID-19 Prevention Compliance Score ($F=3.165$, $p=0.024$) is significant across television exposure levels, while the differences are not significant for the COVID-19 Knowledge Score ($F=1.437$, $p=0.231$) and the COVID-19 Myth Score ($F=1.985$, $p=0.115$). In other words, the higher the exposure to COVID-19 news on television, the more likely is the person to comply with prevention measures, although the differences are small.

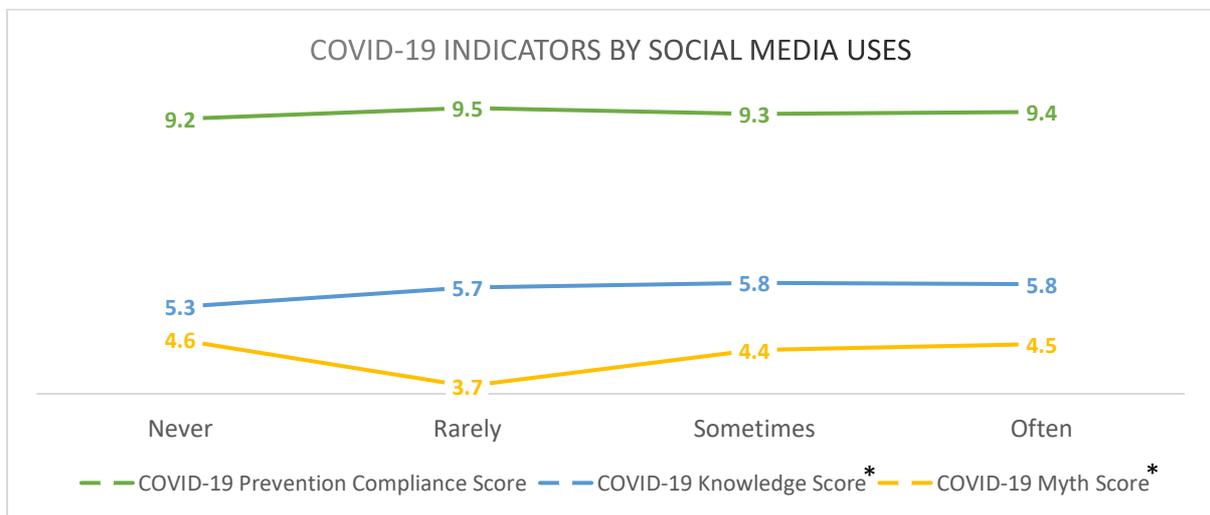


Figure 19: Comparing the average score of COVID-19 Indicators across social media uses.

* indicates a significant difference at $p \leq 0.05$

Figure 19 shows that in contrast to television, when comparing the average score across different social media exposure levels, both the COVID-19 Knowledge Score ($F=3.963$, $p=0.008$) and the COVID-19 Myth Score ($F=3.861$, $p=0.009$) are significant, while the COVID-19 Prevention Compliance Score ($F=1.321$, $p=0.266$) is not significant. So, the higher the exposure to COVID-19 news on social media, the higher is the person's knowledge level and belief in myths and false information about COVID-19.

No significant differences register for interpersonal communication.

Section J: Comparing Across Levels of Media Trust

The study compares the three COVID-19 Indicators across the levels of trust for three media and information sources: Television, social media and interpersonal communication (talking to people).

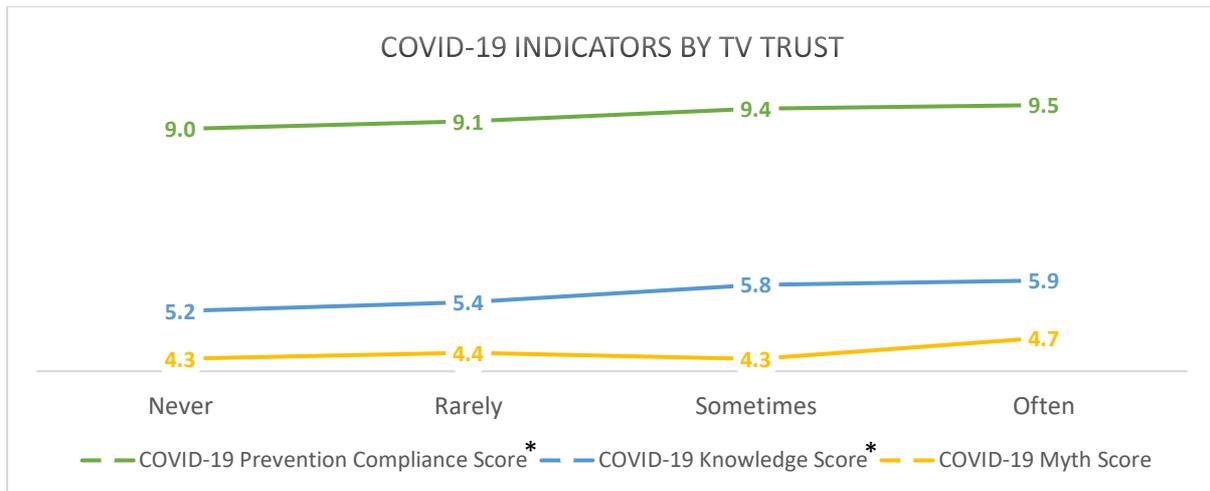


Figure 20: Comparing the average score of COVID-19 Indicators across levels of trust in television.

* indicates a significant difference at $p \leq 0.05$

Figure 20 shows that those who trust television for COVID-19 news average higher on both the COVID-19 Prevention Compliance Score ($F=8.782$, $p=0.0$) and the COVID-19 Knowledge Score ($F=5.937$, $p=0.001$), while the differences are not significant for the COVID-19 Myth Score ($F=2.298$, $p=0.076$). In other words, the higher the person's trust in COVID-19 news on television, the more likely the person complies with prevention measures and the more knowledgeable they are about COVID-19.

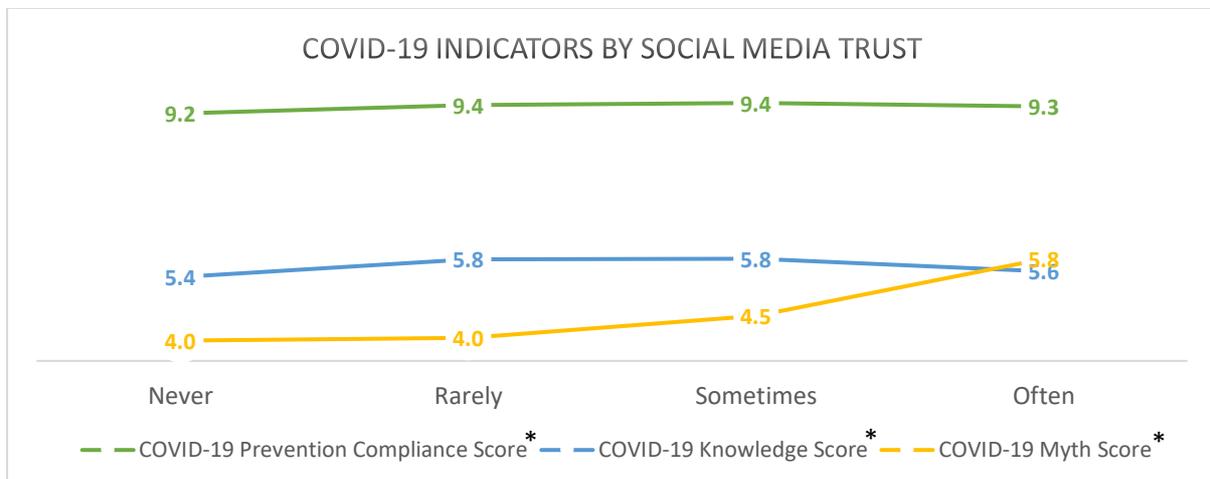


Figure 21: Comparing the average score of COVID-19 Indicators across levels of trust in social media.

* indicates a significant difference at $p \leq 0.05$

Figure 21 shows that those who trust social media for COVID-19 news average higher on all three indicators: The COVID-19 Prevention Compliance Score ($F=3.311$, $p=0.02$), the COVID-19 Knowledge Score ($F=4.982$, $p=0.002$), and the COVID-19 Myth Score ($F=17.567$, $p=0.0$). In other words, the higher the trust in COVID-19 news from social media, the more likely the person complies with prevention measures and knows about COVID-19, but also the more likely they believe in COVID-19 myths and false information, particularly those who say they often trust social media, which may indicate a high level of trust coupled with a low level of criticality—and the more they need media literacy education.

When it comes to interpersonal communication, those who trust COVID-19 information coming from other people are more likely to believe in COVID-19 myths ($F=13.560$, $p=0.0$). The other indicators show no significant differences.

Section K: Comparing Across Levels of Trust in Information Sources

The study compares the three COVID-19 Indicators across the levels of trust in three information sources: Doctors and medical experts, government, and clerics and religious authorities.

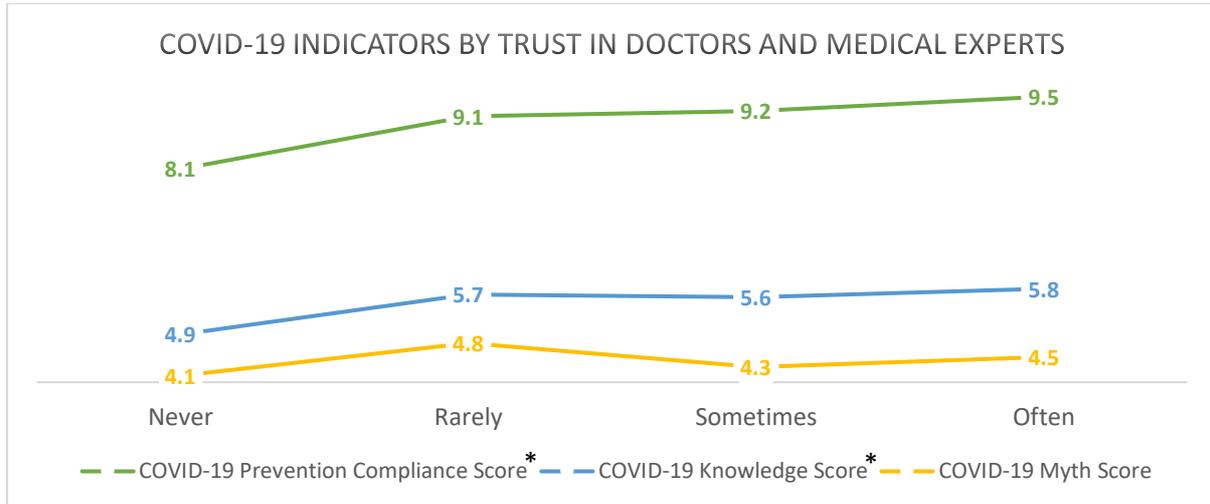


Figure 22: Comparing the average score of COVID-19 Indicators across levels of trust in doctors and medical experts. * indicates a significant difference at $p \leq 0.05$

Figure 22 shows that those who trust doctors and medical experts for COVID-19 information average higher on two indicators: the COVID-19 Prevention Compliance Score ($F=18.599$, $p=0.0$) and the COVID-19 Knowledge Score ($F=2.545$, $p=0.055$), while no significant difference emerges for the COVID-19 Myth Score ($F=0.712$, $p=0.545$). In other words, the higher the trust in doctors and medical experts, the more likely the person complies with prevention measures and knows about COVID-19.

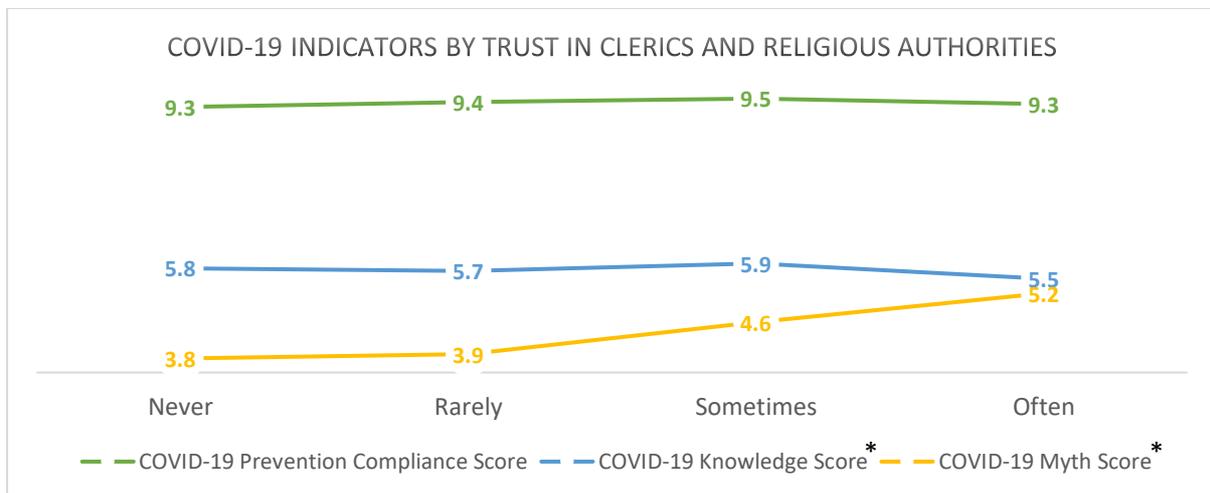


Figure 23: Comparing the average score of COVID-19 Indicators across levels of trust in clerics and religious authorities. * indicates a significant difference at $p \leq 0.05$

In contrast to doctors and medical experts, Figure 23 shows that those who trust clerics and religious authorities for COVID-19 related information average lower on the COVID-19 Knowledge Score ($F=2.601$, $p=0.05$) and higher on the COVID-19 Myth Score ($F=20.975$, $p=0.0$). No significant difference registers for the COVID-19 Prevention Compliance Score ($F=2.112$, $p=0.097$). In other words, the higher the trust in clerics and religious authorities, the less likely the person knows about COVID-19 and the more likely they believe in COVID-19 myths and incorrect information.

Levels of trust in government display no significant differences for the three COVID-19 Indicators.

Section L: Comparing Across Social Media Posting Levels

The study compares the three COVID-19 Indicators across the level of social media posting about COVID-19 (how often people post on social media about COVID-19).

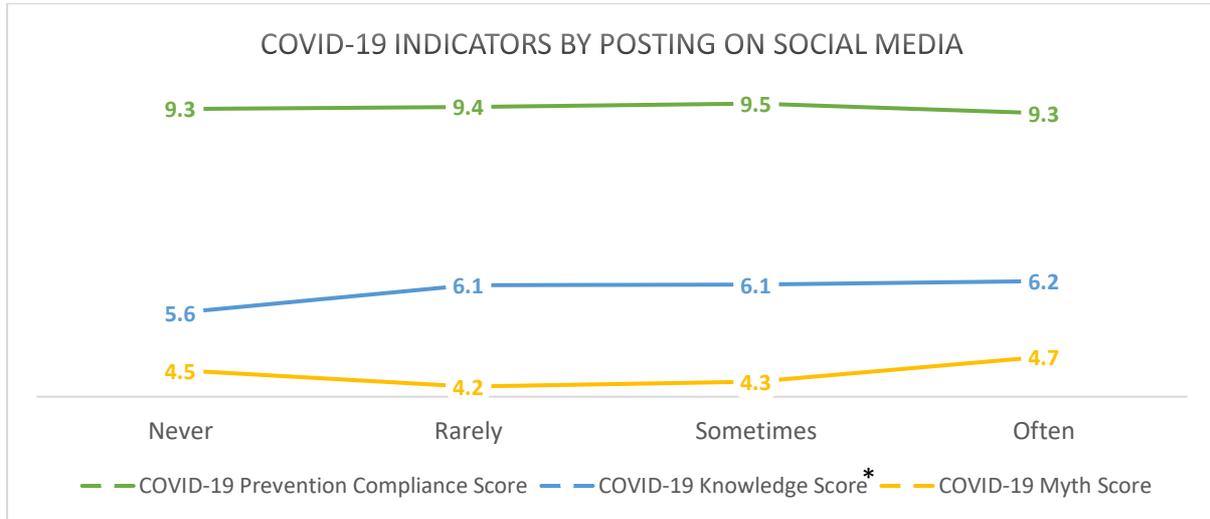


Figure 24: Comparing the average score of COVID-19 Indicators across the levels of posting on social media. * indicates a significant difference at $p \leq 0.05$

Figure 24 shows that those who tend to post about COVID-19 on social media also average higher on the COVID-19 Knowledge Score ($F=10.153$, $p=0.0$). The other two indicators show no significant differences: The COVID-19 Myth Score ($F=1.016$, $p=0.385$) and the COVID-19 Prevention Compliance Score ($F=0.707$, $p=0.548$).

Section M: Comparing Across Fear Levels

The study compares the three COVID-19 Indicators across the levels of reported fear from the disease.

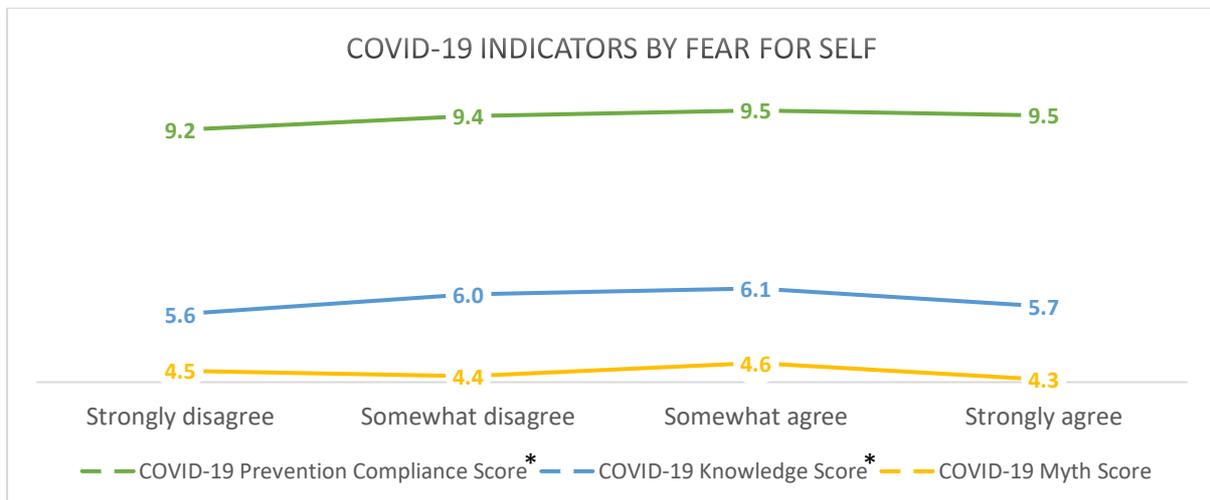


Figure 25: Comparing the average score of COVID-19 Indicators across levels of fear. * indicates a significant difference at $p \leq 0.05$

Figure 25 shows that those who agree that the thought of COVID-19 makes them feel scared average higher on two indicators: the COVID-19 Prevention Compliance Score ($F=9.844$, $p=0.0$) and the COVID-19 Knowledge Score ($F=6.836$, $p=0.0$), while no significant difference emerges for the COVID-19 Myth Score ($F=0.735$, $p=0.531$). In other words, the higher the person self-reports fear from the disease, the more likely the person complies with prevention measures and knows about COVID-19.

Fear for family from COVID-19 registers on significant differences for any COVID-19 Indicator.

Section N: Comparing Across Levels of Perceived Knowledge

The two “perceived knowledge” variables are merged and the composite variable is compared across the indicators.

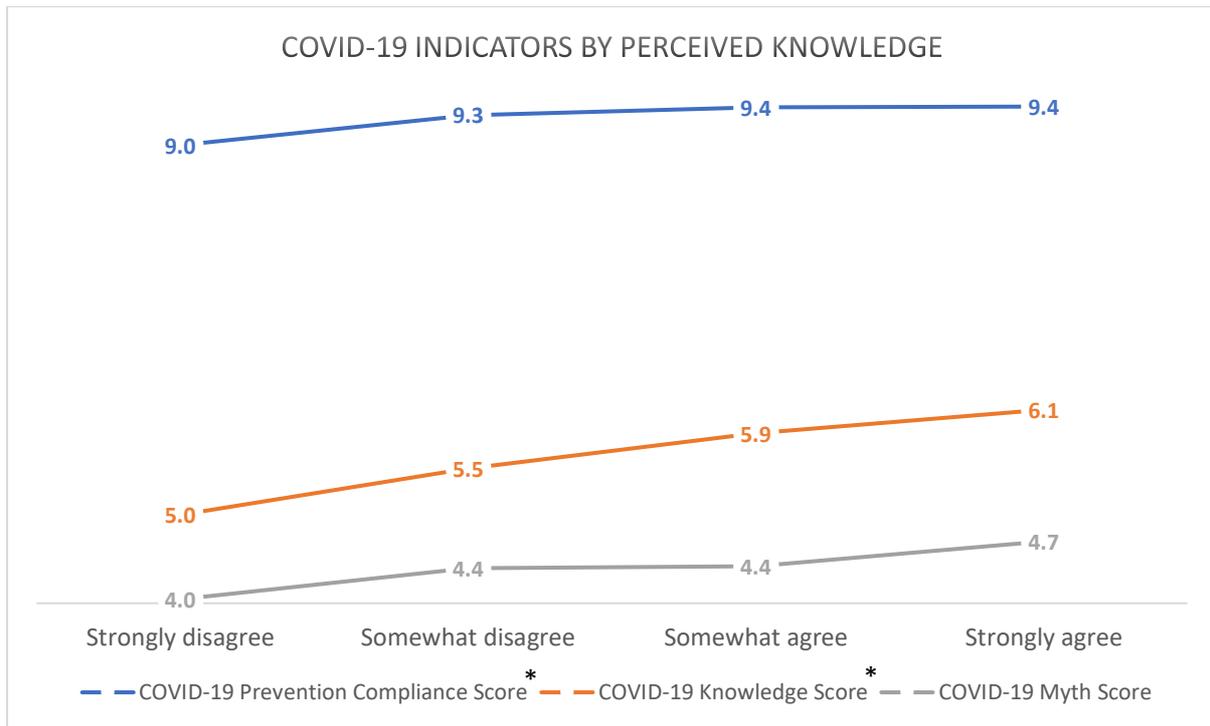


Figure 26: Comparing the average score of COVID-19 Indicators across the levels of perceived knowledge.

* indicates a significant difference at $p \leq 0.05$

Figure 26 shows that the higher a person’s level of perceived knowledge about COVID-19, the higher is the average COVID-19 Prevention Compliance Score ($F=4.733$, $p=0.003$) and the higher is the COVID-19 Knowledge Score ($F=17.331$, $p=0.0$). The COVID-19 Myth Score does not register statistically significant differences ($F=1.352$, $p=0.256$). In other words, the higher the level of confidence in one’s perceived knowledge about COVID-19, the more likely a person abides by COVID-19 prevention measures and actually knows about the disease.

Methodology

The study uses a cross-sectional researcher-administered phone survey of individuals currently living in Lebanon and aged 18 and older. The fieldwork spans the period of March 27, 2020 to April 23, 2020. Phone surveys were the only viable option, given the need for social distancing, which precludes face-to-face interviews, and online surveys do not ensure a scientific sample, nor do they attract a sufficient response rate.

Questionnaire

Two versions of the survey questionnaire (one in Arabic and one in English) were developed and pre-tested. The questionnaire comprised 15 close-ended questions (including several matrix questions), required on average 12 minutes to complete, and generated 52 variables.

To assess media uses of television, social media, and interpersonal communication, participants were asked “How often did you follow Coronavirus news through the following?” The responses were measured on a 4-point scale of “never,” “rarely,” “sometimes,” and “often.”

Using the same response scale, media trust of these sources was assessed through the question “To what extent do you trust Coronavirus news from the following?” Social media production was assessed through the question “How often did you post Coronavirus news on social media?” and used the same response scale. Those who answered that they posted at least “rarely” on social media were asked “How often did you do the following before posting or sharing news about Coronavirus on social media?”

Using the same 4-point response scale, participants ranked responses for the following options: “I checked the original source of the news before posting”, “I compared the information to an expert or credible source before posting”, and “I published most news I received about Coronavirus.”

To assess trust in three main sources of information who often made public statements about the pandemic (doctors and medical experts, the government, and clerics and religious authorities), participants answered the following question on the same 4-point scale: “To what extent do you trust information about Coronavirus from the following sources?” All participants were also asked whether they received any media literacy training in their lives and answered on a 3-point response scale of “no, never”, “yes, a little bit”, and “yes, a lot.”

To assess prevention behavior during the pandemic, participants were asked, “How often do you do the following as a prevention measure for Coronavirus?” Responses were measured on a 4-point scale of “never,” “rarely,” “sometimes,” and “often.” The list of prevention activities included: Avoid crowds, wash hands with water and soap, stay at home, avoid shaking hands, avoid touching my face, cover my cough, as well as two pervasive myths: Eat garlic or bananas and wash inside my nose with warm salty water.

To assess knowledge, two questions were asked. First, participants were asked to answer “yes” or “no” to the question “Are the following groups at higher risk of dying from Coronavirus?” The list included, older people over 65, people with diabetes, heart or lung diseases, immunodeficient individuals, smokers, as well as the following false beliefs that circulated in social media at the time: Children younger than 8, Chinese and Iranians, and those with blood type O+.

Second, participants were asked if they “can name the main symptoms of Coronavirus,” and interviewers were instructed to check any response that matched the following list (without spelling them out to participants): Fever, cough, shortness of breath, chest pain, bluish lips or face, and confusion.

Perceived knowledge was assessed through the question “Do you agree or disagree with the following?” and the following statements: “I am knowledgeable about Coronavirus” and “If someone asks me about Coronavirus, I have enough information to inform them about the subject.” Responses were measured on a 4-point scale of “strongly disagree,” “somewhat disagree,” “somewhat agree,” and “strongly agree.”

Similarly, fear was assessed using the same question and 4-point response scale and the following statements: “The thought of Coronavirus makes me feel scared” and “I am afraid that someone in my family may get sick from Coronavirus.”

Finally, myths and conspiracy theories were assessed using the same question and 4-point response scale and the following statements: “Coronavirus is a man-made biological weapon,” “Coronavirus is created by pharmaceuticals for profit purposes,” and “Coronavirus is a punishment from God.” Demographic information about gender, age, governorate (state), level of education, and income was also collected.

Sample

An overall sample size of 1,536 participants was calculated based on a population of 6 million, a 95% confidence level, and a $\pm 2.5\%$ sampling error. The study adopted a simple random sampling technique based on all possible mobile phone numbers in Lebanon. First, we acquired all possible number ranges from the website of the Lebanese Ministry of Telecommunication. Then we developed a sampling frame based on the groups of numbers and calculated the proportion for each group. Then a proportional random sample of numbers was selected from each group of numbers using the website randomizer.org. The sample consisted of individuals living in Lebanon (including foreign nationals, albeit a small number) and were aged 18 or older. Eight trained researchers contacted their designated list of phone numbers. Each number was called at least five times. Numbers that did not respond after five calls, as well as invalid numbers, were replaced up to two times by adding +1 to the original number. For those who answered, researchers read the consent form and conducted the survey with respondents who consented to participate. They marked those who declined as “refused.” Some respondents who accepted to participate but did not complete more than 85% of the questionnaire were removed from the final dataset. The final tally came to 792 responses with an overall response rate of 51.6%.

Data Analysis

The study used SPSS 26 to conduct frequency distributions and other descriptive statistics, in addition to using the chi-square test of independence as an inferential test of significance, as well as t-Tests, and ANOVAs, and Pearson’s r correlations.

The sample was made up of 56.1% (443) males and 43.9% (346) females. Table 1 shows the age distribution of participants and Table 2 shows the income distribution of participants.

Age	% (n)
18-22	13.4% (104)
23-30	23.6% (184)
31-45	33% (257)
46-65	24.8% (193)
Over 65	5.3% (41)

Table 1: Age distribution

Income	% (n)
Zero	39.4% (291)
Less than 750,000 LL per month	21.4% (158)
750,000 - 1,500,000	20.4% (151)
1,500,001 - 3,000,000	12.2% (90)
3,000,001 - 6,000,000	3.7% (27)
More than 6,000,000 LL per month	3% (22)

Table 2: Income distribution

As for education level, 10.3% (79) completed elementary school or less, 27% (207) completed middle school, 24.9% (191) completed high school, and 37.9% (291) completed a university bachelor's degree or higher. Participants came from all Lebanese governorates and were distributed according to Table 3.

Governorate	Sample % (n)	Actual population proportion
Mount Lebanon	33.5% (258)	34%
Beirut	14% (108)	8%
North	15.8% (122)	15%
South	13% (100)	11%
Beqaa	10.1% (78)	10%
Baalbek el Hermel	5.7% (44)	8%
Akkar	4.4% (34)	7%
Nabatieh	3.5% (27)	7%

Table 3: Geographic distribution

Limitations

The following issues were noted during the implementation of the survey: 27.2% (418) refused to participate, 18.2% (279) of phone numbers were not valid or did not answer despite two number replacements, and 3% (47) of respondents did not sufficiently complete the survey. In addition, although the geographic distribution was largely proportional to the actual population distribution in Lebanon, three governorates were somewhat underrepresented: Baalbek el Hermel, Akkar, and Nabatieh did not fall within ± 2.5 of the actual population distribution (See Table 3), while Beirut was slightly overrepresented. However, this also reflects the fact that many Lebanese who hail from these governorates actually work and live during the week in Beirut. In addition, women were slightly underrepresented.

Other Recent and Affiliated IMRT Studies

1. Melki, Jad, & Kozman, Claudia. (2020). Media Uses and Trust During Protests: A working paper on the media uses of Lebanese during the 2019 uprising. Media/War Program. Institute of Media Research and Training, Volume 1, Issue 1, Lebanese American University, Beirut, Lebanon.
2. Melki, Jad and Hitti, Eveline. (2020). The Domestic Tethering of Lebanese and Arab Women Journalists and News Managers. *Journalism Practice*.
3. Melki, Jad, and Kozman, Claudia. (2019). Media Dependency, Selective Exposure and Trust during War: Media sources and information needs of displaced and non-displaced Syrians. *Media War and Conflict*.
4. Melki, Jad. (2019). Daesh Media Strategy. *Al-Adab*, 5 (May). سياسة داعش الإعلامية، مجلة الآداب، العدد الخامس.
5. Reese, S. & Melki, J. (2019). Genocide & the Mediation of Human Rights: Pedagogies of difficult stories. In S. Jukes & K. Fowler-Watt (Eds), *New Journalisms: Rethinking Practice, Theory & Pedagogy*, Routledge.
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8. Kozman, Claudia (2018). Review of the book *The Lebanese media: Anatomy of a system in perpetual crisis*, by Sarah El-Richani. *Middle East Journal of Culture and Communication*. (Q2)
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17. Kozman, Claudia (2017). Measuring issue-specific and generic frames in the media's coverage of the steroid issue in baseball. *Journalism Practice*. (Q1)
18. Palmer, Lindsay and Melki, Jad. (2016). Shape Shifting in the Conflict Zone: The Strategic Performance of Gender in War and Conflict Reporting. *Journalism Studies*. (Q1)
19. Melki, Jad, and Mallat, Sarah. (2016). Advantages and Disadvantages of Digital Media for Activism, *al-Mustaqbal al-Arabi*, 432. فعالية أم عبء؟ الإعلام الرقمي والاجتماعي في النشاط المدني
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About the study

This study is part of the ongoing Media/Digital Literacy program of the Institute of Media Research and Training (IMRT) at the Lebanese American University (LAU). The Media/Digital Literacy program focuses on the advancement of media and digital literacy education and research in the Arab region, through training a generation of educators, trainers, activists and researchers, and developing locally rooted curricula and scholarship.

Institute of Media Research and Training

The Institute of Media Research and Training (IMRT) at the Lebanese American University (LAU) is an interdisciplinary center for media research, training, production and advocacy. It aims to produce and transmit scientific knowledge and media content that examines how media and digital communication systems shape and are shaped by local and regional politics, economics, and cultures; to develop media literacy curricula and programs and offer academic and professional training that advances media education in the region; and to advocate for ethical, professional, and equitable communication laws and practices and a free media environment. The institute builds on media literacy theory that aims to empower citizens with creative and critical thinking skills and digital competencies that help them become civically engaged global citizens capable of innovatively harnessing the power of media technologies to advance human rights, peace, and social justice.

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