Beyond Parochial Altruism:
Shared Crises and Cross-Ethnic Solidarities in Lebanon

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Abstract

In times of crisis, do people overcome social divisions by exhibiting broad solidarity? This question is especially vital in "divided societies" given the need for broad social and political cooperation to combat natural and man-made disasters. Through a nationally representative phone survey in Lebanon with an embedded experiment, we assess how demographic and health characteristics shape the propensity to prioritize access to Covid-19 vaccines and antibiotics. In Lebanon, these two goods exhibit different demand curves due to significant vaccine hesitancy but excessive demand for antibiotics, which were increasingly out of reach for many due to a severe economic crisis. Contrary to depictions of Lebanon as deeply divided at the mass level, our findings point to broad solidarity with fellow Lebanese nationals: For both types of medications, higher-risk and lower-income profiles are prioritized regardless of ethnicity. In the highest need cases, however, a slight tendency towards coethnic favoritism obtains. Our paper contributes to studies of social solidarity in divided societies and advances research on the sociopolitical effects of pandemics by benchmarking social preferences around vaccines against those related to other essential medications.

1 Introduction

In times of crisis, do people overcome social divisions and exhibit broad solidarity? Does a shared experience of an exogenous, natural threat – in this case, the Covid-19 pandemic – drive cross-cutting altruism with co-nationals or do preexisting social divisions elicit more parochial expressions of altruism? These questions are vital given the need for cooperation at all levels of politics and society to combat many natural and man-made disasters and are all the more pressing in "divided societies," in which "ethnic identity provides clear lines to determine who will be included and who will be excluded" (Horowitz, 1993, 18).[1]

We explore these questions in Lebanon, a quintessential case of a "divided" society where macro-level political divides have also penetrated everyday social life (Deeb et al., 2022).[2] In spring 2022, we ran a phone survey of 1,138 respondents that included a conjoint experiment aimed at understanding how different aspects of social and health status and identity characteristics shaped the propensity to prioritize access to potentially life-saving medications. We focus on two essential medications – Covid-19 vaccines and antibiotics – that have different demand curves in Lebanon. While many Lebanese received Covid-19 vaccines in the context of the ongoing pandemic, the population exhibited significant vaccine hesitancy (Al Halabi et al., 2021). Conversely, antibiotics are highly valued (and over-prescribed) in Lebanon (Talaat et al., 2022; Chaaban et al., 2024; Mallah et al., 2020), but were increasingly out of

[1]We use this term with caution, acknowledging that ethnic divisions are often are promoted and maintained by political actors rather than reflections of essential identities, and therefore the very notion of a divided society is a political construction (Maged, 2022).

[2]Following standard practice in social science research on identity politics (Chandra and Wilkinson, 2008), we use the terms ethnic and sectarian interchangeably throughout this paper even though societal divisions in Lebanon are more precisely described as sectarian or ethnosectarian.

reach for many people due to a severe economic crisis, which erupted in October 2019 and has been called the world's worst economic crisis in the past 150 years (World Bank, 2022).

Our findings point to broad solidarity with fellow Lebanese nationals. For both vaccines and antibiotics, we find that higher-risk profiles are prioritized regardless of ethnicity, with all respondents prioritizing sicker over healthier individuals for access to essential drugs and vaccines. The results also point to substantial reported class solidarity, as all respondents favor lower income people over the wealthy for access to life-saving medications. Our results therefore belie depictions of Lebanon as a society rife with ethnic favoritism and discrimination at the mass level. Under specific conditions, however, coethnic favoritism obtains. In high need situations – for antibiotics for the sickest people, and for Covid-19 vaccines for older people – respondents tend to prioritize coethnics over non-coethnics. Thus, people report a slight coethnic bias when thinking about how to allocate more valued resources and for the most vulnerable people.

Our findings contribute to studies of the dynamics of social solidarity in societies with politicized ethnic divisions. Contrary to standard depictions of deep divisions in such contexts (Horowitz, 2000; Lijphart, 1977), including in our research site (Chang and Peisakhin, 2019), we show that people demonstrate broad, cross-ethnic solidarity when it comes to life or death issues. Our findings also point to the enduring importance of class divisions in a context where ethnic politicians have worked assiduously to suppress cross-ethnic, class-based solidarity (Clark and Salloukh, 2013). We also advance the emerging body of research on the sociopolitical effects of pandemics (Argote et al., 2021; Butterworth et al., 2024; Dionne and Turkmen, 2020; Ferwerda et al., 2024; Fridman et al., 2022) by benchmarking social preferences around the allocation of vaccines against other those related to other essential medications, enabling us to explore the degree to which these preferences extend to other social goods.

In the next section, we review relevant social science research informing the core questions and design of the study while presenting a series of preregistered hypotheses that we explore in this paper. In Section 3, we elaborate the logic of case selection, data and methods

employed in the study. Section 4 presents the results, which we discuss in more detail in the subsequent section. In Section 5, we conclude, outlining the limitations of the study and areas for further research.

2 Social solidarities in times of crisis

In societies with politicized ethnic divisions, it is widely assumed that ethnic bias is pervasive in many aspects of social and political life such as voting (Chandra, 2007), public goods provision (Alesina and Ferrara, 2005; Habyarimana et al., 2007; Miguel and Gugerty, 2005), policy preferences (Lieberman and McClendon, 2013) and others. A human tendency towards ingroup favoritism suggests that parochial altruism, self-sacrificing behavior to aid others from one's own ethnic group sometimes coupled with hostility towards outgroups (Choi and Bowles, 2007; Shayo, 2009), is almost inevitable (Brewer and Caporael, 2006; Brewer, 2019; Tajfel, 2010).[3] But people do not always favor ingroup members (Berge et al., 2015) and ethnic bias may depend on the issue at hand (Malik, 2020). Even in societies where parochial altruism seems to be the norm, people may exhibit broad solidarity with co-nationals when facing a shared crisis or threat (Bauer et al., 2016; Shayo, 2009, 18), particularly when the threat is viewed as natural rather than man-made (Zagefka et al., 2011). When do people behave altruistically to outgroup members?

2.1 Parochial altruism in divided societies

The tendency to differentiate between in- and outgroup members and to prioritize the perceived interests and needs of one's own group is well established in social psychology (Pisor and Ross, 2024). The boundaries of solidarity are limited by conceptions of belonging (Lamont and Molnar), shaping a range of important outcomes that influence human well-being such as redistribution (Lieberman, 2003), social welfare provision (Singh, 2015), and intergroup helping (Van Leeuwen and Zagefka, 2017). Ingroup favoritism also appears to extend

[3]For a review, see Pisor and Ross (2024).

to micro-level interactions, such as clinical interactions in health care facilities (Alsan et al., 2019; Balsa and McGuire, 2003; Cammett and Şaşmaz, 2022b; Chapman et al., 2013; Hsu et al., 2014; Sabin et al., 2009; Shavers et al., 2012; Shen et al., 2018), choices of marital partners (Deeb, 2024), and other aspects of everyday life in divided societies (Brewer, 2019). Even if the mechanisms underlying apparent ingroup bias remain contested (Berge et al., 2015; Singh and Vom Hau, 2016) and reflect dynamics unrelated to ethnicity per se (Deeb, 2020), ingroup favoritism seems to operate on a surface level.

In divided societies, prosocial behavior is all the more likely to manifest as parochial altruism, particularly in countries that have experienced "ethnic" violence, where intergroup contact is often limited and mistrust is high (Bauer et al. 2016). Similarly, studies of the politics of the welfare state emphasize that extending benefits to perceived outgroups, such as immigrants, face popular backlash (Magni, 2024). Therefore, in the context of a crisis like the Covid-19 pandemic, individuals might prioritize ingroup members for access to essential vaccines, particularly when some ethnic or racial groups are viewed as more susceptible to the disease than others (Lieberman, 2022). For example, in Qatar, the establishment of cordons sanitaires to separate citizens from "guest workers" exemplifies the prioritization of ingroup members for access to safe conditions during the pandemic at the macro-level (Iskander, 2020).

To be sure, not all people in a given society exhibit parochial altruism. Some studies indicate that the tendency towards coethnic bias may be most pronounced among the poor, whether because they derive self-esteem from their ethnic group more than their class or professional identity (Shayo, 2009) or prioritize the dignity of their ethnic group in political behavior, irrespective of the prospect for material gain (Malik, 2024). At the same time, studies of ethnic politics emphasize that coethnic bonds tend to trump cross-class solidarity in countries with politicized ethnic divisions, in part because ethnic elites sabotage the development of alternative forms of solidarity such as labor unions and civil society organizations (Clark and Salloukh, 2013). Furthermore, opportunities for cross-ethnic, class-based mixing are more circumscribed in societies with pronounced segregation in residential patterns and

schooling. Studies of parochial altruism and ethnic bias give rise to our first hypothesis:

H 1. *People are more likely to prioritize vaccine/antibiotics access for coethnics.*

The claim of coethnic bias in prioritizing access to essential medications, however, is likely to be overly simplistic. Even in divided societies, social norms often dictate against the open expression of ethnic bias. People are rarely blatantly discriminatory and tend to underreport coethnic preferences due to social desirability bias both in everyday life and in responding to survey researchers (Adida et al., 2016). Thus, we only expect reported preferences to conform to parochial altruism when outgroup members would not be seriously jeopardized. Our preregistered hypothesis therefore holds that coethnic favoritism is likely to obtain for when the stakes are lower – that is, *not* when differentiating among needier and sicker members of societies but rather when coethnics and non-coethnics are in low-risk situations.

H 2. *People are more likely to prioritize vaccine/antibiotics access for coethnics at low to moderate levels of risk.*

2.2 Beyond ethnic parochialism

In the past decade, research on diversity in social and political life increasingly pushes back against claims of coethnic favoritism. Based on a series of lab experiments in Nairobi, Kenya, Berge et al. (2015) find no evidence of coethnic bias, confirming a small but growing body of research with complementary results.[4]

In contrast to the conventional wisdom in social psychology, recent research on parochial altruism also suggests that ingroup favoritism does not always maintain. The conditions under which individuals exhibit coethnic bias depend on a variety of factors such as intergroup competition, institutional contexts that heighten intergroup animosity, the perceived gains of cooperation such as through trade, and other factors (Pisor and Ross, 2024, 4).

[4]For example, as cited in Berge et al. (2015, 4), see Carlson (2015), Michelitch (2015), Dionne (2014), Grossman and Honig (2017), Hjort (2014), Marx et al. (2019), and Voors et al. (2012).

Furthermore, coethnic bias may hold in some realms of social and political life, such as elections, when people vote for coethnics to increase their chances of accessing material benefits (Blaydes, 2010; Chandra, 2007; Cammett, 2014; Corstange, 2016; Lust, 2009), but not in other arenas.[5]

Moreover, coethnic bias may arise due to factors beyond shared preferences among coethnics, providing the appearance of ingroup bias when in fact other mechanisms are at play (Berge et al., 2015; Deeb, 2020; Kustov and Pardelli, 2018). In Lebanon, our research setting, Paler et al. (2020) argue that a lack of intergroup interaction, which enables people to discover common interests, hinders the discovery of shared preferences across ethnic lines. In randomly assigned discussion groups, which vary by cross-ethnic and cross-class composition, the authors find that people assigned to ethnically mixed groups were more willing to publicly oppose the sectarian power-sharing system in Lebanon, but only in discussion groups with members from the same social class. Because residential patterns and other forms of demographic sorting tend to be stratified by ethnicity, people have few opportunities to discover shared class-based concerns. The appearance of coethnic bias may arise as a result of patterns of segregation rather than co-ethnic preferences.

Even in divided societies, where ethnic elites as well as more structural forces hinder cross-ethnic interactions, shared class interests can trump ethnicity. Levels of intergroup inequality shape the degree to which ethnicity becomes politically salient (Horowitz 1985). In a study of electoral behavior across different states in India, voting along ethnic lines is more likely when cross-group income differences are higher, implying that identity politics may mask class politics (Huber and Suryanarayan, 2016).

Beyond electoral behavior, people may not discriminate along ethnic lines as much as we might expect, even in societies recovering from bloody "ethnic" conflicts. Survey data in Bosnia (USAID Bosnia-Herzegovina, 2022), Lebanon (Paler et al., 2018), and Northern Ireland (ARK, 2023) indicate that people have relatively extensive interethnic interactions through workplaces and daily life, and report the desire to increase rather than restrict such

[5]We are grateful to Mashail Malik for underscoring this point.

exchanges. Patterns of intergroup exchanges and preferences for cross-ethnic interactions vary depending on the issue at hand or nature of the personal relationship (i.e., friendships versus marital partners), but by and large suggest that most people are open to mixing beyond their own groups. In day-to-day life, then, there is reason to believe that people are not solely driven by ethnic preferences.

Thus, on average, we expect that people may not even be driven by ingroup bias when it comes to aiding vulnerable populations and will "do the right thing" by prioritizing vaccines and antibiotics for at-risk populations who need them most – the sick and the elderly.

H 3. *People are more likely to prioritize vaccine/antibiotics access for at-risk populations, specifically those who are sicker or older.*

2.3 Health attitudes and intergroup altruism

Solidaristic responses also depend on how people perceive a given threat. Even when a shared threat cross-cuts ethnic and other social cleavages, as was the case with the Covid-19 pandemic, attitudes and beliefs about the disease and about health-related factors shape preferences about allocating essential medications such as vaccines and antibiotics.[6]

[6]Existing research on societal responses to natural versus man-made disasters suggests that not all threats elicit broad solidarity (Gidron and Mijs, 2019; Sambanis et al., 2022). On the surface, the two medications at the center of our experiment tap into these two distinct types of crises, which might elicit distinct responses. The global Coronavirus pandemic, which arose exogenously in spring 2020, arguably represents a natural rather than a man-made disaster, whereas the Lebanese economic meltdown beginning in 2019, which even the World Bank has deemed a politically manufactured crisis (World Bank, 2022), is almost universally attributed to corruption and poor governance by Lebanese politicians and their allies in the banking sector. However, this distinction is not clear-cut. First, in many countries, the pandemic became politicized, either because politicians and others blamed foreign governments for its inception or because it intersected with preexisting social cleavages to contribute to Othering (Dionne and Turkmen, 2020; Ferwerda et al., 2024; Iskander, 2020).

A salient difference between Covid-19 vaccines and antibiotics pertains to the distinct demand curves of these two types of medications, which in turn may affect preferences towards their allocation in our research setting and others. At least two factors shape the demand for these different medications. First, a significant portion of the Lebanese population reported skepticism of Covid-19 vaccines (Hanna et al., 2022; Al Halabi et al., 2021). This has reduced demand for Covid vaccines and potentially alters considerations about prioritizing who should receive them. For this reason, we also include pre-treatment measures of attitudes towards the vaccine in our study. Second, antibiotics are in high demand and are over-prescribed in Lebanon, making them a more unambiguously coveted good than Covid vaccines (Talaat et al., 2022; Chaaban et al., 2024; Mallah et al., 2020; Lahoud et al., 2021; Mounzer et al., 2021). By including the parallel vignette about antibiotics, we can assess whether our results hold in a less controversial aspect of health care.

We therefore expect the dynamics of allocating vaccines and antibiotics to vary according to whether people are vaccine-acceptant or -hesitant. The former group of respondents should value vaccines and antibiotics for their peers similarly, while the latter should regard antibiotics as more essential. This gives rise to a final hypothesis we explore in the paper.

> *H* 4. *Vaccine-acceptant people treat the need for vaccines and antibiotics in the same way, whereas vaccine-hesitant people respond systematically to the need for antibiotics only, and not for vaccines.*

Second, while restricted access to antibiotics can be attributed to a human-made, economic crisis, the traumatic effects of the economic meltdown were so widespread and cross-cutting that they united much of the increasingly impoverished population across ethnic lines in opposition to the political class. Thus, standard distinctions between natural and man-made disasters may not apply to the two health-related scenarios captured in our experiment.

3 Data and Methods

3.1 Lebanese Context

Lebanon is often presented as a prototypical example of a divided society (Lijphart, 1969; Horowitz, 2000). Since independence from France in 1943, Lebanon's political system has been based on consociational power-sharing between elites from the country's many sectarian communities, the largest of which are Shia Muslims, Sunni Muslims, and Christians of various denominations. Sectarian quotas in most parts of government and administration institutionalize the powersharing system and reify the role of sect as the most politically salient identity in Lebanese politics. The Lebanese civil war (1975-1990) only reinforced these divisions. While important ideological differences were at stake, particularly at the beginning of the war, it eventually devolved into a multi-sided conflict, at times with sectarian trappings. International intervention by regional powers turned Lebanon into a battlefield for larger proxy conflicts as well. Sectarian displacement and sorting of the population became commonplace. The war ended in the Taif Agreement, a power-sharing deal that reinstated the pre-war sectarian system with minor adjustments(Hanf, 1993). A general amnesty has limited any formal truth, reconciliation, or reckoning surrounding the war, although some limited elite-level efforts have taken place (Sriram, 2012).

In the post-war period, Lebanon has experienced chronic political tensions, at times erupting into localized violence. Ongoing disputes between Israel and Hezbollah have resulted in periodic large-scale Israeli attacks, at times spurring divisions among political factions and their supporters in Lebanon. Multiple regional events, notably conflicts in U.S. post-invasion Iraq and the Syrian civil war, as well as the Saudi-Iranian rivalry, have brought new Sunni-Shia tensions to the forefront, highlighting a cleavage that was not central to the civil war. Over the past two decades, Lebanon's stability has been repeatedly threatened by political conflicts rooted in these tensions. In 2005, the assassination of former Prime Minister Hariri, a Sunni, and the ensuing withdrawal of Syrian troops from Lebanon led to the coalescing of two political coalitions, one supportive of Hezbollah, Syria, and Iran,

and the other with a more pro-Saudi and pro-Western orientation. A stalemate between the coalitions led to clashes in May 2008, in which Hezbollah emerged as the dominant force in Lebanese politics(Haddad, 2010; Rizkallah, 2019). A few years later, the beginning the civil war in neighboring Syria found one Lebanese coalition on the side of the regime and the other on the side of the rebels. Between 2011 and 2017, Lebanon experienced periodic spillovers from the war next door and became home to 1.5 million Syrian refugees. At times, Lebanese fighters participated directly on both sides of the conflict in Syria. All of these experiences have tested communal coexistence and peace in Lebanon's fragile post-war context (Norton, 2015; Abdo, 2016; Salloukh, 2017; Gade and Moussa, 2017)

Many journalistic and scholarly depictions of contemporary Lebanon continue to characterize it as the paradigmatic case of a divided society. In that sense, Lebanon is a hard test for the argument that a broad-based crisis has the power to generate social solidarity, and that in-group favoritism only emerges under a narrow set of conditions. Scholars have begun to problematize this characterization of Lebanon, making a distinction between undoubtedly divisive politics and the more sweeping term "divided society" (Maged, 2022). The notion that identity is the singular or even most important explanatory variable underpinning any and all social and political outcomes in the country is contested (Ghosn and Parkinson, 2019). Recent scholarship on Lebanon has instead sought to uncover how the strategic logic of elections dynamics produce divergent kinds of sectarian clientelism (Cammett, 2014), how wartime organizational legacies and networks shape post-war patterns of political mobilization (Rizkallah, 2019), how instances of cross-sectarian mobilization arise(Rizkallah et al., 2019), and how sectarian divisions are both reinforced by elite strategy (Clark and Salloukh, 2013; Karam, 2017) and transformed by street mobilization (Majed, 2021).

Since 2015, Lebanon has continued to lurch from crisis to crisis. The difference, however, is that many of these more recent crises do not have a sectarian character. Instead, they center around cross-cutting issues, such as sanitation, economic breakdown, and public health emergencies, which have hit all of Lebanon's communities hard. Beginning with the trash crisis in 2015, the government's failure to secure a new waste management contract

spawned You Stink, a broad-based protest movement that drew support from diverse corners of Lebanese society (Geha, 2019). Economic and environmental conditions in Lebanon gradually deteriorated over the following years. A government announcement about a series of new taxes triggered another broad-based protest movement in October 2019. Lebanon's economy spiraled, with the currency losing more than 90% of its value and the World Bank declaring Lebanon's economic collapse as one of the top three worst economic crises since 1850 (World Bank, 2022). Lebanon was mired in this crisis when the Covid-19 pandemic began. Even in the best of times, Lebanon's public health infrastructure, which consists of a layered web of state, nonstate, and international actors (Cammett, 2014; Cammett and Şaşmaz, 2022a), has been strained. When the pandemic began, this system was slow to respond, already reeling from the mass exodus of healthcare workers and chronic medical supply shortages. The August 2020 port explosion, one of the largest non-nuclear explosion in recent history, destroyed half of the city of Beirut and added to the list of broad-based crises experienced by the Lebanese population in recent years (Watch, 2020).

This bewildering series of crises, while devastating, did not have an overtly sectarian or polarizing dimension, but rather led to suffering and loss across all of Lebanon's communities. In fact, starting with local movements in the municipal elections of 2016 and continuing into the 2018 and 2022 parliamentary elections, activists and civil society members begun forming non-sectarian and cross-sectarian movements for social change (Geha, 2019; Nagle, 2024), a particularly challenging task in a consociational institutional environment that incentivizes political mobilization within rather than across sectarian lines (Cammett, 2014; Salloukh, 2006).

Lebanon's recent tragedies give researchers an opportunity to study how a "divided society" reacts in times of broad-based crises and scarcity. Do people demonstrate social solidarity, prioritizing the most vulnerable, or do people circle the proverbial wagons and demonstrate favoritism toward their in-group? Our study seeks to answer this fundamental question through a survey with a set of embedded experiments. The survey was fielded in the summer of 2022, deep into Lebanon's economic collapse, while the country was still deal-

ing with outbreaks of COVID-19 and, most importantly, at the height of an acute medicine shortage that saw nation-wide scarcity in everything from diabetes medications to cancer treatments to antibiotics (Amnesty International, 2023; Chehayeb et al., 2023).

3.2 Survey and Experimental Design

In spring 2022, we conducted a nationally-representative telephone survey of 1,138 Lebanese adults in collaboration with the Beirut office of IPSOS, a global research and consulting firm. The survey achieved an American Association of Public Opinion Research (AAPOR) cooperation rate of 18.4% among contacted respondents, which is typical for telephone surveys in Lebanon. We chose telephone administration over in-person interviews to mitigate the risk of Covid transmission, as vaccination efforts were still ongoing. This approach also ensured a more representative sample by including more elderly respondents compared to online surveys. All surveys were conducted in Arabic.

Within the survey, we embedded two single-profile conjoint experiments designed to assess factors influencing decisions about access to vaccines in the first experiment, and antibiotics in the second. Respondents were verbally presented with hypothetical profiles varying in sectarian identity, age, socioeconomic class, and health status. To accommodate the telephone format and reduce cognitive load, we presented these profiles as verbal vignettes rather than tabular attribute lists. Vignettes have also been shown to have more external validity than tabular formats, more closely approximating how people encounter and evaluate profiles of individuals in the real world (Bansak, Hainmueller, Hopkins, and Yamamoto, Bansak et al.). In both experiments, respondents evaluated three male profiles, with each profile representing one of Lebanon's primary sects (Shia Muslim, Sunni Muslim, Christian).[7] Social class, health condition, and age were randomized for all profiles. Table 1 summarizes

[7]We signaled the sectarian identity of each profile through two contextual pieces of information – the individual's name and their neighborhood of residence, cued by male names commonly associated with specific sects and residential neighborhoods in Greater Beirut that are widely known to be predominantly populated by a specific sect, respectively. This

Table 1: Attribute levels for conjoint experiments

Vaccine Experiment			
Sect	Health Condition	Age	Social Class
Shia	No health condition	20	Poor
Sunni	Mild asthma	45	Middle-class
Christian	Severe asthma		Well-off
Antibiotic Experiment			
Sect	Health Condition	Age	Social Class
Shia	Mild pneumonia	20	Poor
Sunni	Severe pneumonia	45	Middle-class
Christian			Well-off

the levels of each attribute. After being presented with each profile, respondents were asked whether the profile should be granted immediate access to the COVID-19 vaccine in the first experiment or antibiotics in the second experiment. The order in which respondents were presented with each experiment was randomized.

Our choice to conduct experiments on both COVID-19 vaccines and antibiotics was motivated by several factors including those outlined in Section 2.3. At the time the survey was fielded in summer 2022, vaccines were no longer scarce in Lebanon and there were enough doses for those interested in vaccination[8]. In contrast, Lebanon in summer 2022 was in the midst of an acute antibiotic shortage due to the country's deepening economic crisis (Amnesty International, 2023; Chehayeb et al., 2023; El-Harakeh and Haley, 2022).The experiments also differ in the nature of the interventions: the COVID-19 vaccine experiment considers a relatively new preventative measure, while the antibiotic experiment involves a

indirect approach to conveying ethnic background was deliberately chosen to mitigate social desirability bias. The names and neighborhoods denoting members of each sect include Michel from Ashrafieh and Boutros from Gemmayze (Christian), Ali from Haret Hreik and Hussein from Burj al Barajneh (Shia), and Uthman from Aisha Bakkar and Khalid from Tarik el Jedideh (Sunni).

[8]Reuters reported that by July 15, 2022, there were enough doses available in Lebanon to give 41% of the population two doses (Reuters, 2022)

well-established treatment for acute infections.

People view these medications differently. While hesitancy is the central public health concern with the COVID-19 vaccine, overuse is the primary concern for antibiotics.[9] In 2020, Lebanon was cited as one of the most vaccine-hesitant countries in the world (Mallapaty, 2021). Before the country's vaccine rollout, hesitancy was as high as 75%, yet by the middle of 2021 and after the initial vaccine rollout, vaccine hesitancy among Lebanese citizens was down to between 38% and 42% in 2021 (Al Halabi et al., 2021; Ali et al., 2022; Hanna et al., 2022). A 2024 study puts vaccine hesitancy in Lebanon at approximately 12% (**?**). In contrast, studies document alarming increases in antibiotic consumption in Lebanon in the last 20 years (Lahoud et al., 2021), with the most recent estimates putting antibiotic misuse at 20% to 50% of all antibiotics taken in the country (Chaaban et al., 2024).

A variety of additional factors might moderate choices about which peers to prioritize in access to essential medications. As stipulated in our pre-analysis plan, we also collect a variety of pre-treatment measures related to respondent demographics (i.e., age, gender, education, and socioeconomic status), sociopolitical attitudes (i.e., trust in government and religious authorities, partisanship), confessional and other social identities; and health attitudes (i.e., trust in doctors and the health care system, vaccine hesitancy, and vaccination status).

3.3 Methods

To analyze the experimental data, we estimated Average Marginal Component Effects (AMCEs) on a probability scale using logistic regression models with robust standard errors clustered at the respondent level to account for within-respondent correlation. To evaluate whether respondents incorporate ingroup favoritism in their decision-making, we create a

[9]In fact, recent studies have shown that vaccine hesitancy and antibiotic overuse and incorrect use are correlated and underpinned by a set of social attitudes and experiences that are still poorly understood (Anderson, 2022).

coethnic variable indicating when the respondent's self-reported confession matches with the profile's cued sect. In the vaccine experiment, we also collapse the profile health condition to differentiate between severe health conditions and mild/moderate cases to evaluate whether ingroup favoritism outweighs solidarity only for profiles that are perceived as on the margin of need. We additionally explore heterogeneous effects by respondent income and by the respondent's reported vaccine acceptance or hesitancy. All analyses were conducted using R (version 4.1.0).

4 Findings

We report details on the sample composition of our survey and key demographic characteristics in Table 2. The sample was well-balanced across key demographic factors, including age, sex, sect, and income. In line with recent studies suggesting a declining trend in vaccine-hesitancy, 21.4% of respondents in our sample were vaccine-hesitant and 32.6% had not yet received a dose of the vaccine, despite availability.

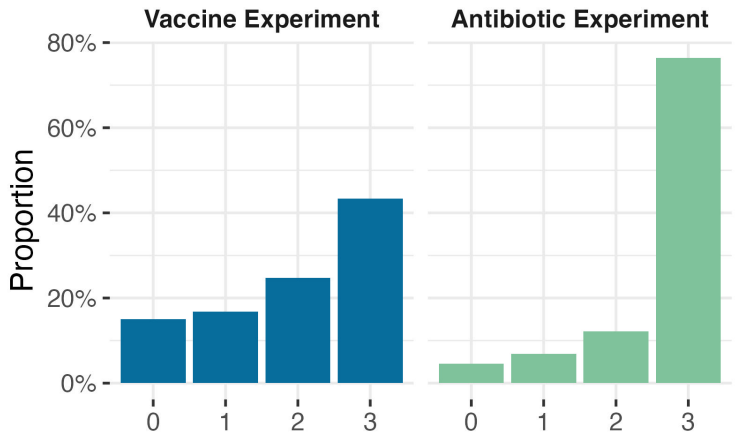
Our first finding from the experimental data is the prevalence of inclusive prioritization for Covid vaccines and antibiotics, as shown in Figure 1. In the vaccine experiment, 43.3% of respondents prioritized all three profiles they were presented, while 15.1% prioritized none. The antibiotic experiment showed even stronger inclusiveness, with 76.4% of respondents prioritizing all profiles and only 4.5% prioritizing none. This pattern challenges the notion that respondents might simply approve all profiles until encountering one they deem unworthy of prioritization, as the marked difference in approval rates between the two experiments indicates that respondents were discriminating between the two interventions rather than applying a uniform response strategy.

These outcomes seem to be driven by respondents' positive view of antibiotics and more mixed view of vaccines, which accords with our priors about the Lebanese population (Al Halabi et al., 2021; Ali et al., 2022; Hanna et al., 2022; Lahoud et al., 2021; Chaaban et al., 2024). Indeed, the vaccine-hesitant prioritize profiles at similar rates as the vaccine-acceptant in the antibiotics experiment, as shown in Figure 2. However, in the vaccine experiment, a

Table 2: Sample Composition and Demographic Characteristics

Characteristic	**N = 1138**	**Proportion**
Gender		
Female	589	51.8%
Male	549	48.2%
Sect		
Sunni	365	32.1%
Shia	358	31.5%
Christian	318	27.9%
Muslim Minority	75	6.6%
Other/Not Reported	22	1.9%
Age		
25-34	262	23.0%
35-44	227	19.9%
18-24	194	17.0%
45-54	186	16.3%
55-64	151	13.3%
65+	118	10.4%
Income Level		
Low Income	477	41.9%
Middle Income	419	36.8%
High Income	242	21.3%
Education Level		
College	381	33.5%
Intermediate	315	27.7%
Secondary	250	22.0%
Elementary	185	16.3%
Not Reported	7	0.6%
Vaccine Attitudes		
Vaccine-Acceptant	894	78.6%
Not Reported	2	0.2%
Received Vaccine	767	67.4%
Not Reported	11	1.0%

Figure 1: Number of profiles prioritized by experiment



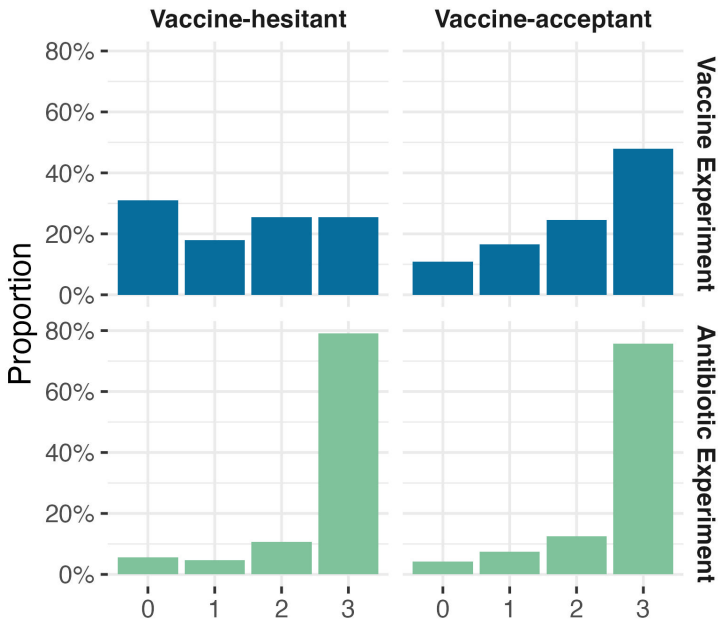
stark contrast emerges. A plurality of the vaccine-hesitant, 31.1%, do not give the vaccine to any profiles while a plurality of the vaccine-acceptant, 48.0%, give the vaccine to every profile.

AMCEs for the included attributes in the full sample are presented in Figure 3. The results indicate that respondents exhibit a tendency to prioritize individuals with poorer health status when allocating immediate access to treatments. Respondents are 19.3% more likely to prioritize vaccine access and 12.9% more likely to prioritize antibiotic access for individuals with poorer health. Concurrently, we observe a weak yet persistent bias against profiles associated with higher social classes. This bias, while not as strong as the health status attribute, indicates that respondents may incorporate considerations of social equity into their decision-making processes.

Our baseline evaluation of sectarian dynamics in the context of in-group favoritism reveals that respondents do not demonstrate a preference for their coethnics over others. Instead, poorer health and lower social class continue to be the primary predictors of vaccine and antibiotic prioritization, suggesting stronger solidarity along need-based and class-based lines.

To further investigate these findings, we explore heterogeneous effects by income in Figure 4. We find that the class bias is driven by low-income respondents in the vaccine experiment and low- and high- income respondents in the antibiotic experiment. The differences are also

Figure 2: Number of profiles prioritized by experiment and vaccine attitude

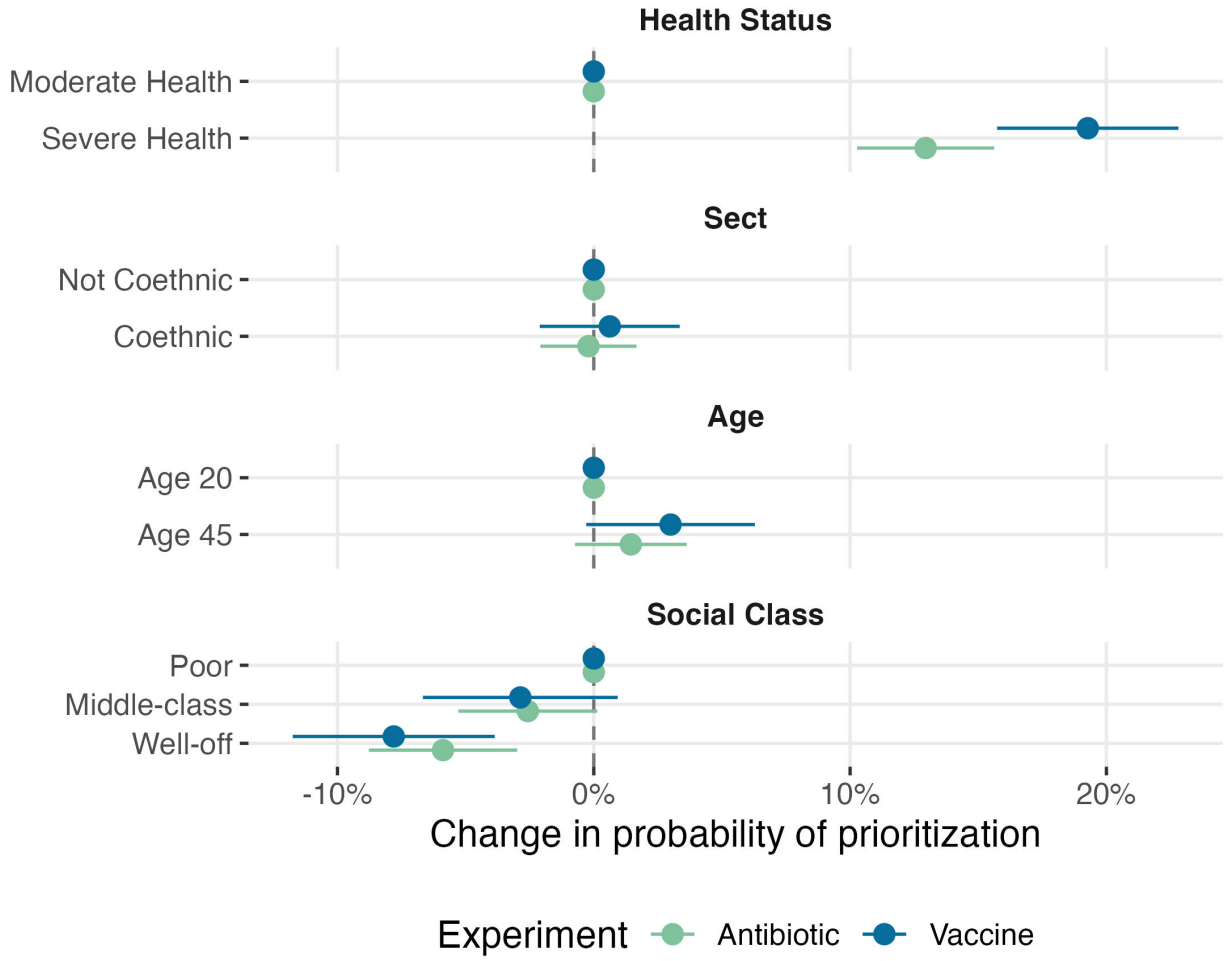


driven by respondents' reactions to well-off profiles in particular, rather than biases against the middle class. Still, the most consistent result is that respondents at all income levels and for both experiments prioritize those with severe health conditions. Once again, we estimate precise nulls for coethnic bias across all income levels.

Overall, these findings challenge our initial expectations of coethnic favoritism as we do not find supportive evidence for Hypothesis 1. Instead, we find robust support for Hypothesis 3. Respondents consistently prioritize individuals who are sick. This trend remains stable across income groups, and as we will discuss below, persists across ethnic groups and vaccine attitudes. For age, we observe positive effects in both experiments favoring those who are older, although these results are not statistically significant. Part of the reason for this might be that the experiments only include profiles aged 20 and 45, rather than elderly profiles where this effect might have been more pronounced. After each experiment, we also asked respondents to identify the most important profile attribute that respondents considered when deciding whether or not to prioritize the profiles.[10] Consistent with the findings from

[10]We asked respondents to choose from the following profile attributes: place of residence,

Figure 3: Conjoint experiment results in full sample

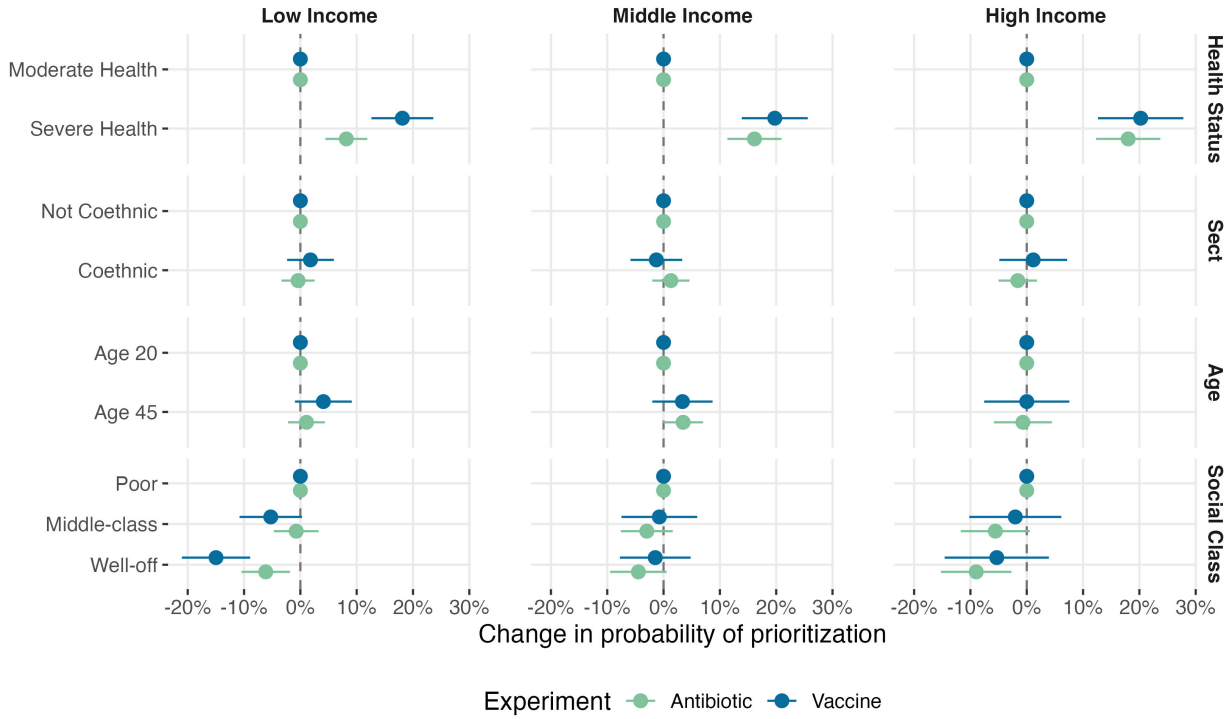


the conjoint AMCEs, Figure B.1 shows that health condition was widely cited as the top priority by the majority of respondents in both experiments. Age was identified as the second priority by a plurality of respondents in both experiments.

Analysis in the full sample in Figure 3 reveals no clear bias for coethnics.To test Hypothesis 2 – which posits that individuals are more likely to prioritize co-ethnics with younger and

health condition, age, and social class. As sect was not mentioned as an explicit attribute in the conjoint profiles, we did not include it in this question.

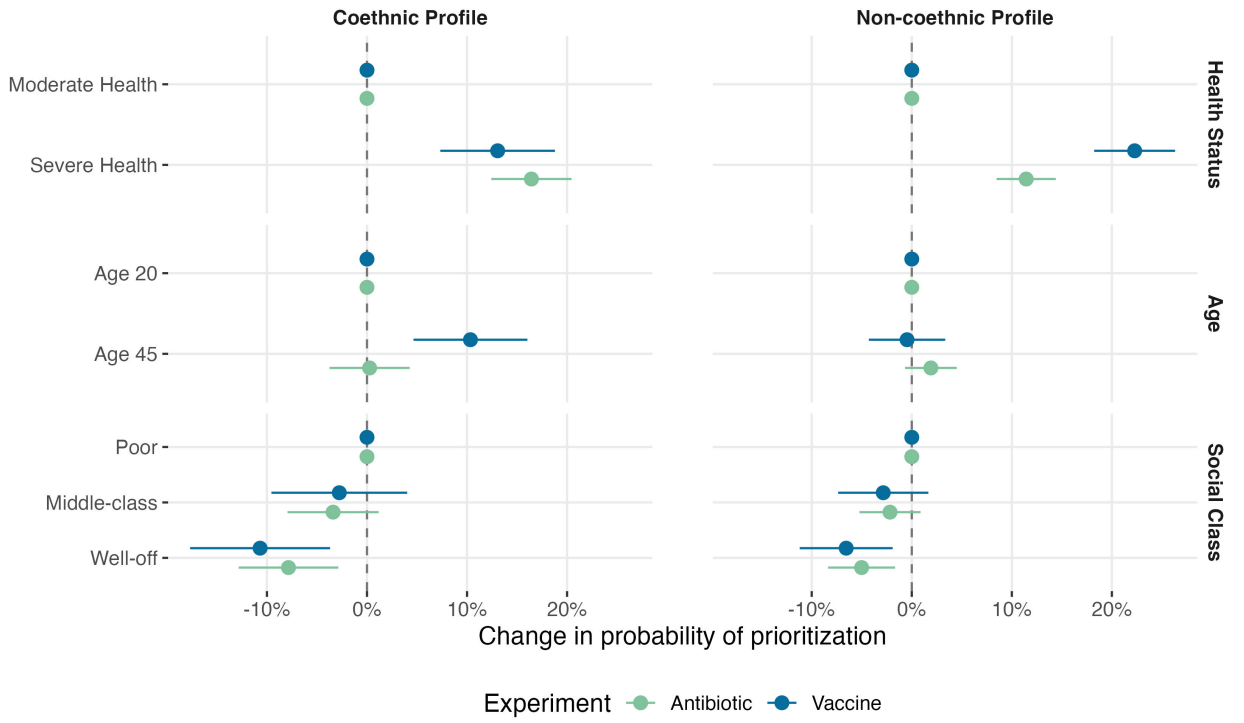
Figure 4: Conjoint experiment results by respondent income level



healthier profiles – we evaluated AMCEs conditional on respondents receiving a co-ethnic profile. This hypothesis was based on the assumption that parochial altruism becomes more salient when the hypothetical recipient has a lower risk profile. The results in Figure 5 suggest a contrary pattern. Respondents show a higher likelihood of prioritizing coethnic profiles that are older for vaccine allocation and sicker for antibiotic distribution. We tentatively interpret these findings as evidence that parochial altruism manifests not when the stakes are low, but rather when they are high. While class solidarity and empathy for vulnerable individuals remain the more consistent patterns across all subsamples, there is evidence of some coethnic bias at the margins.

In Appendix B we include AMCEs conditional on sect for the three largest communities: Sunni, Shia, and Christian. We find no significant differences between sects on the attributes that lead them to prioritize profiles for vaccines or antibiotics. Most importantly, no sectarian subsample exhibits straightforward coethnic bias. The only finding we note is that Shia

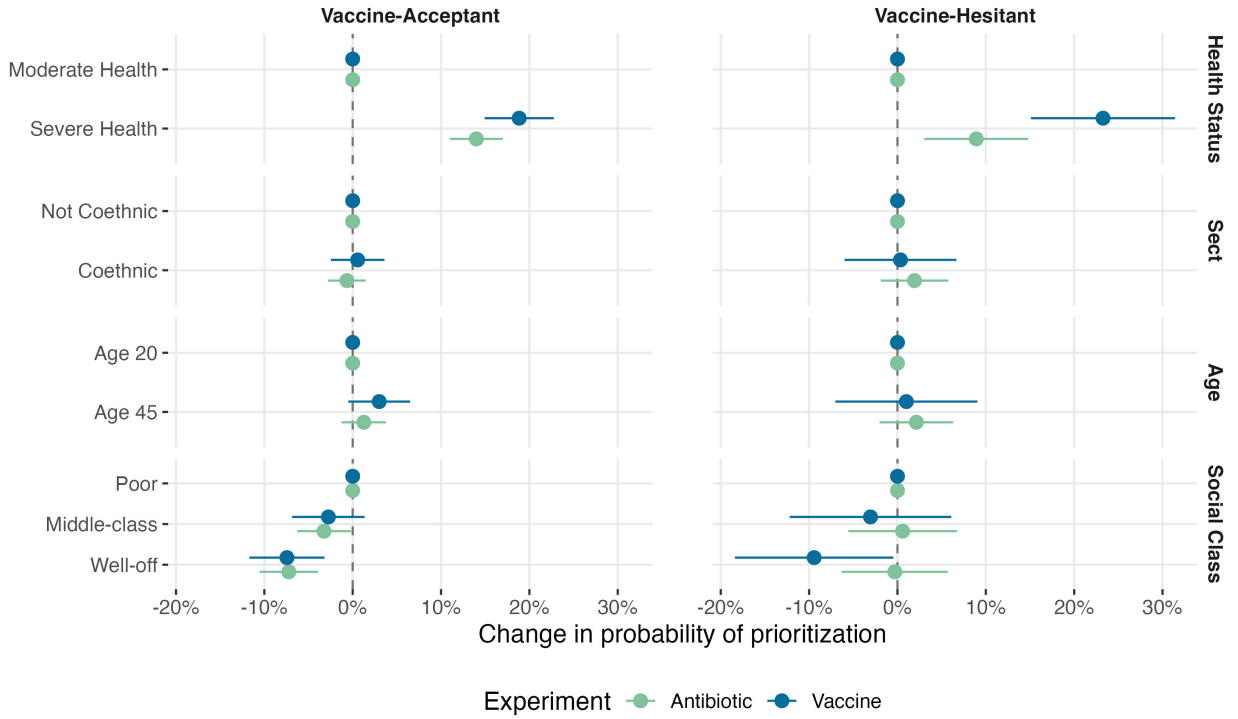
Figure 5: Conjoint experiment results by coethnicity



respondents seem particularly biased against prioritizing well-off profiles for vaccination.

Finally, Figure 6 presents conditional AMCEs for respondents based data collected pre-treatment indicating whether respondents were vaccine-acceptant or vaccine-hesitant. Both groups similarly prioritize the sick and exhibit class bias against the well-off. Notably, vaccine-hesitant respondents display class bias against the well-off only in the vaccine experiment, with no such bias observed for antibiotics. Thus, Hypothesis 4 is not supported, as we do not observe differences in how the vaccine-acceptant and vaccine-hesitant groups respond to various profile attributes. However, as previously discussed, the vaccine-hesitant are generally less likely to prioritize any profile for vaccination, regardless of the profile attributes. This indicates that while the two groups differ in their overall tendency to prioritize individuals for vaccination, these differences do not seem to be driven systematically by the specific attributes included.

Figure 6: Conjoint experiment results by respondent vaccine attitudes



5 Discussion

In the face of shared crises, whether natural or man-made in origin, do people transcend social divisions by expressing broad solidarity with their fellow citizens or do they exhibit parochial altruism? Large-scale disasters often require broad cooperation across social and political lines. Yet such cross-cutting solidarity is presumed to be especially difficult to elicit in "divided societies" such as Lebanon. Our nationally representative survey aims to tap into this question through an embedded experiment, in which we assess how identity, health status and other demographic characteristics shape the propensity to prioritize access to essential medications. We focus on Covid-19 vaccines and antibiotics, which follow different demand curves in Lebanon due to significant vaccine hesitancy but excessive demand for increasingly scarce antibiotics.

To summarize, we find broad solidarity with fellow Lebanese nationals: For both vaccines

and antibiotics, respondents prioritize the sick and the poor, irrespective of ethnicity. We interpret this as evidence of broad social solidarity and concerns for social equity in times of crisis.

Our results indicate little straightforward coethnic bias. At the margins, we find some evidence for coethnic favoritism, but only when the stakes are high –that is, when presented a profile of a vulnerable hypothetical recipient with a severe health condition or more advanced age. Contrary to our preregistered hypothesis, which holds that co-ethnic bias might arise for lower-risk profiles, this suggests that parochial altruism may activate when the stakes are high and need is greater.

These results hold across different social groups and those with distinct perceptions of vaccine safety. We detect few differences across members of different ethnic groups and between the vaccine-hesitant and the vaccine-acceptant, although the latter are much less likely to prioritize any profile for vaccination overall, as would be expected.

On net, the Lebanese in our representative sample report broad social solidarity. By and large, people"do the right thing" by prioritizing the vulnerable, even under conditions of crisis and scarcity when one might expect more self- or ingroup-based favoritism might arise. In a political environment where elites consistently work to suppress cross-cutting, national identities by highlighting and actively working to perpetuate ethnic divisions, our findings also point to enduring class consciousness and solidarity. To the extent that parochial altruism manifests, it is directed toward coethnics who are understood to be particularly vulnerable.

Our findings contribute to the growing body of scholarship on the sociopolitical dimensions of pandemics and other general crises, in part by comparing patterns of solidarity around distinct goods addressing acute medical needs. We also advance research on cooperation and altruism in societies with politicized ethnic cleavages. Lebanon, and other societies like it, are not hopelessly divided or rabidly sectarian. Rather, people are multi-dimensional, exhibiting decision-making and preferences on the basis of many factors beyond coethnicity. Consistent with emerging scholarship that distinguishes between varied domains of everyday

life and the political sphere, ethnic identity may be salient in some areas of life but may play little to no role in some humanitarian considerations and other shared social challenges.

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Appendix

A Sample

Our data come from an experiment embedded in a 1,138-person nationally representative phone survey of Lebanese citizens we conducted in partnership with the Lebanese branch of IPSOS (Institut Public de Sondage d'Opinion Secteur) in the spring of 2022. IPSOS Lebanon enumerators constructed a sampling frame using numbers from the telecommunications operators' database and official directories in Lebanon, supplemented by external databases owned by IPSOS. Numbers were then randomly selected from the frame. If it was a mobile number, enumerators interviewed the person who picked up the phone, provided they were at least 18 years of age. If it was a landline, enumerators interviewed the person in the household with the next birthday.

Of those who were successfully contacted and eligible, the cooperation rate was 18.4 percent. Using the AAPOR calculator worksheet,[11] the contact rate, those who were successfully contacted out of all attempts, is 42.9 percent. The refusal rate, those who have refused out of all the eligible respondents successfully contacted, is 34.1 percent. The minimum cooperation rate, which is the percent of complete surveys out of everyone that was successfully contacted and eligible, is 18.4 percent. The minimum response rate, which is the percent of complete surveys out of all phone number dialing attempts, is 7.7 percent. IPSOS confirmed that this is a typical result for a phone survey in Lebanon.

The resulting sample is well-balanced in terms of age, gender, sectarian identity, and regional representation. The sectarian distribution of the sample accurately reflects the best

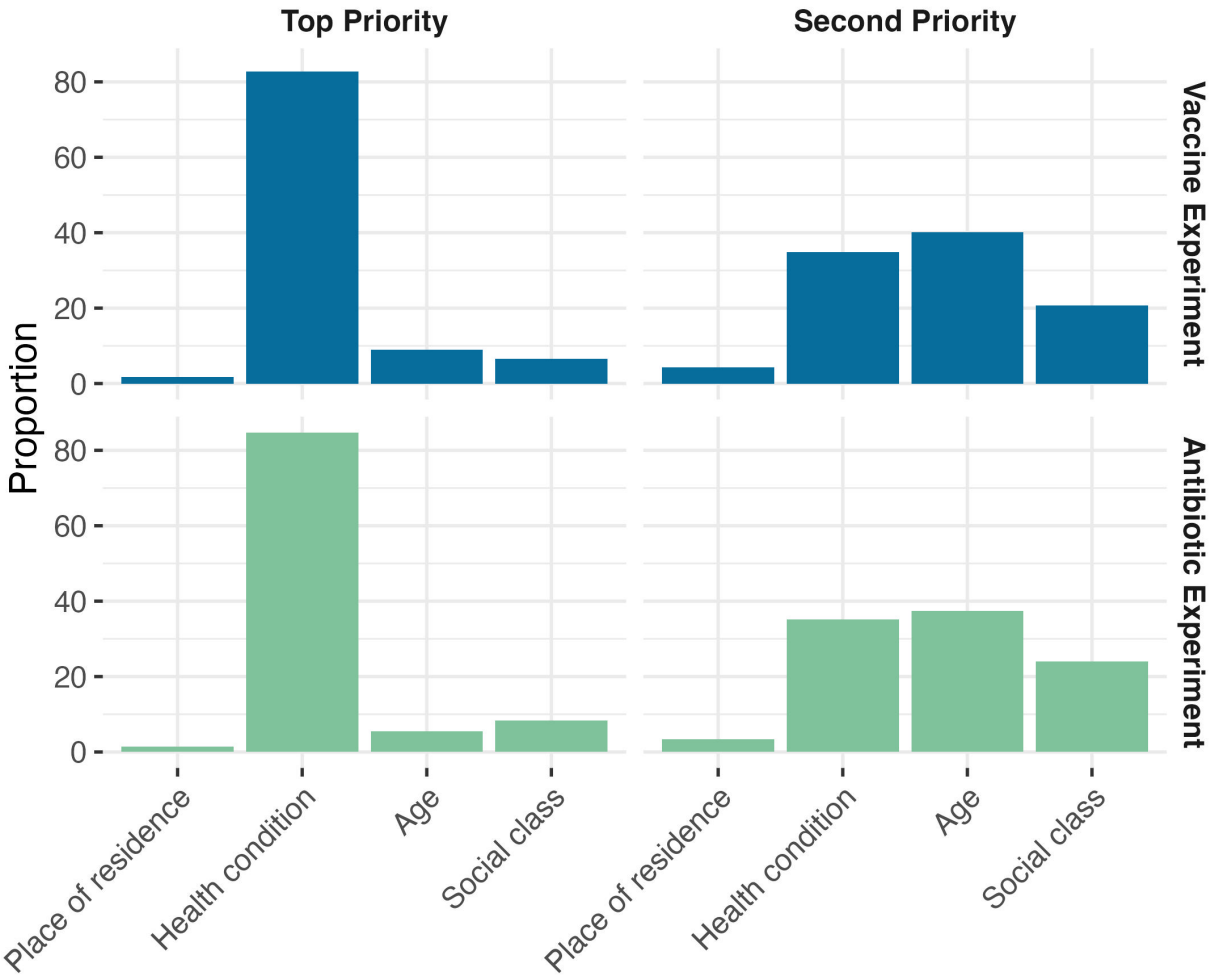
[11]The American Association for Public Opinion Research (2020) Survey Outcome Rate Calculator, Version 4.1.

estimates of country's religious composition[12] Since a census has not been carried out in Lebanon since 1932, official numbers are not available.

[12]The CIA World FactBook (2023), Lebanon Country Summary `https://www.cia.gov/the-world-factbook/countries/lebanon/` (accessed June 14, 2021).

B Additional Results

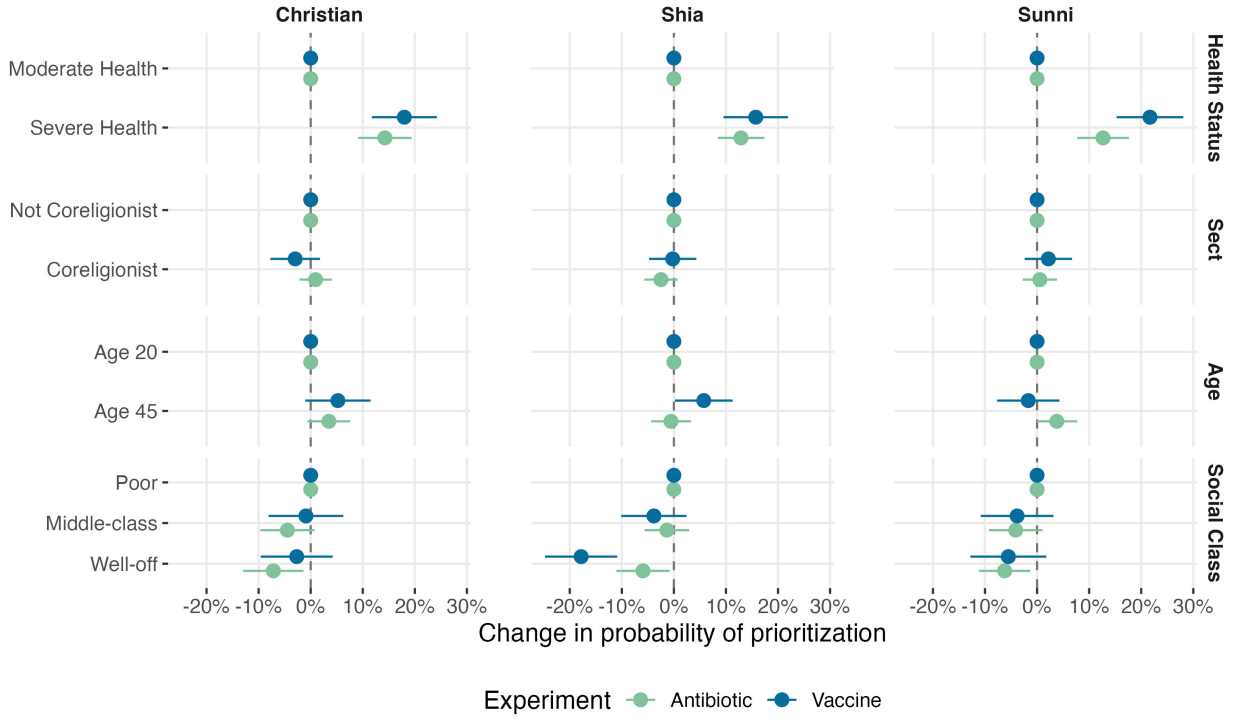
Figure B.1: Conjoint experiment attribute priorities by experiment



After being presented with three profiles for each experiment, respondents were asked the following question:

In determining whether or not someone should get priority access to [the vaccine/antibiotics], which factor was most important in your decision – the place of residence, health condition, age, or social class of the person?

Figure B.2: Conjoint experiment results by respondent sect



C Survey Text

Lebanon Covid Survey

Start of Block: Block 16

Q51 Before proceeding, please change the language of the survey in the top-right corner of this page.

JS

Q49 Survey enumerator: Enter your survey enumerator ID number.

_____

End of Block: Block 16

Start of Block: Introduction

JS

Q45 **TITLE OF RESEARCH: Lebanon Covid-19 Survey**

CO- PRINCIPAL INVESTIGATORS:
• Prof. Melani Cammett, Department of Government, Harvard University
• Prof. Daniel Corstange, Department of Political Science, Columbia University
• Prof. Amanda Rizkallah, International Studies and Languages Division, Pepperdine University

Good morning/afternoon/evening. I am calling on behalf of a research team completing a study. I would like to give you some key information about the study. Please listen carefully before you decide to participate in the study.

[Key elements of the research study]
The study looks at attitudes towards Covid-19 vaccination in Lebanon. You will be asked some survey questions that can take up to 15 minutes to complete and there are no risks to participating.

[Purpose of the research study]
Through this research survey, we hope to learn about the views and experiences of Lebanese adults regarding the Covid-19 pandemic. The purpose of the survey is to better understand general opinions regarding the current public health situation, not any one individual's views or

circumstances. Answers will therefore be completely confidential and no names will be recorded in our data.

[What you will do in the study]
I will ask you a series of oral multiple choice and yes or no questions. You may skip any of the questions you do not feel comfortable answering, and you may stop the survey at any time. You will be asked a variety of questions about your family background, political views, social attitudes and values, and opinions regarding Covid-19 vaccinations.

[Time required]
The study will take about 15 minutes to complete.

[Risks]
Because the data are confidential and your name and other identifying information will not be collected unless you explicitly choose to provide it, there are no anticipated risks for your participation.

[Benefits]
Participating in the survey will give you a chance to voice your opinion about important issues facing your country.

[Confidentiality]
All records from this study will be kept confidential. Your responses will be kept private, and we will not include any information that will make it possible to identify you in any reports or publications unless you explicitly provide this information. Research records will be stored securely on password protected computers. Only members of the research team will have access to your complete data. If identifiers are removed from your identifiable private information, the information from this study may be used for future research studies or distributed to another researcher for future research studies without your additional informed consent.

[Voluntary participation]
Your participation in the study is completely voluntary.

[Right to withdraw from the study]
You have the right to withdraw from the study at any time without penalty.

[How to withdraw from the study]
If you want to withdraw from the study, inform me, your interviewer. There is no penalty for withdrawing.

[What to expect if you take part in this research]
Participating in this study entails responding to a telephone survey about the views of people in your country. When all responses to the survey are collected in summer 2021, the study team,

based at Harvard University in Cambridge, Massachusetts, Columbia University in New York, New York, and Pepperdine University in Malibu, California in the United States will analyze the data and will write reports based on the findings aimed at informing policy-makers in Lebanon about people's views on public health policy.

[Who to contact with questions]
If you have any questions, please contact the principal investigator Amanda Rizkallah, Assistant Professor, Pepperdine University, Amanda.rizkallah@pepperdine.edu, +1-951-237-5674.

If you have questions regarding your rights as a participant in this research, or if problems arise which you do not feel you can discuss with the Investigator, please contact the Pepperdine Institutional Review Board at:

Katy.carr@pepperdine.edu
+ 1 310-506-6084
Human Protections Administrator

End of Block: Introduction

Start of Block: Consent Agreement

JS

Q47 I will now summarize the information presented.

Your participation is voluntary.

If you refuse to participate, it will involve no penalty or loss of benefits to which you are otherwise entitled.

You may discontinue participation at any time without penalty or loss of benefits.

You do not waive any legal rights.

Do you give your consent to be a subject in this research?

- ○ Yes [participate] (1)
- ○ No [do not participate] (2)

End of Block: Consent Agreement

Start of Block: Lebanese

Q48 Are you a Lebanese national?

- ○ Yes (1)
- ○ No (2)

Display This Question:

If Are you a Lebanese national? = No

Q50 Enumerator: thank the respondent for their time, then proceed to end the interview.

End of Block: Lebanese

Start of Block: Demographics

JS

Q1 What is your gender?

- ○ Male (1)
- ○ Female (2)

JS

Q2 What is your year of birth?

▼ 2004 (1) ... 1900 (106)

Q3 Below are some statements related to your household income. Which of these statements comes closest to describing your household income?

- ○ Our household income covers our expenses well and we are able to save. (1)
- ○ Our household income covers our expenses without notable difficulties. (2)
- ○ Our household income does not cover our expenses and we face some difficulties in meeting our needs. (3)
- ○ Our household income does not cover our expenses and we face significant difficulties in meeting our needs. (4)

End of Block: Demographics

Start of Block: Demographics II

JS

Q4 Do you or anyone in your place of residence own a ...?

	Yes (1)	No (2)
a. Television (1)	○	○
b. Satellite dish (2)	○	○
c. Cell phone (3)	○	○
D. Computer (4)	○	○
E. Refrigerator (5)	○	○
F. Car, moped, or motorcycle (6)	○	○

Q5 What is the highest level of education that you have completed?

- ○ Illiterate/No formal education (1)
- ○ Elementary (2)
- ○ Intermediate (3)
- ○ Technical intermediate (BT/DS) (4)
- ○ High School/Secondary School (5)
- ○ Technical advanced (TS/LT) (6)
- ○ Undergraduate (BSc/BA) (7)
- ○ Master and/or PhD (8)
- ○ Other (9) _____

End of Block: Demographics II

Start of Block: Views on foreign countries and institutions

JS

Q6 We are interested in your views on some aspects of different countries in the world. For each of these countries, we'll ask you about a few traits: please give us your opinion about each of them.

Q7 How about the country's respect for civil rights? Is it very strong, somewhat strong, neither strong nor weak, somewhat weak, or very weak?

	Very Strong (1)	Somewhat Strong (2)	Neither Strong nor Weak (3)	Somewhat Weak (4)	Very Weak (5)	Don't Know (enumerator: don't read) (6)	No Response (enumerator: don't read) (7)
${e://Field/country1} (1)	○	○	○	○	○	○	○
${e://Field/country2} (2)	○	○	○	○	○	○	○
${e://Field/country3} (3)	○	○	○	○	○	○	○
${e://Field/country4} (4)	○	○	○	○	○	○	○

Q8 How about the country's foreign policy? Are your views strongly positive, somewhat positive, neither positive nor negative, somewhat negative, or very negative?

	Strongly Positive (1)	Somewhat Positive (2)	Neither Positive nor Negative (3)	Somewhat Negative (4)	Very Negative (5)	Don't Know (enumerator: don't read) (6)	No Response (enumerator: don't read) (7)
${e://Field/country1} (1)	○	○	○	○	○	○	○
${e://Field/country2} (2)	○	○	○	○	○	○	○
${e://Field/country3} (3)	○	○	○	○	○	○	○
${e://Field/country4} (4)	○	○	○	○	○	○	○

Q9 How about the quality of the country's healthcare system? Is it very high quality, somewhat high quality, neither high nor low quality, somewhat low quality, or very low quality?

	Very High Quality (1)	Somewhat High Quality (2)	Neither High nor Low Quality (3)	Somewhat Low Quality (4)	Very Low Quality (5)	Don't Know (enumerator: don't read) (6)	No Response (enumerator: don't read) (7)
${e://Field/country1} (1)	○	○	○	○	○	○	○
${e://Field/country2} (2)	○	○	○	○	○	○	○
${e://Field/country3} (3)	○	○	○	○	○	○	○
${e://Field/country4} (4)	○	○	○	○	○	○	○

Q10 How about the quality of the country's educational system? Is it very high quality, somewhat high quality, neither high nor low quality, somewhat low quality, or very low quality?

	Very High Quality (1)	Somewhat High Quality (2)	Neither High nor Low Quality (3)	Somewhat Low Quality (4)	Very Low Quality (5)	Don't Know (enumerator: don't read) (6)	No Response (enumerator: don't read) (7)
${e://Field/country1} (1)	○	○	○	○	○	○	○
${e://Field/country2} (2)	○	○	○	○	○	○	○
${e://Field/country3} (3)	○	○	○	○	○	○	○
${e://Field/country4} (4)	○	○	○	○	○	○	○

End of Block: Views on foreign countries and institutions

Start of Block: Block 12

Q44 I’m going to name a number of institutions. For each one, please tell me how much trust you have in them.

	Refuse to answer (1)	Don't know (2)	No trust at all (3)	Not a lot of trust (4)	Quite a lot of trust (5)	A great deal of trust (6)	Don't Know (enumerator: don't read) (7)	No Response (enumerator: don't read) (8)
${e://Field/inst1} (1)	○	○	○	○	○	○	○	○
${e://Field/inst2} (2)	○	○	○	○	○	○	○	○
${e://Field/inst3} (3)	○	○	○	○	○	○	○	○
${e://Field/inst4} (4)	○	○	○	○	○	○	○	○
${e://Field/inst5} (5)	○	○	○	○	○	○	○	○

Q45 If it became available, how likely are you to get the vaccine if it was available for free?

- Very likely (1)
- Somewhat likely (2)
- Somewhat unlikely (3)
- Very unlikely (4)
- I already got the vaccine (5)
- Don't know (6)
- Refuse to answer (7)

End of Block: Block 12

Start of Block: Social and political identity and behavior

JS

Q12 What is your confession as officially listed on your registration card?

▼ Sunni (1) ... Other (12)

Q13 If you are asked to identify yourself, with which of the following do you most closely identify yourself?

- Your nationality (1)
- Confession (2)
- Ethnicity (3)
- Arab world (4)
- Local community, city where I live (5)
- Your tribe or extended family (6)
- Other (7)

Q14 Are you a supporter or member of a political party?

- Yes (1)
- No (2)

Display This Question:

If Are you a supporter or member of a political party? = Yes

Q15 Which party?

- ○ Future Movement/Saad Hariri (1)
- ○ Amal Movement/Nabih Berri (3)
- ○ Hizballah/Hassan Nasrallah (4)
- ○ Progressive Socialist Party/Walid Jumblatt/Taymor Jumblatt (5)
- ○ Free Patriotic Movement/Michel Aoun/Jibran Bassil (2)
- ○ Lebanese Forces/Samir Geagea (6)
- ○ Kataib Party/Amin Gemayel/Sami Gemayel (7)
- ○ March 14 Forces (8)
- ○ March 8 Forces (9)
- ○ Tashnaq (10)
- ○ No One (11)
- ○ Other (12) _____

End of Block: Social and political identity and behavior

Start of Block: SARS CoV-2 experiment 1: Vaccine nationality and trust in foreign states

Q17 Which vaccine did you get?

Check all that apply if you received two or more different vaccines.

- [ ] Sputnik V, the Russian vaccine (1)
- [ ] Sinopharm, the Chinese vaccine (2)
- [ ] Pfizer, the American vaccine (3)
- [ ] AstraZeneca, the British vaccine (4)
- [ ] One of the vaccines but I do not remember the country (5)
- [ ] Moderna, the American vaccine (enumerator: don't read) (6)

Page Break

End of Block: SARS CoV-2 experiment 1: Vaccine nationality and trust in foreign states

Start of Block: Recommend

Q18 Would you be willing to recommend Sputnik V, the Russian vaccine for Covid?

- Yes (1)
- No (2)
- Don't Know (enumerator: don't read) (3)
- No Response (enumerator: don't read) (4)

Q19 Would you be willing to recommend Sinopharm, the Chinese vaccine for Covid?

- Yes (1)
- No (2)
- Don't Know (enumerator: don't read) (3)
- No Response (enumerator: don't read) (4)

Q20 Would you be willing to recommend Pfizer, the American vaccine for Covid?

- Yes (1)
- No (2)
- Don't Know (enumerator: don't read) (3)
- No Response (enumerator: don't read) (4)

Q21 Would you be willing to recommend AstraZeneca, the British vaccine for Covid?

- Yes (1)
- No (2)
- Don't Know (enumerator: don't read) (3)
- No Response (enumerator: don't read) (4)

Q22 Would you be willing to recommend a vaccine for Covid?

- Yes (1)
- No (2)
- Don't Know (enumerator: don't read) (3)
- No Response (enumerator: don't read) (4)

End of Block: Recommend

Start of Block: Take

Q23 Are you willing to take Sputnik V, the Russian vaccine for Covid?

- Yes (1)
- No (2)
- Don't Know (enumerator: don't read) (3)
- No Response (enumerator: don't read) (4)

Q24 Are you willing to take Sinopharm, the Chinese vaccine for Covid?

- ○ Yes (1)
- ○ No (2)
- ○ Don't Know (enumerator: don't read) (3)
- ○ No Response (enumerator: don't read) (4)

Q25 Are you willing to take Pfizer, the American vaccine for Covid?

- ○ Yes (1)
- ○ No (2)
- ○ Don't Know (enumerator: don't read) (3)
- ○ No Response (enumerator: don't read) (4)

Q26 Are you willing to take AstraZeneca, the British vaccine for Covid?

- ○ Yes (1)
- ○ No (3)
- ○ Don't Know (enumerator: don't read) (2)
- ○ No Response (enumerator: don't read) (4)

Q27 Are you willing to take a vaccine for Covid?

- Yes (1)
- No (2)
- Don't Know (enumerator: don't read) (3)
- No Response (enumerator: don't read) (4)

End of Block: Take

Start of Block: SARS CoV-2 experiment 2: Vaccine altruism

Q28 Lebanon has a limited supply of Covid vaccines. There is a lot of discussion about who should have priority for the vaccine. We are trying to get a sense of how the Lebanese people think the ongoing vaccination campaign should be structured. I will present you with a few hypothetical profiles of Lebanese citizens, and ask you if they should receive immediate access to a vaccine.

Q29 Michel is a ${e://Field/choice1_age} year old man from a ${e://Field/choice1_social_class} family in Ashrafieh in Beirut who has ${e://Field/choice1_health_condition}.

Should this person get immediate access to the vaccine?

- Yes (1)
- No (2)

Q30 Ali is a ${e://Field/choice2_age} year old man from a ${e://Field/choice2_social_class} family in Haret Hreik in Greater Beirut who has ${e://Field/choice2_health_condition}.

Should this person get immediate access to the vaccine?

- Yes (1)
- No (2)

Q31 Uthman is a ${e://Field/choice3_age} year old man from a ${e://Field/choice3_social_class} family in Aisha Bakkar in Beirut who has ${e://Field/choice3_health_condition}.

Should this person get immediate access to the vaccine?

- Yes (1)
- No (2)

End of Block: SARS CoV-2 experiment 2: Vaccine altruism

Start of Block: Manipulation check

Q32 In determining whether or not someone should get priority access to the vaccine, which factor was most important in your decision -- the place of residence, health condition, age, or social class or place of residence of the person?

- Place of residence (1)
- Health condition (2)
- Age (3)
- Social class (4)

Q33 What was the second most important factor in your decision?

Enumerator: do not read the respondent's choice from the previous question.

- Place of residence (1)
- Health condition (2)
- Age (3)
- Social class (4)

End of Block: Manipulation check

Start of Block: Medication Altruism Experiment

JS

Q34 Now I'd like to ask you some questions about the availability of medications in Lebanon. Lebanon has a limited supply of antibiotics. This raises questions about who should have priority access to these medications. We are trying to get a sense of how the Lebanese people think about how to allocate basic medications like antibiotics. I will present you with a few hypothetical profiles of Lebanese citizens, and ask you if they should receive immediate access to antibiotics.

Q35 Boutros is a ${e://Field/choice1_age_two} year old man from a ${e://Field/choice1_social_class_two} family in Gemmayze in Beirut who has ${e://Field/choice1_health_condition_two}.

Should this person get immediate access to antibiotics?

- Yes (1)
- No (2)

Q36 Hussein is a ${e://Field/choice2_age_two} year old man from a ${e://Field/choice2_social_class_two} family in Burj al Barajneh in Greater Beirut who has ${e://Field/choice2_health_condition_two}.

Should this person get immediate access to antibiotics?

- Yes (1)
- No (2)

Q37 Khalid is a ${e://Field/choice3_age_two} year old man from a ${e://Field/choice3_social_class_two} family in Tarik el Jedideh in Beirut who has ${e://Field/choice3_health_condition_two}.

Should this person get immediate access to antibiotics?

- ○ Yes (1)
- ○ No (2)

End of Block: Medication Altruism Experiment

Start of Block: Manipulation Check Two

Q38 In determining whether or not someone should get priority access to antibiotics, which factor was the most important in your decision -- the place of residence, health condition, age, or social class or place of residence of the person?

- ○ Place of residence (1)
- ○ Health condition (2)
- ○ Age (3)
- ○ Social class (4)

Q39 What was the second most important factor in your decision?

Enumerator: do not read the respondent's choice from the previous question.

- ○ Place of residence (1)
- ○ Health condition (2)
- ○ Age (3)
- ○ Social class (4)

End of Block: Manipulation Check Two

Start of Block: Experiment 2: SARS CoV-2 Vaccine Hesitancy

Q44 ${e://Field/hesitancy_field} support vaccination against Covid-19 on the grounds that it will help stop the virus and will have minimal side effects. We'd like to ask about your perspectives on this issue.

Q41 How likely do you think that vaccines can effectively curb the virus?

- Vaccines are not at all likely to curb the virus (1)
- Vaccines are somewhat unlikely to curb the virus (2)
- Vaccines are somewhat likely to curb the virus (3)
- Vaccines are very likely to curb the virus (4)

Q42 How worried are you about dangerous side effects from the vaccine?

- Are you not at all worried? (1)
- Are you worried just a little bit? (2)
- Are you somewhat worried? (3)
- Are you extremely worried? (4)

End of Block: Experiment 2: SARS CoV-2 Vaccine Hesitancy

Start of Block: Enumerator Input

Display This Question:

If If Survey enumerator: Enter your survey enumerator ID number. Text Response Is Not Empty

Q48 Please indicate any errors and enter any corrections to the responses input into the survey form here.

_____

End of Block: Enumerator Input