HiCN Households in Conflict Network

Information, Anxiety, and Persuasion:
Analyzing Return Intentions of Displaced Persons

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HiCN Working Paper 362

December 2021

Abstract: Anxiety influences how people attend to, interpret, and respond to information and potential threats. How does anxiety influence attempts to persuade? We hypothesize that the relationship depends on the interaction between an individual's level of anxiety and the trustworthiness of a source that provides information. Individuals with lower levels of anxiety can be persuaded by a trustworthy source. But persistent and high levels of anxiety lead to hypervigiliance and mistrust in others. This means that even trustworthy sources of information cannot persuade anxious individuals. We test our hypotheses with a factoral survey experiment, drawing participants from residents of internally displaced person (IDP) camps in northeastern Nigeria. We find that information from a more trustworthy source leads to increased return intentions. However, the more participants exhibit psychological distress the less of an effect source trustworthiness has on their return intentions. We conclude by discussing the implications for return of displaced persons and political and personal decision-making more generally.

Keywords: Stress, psychosocial function, political psychology, displacement, conflict.

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Introduction

We know that anxiety influences how people attend to, interpret and respond to potential threats (Wagner and Morisi 2019). Anxiety leads to more thorough searches for information (Clifford and Jerit 2018, Alberston and Gadarian 2015, Merolla and Zechmeister 2018, Valentino, Banks, et al. 2009), increases consideration of choices and alternatives (Banks and Valentino 2012, MacKuen, et al. 2010), and heightens risk aversion (Druckman and McDermott 2008, Lerner and Keltner 2001). These consequences of anxiety should influence whether attempts at persuasion—when a source seeks to convince a target to choose to change its behavior or attitudes by transmitting a message (Perloff 2003)—succeed or fail. Consistent with this line of thinking, Marcus et al. (2005) find that attempts at persuasion that accentuate threats are more effective, and Valentino et al. (2008) conclude that anxiety motivates not only information search, but also leads to increased learning from this information.

We also know that the characteristics of the source influence the success or failure of attempts to persuade. Sources that are viewed as credible, and particularly sources that are seen as trustworthy, have greater success in persuading targets (Chiang and Knight 2011, Guillory and Geraci 2013, Lupia and McCubbins 1998, Pluviano, Della Sala and Watt 2020). Existing work on anxiety and political decision-making, however, has not considered how variation in the credibility of a source influences the outcomes of attempts to persuade. The work on anxiety and persuastion reported in Marcus et al. (2005) and Valentino et al. (2008) use news media as the source of information, and do not vary the credibility of the source.

In this paper, we investigate how differences in the credibility of a source influence its ability to persuade. We begin with insights from research on persuasion in political science, which holds that more credible sources are better able to persuade targets. We then draw on work in psychology which finds that high levels of anxiety generates hypervigiliance to threats and reduces trust in others. Building on this research, we theorize that even trustworthy sources will be unable to

persuade more anxious targets.

Our empirical analysis assesses our hypotheses in the context of decisions by people displaced by conflict to return to their area of origin. This context is relevant for our theory because displaced persons frequently lack reliable information about conditions in their area of origin and must rely on others to fill this gap. Most research to date on conditions influencing voluntary return draws on the push-pull framework, which holds that displaced persons and other types of migrants maximize well-being and minimize risk by choosing to return home only when the conditions in their area of origin improve or appear better than conditions in their current place of displacement (Koser 1997)[4]. But incomplete information is a powerful barrier to accurately comparing conditions between areas of displacement and origin. While diplaced persons have first-hand knowledge of conditions in their area of displacement, their knowledge of conditions at home are often fragmentary or incomplete. To address this deficit, displaced persons rely on information sources such as government officials, non-governmental organizations, the media, and friends and family in their area of origin. Access to information promises to improve the quality of decisions to return or remain displaced. Recognizing this need, actors seeking to facilitate voluntary return regularly collect information in areas of origin and disseminate this to displaced persons (United Nations High Commissioner for Refugees 1996).

While relying on others for information can address displaced people's information deficit, it raises another problem—they must carefully evaluate the characteristics of the source. In their study of Syrian refugees in Lebanon, Alrababa'h et al. (2020) find that pull factors like economic prospects and social networks in the place of origin influence return intentions, but their effects are moderated by how much confidence the potential returnees have in the value of the information

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[4] Push factors are current conditions in the area of displacement, including types of perceived victimization (Arias, Ibáñez and Querubin 2014), social networks (Omata 2012), economic opportunities and access to public goods (Lippman and Rogge 2004), and security (Hoogeveen, Rossi and Sansone 2018). Pull factors refer to relevant conditions in the displaced person's area of origin (Schwartz 2019). Our work is similar to recent research that considers how the experience of wartime violence and displacement influence return intentions (Ghosn, et al. 2021, Camarena and Hägerdal 2020).

provided about these conditions. In other words, displaced persons were persuaded to consider return more seriously if they had more confidence in the source of information about their area of origin. But we know little about what makes one source more persuasive than another in the minds of displaced people.

We address this gap by building on a well-established theory of persuasion (Lupia and McCubbins 1998). This theory holds that a source persuades a target when it is both knowledgeable—that is, well-positioned to predict the consequences of actions taken by the target of persuasion—and trustworthy—that is, has self-interested reasons to convey true rather than deceptive knowledge to the target. Subsequent research has found that trustworthiness is more important than knowledge for successful persuasion. We use this line of work to hypothesize that information about good conditions in an area of origin conveyed by a trustworthy source increase displaced people's intentions to return.

We also hypothesize that individuals exhibiting symptoms of anxiety will not be persuaded by even a trustworthy source. Following Canetti-Nisim et al. (2009), we measure anxiety with a questionnaire that screens for and provides a continuous measure of symptoms of posttraumatic stress disorder (PTS). PTS is a mental health condition triggered by witnessing or experiencing a life-threatening event, and leads to disturbing memories, nightmares, and severe anxiety[5]. Hypervigiliance is a key consequence of PTS, leading those who report symptoms to be highly attuned to threats in their environment. This is particularly true for situations that remind them of traumatic events they have experienced, such as being displaced. Such reminders lead them to attribute harmful motives to, and be less willing to trust, others.

We test our hypotheses with a factoral survey experiment, drawing participants from residents of internally displaced person (IDP) camps in northeastern Nigeria. These residents were displaced

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[5] PTS can be distinguished from the emotional state of fear, which is caused by clear and unambiguous threats, and diminishes when the threat recedes (Alberston and Gadarian 2015, Huddy, et al. 2005). PTS is characterized by the persistence of stress and anxiety after exposure to trauma and an inability to accept that one is safe even in an environment without threats (McNaughton and Gray 2000).

from their homes by the conflict between government, militia, and Boko Haram rebel forces. Our experiment varies the knowledge and trustworthiness of a hypothetical information source that convey information about good conditions in a displaced person's area of origin. The response variable is how likely someone similar to the IDP participant would be willing to return to their area of origin if they learned this information from this source. We chose this setting in part because at the time we fielded the experiment, the number of violent confrontations between armed groups had declined and the return of displaced persons had begun to increase. This means that return was a plausible outcome for many of our participants (Kwenin 2016). We find that information from a more trustworthy, but not from a more knowledgeable, source leads to increased return intentions. However, this effect declines as anxiety among participants increases. Among participants reporting high levels of anxiety, even trustworthy information sources did not change return intentions.

In developing this theory, our paper contributes to a growing body of research on the effects of psychosocial health on political behavior and attitudes. Recent work, for example, has found that individuals experiencing symptoms of depression have lower levels of political participation (Landwehr and Ojeda 2021, Couture and Breux 2017). Our work is closely related to a number of studies of how psychological distress influences threat perceptions and attitudes towards outgroups (Canetti-Nisim, et al. 2009, Canetti, et al. 2013, Bonanno and Jost 2006, Canevello, Hall and Walsh 2021). Our specific contribution is to theorize that anxiety makes attempts at persuasion less likely to succeed by diminishing their targets' ability to consider a source trustworthy.

While our empirical focus is on displaced persons, our theory and findings have important implications for understanding the conditions under which attempts at persuasion succeed or fail in changing behaviors and attitudes. Most people who experience or witness trauma do not develop PTS, and the prevalence of the disorder in representative samples of residents of western countries is in the single digits. But prevalance is considerably higher in sub-populations such as military

veterans, civilians in combat zones, displaced persons, and women, and is strongly correlated with the number of traumatic events that an individual experiences over the life course (Yehuda, et al. 2015). In other words, PTS is more likely among the most vulnerable. These vulnerable populations are often the targets of both well-intentioned and malign campaigns of persuasion. Well-intentioned sources seek to persuade those suffering PTS symptoms to seek care, to provide information and resources to victims of crime and violence about rights to legal and social assistance, and to convince individuals impacted by natural disasters and conflicts to take steps to rebuild their lives. Malign sources aim to persuade the same targets to blame outgroups for their plight, to support exclusionary policies, or to engage in violence. Our study contributes to understanding the conditions under which attempts at persuasion among targets who have experienced traumatic events do and do not work.

The findings reported here improve our understanding of how anxiety influences attempts at persuasion. For example, does anxiety moderate the effect of information source characteristics on voting, perceptions of corruption, and other topics where individuals rely on information sources to make judgements and decisions? Sick people are likely to experience higher levels of anxiety. Do our findings suggest that anxious patients are less willing to follow medical advice, even from health care providers they view as trustworthy? The findings also may broaden our understanding of the conditions under which anxiety influences information processsling. Recall that Marcus et al. (2005) conclude that the anxious were more easily persuaded. The theory and findings we present here suggest that it is not the case that the more anxious are more persuadable in general. Rather, anxious people are more alert to danger—their threat sensitivity is heightened. If an attempt at persuasion seeks to heighten such sensitivity to threats, as is the case in Marcus et al. (2005), then those with anxiety may be more persuadable. But if the persuasion entails facts or a well-reasoned argument that requires one to keep one's fears at bay in order to process this information, then people with anxiety may be less persuadable. This is the context for our study, where displaced

people are considering returning to an area that was once dangerous but that they are told is now safe. In such cases, the core fear system in the human brain's amygdala signals to discount such information and that it is better to be safe than to act on potentially incorrect information. Future research could investigate these important questions.

Information, Anxiety, and Decision-Making

The push-pull perspective on migration holds that individuals seek to maximize their subjective expected utility, making decisions to migrate by comparing conditions in their current location with those in other locations. A key challenge that displaced persons considering return in particular face in making such comparisons is collecting information about conditions in their area of origin (Koser 1997). This is one example of the more general problem that individuals often face when making consequential decisions—they lack the ability or willingness to gather relevant information (Lupia and McCubbins 1998). Displaced people, for example, often find it difficult to visit their homes to collect first-hand information. Furthermore, displaced people want to obtain information about multiple dimensions of conditions in their area of origin, including the frequency of armed conflict, the state of their former dwelling and neighborhood, the prices and availability of important goods, the quality of public services, and so on. Even if it is possible for a displaced person to make scouting trips to the area of origin, such visits may not provide sufficient information about these varied conditions to allow for a fully-informed comparison of the areas of displacement and origin.

Instead, displaced persons frequently must rely on others—news sources, social media, government officials, international and nongovernmental organizations, and individuals in their social network—to form a more complete picture of conditions in their area of origin. The role of information in informing return decisions has been recognized in previous work. Hoogeveen, Rossi, and Sansone (2018) find that more highly-educated individuals displaced from northern Mali were less likely to return home. They suggest that this is because those with more education had access

to more and better information about the situation in their area of origin, relying more heavily on mobile phones and the internet than what the authors describe as "less reliable" sources such as word of mouth. Alrababa'h et al. (2020) find that pull factors in the area of origin influence the return intentions of refugees from Syria, but that their influence was moderated by the degree to which refugees had high confidence in information about conditions in Syria.

Relying on information sources can alleviate the problem of inadequate information about conditions at home, but raises a new problem: which sources of information should a target believe? One influential theory of persuasion (Lupia and McCubbins 1998) holds that an information source must have two characteristics to persuade a target to change their actions or intentions. First, the source must be more *knowledgeable* than the target. A knowledgeable source is one that is better able to predict the consequences of a target's actions. In the context of displacement, a knowledgeable source has better information that allows it to predict how conditions in the area of origin will influence the well-being of those who return. Second, a source must be *trustworthy*.[6] A trustworthy source is one that the target believes benefits in some way when the target makes a choice that maximizes its utility. In other words, a source is trustworthy when both the source and target prefer that the target make the utility-maximizing choice for itself. An untrustworthy source, in contrast, is one whose interests lead it to prefer the target to make a choice that does not maximize its utility.

Information sources across a wide range of domains vary in the degree to which they possess better knowledge and are trustworthy (Lupia and McCubbins 1998). This is the case for sources that provide displaced people with information about conditions in their area of origin. Koser (1997, 3) holds that displaced people must use care in evaluating both "the relevance of the information" for their needs as well as "the reliability of the information transmitter". Just as it is difficult for

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[6] A perception of trustworthiness can be based on an understanding of the source's interests or character, or external forces, such as institutions that create penalties for lying. Our focus is on the former understanding; future research might profitably investigate how external forces influence return intentions. See Lupia & McCubbins (1998, 53-62).

displaced people to collect information about conditions in their area of origin directly, it may also be difficult for information sources to do so. Reporters may not be able to access or have an interest in covering developments in remote areas. Government officials, international organizations, and nongovernmental organizations may be working in the area of origin, however their activities may provide them with access to only a subset of the information relevant to a displaced person's intention to return. For example, a non-governmental organization providing food aid will have information on livelihoods in the area, but may be less informed about security issues or government initiatives on the horizon. Social media and members of a displaced person's social network may be able to provide relevant information from a person's area of origin, but such information may be too superficial to meet their needs. Furthermore, many of these actors might have interests that lead them to encourage return when conditions are unsuitable or to discourage return when conditions are suitable. For example, politicians or nongovernmental organizations in locations that host displaced people may wish to see them depart to reduce the need to provide services. Individiuals residing in the area or origin might have incentives to discourage return, even when conditions are suitable, because they fear that an influx of former residents would create greater competition for employment, housing, or social services. Displaced people thus must devote cognitive resources to engage in careful reasoning to estimate an information source's knowledge and trustworthiness before updating their willingness to return. This is a consequential decision, as returning when conditions are poor might threaten the security or livelihood of a displaced person.

Lupia & McCubbins (1998, 9) theorize that a source must be *both* knowledgeable and trustworthy to persuade a target, motivating our first hypothesis:

H1: Compared to information sources that are less knowledgeable or less trustworthy, sources that are both more knowledgeable and trustworthy change displaced persons' return intentions.

Subsequent research casts some doubt on the conclusion that both knowledge and trustworthiness are both necessary for persuasion to occur. A number of studies have found that sources that are

trustworthy but not knowledgeable influence preferences and behavior (Chiang and Knight 2011, Weitz-Shapiro and Winters 2016, Pluviano, Della Sala and Watt 2020). Why might this be the case? Guillory and Geraci (2013) suggest that the effect of knowledge depends on context. Knowledge is most likely to be influential in settings where the participant has little expertise and such expertise is necessary for making good decisions. They hypothesize, for example, that knowledge is more important in contexts such as medical decision making (an example of what is referred to in the economics literature as a "credence goods" market), where a physician has much more knowledge than the typical patient, than in domains such as politics, where participants may conclude (correctly or not) they have sufficient knowledge to make reasoned choices. While this question remains open in the literature, we point out that displaced people typically would have considerable (if perhaps dated) knowledge of the general conditions of their area of origin, since they had lived there and may remain in contact with current residents. This might lead them to conclude that the marginal value of information from a knowledgeable source was quite small. Based on this, we are more confident in our second hypothesis:

H2: Compared to information sources that are less trustworthy, sources that are more trustworthy change displaced persons' return intentions.

Building on these insights from the existing literature, we theorize that anxiety, specifically reporting symptoms of posttraumatic stress, influences targets' ability to persuade. Postraumatic stress is a form of anxiety that develops after experiencing or witnessing a traumatic event. Individuals with posttraumatic stress repeatedly relive the traumatic event through flashbacks and nightmares, and feel distress when reminded of the event. They avoid situations and thoughts that bring the trauma to mind. Postraumatic stress leads to increased arousal, which can include poor sleep, difficulty regulating emotions, and hypervigiliance towards potential threats. It is closely associated with negative mood and, in some cases, depression. Onset is frequently delayed until well after the traumatic event. Posttramautic stress is complex to diagnose; most people who suffer

trauma do not develop the disorder, and some trauma victims develop considerable psychological distress but do not meet clinical criteria for diagnosis (Yehuda, et al. 2015). Exposure to war, violence, and displacement leads to psychological distress, including PTS, in some victims (Canetti, Hall, Rapaport, & Wayne, 2013), and such exposure has been shown to influence return intentions among refugees (Ghosn, et al., 2021). For these reasons, we focus on this particular form of anxiety.

While PTS does not impair general cognition (Aupperle, et al. 2012), a central symptom of PTS is hypervigilance, understood as an exaggerated sensitivity to potential threats and strong focus on the potential for danger in social interactions (Yehuda et al., 2015). Hypervigiliance resulting from PTS has important consequences for social cognition in general and the ability to trust others specifically. Hypervigiliance increases generalized perceptions of threat (e.g., Canetti, Hall, Rapaport, & Wayne, 2013) and leave a neural footprint in the form of exaggerated amygdala responses to threatening stimuli among traumatized individuals (Rauch et al., 2000). This means that individuals experiencing symptoms of PTS are sensitive to information related to their experience of traumatic events. In the context of displaced people, those with symptoms of PTS should be highly attuned to information that reminds them of traumatic experiences in their area of origin, which will activate their hypervigiliance. Hypervigiliance, in turn, leads individuals to be more suspicious and less trustworthy of others. Individuals with PTS symptoms, for example, make lower investments in trust games with cooperative partners (Bell, et al. 2019). They also learn more slowly during trust games, indicating an impaired ability to process relevant information about the intentions of others (Cisler, et al. 2015). Other evidence suggests that individuals with PTS symptoms are more likely to attribute hostile intent to others (van Reemst, Fischer and Zwirs 2014) and to interpret ambiguous situations as more threatening (Bomyea, Johnson and Lang 2016), and that individuals who experience traumatic events or anxiety are less trusting of others (Alesina & Ferrara, 2002; Kijewski & Freitag, 2018; Potts, et al., 2019).

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The theory of persuasion discussed earlier requires that people be able to carefully understand and process information regarding a source's trustworthiness. Considerable evidence suggests that the hypervigiliance and mistrust associated with PTS symptoms interferes with the

the ability to do so. Situations or information that remind those with PTS of traumatic events, such as an experience of being displaced, activate this hypervigiliance, which in turn undermines their ability to evaluate a source of information as trustworthy. This leads to our third hypothesis:

H3: Compared to displaced persons experiencing less anxiety, the return intentions of those experiencing more anxiety will be less influenced by a trustworthy source of information. While we know that a trustworthy source of information can change attitudes and behavior across diverse social situations, such as voting behavior, this theoretical framework has never been applied to the domain of displaced people's return intentions. To our knowledge, there is no work in any empirical domain that investigates how anxiety influences the willingness of a target to act on information provided by a trustworthy source. In what follows, we apply the hypotheses developed above from the literatures on persuasion and on anxiety to the specific domain of return decisions by displaced people, but suggest that the insight from our third hypothesis in particular could apply more generally to other domains in which a source seeks to persuade a target.

Research Design

Participant Recruitment and Sample

We conducted our survey experiment using a sample of 822 adults. Inclusion criteria included being 18 years of age or greater, identifying as an IDP and residence in an IDP camp, and knowledge of Hausa or English. Participants were recruited from 10 randomly chosen IDP camps in Maiduguri and Jere local government areas (LGAs) of Borno State in Nigeria. The sample frame includes all IDP camps in Borno state considered safe by security forces and government officials at the time of the study. Over 90 percent of camps meeting this inclusion criterion are in Maiduguri and Jere. The camps from which we recruited participants vary considerably in size, the areas of

origin of resident IDPs, and their status as formal camps approved by the government and informal IDP settlements (see appendix 1). The final size of the sample was dictated by logistical and practical constraints, and is broadly similar in size to those used in published research in locations that have experienced conflict (Mironova and Whitt 2018) and involve displaced persons (Ghosn, et al. 2021). Descriptive statistics are provided in appendix 3. The mean and modal value for the age of the participants was between 35 and 44. Slightly more than half (51.3 percent) of subjects identified as male, with the balance identifying as female. Over half of the participants stated that they either had no formal education (16.3 percent) or informal schooling only (42.2 percent). Remaining participants indicated some experience with formal education; of these, the largest group (14.5 percent of the entire sample) had completed primary school. Most participants indicate that their socio-economic status declined after they displaced, and experienced some degree of exposure to wartime violence.

Procedure

Enumerators began at a randomly selected starting point in each IDP camp and recruited participants from every third household. Enumerators first sought to interview the self-identifed head of household. If the head of the household was not available, they interviewed the oldest available adult. If no suitable adults were available, enumerators moved to the next third household. Participants were informed of the purpose of the study, the confidentiality of their responses, and their rights, including the right to withdraw at any time, when offered the opportunity to participate in the study. Those that agreed to participate were presented with a translated consent form. There was no time limit for completing the study; average time to completion was 25 minutes. There was no monetary compensation for participation. The participation rate was over 97 percent.

The enumerators were local residents, fluent in English and Hausa languages, familiar with local

customs, and had extensive experience carrying out similar research. The enumerators received ethical training regarding human subjects research and fieldwork instructions from the survey firm under the supervision of the first author and an independent consultant. The enumerators worked in teams of two. Each team included a male and a female enumerator. Female enumerators were used when approaching female participants. Interviews were conducted in private in the homes of the respondents.

The instrument collects self-reports of exposure to violence and symptoms of posttraumatic stress. Camp, community, and local leaders, as well as participants in our focus groups and pre-testing, indicated that the risk to participants in terms of inducing further distress was low, which is consistent with the findings of a meta-analysis of participant responses to trauma research (Jaffe, DiLillo, Haikalis, & Dykstra, 2015). Participants were provided with the research team's contact information and asked to follow up if they felt that their participation may have resulted in some form of psychological distress so that the team could refer them to counseling or other resources. None did so. Prior to data collection, we sought and obtained approval from the National Health Research Ethics Committee (NHREC) of Nigeria and a university institutional review board in the United States. The data collection protocol included procedures and training to minimize the risk to enumerators and participants posed by COVID 19. We further obtained the approvals of IDP camp, community, and local government leaders.

Survey Instrument

The survey instrument can be found in Appendix 2. Participants first were asked about their exposure to violent conflict. We measured exposure to five different types of violence: death of family member, physical injury of family member, physical injury of the participant, home destroyed or severely damaged by warfare or a combatant, and forcible displacement by a combatant. These five dichotomous measures were summed to create the variable *exposure to violence*, an approach used regularly in similar studies (Voors, et al. 2012, Blattman 2009). The

survey instrument then measured demographic characteristics. We next measured participants'

symptoms of posttraumatic stress using the six-item abbreviated PTS Checklist-civilian version

PCL-C (Lang and Stein 2005, Weathers, et al. 1993). The PCL-C is a self-report scale designed to

access the severity of DSM-IV symptoms of PTS, and the six-item version has been shown to have

adequate psychometric properties for the same screening purposes (Lang and Stein 2005).

Participants were asked to rate how much each posttraumatic symptom bothered them during the

past month on a 5-point scale ranging from 1 (not at all) to 5 (extremely). These values were then

summed to create the variable posttraumatic stress (*PTS*). Prior work demonstrates that, among

IDPs, the PCL-C has high internal consistency (Ibrahim, et al. 2018, Pfeiffer and Elbert 2011,

Thapa and Hauff 2005). This was the case in our sample as well ($\alpha = .84$).

Experimental Design

Our experiment manipulates the degree to which an information source is trustworthy and

knowledgeable. In designing the experiment, we needed a type of information source that our

participants could realistically view as either having or not having one or both of these

characteristics. We chose to use a hypothetical nongovernmental organization (NGO) as the

information source. In focus group discussions during the pilot stage of the study, we asked IDP

participants how they gathered information about conditions in their area of origin and perceptions

of different actors. Most of the participants indicated that they collected information from multiple

sources; chief among them are family and friends, NGO staff, security personnel, and the Hausa

version of the BBC. Camp leaders were generally distrusted; IDP participants accused the camp

leadership of siphoning off resources that were meant for them for personal use. While they had

more positive views of family, friends, and neighbors, they viewed information from these sources

as often inconsistent and based on unverifiable information or rumors. This led some participants to

probe these more trusted sources for details when they provided information, and to take more

seriously information that was based on eyewitness accounts or direct experiences.

Participants generally had positive perceptions of NGOs that provide assistance and information to IDPs. They also indicated that the NGOs working with them were a valuable source of information about current and future conditions in their area of origin. Focus group participants stated that some NGOs have worked with them for years, while others are relatively new in the area. Some participants further indicated they believed some NGOs were motivated less by a desire to help IDPs than by the need to protect their operations and finances and respond to political pressures from the state government and other authorities. These responses are consistent with reports of government-initiated pressure on NGOs in Borno state, as well as other parts of Africa (Musila 2019, Wintour 2019).

The final survey instrument included a 2x2 factoral survey experiment that manipulates the trustworthiness and knowledge of a fictional NGO—Action Against Violence (AAV) — providing information to IDPs about conditions in their areas of origin. Participants were randomly assigned to one of four vignettes. The responses during the focus groups informed the wording of these vignettes. The experiment manipulates the degree to which an information source is knowledgeable and trustworthy. The nuanced attitudes towards NGOs among the focus group partipants provided an opportunity to realistically manipulate these two dimensions. Specifically, focus group participants indicated that NGOs varied in their knowledge of the conflict which, following comments from some of the focus group participants, we proxied with the location of the NGO staff (local or distant) and the length of time the staff had worked with local conflict-affected communities. For the conditions in which AAV was less knowledgeable, the vignette began with "Action Against Violence (AAV) is a registered NGO with an office in Lagos. They recently started operations in Borno and their staff occasionally visit displaced communities in Maiduguri from Lagos." For the conditions in which AAV is more knowledgeable, the vignette begins with "Action Against Violence (AAV) is a registered NGO with an office in Maiduguri. For many years, their staff has lived in and worked with communities experiencing violence in Borno state." The

motivation for this manipulation is that an NGO with a long presence in the area from which IDPs displaced would be perceived as having access to more and better information about local conditions.

Focus group participants thought that most NGOs were motivated primarily to help IDPs, but also indicated some wariness towards NGOs that they suspected might alter their operations for financial or political reasons. This allowed us to manipulate the trustworthiness of the fictional NGO by varying the degree to which the NGO is believed to be motivated by financial concerns or the interests of IDPs. For the less trustworthy treatment conditions, AAV was described in the following terms: "When talking about this organization, some formerly displaced persons have said that the NGO is always short of funds, and for this reason encourages displaced persons to return home even when they believe that the condition might not be suitable for people to return." In the more trustworthy conditions, the experiment stated that "When talking about this organization, some formerly displaced persons have said that the NGO encourages displaced persons to return home only when they believe that the condition at home is suitable for people to return." The inclusion of "only" is an important modifier, as it indicates that the NGO would provide information suggesting that return is safe and viable when this is actually the case. Focus group participants also indicated that they rarely had first-hand information about the true knowledge and motives of NGOs. In our experimental treatments, we mimic this fact by suggesting that the information they receive about the NGO comes from formerly displaced people.

After being presented with one of these four treatment conditions, participants were then asked "Imagine that the staff of this NGO tells a displaced person like you that the security and general condition in your area of origin have improved in recent months, and that this improvement is expected to be sustained into the future. How likely do you think that someone like you may consider returning to your place of origin based on the information from this NGO staff?" Answers to this question serve as our response variable, *return intentions*, and ranges in value from one (very

unlikely to return) to five (very likely to return).

Covariates

The survey instrument also measures participants' age, gender, educational level, and socioeconomic status. The *Age* variable is an ordinal measure that ranges from 1 to 7. *Gender* takes a value of 1 for male participants and 2 for female participants. *Education* is an ordinal measure ranging from no formal education, informal schooling including Qur'anic education,

primary education, secondary education, to tertiary education. To measure respondents' socioeconomic status, they were asked to imagine the Nigerian society as arranged on a scale where those who are worst off have a value of zero and those who are best off have a value of ten. Participants were asked to rate their socio-economic status on this scale both before the beginning of the conflict with Boko Haram and when the survey was fielded. The variable *SES Change* measures the difference in these two variables and captures the degree to which the participants believe their socio-economic status had declined or improved.

Descriptive Statistics

Figure 1 summarizes the response variable for all participants in the experiment. Over 58 percent indicate that, if in the position of a displaced person like themselves, they would be likely or very likely to return, while 32 percent state they would be very unlikely or likely to return. Figure 2 visualizes the percentage of participants reporting each possible level of anxiety. Most subjects report values between 10 and 20, indicating a moderate to high level of anxiety, and almost 8 percent report the highest possible level of anxiety. Over 75 percent of the participants report a score of fourteen or higher, meaning they have screened positive for PTS-*D* using this measure.

Figure 1: Return Intentions
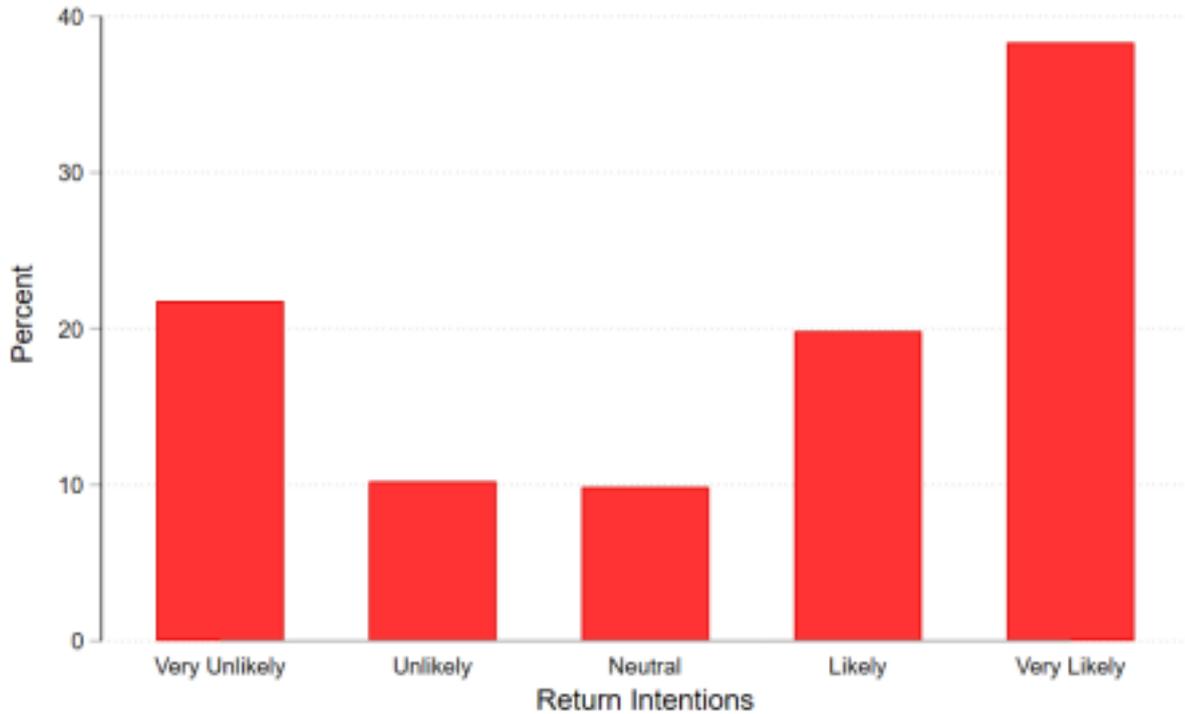
Appendix 4 summarizes the covariates for each of the four treatment conditions. These observable characteristics appear quite well-balanced across the conditions. To test this proposition more systematically, we conducted a multinomial logistic regression using treatment assignment as the response variable (setting less knowledgeable and less trustworthy as the base outcome) and the covariates as the explanatory variables. Results are reported in Appendix 5. None of the covariates have a statistically significant relationship to treatment assignment, which is further evidence that the sample is balanced on observables across treatment conditions.

Figure 2: Distribution of PTS
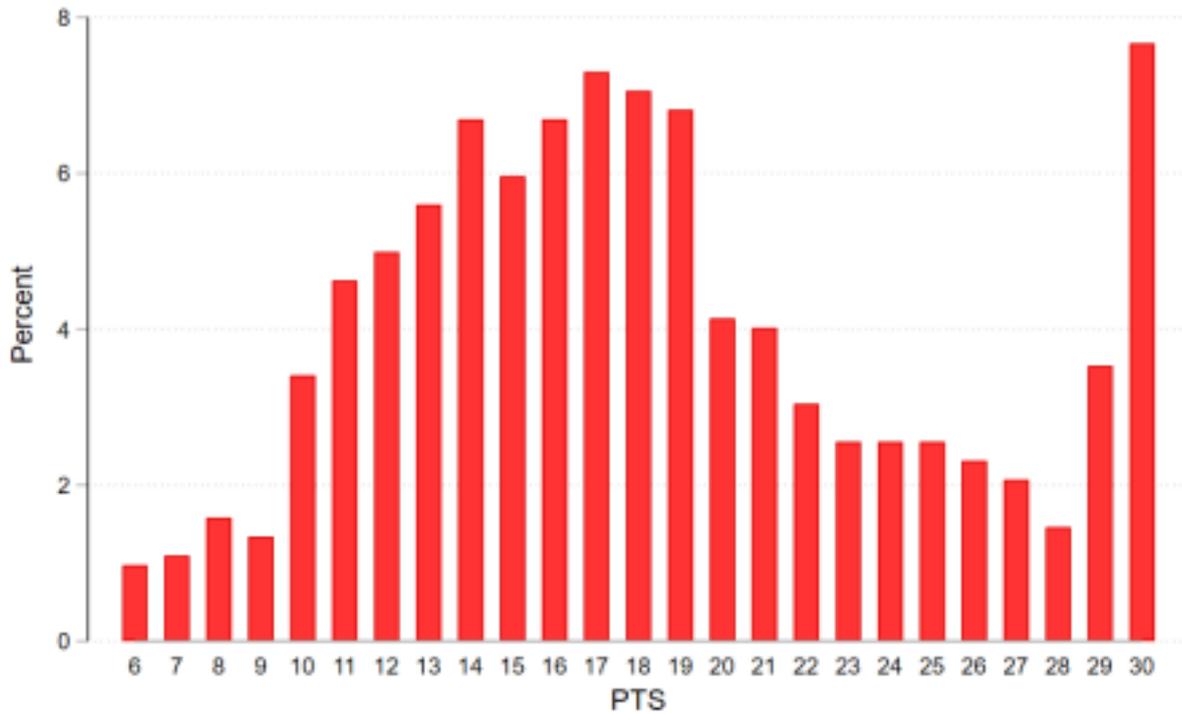
Analysis

Hypotheses 1 and 2 hold that information provided by a sender who is more trustworthy or knowledgeable will increase return intentions. Figure 3 plots *return intentions* for each treatment condition. Red dots depict each observation, black dots the mean for each condition, and black bars the 95 percent confidence intervals around each mean. Recall that *return intentions* ranges from 1, indictating being very unlikely to return, to 5, indicating being very likely to return.

The conditions with the highest mean values for *return intentions* both include a more trustworthy source of information. These means are statistically distinguishable from the conditions that include a less trustworthy source. Notice as well that the means for the two conditions that include a more trustworthy information are quite similar, and that the confidence intervals around these means overlap. This suggests that an information source that is both more trustworthy *and* more knowledgeable does not further increase return intentions compared to a source that is more trustworthy but less knowledgeable. In other words, being more trustworthy alone is sufficient to

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increase return intentions. Figure 3 thus provides support for hypothesis 2 that a more trustworthy source increases return intentions, not for hypothesis 1's claim that both knowledge and trustworthiness influence return intentions.

Figure 3: Return Intentions by Treatment Condition
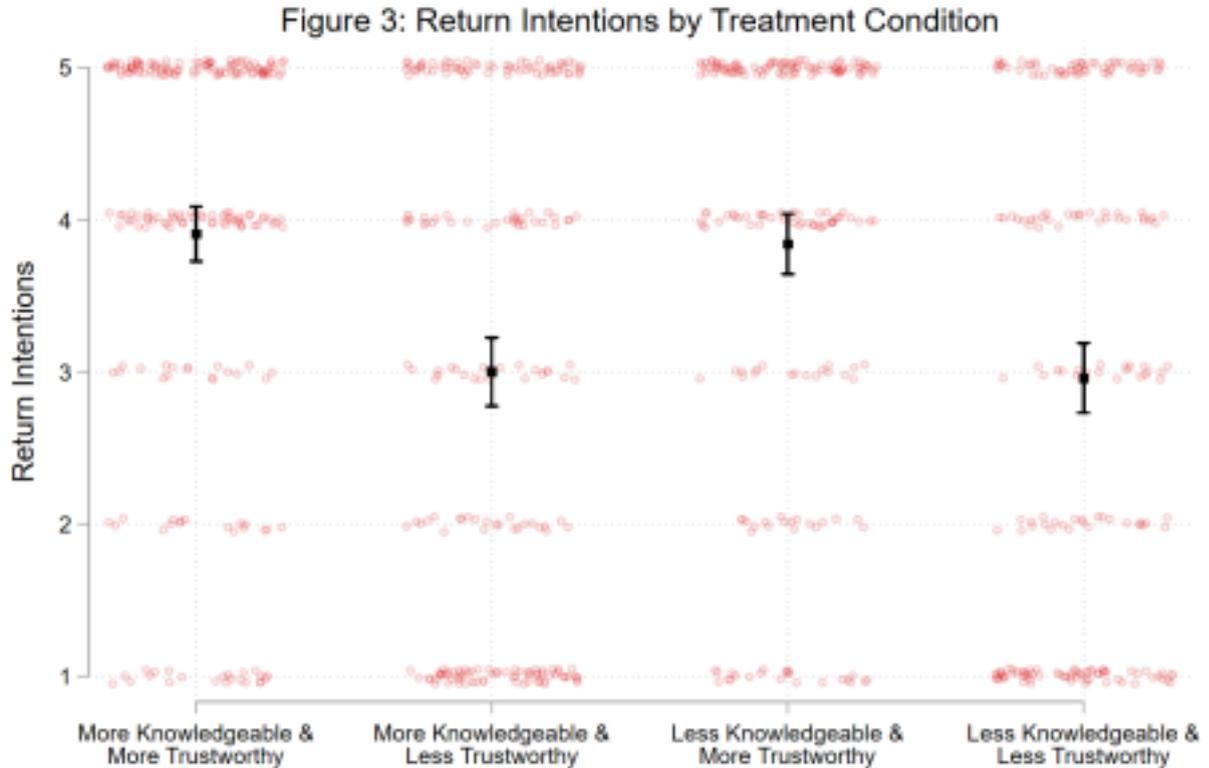
23

Table 1: Information, Posttraumatic Stress and Return Intentions

	1	2	3	4
More Knowledgeable & More Trustworthy	0.95** (0.15)	0.94** (0.15)	0.96** (0.14)	2.57** (0.47)
More Knowledgeable & Less Trustworthy	0.04 (0.16)	0.04 (0.16)	0.07 (0.15)	0.39 (0.51)
Less Knowledgeable & More Trustworthy	0.88** (0.15)	0.88** (0.15)	0.91** (0.15)	1.91** (0.49)
PTS		0.02* (0.01)	0.01 (0.01)	0.05** (0.02)
More Knowledgeable & More Trustworthy*PTS				-0.09** (0.02)
More Knowledgeable & Less Trustworthy* PTS				-0.02 (0.03)
Less Knowledgeable & More Trustworthy* PTS				-0.05* (0.03)
Exposure to Violence			0.18** (0.05)	0.18** (0.05)
Age			-0.02 (0.04)	-0.03 (0.04)
Gender			0.00 (0.11)	-0.01 (0.11)
Education			0.08* (0.03)	0.08* (0.03)
SES Change			0.07** (0.01)	0.07** (0.01)
Constant	2.96** (0.12)	2.62** (0.20)	2.04** (0.35)	1.37** (0.46)
Observations	822	822	822	822
R-squared	0.08	0.08	0.14	0.16

Note: Robust standard errors are in parentheses. The method of estimation is ordinary least squares. Excluded category for treatment is the Less Knowledgeable and Less Trustworthy condition. ** $p < 0.01$, * $p < 0.05$.

These conclusions are borne out by the statistical analyses provided in table 1, which reports the results of ordinary least squares regressions. In each model, return intentions is the response variable. The first model includes as explanatory variables the treatment conditions, using Less Knowledgeable and Less Trustworthy as the excluded category. Our hypotheses suggest that this condition should have the smallest effect on return intentions. The second model adds our measure of anxiety, the continuous variable PTS, as a covariate. The third model adds the remaining covariates: exposure to violence, age, gender, education, and SES change. The fourth model adds bivariate interactions between each treatment condition and PTS.

Turning first to the hypotheses about the characteristics of an information source, the treatments in which the source is more trustworthy have a positive and statistically significant relationship to *return intentions*. The substantive effect is sizeable. Recall that *return intentions* ranges from 1 to 5, and has a mean of 3.43 for the entire sample. In model 2, for example, the expected value of *return* intentions increases by .88 (for a less knowledgeable and more trustworthy source) and .94 (for a more knowledgeable and more trustworthy source). The coeffiecient for the more knowledgeable and less trustworthy condition, however, is small and not statistically significant. This indicates that, when comparing sources of information that are less trustworthy, a source that is knowledgeable has no greater influence on *return intentions* than a source that is not knowledgeable. These results hold regardless of the combinations of covariates or interactions included in the models.

Our third hypothesis concerns how higher levels of *PTS* moderate the effects of trustworthiness cues. Model 4 assesses this proposition by interacting each treatment condition with *PTS*. The interaction terms indicate that higher levels of *anxiety* reduce the effect of a more trustworthy source of information. This relationship is visualized in figure 4, which plots the marginal effect of *anxiety* for each of the three treatment conditions compared to the Less Knowledgeable & Less

Trustworthy condition. Consistent with the results reported above, assignment to the More Knowledgeable and Less Trustworthy condition does not influence *return intentions* regardless of the value of *PTS*. But among participants assigned to a condition with a more trustworthy source, those reporting low levels of *PTS* have much higher predicted levels of *return intentions* than do those assigned to the excluded condition, and these predicted levels of *return intentions* decline with increases in *PTS*. Among participants with high levels of *PTS*, the effects of a more trustworthy source of information disappear—these participants' return intentions are statistically indistinguishable from those of participants in untrustworthy information source conditions.

In models 3 and 4, *exposure to violence* has a positive relationship with return intentions. This raises the possibility that it is *exposure to violence,* rather than *PTS,* that reduces persuasion by more trustworthy sources in our experiment. While exposure to violence might cause increased levels of posttraumatic stress, it is also possible that anxiety is the result of other experiences, including experiences while displaced. The proposition that it is *exposure to* violence, rather than *PTS,* that reduces the effect of persuasion from a more trustworthy source is difficult to test cleanly because all of the participants, who were residents of IDP camps, reported being exposed to some form of wartime violence. This means that we lack a group of participants who did not experience violence and could serve as a control group. With this limitation in mind, it is possible that greater *exposure to violence* might reduce persuasion by a trustworthy source. To assess this possibility, we first calculated the Pearson's r bivariate correlation between these variables. The correlation is 0.21, providing some evidence that *PTS* is independent of *exposure to violence* in our sample. In appendix 7, we re-estimate model 4, but interact *exposure to violence* with treatment conditions and include *PTS* as a covariate. None of the coefficients on the interaction between *exposure to violence* and the treatment conditions are statistically significant, and figure A2 in appendix 7 indicates that increases in *exposure to violence* are not associated with statistically meaningful declines in *return intentions*. This leads us to conclude that it is likely *PTS* rather than *exposure to*

violence that moderates the effects of the treatment conditions on *return intentions*.

Figure 4: Marginal Effects of PTS on Effect of Information Source

Legend:
— More Knowledgeable & More Trustworty
— More Knowledgeable & Less Trustworty
— Less Knowledgeable & More Trustworty
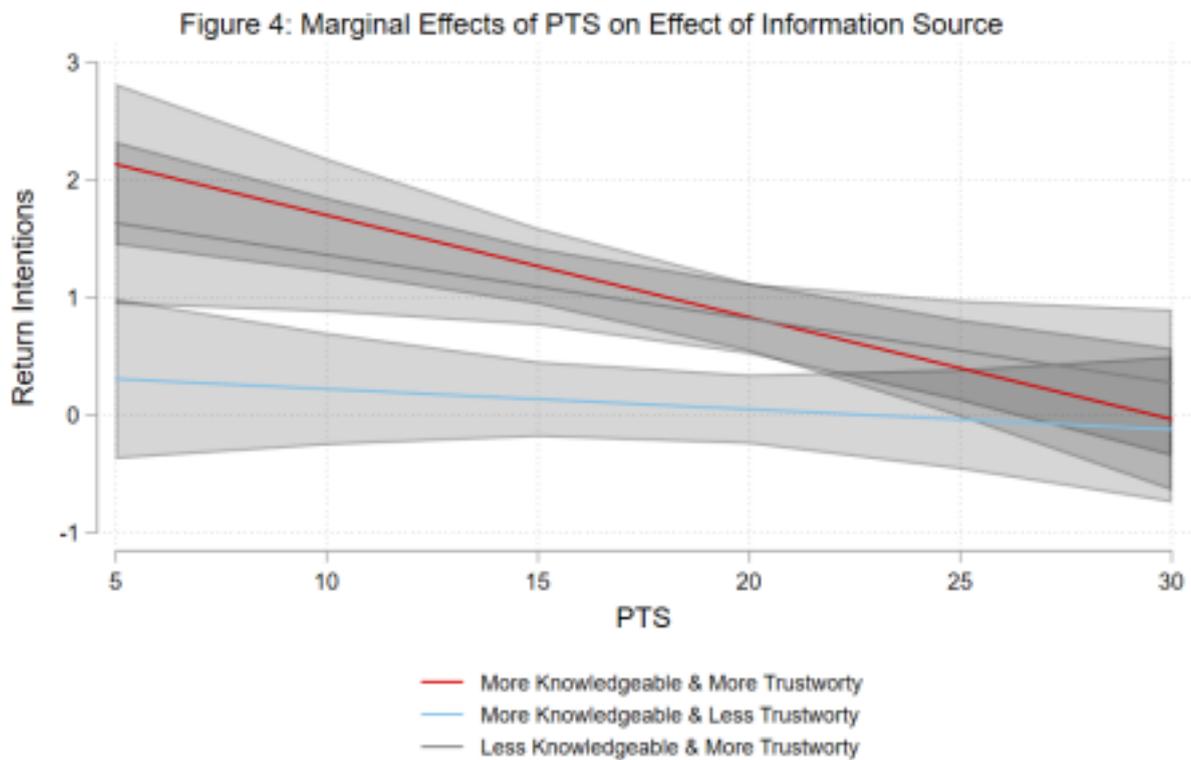
Conclusion

Individuals often rely on others to provide them with information about which choice will advance their interests. Such choices are particularly consequential for those displaced by violent conflict and contemplating return to their area of origin. Remaining in the area of displacement requires adjustment to a new environment, one that may lack resources, opportunities, and connection with the displaced person's family and friends. Returning to the area of origin might allow the displaced to reconstruct their former lives, regain property, and reconnect with their social network. But return can be especially risky because displaced persons often face difficulties in gathering good information about conditions in their area of origin.

Like others who lack complete information about which choice is best for them, displaced people can rely on others to fill this gap. We know that more credible sources of information about conditions in the area of origin can increase displaced persons' intentions to return (Alrababa'h, et al. 2020). We investigate what makes such sources credible to targets. Drawing on existing theories

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of persuasion, we hypothesize that sources that are trustworthy will be particularly influential. The findings from our survey experiment are consistent with this hypothesis—trustworthy sources that convey information about good conditions in the area of origin lead displaced persons to support returning.

This finding is consistent with much of the existing literature on persuasion. We draw on theory and findings in psychology on the consequences of anxiety for social relations to hypothesize that greater posttramatic stress increases sensitivity to threats and reduces willingness to trust others. Our findings are consistent with this hypothesis. Although our results are an important step in the direction of understanding how information source characteristics and psychological dispositions influence preferences, future work could probe the generalizability of these findings among displaced persons in other settings, other types of individuals that are at a higher risk of experiencing traumatic events such as military veterans and victims of violent crime and sexual violence, and other measures of anxiety.

These findings have implications for practice. A key implication is that expertise alone does not always make an information source the most credible messenger. In humanitarian settings, a premium is often justifiably placed on expert opinion as an influential source of information. Our findings call into question the efficacy of relying primarily on expertise to persuade. Instead, governments, multinational aid organizations, and other institutions can also enlist sources that can be perceived as trusted messengers. It also implies that those working with vulnerable groups like IDPs and refugees should intentionally explore ways to improve and sustain their trustworthiness within the communities they serve. Mental health interventions that alleviate anxiety in general and PTS specifically, apart from improving personal well-being, could help people exposed to trauma better determine which sources of information are most useful. If these interventions reduce the prevalence of anxiety, they might also reduce overall distrust in the community, and could ultimately improve the effects that trusted information sources will have on behavior and attitudes.

References

Alberston, Bethany, and Shana Kushner Gadarian. 2015. *Anxious Politics: Democratic Citizenship in a Threatening World.* New York: Cambridge University Press. Alesina, Alberto, and Eliana La Ferrara. 2002. "Who trusts others?" *Journal of Public Economics* 85: 207–234.

Alrababa'h, A., D. Masterson, M. Casalis, D. Hangartner, and J. Weinstein. 2020. *The dynamics of refugee return: Syrian refugees and their migration intentions.* Center for Effective Global Action.

Arias, Marıa Alejandra, Ana Marıa Ibáñez, and Pablo Querubin. 2014. "The Desire to Return during Civil War: Evidence for Internally Displaced Populations in Colombia." *Peace Economics, Peace Science and Public Policy* 20: 209–233.

Aupperle, Robin L., Andrew J. Melrose, Murray B. Stein, and Martin P. Paulus. 2012. "Executive function and PTSD: Disengaging from trauma." *Neuropharmacology*, 686- 694.

Banks, Antoine J., and Nicholas A. Valentino. 2012. "Emotional substrates of white racial attitudes." *American Journal of Political Science* 56 (2): 286-297.

Bell, Victoria, Benjamin Robinson, Cornelius Katona, Anne-Kathrin Fett, and Sukhi Shergill. 2019. "When trust is lost: the impact of interpersonal trauma on social interactions." *Psychological Medicine* 49 (6): 1041-1046.

Blattman, Christopher. 2009. "From Violence to Voting: War and Political Participation in Uganda." *American Political Science Review* (Cambridge University Press (CUP)) 103: 231–247.

Bomyea, Jessica, Alyson Johnson, and Ariel J. Lang. 2016. "Information Processing in PTSD: Evidence for Biased Attentional, Interpretation, and Memory Processes." *Psychopathology Review* a4: 218–243.

Bonanno, George A., and John T. Jost. 2006. "Conservative shift among high-exposure survivors of the September 11th terrorist attacks." *Basic and Applied Social Psychology* 28 (4): 311-323.

Camarena, Kara Ross, and Nils Hägerdal. 2020. "When do displaced persons return? Migration among Christians in Mount Lebanon." *American Journal of Political Science* 64 (2): 223- 239.

Canetti, Daphna, Brian J. Hall, Carmit Rapaport, and Carly Wayne. 2013. "Exposure to Political Violence and Political Extremism." *European Psychologist* 18: 263–272.

Canetti-Nisim, Daphna, Eran Halperin, Keren Sharvit, and Stevan E. Hobfoll. 2009. "A New Stress-Based Model of Political Extremism Personal Exposure to Terrorism, Psychological Distress, and Exclusionist Political Attitudes." *Journal of Conflict Resolution* 53 (3): 363-389.

Canevello, Amy, Jonathan Hall, and James Igoe Walsh. 2021. "Empathy-mediated altruism in intergroup contexts: The roles of posttraumatic stress and posttraumatic growth." *Emotion.*

Chiang, Chun-Fang, and Brian Knight. 2011. "Media bias and influence: Evidence from newspaper endorsements." *Review of Economic Studies* 78 (3): 795-820.

Cisler, Josh M., Keith Bush, J. Scott Steele, Jennifer K. Lenow, Sonet Smitherman, and Clinton D. Kilts. 2015. "Brain and behavioral evidence for altered social learning mechanisms among women with assault-related posttraumatic stress disorder." *Journal of Psychiatric Research* 63 (1): 75-83.

Clifford, Scott, and Jennifer Jerit. 2018. "Disgust, anxiety, and political learning in the face of threat." *American Journal of Political Science* 62 (2): 266-279.

Couture, Jérôme, and Sandra Breux. 2017. "The Differentiated Effects of Health on Political Participation." *European Journal of Public Health* 27 (4): 599-604.

Druckman, James N., and Rose McDermott. 2008. "Emotion and the framing of risky choice." *Political Behavior* 30 (3): 297-321.

Ghosn, Faten, Tiffany S. Chu, Miranda Simon, Alex Braithwaite, Michael Frith, and Joanna Jandali. 2021. "The Journey Home: Violence, Anchoring, and Refugee Decisions to Return." *American Political Science Review* 1–17.

Guillory, Jimmeka J., and Lisa Geraci. 2013. "Correcting erroneous inferences in memory: The

role of source credibility." *Journal of Applied Research in Memory and Cognition* 2: 201–209.

Hoogeveen, Johannes G., Mariacristina Rossi, and Dario Sansone. 2018. "Leaving, Staying or Coming Back? Migration Decisions During the Northern Mali Conflict." *The Journal of Development Studies* 55: 2089–2105.

Huddy, Leonie, Stanley Feldman, Charles Taber, and Gallya Lahav. 2005. "Threat, Anxiety, and Support of Antiterrorism Policies." *American Journal of Political Science* 49 (3): 593- 608.

Ibrahim, Hawkar, Verena Ertl, Claudia Catani, Azad Ali Ismail, and Frank Neuner. 2018. "The validity of Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5) as screening instrument with Kurdish and Arab displaced populations living in the Kurdistan region of Iraq." *BMC Psychiatry* 18.

Jaffe, Anna E, David DiLillo, Michelle Haikalis, and Rita E Dykstra. 2015. "Does it hurt to ask? A meta-analysis of participant reactions to trauma research." *Clinical Psychology Review* 40 (1): 40-56.

Kijewski, Sara, and Markus Freitag. 2018. "Civil War and the Formation of Social Trust in Kosovo: Posttraumatic Growth or War-related Distress?" *Journal of Conflict Resolution* 62 (4): 717-742.

Koser, K. 1997. "Information and Repatriation: The Case of Mozambican Refugees in Malawi." *Journal of Refugee Studies* 10: 1–17.

Kwenin, H. 2016. *Despite Rising Numbers of Returnees, Nearly 1.8 Million People Still Displaced in North-East Nigeria.* International Organization for Migration. https://www.iom.int/news/despite-rising-numbers-returnees-nearly-18-million-people still-displaced-north-east-nigeria.

Landwehr, Claudia, and Christopher Ojeda. 2021. "Democracy and depression: A cross-national study of depressive symptoms and nonparticipation." *American Political Science Review* 115 (1):

323-330.

Lang, Ariel J., and Murray B. Stein. 2005. "An abbreviated PTSD checklist for use as a screening instrument in primary care." *Behaviour Research and Therapy* (Elsevier BV) 43: 585–594.

Lang, Ariel J., Kendall Wilkins, Peter P. Roy-Byrne, Daniela Golinelli, Denise Chavira, Cathy Sherbourne, Raphael D. Rose, et al. 2012. "Abbreviated PTSD Checklist (PCL) as a guide to clinical response." *General Hospital Psychiatry* 34: 332–338.

Lerner, Jennifer S., and Dacher Keltner. 2001. "Fear, anger, and risk." *Journal of Personality and Social Psychology* 81 (1): 146-159.

Lippman, B., and J. Rogge. 2004. "Making return and reintegration sustainable, transparent, and participatory." *Forced Migration Review* 4-5.

Lupia, Arthur, and Matthew D. McCubbins. 1998. *The Democratic Dilemma: Can Citizens Learn What They Need to Know?* New York: Cambridge University Press. MacKuen, Michael, Jennifer Wolak, Luke Keele, and George E Marcus. 2010. "Civic engagements: Resolute partisanship or reflective deliberation." *American Journal of Political Science* 54 (2): 440-458.

Marcus, George E., John L. Sullivan, Elizabeth Theiss-Morse, and Daniel Stevens. 2005. "The emotional foundation of political cognition: The impact of extrinsic anxiety on the formation of political tolerance judgements." *Political Psychology* 26 (6): 949-963.

McNaughton, Neil, and Jeffrey A. Gray. 2000. "Anxiolytic action on the behavioural inhibition system implies multiple types of arousal contribute to anxiety." *Journal of Affective Disorders* 61 (3): 161-176.

Merolla, Jennifer L., and Elizabeth J. Zechmeister. 2018. *Democracy at Risk: How Terrorist Threats Affect the Public.* Chicago: University of Chicago Press.

Mironova, Vera, and Sam Whitt. 2018. "Social Norms after Conflict Exposure and Victimization by Violence: Experimental Evidence from Kosovo." *British Journal of Political Science* 48 (3):

749-765.

Musila, G. 2019. *The spread of anti-NGO measures in Africa: Freedoms under threat.* Freedom House. https://freedomhouse.org/report/special-report/2019/spread-anti-ngo-measures africa-freedoms-under-threat.

Omata, N. 2012. "Repatriation and Integration of Liberian Refugees from Ghana: the Importance of Personal Networks in the Country of Origin." *Journal of Refugee Studies* 26: 265–282. Perloff, Richard M. 2003. *The Dynamics of Persuasion.* London: Routledge. Pfeiffer, Anett, and Thomas Elbert. 2011. "PTSD, depression and anxiety among former abductees in Northern Uganda." *Conflict and Health* 5.

Pluviano, Sara, Sergio Della Sala, and Caroline Watt. 2020. "The effects of source expertise and trustworthiness on recollection: the case of vaccine misinformation." *Cognitive Processing* 21 (2): 321-330.

Potts, Stephanie R., William T. McCuddy, Devi Jayan, and Anthony J. Porcelli. 2019. "To trust, or not to trust? Individual differences in physiological reactivity predict trust under acute stress." *Psychoneuroendocrinology* 100 (1): 75-84.

Schwartz, Stephanie. 2019. "Home, Again: Refugee Return and Post-Conflict Violence in Burundi." *International Security* 44: 110–145.

Thapa, Suraj Bahadur, and Edvard Hauff. 2005. "Psychological distress among displaced persons during an armed conflict in Nepal." *Social Psychiatry and Psychiatric Epidemiology* 40: 672–679.

United Nations High Commissioner for Refugees. 1996. *Voluntary Repatriation: International Protection.* Geneva: United Nations High Commissioner for Refugees.

Valentino, Nicholas A., Antoine J. Banks, Vincent L. Hutchings, and Anne K. Davis. 2009. "Selective Exposure in the Internet Age: The Interaction between Anxiety and Information Utility." *Political Psychology* 30 (4): 59-613.

Valentino, Nicholas A., Vincent L. Hutchings, Antoine J. Banks, and Anne K. Davis. 2008. "Is a worried citizen a good citizen? Emotions, political informaiton seeking, and learning via the Internet." *Political Psychology* 29 (2): 247-273.

van Reemst, Lisa, Tamar F. C. Fischer, and Barbara W. C. Zwirs. 2014. "Social Information Processing Mechanisms and Victimization." *Trauma, Violence, & Abuse* 17: 3–25. Voors, M. J., E. E. Nillesen, P. Verwimp, E. H. Bulte, R. Lensink, and D. P. Van Soest. 2012. "Violent conflict and behavior: A field experiment in Burundi." *American Economic Review* 102 (2): 941-964.

Wagner, Markus, and David Morisi. 2019. "Anxiety, fear, and political decision making." In *Oxford Research Encyclopedia of Politics*, 1-24. New York: Oxford University Press. Weathers, F. W., B. T. Litz, D. S. Herman, J. A. Huska, and T. M. Keane. 1993. *The PTSD Checklist (PCL): Reliability, validity, and diagnostic utility.* Annual Convention of the Internaitonal Society for Traumatic Stress Studies.

Weitz-Shapiro, Rebecca, and Matthew S. Winters. 2016. "Can citizens discern? Information credibility, political sophistication, and the punishment of corruption in Brazil." *Journal of Politics* 79 (1): 60-74.

Wintour, P. 2019. "Nigeria warned it risks humanitarian disaster by expelling charities." *Guardian*, September 29. http://www.theguardian.com/world/2019/sep/29/nigeria warned-it-risks-humanitarian-disaster-by-expelling-charities.

Yehuda, Rachel, Charles W. Hoge, Alexander C. McFarlane, Eric Vermetten, Ruth A. Lanius, Caroline M. Nievergelt, Stevan E. Hobfoll, Karestan C. Koenen, Thomas C. Neylan, and Steven E. Hyman. 2015. "Post-traumatic stress disorder." *Nature Reviews Disease Primers* 1.

Appendix

Contents

Appendix 1: Survey Locations

Table A1: Survey Locations

Name	State	Address	Capacity	Population	Longitude	Latitude	Type	LGA of IDPs
NYSC Camp	Maiduguri	Tashan Kano Motor Park	10,000	4,545	13.11928E	11.8258N	Formal	Marte, Gwaza, Damboa, Bama
Bakassi Camp	Maiduguri	Damboa Road Adjacent Peace FM Maid.	50,000	39,170	13.11508E	11.79045N	Formal	Damboa, Marte , Gwoza, Abadam, Nganzai, Ngala
Gubio Camp	Jere	Gubio Road after Shagari Low-Cost Housing Estate	50,000	30,400	13.07953E	11.90408N	Formal	Kukawa, Marte, Kala Balge, Gubio, Mafa, Dikwa, Ngala, Monguno
CAN IDP	Maiduguri	Wulari Jeruselem near EYN Centre	12,000	7,300	13.13692E	11.84401N	Formal	Gwoza, Chibok and Askira
St. Hillary IDP Camp	Maiduguri	Opposite Highcourt	8,000	5,000	13.13932E	11.78912N	Informal	Gwoza, Chibok, Askira Uba
Mogolis Camp	Maiduguri	Kashim Ibrahim Way near Dandal Police Station	8,000	4,679	13.1491E	11.84575N	Formal	Abadam and Mobar
El-Badawi Camp	Jere	After Muna Motor	30,000	17,950	13.25046E	11.87318N	Formal	Mafa, Dikwa, Marte,

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		Park						Ngala, Kala Balge
Muna 1 IDP Camps	Jere	After Muna Motor Park	20,000	14,120	13.2 531 9E	11.8 6917 N	Inf or m al	Mafa, Dikwa, Marte, Ngala, Kala Balge
Garba Buzu Camp	Maid uguri	Behind 20 Housing Estate, Pompom ari Bypass	8,0 00	5,00 0	13.1 106 7E	11.8 5049 N	Inf or m al	Kukawa, Mobar, Guzammala, Abadam
Teache rs Village Camp	Maid uguri	Mala Kachalla h Bypass	50, 300	31,3 00	13.1 002 7E	11.8 4379 N	Fo rm al	Kukawa, Mobar, Guzammala, Abadam

Figure A1: Map of Surveyed IDP Camps
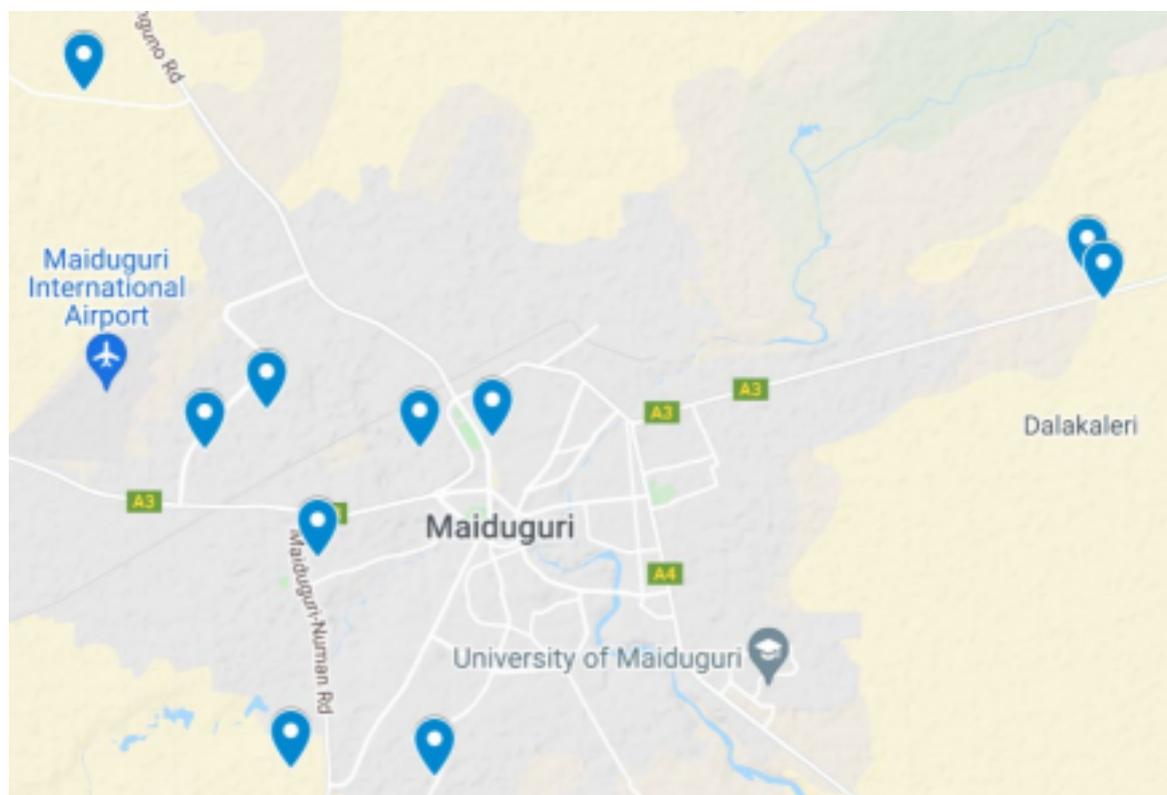
Appendix 2: Survey Instrument

The survey instrument was translated from English to Hausa by a native speaker and expert translator. The translated Hausa version of the instrument was back translated into English by another native Hausa speaker. We compared the back-translated version with the original English version for accuracy. The second translator and three other native speakers from the IDP camps resolved any inconsistencies in semantic and syntactic equivalence of both versions during pre-testing of the instrument.

The Hausa version of survey instrument is in green.

Have you experienced any of the following by A<u>rmed extremist group,</u> <u>civilian JTF </u> or the N<u>igerian army</u>?
Ka/ki taɓa fuskantar da daya daga cikin waɗɗanan ta wurin haduwa da kungiya tsaurin ra'ayin makamai, JTF na farar hula ko kuma Sojojin Nijeriya?

Home destroyed or severely damaged	**By Armed**	jikina	Close family member physically injured	Close family member killed
An rushe mazauni na	I was physically injured	I was forcibly displaced from my home		An kasha dangi nan na kusa
	Na ji rauni a	An tilassa mani na bar mazaunina	Dangina na kusa sun ji rauni	

By Civilian JTF JTF na farar

☐ ☐ ☐ ☐ ☐

extremist group
kungiya tsaurin ra'ayin makamai hula

☐ ☐ ☐ ☐ ☐

By Nigerian Army

☐ ☐ ☐ ☐ ☐

Sojojin Nijeriya

35

Please answer a few questions about yourself.

Don Allah ka/ki amsa yan tambayoyi game da kan ka /ki What is your gender?
Mene ne jinsin ka/ki

○　　Male
na miji

○ Female
ta mace

What is your age (in years)?
Shekarunka/ ki nawa?

○ 18 - 24

○ 25 - 34

○ 35 - 44

○ 45 - 54

○ 55 - 64

○ 65 - 74

○ 75 - 84

○ 85 or older
85 ko fiye

What is your highest level of education you have completed? Mene ne mataki mafi girma da ka/ ki da shi na ilimi?

○　　No formal education
Babu ilimin boko

○ Informal schooling only (including Koranic schooling) Ilimin kur'ani

○ Some primary education
Karatun firamare kadan

○ Primary school completed
Na gama firamare

○ Some intermediate school or some secondary school (high school) Dan matsakaicin makaranta

ko kuma sakandare kadan

○Secondary school/ high school completed
Na gama sakandare

○Post-secondary qualifications, other than university e.g. polytechnic or college diploma Na yi

karatun gaba da sakandare amma ba jami'a ba e.g politeknik, ko kuma difloma ○Some
university
Dan jami'a

○   University completed
Na gama Jami'a

○Post-Graduate education
Karatun gaba da Jami'a

○   Don't know
Ban sani ba

Imagine Nigerian society as arranged on a scale like the one shown below, where the worst off socially and economically are on the left (0) and the best off are on the right (10). Yi tunanin jama'ar Nijeriya a kan sikeli irin na kasa, inda mafi munin zamantakewa da tattalin arziki na habbun hagu (0) sannan mafi kyau na hannun dama (10)

Please move the slider to select the place where you feel you stood **before** the conflict with Boko Haram.
Don Allah ka zamar da shifidan zuwa inda ka/ki ke ganin matsayin Nijeriya kafin rikicin boko haram.

Worst off Best off

0 1 2 3 4 5 6 7 8 9 10

My place:
Matsayina:

Imagine Nigerian society as arranged on a scale like the one shown before, where the worst off socially and economically are on the left (0) and the best off are on the right (10). Yi tunanin jama'ar Nijeriya a kan sikeli irin na kasa, inda mafi munin zamantakewa da tattalin arziki na habbun hagu (0) sannan mafi kyau na hannun dama (10)

Please move the slider to select the place where you feel you stand now.
Don Allah ka zamar da shifidan zuwa inda ka/ki ke matsayin ka a yanzu.

Below is a list of problems and complaints that people sometimes have in response to stressful

life experiences. Please indicate how much you have been bothered by each problem in the last month.

A kasa akwai jerin damuwowi da koke-koke da wasulokatai mutane ke da su dangane da rayuwa mai tsanani da suka fuskanta. Don Allah, ka /kin nuna ta nauyin yadda kowane damuwa ya dame ka a watan da ta wuce.

Extremely Kwarai da gaske	Repeated, disturbing memori	es, thoughts, or Not at all Ko kadan	A little bit Kadan Moderately Matsaka	ici Quite a bit Sosai

images of a stressful experience from the past? ○ ○ ○ ○ ○
Maimaicin tunani masu sa damuwa, ko kuma hotunan abubuwa marasa kyau da ka/ki ka fuskanta a baya.

Feeling very upset when something reminded you of a stressful experience from the past? Bacin rai idan wani abu ya tunashe ka/ki abubuwa marasa kyau da suka faru a baya.

○ ○ ○ ○ ○

Avoid activities or situations because they remind

you of a stressful experience from the past?

abubuwa marasa kyau da suka faru a baya. ○ ○ ○ ○ ○ Gudun ayyuka ko halin da suke

tuna ma ka/ki

Feeling distant or cut off from other people?

ka/ki daga dangantaka da mutane. ○ ○ ○ ○ ○ Jin ka/kin yi nesa da nutane ko kuma an

yanke

Feeling irritable or having angry outbursts?

Jin haushi ko kuma yawan tsawa (ma mutane) ○ ○ ○ ○ ○ Wuyan maida hankali akan abu

○ ○ ○ ○ ○

Having difficulty concentrating?

Participants were randomly assigned to read, or have read to them, one of the following four vignettes:

A. More knowledgeable and more trustworthy
Consider the following hypothetical NGO working with IDPs:

Action Against Violence (AAV) is a registered NGO with an office in Maiduguri. For many years, their staff has lived in and worked with communities experiencing violence in Borno state.

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When talking about this organization, some formerly displaced persons have said that the NGO encourages displaced persons to return home only when they believe that the condition at home is suitable for people to return.

Imagine that the staff of this NGO tells a displaced person like you that the security and general condition in your area of origin have improved in recent months, and that this improvement is expected to be sustained into the future.

Yi la'akari da wannan misalign NGOn da ke aiki da IDPs
Mataki game da tashin hankali (AAV) NGO ce da ke da ofishi a Maiduguri. Ma'aikatan su sun zauna kuma sun yi aiki a cikin kuma tare da mutanen yankunan da ke fuskantar tashin hankalin na shekaru da dama a jihar Borno. Yawancin ra'ayin mutanen Maiduguri shine wannan NGO bata nu na bambanci a ma'amalarsu da mutane. Misali, wasu yankunaa cikin Maiduguri sun ce NGOn na bada rahoton gaskiya akan kisan-kiyashin da yan-tawaye da jami'an gwanati ke yi. Yi tunanin cewa ma'aikacin wanna NGOn ya/ta gaya ma mai gudun hijira irin ka/ki cewa tsaro da yanayin anguwan ka/ki na asali sun dawo a cikin wattanin nan, kuma ana tsammanin ci gaban wannan habakar zata dore na tsawon lokaci nan gaba.

B. More Knowledgeable and Less Trustworty
Consider the following hypothetical NGO working with IDPs:

Action Against Violence (AAV) is a registered NGO with an office in Maiduguri. For many years, their staff has lived in and worked with communities experiencing violence in Borno state. When talking about this organization, some formerly displaced persons have said that the NGO encourages displaced persons to return home only when they believe that the condition at home is suitable for people to return.

Imagine that the staff of this NGO tells a displaced person like you that the security and general condition in your area of origin have improved in recent months, and that this improvement is expected to be sustained into the future.

Yi la'akari da wannan misalign NGOn da ke aiki da IDPs
Mataki game da tashin hankali (AAV) NGO ce da ke da ofishi a Maiduguri. Ma'aikatan su sun zauna kuma sun yi aiki a cikin kuma tare da mutanen yankunan da ke fuskantar tashin hankalin na shekaru da dama a jihar Borno. Amma, yawancin ra'ayin mutanen Maiduguri shine wannan

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NGO tana nuna bambanci a ma'amalarsu da mutane. Misali, basu ba da rahotanin gaskiya ba akan kisan- kyashi da yan tawaye da sojojin gwanati sukayi.

Yi tunanin cewa ma'aikacin wanna NGOn ya/ta gaya ma mai gudun hijira irin ka/ki cewa tsaro da yanayin anguwan ka/ki na asali sun dawo a cikin wattanin nan, kuma ana tsammanin ci gaban wannan habakar zata dore na tsawon lokaci nan gaba.

C. Less Knowledgeable and More Trustworthy
Consider the following hypothetical NGO working with IDPs:

Action Against Violence (AAV) is a registered NGO with an office in Lagos. They recently started operations in Borno and their staff occasionally visit displaced communities in Maiduguri

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from Lagos. When talking about this organization, some formerly displaced persons have said that the NGO encourages displaced persons to return home only when they believe that the condition at home is suitable for people to return.

Imagine that the staff of this NGO tells a displaced person like you that the security and general condition in your area of origin have improved in recent months, and that this improvement is expected to be sustained into the future.

Yi la'akari da wannan misalin NGOn da ke aiki tare da IDPs
Mataki game da tashin hankali (AAV) NGO ce da ke da ofishi a Lagos. Kwannan nan ma'aikatan su sun kawo aikin ziyara a yankunan Maiduguri daga Lagos. Bisa ga ayyukan su a waddansu wazaje, yawancin ra'ayin mutanen wazajen da suka yi aiki cewa NGOn bata nuna banbanci a ma'amalaran su da mutane. Misali, waddansu yankuna a Maiduguri sunce wannan NGOn na bada rahoton gaskiya akan kisan-kiyashin da yan-tawaye da jami'an gwanati ke yi. Yi tunanin cewa ma'aikacin wanna NGOn ya/ta gaya ma mai gudun hijira irin ka/ki cewa tsaro da yanayin anguwan ka/ki na asali sun dawo a cikin wattanin nan, kuma ana tsammanin ci gaban wannan habakar zata dore na tsawon lokaci nan gaba.

D. Less Knowledgeable and Less Trustworthy
Consider the following hypothetical NGO working with IDPs:

Action Against Violence (AAV) is a registered NGO with an office in Lagos. They recently started operations in Borno and their staff occasionally visit displaced communities in Maiduguri from Lagos.

Imagine that the staff of this NGO tells a displaced person like you that the security and general condition in your area of origin have improved in recent months, and that this improvement is expected to be sustained into the future. When talking about this organization, some formerly displaced persons have said that the NGO encourages displaced persons to return home only when they believe that the condition at home is suitable for people to return.

Yi la'akari da wannan misalin NGOn da ke aiki tare da IDPs
Mataki game da tashin hankali (AAV) NGO ce da ke da ofishi a Lagos. Kwannan nan ma'aikatan su sun kawo aikin ziyara a yankunan Maiduguri daga Lagos. Bisa ga ayyukan su a waddansu wazaje, yawancin ra'ayin mutanen wazajen da suka yi aiki cewa NGOn bata nuna banbanci a ma'amalarsus da mutane. Misali, waddansu yankuna a Maiduguri sunce wannan NGOn na bada

rahoton gaskiya akan kisan-kiyashin da yan-tawaye da jami'an gwanati ke yi. Yi tunanin cewa ma'aikacin wanna NGOn ya/ta gaya ma mai gudun hijira irin ka/ki cewa tsaro da yanayin anguwan ka/ki na asali sun dawo a cikin wattanin nan, kuma ana tsammanin ci gaban wannan habakar zata dore na tsawon lokaci nan gaba.

All participants then answered the following question:
How likely do you think that someone like you may consider returning to your place of origin based on the information from this NGO staff?
Tayaya watakila ka/ke tunani wani irin ka/ki zai yi la'akarin komawa mazauninka, bias ga bayyanan wannan ma'aikacin NGOn?

1. Very unlikely
Ina shakka sosai
2. Unlikely
Ina shakka
3. Neutral
Matsakaici
4. Likely
Watakila
5. Very likely
Babu shakka

Appendix 3: Descriptive Statistics

Table A2: Descriptive Statistics

	Observations	Mean	Standard Deviation	Minimum	Maximum
Return Intentions	822	3.43	1.59	1	5
Posttraumatic Stress	822	18.33	6.22	6	30
Exposure to Violence	822	3.61	1.03	1	5
Age	822	3.19	1.32	1	7
Gender	822	1.49	.50	1	2
Education	822	2.90	1.65	1	10
SES Change	822	-2.22	4.72	-10	8

Appendix 4: Descriptive Statistics for Treatment Groups

More Knowledgeable & Less Trustworthy

	Observations	Mean	Standard Deviation	Minimum	Maximum
Return Intentions	215	3.91	1.35	1	5
PTS	215	18.63	6.33	6	30
Exposure to Violence	215	3.65	.99	1	5
Age	215	3.10	1.26	1	7
Gender	215	1.49	.50	1	2
Education	215	2.71	1.56	1	8
SES Change	215	-2.16	4.70	-10	8

More Knowledgeable & Less Trustworthy

	Observations	Mean	Standard Deviation	Minimum	Maximum
Return Intentions	211	3.00	1.69	1	5
PTS	211	18.11	6.27	6	30
Exposure to Violence	211	3.57	1.06	1	5
Age	211	3.34	1.40	1	7
Gender	211	1.47	.50	1	2
Education	211	2.97	1.75	1	10
SES Change	211	-2.26	4.61	-10	7

Less Knowledgeable & More Trustworthy

	Observations	Mean	Standard Deviation	Minimum	Maximum
Return Intentions	195	3.84	1.41	1	5
PTS	195	18.22	6.37	6	30
Exposure to Violence	195	3.54	1.07	1	5
Age	195	3.16	1.36	1	7
Gender	195	1.50	.50	1	2
Education	195	2.91	1.63	1	8
SES Change	195	-2.18	4.85	-9	8

Less Knowledgeable & Less Untrustworthy

	Observations	Mean	Standard Deviation	Minimum	Maximum
Return Intentions	201	2.96	1.65	1	5
PTS	201	18.36	5.94	7	30
Exposure to Violence	201	3.69	.99	1	5
Age	201	3.18	1.27	1	7
Gender	201	1.48	.50	1	2
Education	201	3	1.66	1	7
SES Change	201	-2.27	4.74	-9	8

Appendix 5: Multinomial Logistic Regression of Treatment Condition Assignment

	More Knowledgeable & More Trustworthy	More Knowledgeable & Less Trustworthy	Less Knowledgeable & More Trustworthy
PTS	0.01	-0.00	0.00
	(0.02)	(0.02)	(0.02)
Exposure to Violence	-0.02	-0.10	-0.13
	(0.10)	(0.10)	(0.10)
Age	-0.07	0.09	-0.02
	(0.08)	(0.08)	(0.08)
Gender	-0.04	0.01	0.07
	(0.20)	(0.20)	(0.21)
Education	-0.12*	0.00	-0.02
	(0.06)	(0.06)	(0.06)
SES Change	0.00	-0.00	-0.00
	(0.02)	(0.02)	(0.02)
Constant	0.62	0.15	0.46
	(0.64)	(0.64)	(0.65)
Observations	822	822	822

Note: Standard errors in parentheses. Less knowledgeable and less trustworthy is the base category.

Appendix 6: Ordered Logistic Regression Results

<u>5 6 7 8</u>
More Knowledgeable & More Trustworthy 1.04** 1.04** 1.11** 3.16** (0.18) (0.18) (0.18) (0.60)
More Knowledgeable & Less Trustworthy 0.05 0.05 0.11 0.60 (0.18) (0.18) (0.18) (0.59)
Less Knowledgeable & More Trustworthy 0.99** 0.99** 1.08** 2.28** (0.18) (0.18) (0.19) (0.60)
Posttraumatic Stress 0.02* 0.01 0.07** (0.01) (0.01) (0.02)
More Knowledgeable & More Trustworthy*PTS -0.11** (0.03)
More Knowledgeable & Less Trustworthy*PTS -0.03 (0.03)
Less Knowledgeable & More Trustworthy*PTS -0.07* (0.03)
Exposure to Violence 0.26** 0.26** (0.07) (0.07)
Age -0.00 -0.02 (0.05) (0.05)
Gender 0.00 -0.02 (0.13) (0.13)
Education 0.10* 0.09* (0.04) (0.04)
SES Change 0.08** 0.09** (0.01) (0.01)
Cut 1 -0.82** -0.39 0.43 1.28* (0.14) (0.24) (0.44) (0.57)
Cut 2 -0.26 0.17 1.01* 1.86** (0.13) (0.23) (0.44) (0.57)
Cut 3 0.20 0.62** 1.49** 2.35** (0.13) (0.24) (0.44) (0.57)
Cut 4 1.05** 1.48** 2.40** 3.28** (0.14) (0.24) (0.44) (0.58)

<u>Observations 822 822 822 822</u> Note: Cell entries are odds ratios. Robust standard errors in parentheses. Excluded category for treatment is less knowledgeable and less trustworthy condition. ** p < 0.01, * p < 0.05.

Appendix 7: Exposure to Violence

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More Knowledgeable & More Trustworthy 1.96** (0.59)
More Knowledgeable & Less Trustworthy 0.40 (0.55)
Less Knowledgeable & More Trustworthy 1.71** (0.56)
Exposure to Violence 0.33 (0.11)**
More Knowledgeable & More Trustworthy*Exposure to Violence -0.27 (0.15)
More Knowledgeable & Less Trustworthy* Exposure to Violence -0.09 (0.15)
Less Knowledgeable & More Trustworthy* Exposure to Violence -0.22 (0.15)
PTS 0.01 (0.01)
Age -0.02 (0.04)
Gender -0.01 (0.11)
Education 0.08* (0.03)
SES Change 0.07** (0.01)
Constant 1.51** (0.49)

Observations 822 <u>R-squared 0.15</u> Note: Robust standard errors in parentheses. Excluded category for treatment is the less knowledgeable and less trustworthy condition. ** p < 0.01, * p < 0.05.

Figure A2: Marginal Effects of Exposure to Violence on Information