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THE EFFECTS OF NEIGHBORHOOD SOCIAL ENVIRONMENT ON MENTAL HEALTH AND PSYCHOSOCIAL WELLBEING IN THE AFTERMATH OF CONFLICT

Social Inquiry

Cordaid · BUILDING FLOURISHING COMMUNITIES

CONTENTS

EXECUTIVE SUMMARY

This study carried out in conjunction with Cordaid, through its Integrating Mental Health and Psychosocial Support Services (MHPSS) Across Cordaid Thematics (IMPACT) initiative and Social Inquiry, seeks to explore the effect neighborhood- or street-level physical, social, and institutional factors have on individual mental health and psychosocial outcomes in the aftermath of conflict, as internally displaced persons (IDPs) return home to rebuild their lives and communities. Such exploration is based on an understanding that both psychosocial wellbeing and socio-ecological factors (that is, the environment in which people live) affect the prospects for durable reintegration and in turn long-term peace and reconciliation in post-conflict settings. Unpacking these relationships helps contribute empirical evidence to broader policy debates and proposed interventions on supporting psychosocial wellbeing and integrating such care into the achievement of durable reintegration, peace, and reconciliation.

Drawing primarily on original data collected from 765 residents of Baiji, a mid-sized city in Salah al-Din Governorate in Iraq particularly affected by the ISIL[1] conflict (2014-17), where Cordaid supports the delivery of mental health and psychosocial support services, analysis and findings here highlight not only individual factors that influence psychosocial wellbeing, but the protective effects of street-level social environment on this outcome as well.

At the individual-level, cumulative conflict exposure, being less well-off than prior to the conflict, identifying as female, and having displaced into a camp setting are all correlated with more negative mental health and psychosocial outcomes than the average. Critically, at the street-level, this analysis consistently finds that neighborhood social environment linked to collective social cohesion, institutional trust, and public participation, rather than collective material surroundings such as wealth, physical integrity, or safety, do matter for the mental health and psychosocial outcomes of its residents, in line with other studies. Positive social environments at the street-level act as buffers to protect individual psychosocial wellbeing from shocks in general and moderate the effects of previous conflict exposure on psychosocial wellbeing upon return. Furthermore, there seems to be a threshold of social environment, particularly institutional trust and social cohesion, above which additional incremental improvements have less effect on individual mental health and psychosocial outcomes.
The same does not hold as firmly for public participation, indicating that local civic engagement is particularly essential in general for better mental health and psychosocial outcomes. In other words, there is likely never too much public participation.

Despite differences in the physical and social environments of the streets in this study, nearly all residents felt high levels of belonging and pride in their neighborhoods and expressed no plans to leave Baiji. But, at the same time, nearly all felt neglected and unacknowledged by the state. The polarized view residents all seem to have (high belonging but also high sense of marginalization) makes determining their levels of reintegration difficult, because they feel this way regardless of gender, socio-economic status, or conflict experience. What this points to is that reintegration, and by extension long-term peace, is particularly complicated and may instead need to be seen as a political process involving complex, often intertwined claims, including for redress and recognition as equal citizens within their communities. Thus, working toward positive social environments (understanding this as not only as person-to-person but also person-to-state) may not only improve psychosocial wellbeing, but may also contribute to the process of collective claim-seeking embedded within both reintegration and peacebuilding.

Bearing all of this in mind, the following should be considered for improving psychosocial wellbeing and integrating such care into strategies to promote durable reintegration, peace, and reconciliation:

■ Efforts to generate social cohesion, institutional trust, and/or public participation at the street-level should be central to programming on mental health and psychosocial support and durable reintegration. Producing a positive social environment is a potentially cost-effective, high-impact approach both to psychosocial wellbeing and the reintegration process, which in turn serves to lay the basis for long-term peace.

■ Since improving a street's social environment from low to medium has more impactful effects on individual residents' psychosocial wellbeing than improving a social environment from medium to high, interventions should prioritize those areas in which institutional trust and cohesion, in particular are lowest, as the relative gains are likely to be greatest. This means greater implementation across an urban area covering specific neighborhoods with deficits in their social environments.

■ Neighborhood social ecology, rather than collective material surroundings such as wealth, physical integrity or safety, matters for the mental health and psychosocial outcomes of its residents. These findings lend greater credence to both donors and national governments that prioritizing investments in social cohesion, institutional trust, and participation in the aftermath of conflict is as important as physical infrastructure and livelihoods support given that the former are likely to have significant positive effects on wellbeing and negative effects on conflict recurrence, which in turn make the latter more possible and sustainable and vice versa.

■ Institutional trust is particularly low within the context of this study, with the particular exception of the community police. Here they appear to serve as liaisons between respondents and security actors to better raise citizens' concerns and help foster dialogue and trust between the two. This dynamic may be worth leveraging to better support the transformative role community policing in building further bridges between residents and local authorities (beyond the security sector), facilitating better cohesion between residents, and in working to help de-stigmatize needing and accessing mental health and psychosocial care.

■ Finally, because women tend to report worse mental health and psychosocial outcomes and men may under-report them, gender analysis and a gender-transformative approach should be central to programming at the intersection of wellbeing and social environment.

1. INTRODUCTION

The growing recognition of the collective impact that conflict, violence, and disaster have on communities[2] has increasingly put focus on the fact that individual wellbeing is strongly dependent on the broader social, institutional, and cultural systems to which a person is a part.[3] In other words, the characteristics of a place, either before or after a shock, may have an effect on mental health and psychosocial outcomes in general. Empirical studies on this, broadly speaking, have tended to focus on urban violence or natural disasters, where social cohesion[4] and institutional failures,[5] respectively, have contributed to moderating or exacerbating the impact of exposure to stressful events on psychosocial wellbeing.

Such studies in conflict contexts have emerged in recent decades and have found that socioecological factors affect individual dynamics: mental health among former child soldiers,[6] neighborhood resistance to violence,[7] and levels of belonging and acceptance internally displaced persons (IDPs) feel to their hosting locations,[8] among others. Having a better understanding of these factors in post-conflict settings is critical as recent analysis indicates that the burden of mental health disorders among conflict-affected populations is not only high, but higher than previously estimated.[9]

In an effort to further contribute to the evidence base in this regard, this study, carried out in conjunction with Cordaid, through its Integrating Mental Health and Psychosocial Support Services (MHPSS) Across Cordaid Thematics (IMPACT) initiative and Social Inquiry, seeks to explore the effect neighborhood- or street-level physical, social, and institutional factors have on individual mental health and psychosocial outcomes in the aftermath of the ISIL conflict in Iraq, as IDPs return home to rebuild their lives and communities. Such exploration is based on the understanding that both psychosocial wellbeing and socioecological factors affect the prospects for long-term peace and reconciliation in post-conflict settings. To this end, the study seeks to empirically test the extent to which there is a relationship between such communal factors and individual mental health and psychosocial outcomes, whether such factors moderate the impact of conflict exposure on said outcomes, and the extent to which improving the level of these factors influences outcomes—among the now returned urban residents of Baiji in Salah al-Din Governorate. Unpacking these relationships will enable broader policy debate and proposed intervention on supporting psychosocial wellbeing and integrating such care into the achievement of durable reintegration, peace, and reconciliation.

2. METHODS

2.1 Research design

This study draws upon an original dataset collected among residents of Baiji, a mid-sized city in Salah al-Din Governorate in Iraq, where Cordaid supports the delivery of mental health and psychosocial support services. The city and its predominantly Sunni Arab residents experienced mass population displacement, grave human rights violations, and particularly severe residential, civilian, and commercial infrastructure destruction as a result of the ISIL conflict (2014-17). Despite these collective shocks, there is diversity in what residents of Baiji experienced during and after the ISIL conflict, in terms of triggers for displacement, human and material losses, social and economic ruptures, and reasons for returning, among others. Upon return, residents also face different social and material conditions, depending on where they reside. These multiple dynamics make Baiji a particularly illuminating post-conflict context in which to explore the effect individual and collective factors have on residents' mental health and psychosocial outcomes as they seek to reintegrate into their places of origin.

Quantitative data collection was preceded by 13 qualitative key informant interviews conducted with local Baiji authorities, community leaders, and residents to gain greater insight into and first-person information on the conflict and post-conflict dynamics of the city. This data served to better contextualize and validate survey questions, particularly when adapting scales for this context. Follow-up discussion also took place with residents and field team members to further validate findings after data collection as well. This data is incorporated where relevant into the findings presented in the following sections.

2.2 Empirical strategy

The main purpose of the original dataset generated is to conduct multivariate regression analysis to identify which factors play a role, and to what degree, in individual mental health and psychosocial outcomes. The focus here is not only on the impact of household or personal factors on residents' psychosocial wellbeing, but that of the characteristics of their immediate environment (i.e., the streets they live on) as well. As such, an innovative characteristic of this analysis is that it incorporates multilevel modeling,[10] combining factors at the individual level as well as their aggregation at the street level. These two levels of variables are defined as follows: individual-level factors correspond to household characteristics and the personal views and experiences of each respondent; and street-level factors are constructed through aggregating and averaging individual responses per street as assigned as contextual variables to the respondents in that particular street.

2.3 Data collection and sampling strategy

This study entailed conducting an original survey of 765 residents of Baiji, administered by an experienced team of local field researchers in November 2020 using KoboToolBox. The enumeration team comprised five members, all of whom are themselves residents of the city, with a purposeful overrepresentation of women (three to two). This gender configuration was to ensure not only women's participation in the study but also greater reporting of psychosocial data from men, who by experience in this context, in general, feel more comfortable sharing information of this nature to female enumerators.

Because the study sought to undertake multilevel analysis that included residents' immediate environment, streets were sampled first and then the people residing within them. Thirty residential streets across Baiji's 11 urban areas were selected utilizing a grid system (i.e., those streets on the map where the axis of the overlaid grid crossed served as study data points). This allowed for coverage of streets across the whole urban landscape, ensuring a diversity of both individual and environmental conditions. GPS coordinates of the selected streets were shared with the enumeration teams ahead of fieldwork each day, and they would then collect data from each household located on each of their respective target streets with the aim of obtaining a full representation of houses on each street. Within the sampled households, one individual was randomly selected to take part in the study without limiting participation to heads of household, thus generating a sample statistically representative of the overall city's population.

For additional verification, teams also reported on street characteristics in terms of its physical state as well as how many houses were occupied (and thus approached), destroyed, or vacant. Respondents were then clustered by street for analysis.

Figure 1. Distribution of streets sampled in Baiji Center and respondents therein

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The final sample is relatively gender-balanced (57% men and 43% women), with the majority (64%) of respondents falling between 31 to 50 years of age with a plurality having completed primary education (33%) and some level of secondary education (37%). The refusal rate for the survey stands at 4% after enumerators read a consent excerpt to prospective respondents.

Upon completion of the survey, enumerators offered to refer respondents to Cordaid's mental health and psychosocial support services, either by providing contact details or calling directly on behalf of the respondent, if they consented to this. Among the sample, 14% accepted the offer for referral. This low rate is attributed to the stigma that is attached to discussions of individual mental health and psychosocial needs. While qualitatively, residents, community leaders, and authorities alike recognize the psychosocial effects the conflict and its aftermath have had on Baiji in general and the need to address them, the topic is still sensitive for people at an individual level with respect to their own potential struggles.

Limitations

First, given the research design, it is not possible to establish causal relationships (e.g., causation between different street-level variables), but rather correlations. This is still informative and lays the basis to conduct longitudinal or panel data studies that can do so. Second, some of the streets selected in the sample could not be accessed by our field teams, either because of security forces' restriction or because the teams did not feel particularly safe to be in them due to security concerns. Thus, the sample while not biased is not fully representative of all streets in the city as, for example, some of the potentially more unsafe parts of the city are not covered. Third, Baiji is akin to other ethnoreligiously homogenous, urban areas affected by the ISIL conflict in Iraq, making findings here generalizable to these areas and other similarly configured urban conflict contexts that have experienced mass displacement. However, it is expected that findings here will have more limited extrapolation to urban settings with significant ethnoreligious diversity and/or disputed governance status, and rural settings overall. Finally, findings here may also be influenced to some extent by concerns over COVID-19 as well as the measures taken to curb transmission. Data collection took place in accordance with public health regulations after

restrictions had already eased. For their own safety and that of respondents, field teams were provided with personal protective equipment (masks and hand sanitizer), and where possible, they conducted surveys outdoors or in well-ventilated spaces (e.g., respondents' yards, rooms with open windows, etc.)

2.4 Measures

This section presents the key individual and community factors used in the empirical analysis and explains how they are measured quantitatively. An extensive survey tool was developed for this study consisting of nine modules on respondent demographics, displacement and return experiences, physical/material wellbeing, governance and participation, protection and security, social cohesion, reconciliation and accountability, population returns, and mental health and psychosocial wellbeing.

The measures detailed below focus on those used for the multivariate regression analysis presented in this study, which allows for the determination of whether or not there is any relationship between an outcome and a series of explanatory factors. Because the focus here is on testing whether mental health and psychosocial outcomes are affected by individual and collective factors, the next subsections define first how mental health and psychosocial outcomes (i.e., the dependent variables) are measured, and second, how individual and collective factors (i.e., the explanatory variables) are measured. In-depth explorations of other components of the survey are featured in supplementary briefs to this report.

2.4.1. Dependent variables: mental health and psychosocial wellbeing measures

The scales presented below serve as four proxies for individual mental health and psychosocial outcomes. Both clinical and non-clinical instruments were used to ensure the robustness of findings, as follows:

- Post-Traumatic Stress Disorder Checklist for Diagnostic and Statistical Manual for Mental Disorders-5 (PCL-5) is a 20-item scale that captures symptoms and their frequency in the past month resulting from conflict exposure, rated from 0 (not at all) to 4 (extremely).[11] Possible score range is 0 to 80.
- Patient Health Questionnaire-9 (PHQ-9) is a nine-item scale that captures symptoms for depression and their frequency in the last two weeks, rated from 0 (not at all) to 3 (nearly every day).[12] Possible score range is 0 to 27.
- Emotional Climate Scale is a 10-item scale that assesses the perception of a negative or positive emotional climate in a given context.[13] In the version adapted for this study, participants were asked to "evaluate the current state of your neighborhood," indicating their degree of agreement with a series of statements from 1 (not at all) to 4 (completely). An example of a statement is "The social climate in this neighborhood is of hope, hopeful."
- An overall mental health and psychosocial wellbeing index was constructed using the standardized scores of the above three scales. The estimated Cronbach α (a measure of internal reliability) for this index is .74.

2.4.2. Explanatory variables

Individual measures
Respondent gender, age group, education level, role in the household, camp or out-of-camp displacement experience, current physical state of housing, and change in household socioeconomic status pre- and post-conflict as self-reported demographic and personal characteristics were included in the analysis.

Finally, respondent ISIL-conflict exposure (2014-2020) was captured by adapting the Life Event Checklist for Diagnostic and Statistical Manual for Mental Disorders-5 (LEC-5)[14] to a 10-item scale of the most frequently reported conflict-related events that residents may have been exposed to. An index of self-reported cumulative exposure to conflict was created by summing responses ("it happened to me personally" or "I witnessed it happen to someone else"). This scale was administered in the survey ahead of the PCL-5.

Street-level measures

Street-level measures of respondents' immediate environment were divided into two categories: social environment and physical environment. Each category comprised three indices. The indices generated were standardized per respondent, and then each was aggregated and averaged to the street level, according to the street where respondents were interviewed, in order to produce street-level indices.

a) Social environment (social cohesion, trust in institutions, public participation)
- The *street-level social cohesion index* comes from the social cohesion and trust component (α = .68) of the Neighborhood Collective Efficacy Scale,[15] which includes five items rated from 0 (strongly disagree) to 3 (strongly agree). An example of an item is "This is a close-knit street."
- The *street-level trust in institutions index* comes from a six-item scale (α = .80) that was developed to assess how much respondents trust that formal and informal institutional actors work for the best interests of residents, rated from 0 (not at all) to 3 (completely).
- The *street-level public participation index* comes from a two-item scale (α = .68) that was adapted from the Iraq Knowledge Network Survey[16] on respondent engagement in public affairs and in civic or community activities, with responses such as "I have done it," "I have not but would," and "I have not done it and would not do it."

b) Physical environment (socioeconomic status, destruction, safety)
- The *street-level socioeconomic status index* comes from the current self-reported purchasing power of residents via a five-option scale, ranging from being able to buy whatever they want to not having enough money for food.
- The *street-level physical destruction index* comes from an eight-item scale (α = .55) that was developed to assess the level of residential and public infrastructure destruction or restoration on the respondent's street, rated from 0 (not at all) to 3 (fully).
- The *street-level safety index* comes from a three-item scale (α = .66) that was developed to assess level of personal safety, comfort moving around day and night, and crime on the respondent's street, rated from 0 (strongly disagree) to 3 (strongly agree).

3. CONTEXT

3.1 Baiji before the ISIL conflict

Situated on the road connecting Baghdad and Mosul, Baiji in Salah al-Din Governorate was integral to Iraq's economy. It was home to the largest oil refinery in the country as well as numerous auxiliary state-run factories and industries employing the bulk of the population from the surrounding areas and elsewhere. What this meant for the tribally configured, majority Sunni Arab inhabitants was a priority of place in the government, particularly in security posts and in relation to the oil sector, and with this an accumulation of wealth and influence.

The factors that made Baiji influential under the previous regime are the same ones that led to its reversal of fortune in the aftermath of the Iraq War in 2003. A significant proportion of households in the city were heavily impacted by the ensuing de-Baathification process, which purged those associated with the Baath party from their posts, limiting income sources for many and seen as a vengeful policy by those affected.[17] Out of this decline in socioeconomic status and among the perception of Sunni Arab marginalization and punishment by the new Shia-dominated central government, emerged extreme violence and two years (2006-2008) of sectarian warfare that also affected Baiji. Given its refinery and economic significance, Baiji was a particular target for anti-government and extremist armed groups. Taken together, this also sparked divisions among tribes.[18]

This history helps to explain some of the broader dynamics at play in Baiji ahead of the ISIL conflict. In particular, data from 2012 reveals the area had one of the highest levels of human capital in the country as well as a high rate of migration from elsewhere in Iraq, due in part to its refinery and related factories.[19] At the same time, as a result of post-2003 policies and ensuing instability, it also had high perceptions of insecurity; moderately high levels of mistrust between residents, poverty, and public participation; and one of the highest rates of inequality among its residents in the country.[20]

Photo DVIDSHUB

3.2 Baiji during and immediately after the ISIL conflict

ISIL manipulated these different fault lines when it took the city in 2014. Iraqi Security Forces, comprising the Counter-Terrorism Service, Federal Police, both Sunni and Shia Popular Mobilization Units (PMUs), and local police, with support of U.S.-led Coalition airstrikes, retook Baiji in 2015.[21] The battle for the city and its aftermath resulted in widespread, near-complete destruction of residential areas, infrastructure, and the oil refinery and other factories.[22] The arrival of ISIL and the ensuing violence and military operations that followed also resulted in widespread displacement of Baiji's residents to other parts of Iraq. Despite being retaken in 2015, displaced families did not begin to return to the city in earnest until 2017 as security forces prevented these movements citing safety concerns and heavy damage to infrastructure. While location-specific data with regard to population figures are not available, at the district level over the course of the conflict approximately 142,758 residents were displaced, of which 114,414 have returned, for an 80% return rate.[23] The estimated return rates for the Baiji urban area are lower, with most locations reporting roughly half to less than half of their pre-conflict populations back.[24]

4. FINDINGS

4.1 Baiji at present

The displacement and return trends described above are also found among the Baiji residents in this sample. The overwhelming majority (97%) report having been displaced in 2014, with slightly over two-thirds returning to the city between 2018 and 2019. Qualitative interviews with residents and authorities corroborate that roughly 40% of the pre-conflict population has yet to return, while also noting a significant loss of life as a result of the conflict. These interlocutors also noted that the return process requires security clearance from Baiji authorities. Community policing units were in part established (via a dedicated division within the Ministry of Interior) to help facilitate this process, serving as liaisons between security actors and community members. They also indicated that community and tribal mechanisms were also implemented at the onset of return to the city to ease initial tensions between residents as they came back to such destruction and sought to cast blame on one another for what had happened. This latter point relates to concern that people with perceived ISIL affiliation in some capacity were granted security clearance and allowed to return when they should not have been. It is reported that community and tribal efforts combined with the passage of time helped to improve community relations as people adjusted to their new conditions. This being said, among residents surveyed 17% still feel that some people in their neighborhoods should not have been allowed to return.

Residents' stated reason for return, by and large, relates to not being able to financially afford remaining displaced (70%). Linked to this, the majority of respondents (79%) reported owning the homes they currently lived in, with almost two-thirds indicating their homes were damaged or destroyed but now repaired. With respect to physical destruction more broadly, Baiji residents surveyed indicated that they live on streets where partial house destruction remains (62%), water provision is mostly restored (66%), and electricity provision is partially (47%) to mostly (46%) restored; however, they are partially (62%) to not at all (34%) well-lit at night.

The majority (64%) of residents surveyed fear a recurrence of ISIL or similar events in the city, and further reported not leaving their homes unless it was absolutely necessary to do so (56%). This was not attributed to COVID-19 and related restrictions, which had been lifted at the time of data collection; but rather, as community member key informants explained, people tend to limit their movements, particularly at night because there is still concern over ISIL attacks coming from areas surrounding the urban center. Beyond these fears, the most predominant social threats facing the city now include unemployment (94%), followed by public health concerns related to COVID-19 (40%) and child labor (30%). The increasing prominence of child labor is reported to be relatively new to the city and was also raised by a number of key informants as a pressing concern in the aftermath of conflict in part due to households' economic needs. Furthermore, Baiji residents, by and large, report significant levels of marginalization and neglect within their neighborhoods, particularly by authorities (Figure 2).
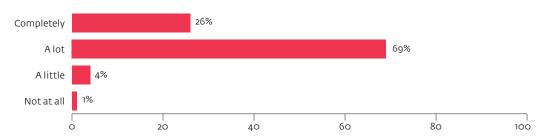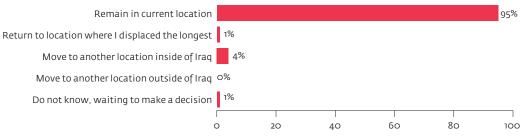
Figure 2. Baiji residents' perceived feeling of neighborhood marginalization or neglect

Despite these conditions and concerns, all residents surveyed feel high levels of both belonging to the city and pride in their neighborhoods. Residents also plan to remain where they currently live across all indicators asked in this regard (Figure 3).
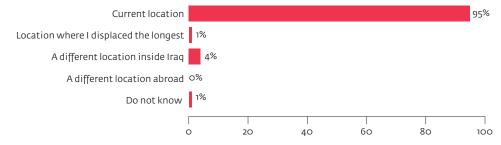
Figure 3. Baiji residents' perceived permanence of return

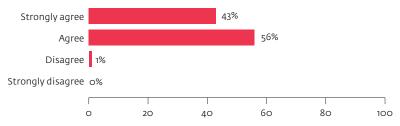**What is your household's current movement intentions in the next six months?**

Remain in current location — 95%
Return to location where I displaced the longest — 1%
Move to another location inside of Iraq — 4%
Move to another location outside of Iraq — 0%
Do not know, waiting to make a decision — 1%

What is your preferred location to live in the forseeable future?

Current location — 95%
Location where I displaced the longest — 1%
A different location inside Iraq — 4%
A different location abroad — 0%
Do not know — 1%

I would like to be living here (in current location) in three years' time.

Strongly agree — 43%
Agree — 56%
Disagree — 1%
Strongly disagree — 0%

It is against this backdrop that individual and street-level factors that may influence mental health and psychosocial outcomes among returned Baiji residents are explored below.

4.2 The impact of social environment on mental health and psychosocial outcomes

To empirically uncover what, if any, relationship exists between the social environment and psychosocial wellbeing in a post-conflict context, the dataset generated in this study is used to run a series of multivariate regression models testing different aspects of this relationship. Different factors are added to the analysis to make sure that any observed relationship is valid for any type of individual or neighborhood. As such, this multilevel model includes individual-level variables (mainly demographic characteristics of the respondents) as well as street-level variables (the social and material characteristics of the streets in which respondents live).

This testing is carried out for each of the four dependent variables that serve as proxy measures for mental and psychosocial wellbeing. The main findings are presented below, with the full statistical analysis found in Annex 1.

4.2.1 Individual factors

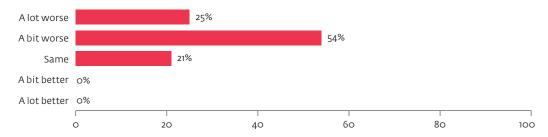The most significant individual-level factor found that has a bearing on mental health and psychosocial outcomes is *cumulative conflict exposure*. In other words, the more exposure a Baiji resident had to conflict, the worse their reported mental health and psychosocial wellbeing across all measures. This is an expected outcome and follows findings from other studies of conflict-affected populations.[25]
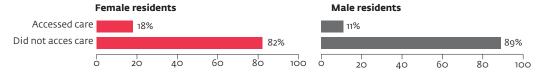
After this, the *change in a household's socioeconomic status* is also significantly correlated with psycho-social wellbeing. Specifically, the worse a Baiji resident's purchasing power is at present as compared to how it was prior to the conflict, the worse their mental health and psychosocial outcomes. Of note, one-quarter of Baiji residents surveyed report their current socioeconomic status is considerably worse now than before (Figure 4).

Figure 4. Household purchasing power now as compared to before the ISIL conflict

Gender is another critical factor in relation to reported mental health and psychosocial out-comes. *Female* residents tend to have more negative outcomes than their male counterparts. In exploring responses further, men and women report similar levels of conflict exposure. They also seek care for mental health and psychosocial needs at the same rate (Figure 5).

Figure 5. Baiji residents who accessed any mental health or psychosocial care in the past 12 months by gender

Yet, women tend to report worse outcomes. This may be attributable to other social factors women face within their communities and a likely higher comfort in reporting conflict exposure as well as the potential under-reporting of men in this regard.[26]

Finally, where residents were previously displaced seems to matter for psychosocial wellbeing. In particular, having been *displaced in a camp* is negatively correlated with mental health and psychosocial outcomes. This is a relatively unexpected finding as previous research among internally displaced populations found the opposite to be true, particularly because IDPs in camps had more access to mental health and psychosocial care.[27] This being said, among Baiji residents sampled, only 6% indicated displacing to a camp setting, primarily within Salah al-Din Governorate. The overwhelming majority displaced to non-camp locations, mainly elsewhere in Salah al-Din, followed by Kirkuk and Erbil governorates.

4.2.2 Street-level factors

In now examining the effect of street-level variables on mental health and psychosocial out-comes, what is found first is that *study respondents tend to report better mental health and psychosocial outcomes upon return to streets that feature a positive social environment, irrespective of their personal exposure to conflict.* In particular, collective social cohesion, collective trust in institutions, and collective public participation are each statistically significant and positively support the psychosocial wellbeing of their residents (Figure 6). Table 1 provides an illustration of what a neighborhood with a positive social environment, as defined here, would look like. Thus, the immediate social environment to which residents return acts as a buffer to stressful life events in general, in the same way that having savings helps a person better absorb and cope with financial shocks.
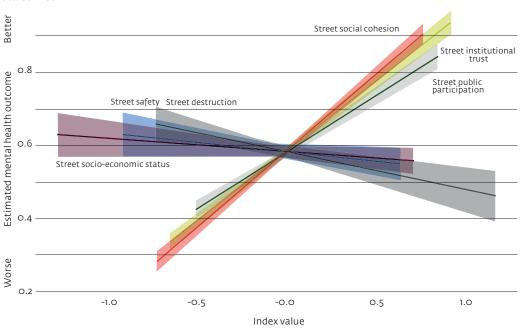
Table 1. Positive social environment in practice

SOCIAL ENVIRONMENT INDICATORS	FEATURES OF A NEIGHBORHOOD WITH A *POSITIVE* SOCIAL ENVIRONMENT
Social cohesion	■ Neighbors trust one another and are willing to help each other. ■ The street is close-knit, where neighbors feel they share similar values and get along with each other.
Trust in institutions	■ Neighbors have confidence that formal authorities, such as central, provincial, and local governments work for the best interest of all residents here. ■ Similarly, they have confidence that informal actors, such as local tribal leaders do the same.
Public participation	■ Neighbors actively participate in public affairs, such as expressing grievances or meeting with authorities and/or in civic activities, such as volunteering or initiating a neighborhood project. ■ When not actively participating in such endeavors, neighbors express their openness to do so (as opposed to being unwilling to participate at all).

This relationship does not seem to hold, one way or another, for the other street-level variables tested, including current socioeconomic status, levels of safety, or the physical state of the street after conflict. In other words, there is no correlation between physical environment and psycho-social wellbeing, and thus they do not directly affect each other. This means that, for instance, similar mental health and psychosocial outcomes, on average, are found among residents in heavily destroyed streets and those in more intact ones.

Figure 6. Relationship between street-level variables and mental health and psychosocial outcomes

Note: Destruction seems to be negatively correlated with mental health and psychosocial outcomes, but this effect fully disappears in the full model. The shading around each line denotes each variable's respective 95% confidence interval.

Next, in taking level of conflict exposure into account, analysis shows that *street-level social environment positively moderates the effect that conflict exposure has on respondent mental health and psycho-social outcomes*. As noted, a core finding across the empirical literature is that psychosocial wellbeing is strongly correlated to individual exposure to stressful events, where more reported exposure is accompanied by more negative outcomes. The neighborhood or street-level social environment can act as a moderator for this relationship. This effect is found here as well. Estimated mental health and psychosocial outcomes follow different trajectories as conflict exposure increases, depending on the social environment the respondent lives in. This holds true for all indicators of social environment, with public participation having the largest significance in this regard.

These different trajectories imply that, while a respondent in a weak social environment who reported high levels of cumulative conflict exposure will tend to have significantly negative mental health and psychosocial outcomes, there is less impact in this regard for a person with the same level of exposure residing on a street with a stronger social environment. Put more formally, each additional conflict event experienced carries a stronger negative effect on psycho-social wellbeing if the person resides on a street with low social cohesion, low trust in institutions, or particularly low public participation than on a street with higher levels of these factors. What this indicates is that exposure to stressful events is felt differently by residents depending on their immediate social environment. On streets with weaker cohesion, institutional trust, or participation, the cumulative conflict "baggage" that an individual carries with them upon their return will tax them at higher rates than those that find a stronger social environment back home.

While positive social environments serve as a buffer in general against negative shocks to psychosocial wellbeing and moderate the impact of conflict exposure in particular, it does not seem to follow that the stronger the environment, the stronger the impact on mental health and psychosocial outcomes. Rather, *the effect of the social environment on psychosocial wellbeing plateaus at a certain level*, indicating that there may be a threshold of collective cohesion, institutional trust, and participation above which additional incremental improvements have less effect on individual mental health and psychosocial outcomes. In particular, more advanced regression models (conducted over the base model in Annex 1) show that there are *diminishing marginal effects* for changes in street-level social environment. That is, improving a street's social environment from low to medium has more impactful effects on individual residents' psychosocial wellbeing than improving a social environment from medium to high.

This plateau effect is most clearly found in relation to collective, street-level institutional trust, where at a certain upper level, no significant changes are estimated on mental health and psychosocial outcomes as overall trust increases. A similar pattern emerges for social cohesion. This implies that small, incremental changes when the baseline is low are considerable with respect to psychosocial wellbeing in relation to these two indicators. The least changing variable in this regard is collective public participation. While it tends to plateau as well, its effect is still significant at all levels of the indicator. These findings, in particular, lend credence to focusing efforts in "socially weaker" neighborhoods in a city as the gains are greater overall while also emphasizing the importance of local civic engagement to positive psychosocial wellbeing in general as well.
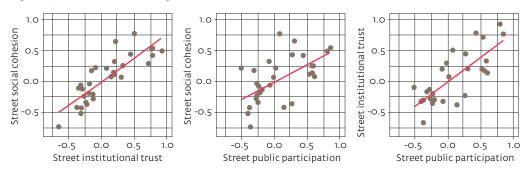
4.3 Hallmarks of positive street-level social environments in context

Having identified the role street-level social environments can play on residents' psychosocial wellbeing, focus will now turn to the various factors that are associated with such environments in particular in Baiji. Given the limitations of the data, only correlation, not causation between different neighborhood variables, can be shown. Furthermore, it is not possible to know whether and to what extent the ISIL conflict has had an effect on these correlations as comparison between street-level factors now to their pre-conflict states cannot be carried out because such granular data from that time does not exist.

Bearing these caveats in mind, the three street-level social environment variables – social cohesion, trust in institutions, and public participation – are strongly correlated to one another, indicating that they reinforce each other (Figure 7), based on additional empirical analysis conducted over the base model in Annex 1. In other words, one variable does not tend to be present on a street without the other two as well. Each of these also seems to be negatively correlated with street-level safety – when safety is low, so too are cohesion, trust in institutions, and participation, as would be expected. No relationship was found between social environment variables and street-level socioeconomic status or physical destruction. Thus, social cohesion, trust institutions, and participation can be high or low in neighborhoods irrespective of their collective wealth or physical integrity.

Figure 7. Correlations among street-level social environment measures

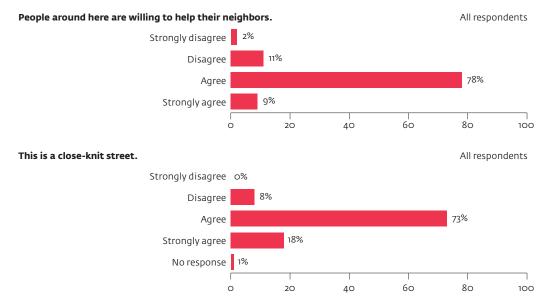Note: Each point in the graphs represent each street in the study sample.

Given these findings, garnering a better understanding of each social environment variable is warranted and thus explored below.

4.3.1 Social cohesion

Of the three street-level indices comprising social environment, social cohesion has the most positive outcomes overall and there is consistency among residents on a given street with regard to their responses, indicating that whatever level of cohesion is felt on a street is done so by all neighbors similarly. Within the index overall, trust in others on the street, the close-knit nature of the street, and that people on the street get along had the highest rates of affirmative responses (Figure 8). Perhaps related to this, the large majority of respondents (79%) are now residing in the same house, and thus on the same street, as they were before the conflict, which may enable the restoration or reaffirmation of pre-conflict ties over time since return.

This tracks to a certain extent with qualitative findings from key informants in Baiji, where some noted that initial tensions and mistrust among residents have subsided over time. These dynamics were found at the earlier stages of return to the city, related to blaming certain families for the causes of conflict.[28] Furthermore, at present there also is a reportedly pervasive sense of acknowledgment between residents of what happened to them. Specifically, there is a sense of having shared a common experience of violence, displacement, and loss. At the same time, some report that pre-existing hostilities (e.g., between tribes) remain but are reportedly in the background as most people are focused on rebuilding their homes and reestablishing their employment conditions.

Figure 8. Disaggregation of Baiji residents' levels of social cohesion

People on this street can be trusted.

All respondents

Strongly disagree	0%
Disagree	4%
Agree	71%
Strongly agree	23%
No response	1%

People on this street generally don't get along with each other.

All respondents

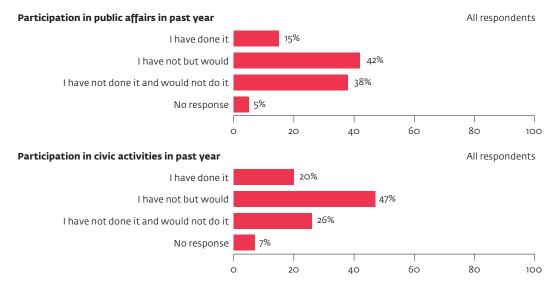| Strongly disagree | 1% |
Disagree	73%
Agree	24%
Strongly agree	2%
No response	1%

People on this street do not share the same values.

All respondents

Strongly disagree	2%
Disagree	68%
Agree	28%
Strongly agree	2%
No response	1%

4.3.2 Public participation

Following social cohesion, street-level public participation has the next most positive outcomes. As noted earlier, this index comprises both engagement in public affairs (e.g., contacting a community leader or authorities, expressing views or grievances in public forums, etc.) and in civic activities (e.g., volunteering in the community, donating to charity or others, initiating neighborhood projects, etc.). Across respondents in the sample, a relatively wide range is found of those who do, would consider, or do not engage in such behaviors (Figure 9). Of note, there seems to be less willingness to participate in public affairs, which tend to relate more to governance, than in more civic-oriented activities, which may have to do with lower levels of institutional trust overall (as will be detailed below).

Figure 9. Disaggregation of Baiji residents' levels of public participation

Participation in public affairs in past year

All respondents

I have done it	15%
I have not but would	42%
I have not done it and would not do it	38%
No response	5%

Participation in civic activities in past year

All respondents

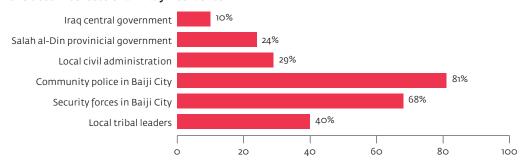| I have done it | 20% |
I have not but would	47%
I have not done it and would not do it	26%
No response	7%

Within the realm of engagement in public affairs, most activities respondents reported being involved in are making demands to relevant actors related to public service provision (specifically, water, electricity, rubble removal, and road repair) as well as participation in conferences on IDP returns and ending injustice, among others. With respect to more civic-oriented activities, respondents most frequently indicated that they provided financial or in-kind support to those in need or in ill health, pooled resources with their neighbors to extend water or electricity supply to the street and participated in volunteer efforts to clean and renovate schools and clean local streets. Qualitative data confirms that these citizen-led, and more often than not youth-led, activities are taking place in some neighborhoods more than others across the city and that they are a particularly positive post-conflict development.

4.3.3 Trust in institutions

Finally, street-level institutional trust is the lowest-performing index of the three that measure collective social environment and is relatively consistent across individual streets in the sample. In order to ascertain an overall level of institutional trust per street sampled in the city, respondents were asked to rate how confident they were in various institutional actors working for the best interests of all Baiji residents. These actors included the central, provincial, and local governments; community police, which are attached to a dedicated division within the Ministry of Interior and comprised of locally constituted units that serve as liaisons between residents and security forces and law enforcement; the security forces themselves, which include Iraqi Security Forces, Counter-Terrorism Service, Federal Police, both local and external (predominantly from Iraq's southern governorates) PMUs, and local police; and finally, local tribal leaders (Figure 10).

Figure 10. Percentage of respondents who are confident institutional actors are working for the best interests of all Baiji residents

On the positive side, it is predominantly the community police (81%) followed by security forces (68%) whom survey respondents most feel work for the best interests of all. With respect to community police, the fact they are comprised of members who are from the city first and their role in raising residents' concerns and seeking to foster dialogue and trust between the community and security and law enforcement actors, second, go a long way to engendering confidence and trust. The picture is a bit more complicated regarding the constellation of security forces in Baiji City. Given the multiplicity of security actors present at the time of data collection, community leaders and residents alike made reference to growing concerns over this militarization and the "hegemony of external PMUs," as one of them put it. Thus, some positive responses may be attributed to concerns over publicly critiquing these forces. At the same time, the increasing localization of the security configuration, growing stability of the overall security situation in the city and easing of movement restrictions reportedly also help in generating greater trust in security actors overall in spite of noted concerns.
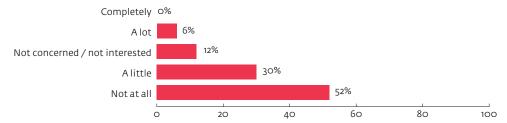
While obvious, what is particularly telling about these findings is that people seem to rightly put trust into institutions whose presence they not only can see but feel are contributing positively to their lives in some way. This serves as an explanation for the progressively worsening levels of trust directed toward informal and formal civilian governance among residents in the sample, even locally configured actors. This is the case with local tribal leaders, where they are reportedly more interested in "politics" than supporting communities. When it comes to the general governance framework, all residents sampled believe that authorities should be responsible for neighborhood reconstruction; however, none report that there has been government action for housing reconstruction and only 5% report government involvement in broader public infrastructure repair. Qualitative findings echo this sentiment as both community leaders and

residents noted that Baiji was deemed a city in distress and eligible for support from the government's Reconstruction Fund. However, this had yet to materialize. Rather, for these residents, the state provided security forces to retake the city but has been absent since then.

Thus, feelings of institutional neglect pervade the data and seem to undermine people's view of state action and their own involvement in public affairs. As noted earlier, 95% of all residents surveyed feel people in their neighborhoods are neglected or marginalized. Furthermore, they are most upset about governance issues related to corruption and neglect, third only to ISIL crimes and lack of justice, respectively. In this regard, a significant proportion of residents surveyed do not feel their suffering is acknowledged by the state at all (Figure 11). While in qualitative interviews, residents and community leaders alike indicated that compensation from the state was required to help families and acknowledge the physical and human losses they have suffered, those residents surveyed overwhelmingly (82%) expressed little to no confidence in authorities being able to repair such losses in this manner[29] nor did they think elections could translate people's expectations into positive change.

Figure 11. Perceived level of central government acknowledgment of Baiji residents' experience of violence and suffering

5. PUTTING THE PIECES TOGETHER

The overall findings of this study of Baiji and its residents provide further empirical evidence for different aspects of addressing the psychosocial wellbeing of post-conflict communities: the relationship between social environments and mental health and psychosocial outcomes in conflict-affected populations; how to better understand durable reintegration of returning IDPs in post-conflict settings; and, finally, considerations for how to best support individual and community outcomes in both regards.

5.1 Street-level protective effects of social environment on psychosocial wellbeing in post-conflict return settings

At the individual-level, cumulative conflict exposure, being less well-off than prior to the conflict, identifying as female, and having displaced into a camp setting are all correlated with negative mental health and psychosocial outcomes. Critically, at the street-level, this analysis consistently finds that neighborhood social ecology, rather than collective material surroundings such as wealth, physical integrity, or safety, do matter for the mental health and psychosocial outcomes of its residents, in line with other studies.[30] Positive social environments at the street-level act as buffers to protect individual psychosocial wellbeing from shocks in general and moderate the effects of previous conflict exposure on psychosocial wellbeing upon return. Furthermore, there seems to be a threshold of social environment, particularly institutional trust and social cohesion, above which additional incremental improvements have less effect on individual mental health and psychosocial outcomes. The same does not hold as firmly for public participation, indicating that local civic engagement is particularly essential in general for better mental health and psychosocial outcomes. In other words, there is likely never too much public participation. The positively reinforcing relationship between the three social environment measures, social cohesion, trust in institutions, and public participation, further confirms the conception of social cohesion more broadly as the relationship not only between citizen groups but citizens and the state and the capacity for collective action.[31]

In examining each measure of the social environment in more detail, levels of social cohesion and public participation are found to be relatively high in the Baiji context, particularly as compared to trust in institutions, which is considerably lower across all streets examined.

As such, despite their own efforts to rebuild or reaffirm social ties and participation, residents report a pervasive sense of state neglect. In other words, there is only so much that communities can do on their own to improve their respective social environments without some positive and impactful involvement from the state.

5.2 Implications for durable reintegration and long-term peace

It is difficult to determine the level to which durable reintegration has taken place among now returned residents of Baiji. If taking into account measures related to belonging and movement intentions, it could be argued that reintegration has occurred as nearly all residents sampled report either high belonging to the city, pride in their neighborhoods, or desire to stay in the location. Findings would be more variable if advancement toward reintegration was instead measured by the progress these residents make (and the provisions the state has put in place) in overcoming key return-related obstacles faced in Baiji. This does not seem quite right either because regardless of individual progress, nearly all residents sampled feel marginalized or neglected, and furthermore, completely unacknowledged by the state in what happened to them. Such high levels of neglect have the potential to instill greater fragility within post-conflict communities, leaving them more susceptible to violence or conflict in the face of further shocks. In this sense then, neither reintegration nor peace would be deemed durable at all.

What this points to is that reintegration, and by extension long-term peace, is particularly complicated and that rather than assessing it through purely individual-level factors alone, it may instead need to be seen as a political process involving complex, often intertwined claims, including for redress of past wrongs and recognition as equal and legitimate members of the local and national socio-political community in which they live.[32] Thus, working toward positive social environments (understanding this as not only as person-to-person but also

person-to-state) may not only improve psychosocial wellbeing, but it may also contribute to the process of collective claim-seeking embedded within both reintegration and peacebuilding, providing additional ways to measure their sustainability.

5.3 Considerations to support individual and community outcomes

Taken together, this work further highlights the importance of moving beyond purely individualized strategies for addressing mental health and psychosocial outcomes in post-conflict settings to exploring the wider social and political context in which they are embedded as well.[33] This is because grappling with these structures may also help to prevent future violence,[34] with the aim of creating environments that enable peaceful contestation, voice, respect for difference, and broadly speaking builds the freedom of both individuals and groups.[35] It also confirms the importance of prioritizing interventions and policies aimed at improving conflict-affected people's immediate social environment, particularly when these individuals have returned home from prolonged internal displacement, as issues linked to social, institutional, and cultural functioning are some of the major barriers not only to psychosocial wellbeing but also durable reintegration and peace as well in their full complexity. This does not mean diminishing mental health provisions and policies, but rather strengthening them through better linkages to efforts focused on cohesion, good governance, and participation. Such a cross-sector approach is in line with international guidelines on mental health and psychosocial care in emergencies[36] and emerging findings in relation to mental health and peacebuilding.[37]

These findings also call for more localized approaches focused at the street- and neighborhood-level rather than wider area-based targeting as a starting point for intervention. Furthermore, attention should be paid to those areas where the social environment is particularly low, as incremental changes to these conditions have the most effect on psychosocial wellbeing, and it may be in these locations where individuals need the most care. Regardless of street or neighborhood, public participation should be broadly encouraged and built upon. Lastly, and critically, the positive presence of the state is necessary in post-conflict contexts to support mental health and psychosocial wellbeing. Interventions geared toward active engagement of authorities with residents, in relation to security as with the community police in Baiji, in reconstruction and compensation efforts, participatory budgeting,[38] or efforts related to localized coexistence efforts may be critical platforms to establish this incremental change. This is imperative given how particularly low trust in institutions is in this context and that prolonged loss of trust can diminish civic engagement and, when experienced at a collective level, can weaken cohesion as well.[39]

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6. RECOMMENDATIONS

- Efforts to generate social cohesion, institutional trust, and/or public participation at the street-level should be central to programming on mental health and psychosocial support and durable reintegration. Respondents tend to report better mental health and psychosocial outcomes upon return to streets that feature a positive social environment, irrespective of their personal exposure to conflict. In addition, street-level social environment positively moderates the effect that conflict exposure has on respondent mental health and psychosocial outcomes. Producing a positive social environment is a potentially cost-effective, high-impact approach both to psychosocial wellbeing and the reintegration process, which in turn serves to lay the basis for long-term peace.

- Since improving a street's social environment from low to medium levels has more impactful effects on individual residents' psychosocial wellbeing than improving a social environment from medium to high, interventions should prioritize those areas in cities and towns in which institutional trust, participation, and cohesion, in particular, are lowest. This should involve localized approaches focused at the street- and neighborhood-level rather than wider area-based targeting as a starting point for intervention. This means greater implementation across an urban area covering specific neighborhoods with deficits in their social environments. The establishment of neighborhood community centers and civil society groups in conjunction with local authorities, for example, may be a step in this direction, offering space for residents to connect with one another, volunteer their time, and engage with authorities, among others.

- Neighborhood social ecology, rather than collective material surroundings such as wealth, physical integrity or safety, matters for the mental health and psychosocial outcomes of its residents. These findings lend greater credence to both donors and national governments they should give more priority to investments in social cohesion, institutional trust, and participation in the aftermath of conflict. Such investments are as important as physical infrastructure and livelihood support, given that the former are likely to have significant positive effects on wellbeing and negative effects on conflict recurrence, which in turn make the latter more possible and sustainable and vice versa. Implementing interventions, simultaneously or at least in a non-linear sequence based on the needs of a given context that span humanitarian, development, and peacebuilding spheres, is in line with the so-called triple nexus approach that national governments, the UN, and donors have recently sought to adopt in addressing protracted crises.[40] This approach necessitates flexible, longer-term funding and more robust analysis of how effective interventions that have the potential to span this nexus, such as cash-for-work programming or participatory budgeting, are for both improving the physical and social conditions for residents upon return.

- Institutional trust among residents is particularly low within the context of this study, with the particular exception of the community police. Here, community police appear to serve as liaisons between respondents and security actors to better raise citizens' concerns and help foster dialogue and trust between the two. Their being a locally comprised entity that has regular and direct contact with residents helps account for this level of trust. This dynamic may be worth leveraging to better support the transformative role of community policing in building further bridges between residents and local authorities (beyond the security sector), facilitating better cohesion between residents, improving confidence in and transparency of existing compensation and redress mechanisms, and working to help de-stigmatize needing and accessing mental health and psychosocial care. It may also be worth understanding community views on existing and emerging trusted civil actors (for example, youth leaders) who may also be able to work in coordination with community police in this regard.

- Finally, because women tend to report worse mental health and psychosocial outcomes and men may under-report them, gender analysis and a gender-transformative approach should be central to programming at the intersection of wellbeing and social environment. One element of this involves a better understanding of the ways in which women and men prefer to participate in their neighborhoods to further support them in these efforts. In addition, it may be worth having community centers within a neighborhood open at different times for different genders and to allow people to access services for as long as they need to build the trust necessary to feel comfortable in seeking mental health and psychosocial support.

ANNEX 1. STATISTICAL MODELS

The table below shows the principal multivariate regression models that form the bulk of Section 3.2, combining the four dependent variables and the three-key street-level social environment variables.

	PCL-5 SCORE			PHQ-9 SCORE			EMOTIONAL CLIMATE INDEX			OVERALL MENTAL HEALTH INDEX		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Intercept	-0.883	-0.762	-0.329	1.775**	1.863**	2.000**	-0.068	-0.060	-0.058	-0.669***	-0.643***	-0.638***
	[3.297]	[3.284]	[3.292]	[0.885]	[0.877]	[0.880]	[0.094]	[0.095]	[0.098]	[0.167]	[0.166]	[0.169]
Level 1 (individual variables)												
Cumulative conflict exposure	4.373***	4.370***	4.400***	0.769***	0.767***	0.777***	-0.021**	-0.022**	-0.022**	0.161***	0.160***	0.161***
	[0.376]	[0.376]	[0.376]	[0.103]	[0.103]	[0.104]	[0.010]	[0.010]	[0.010]	[0.019]	[0.019]	[0.019]
House state (1 = damaged)	1.217	1.156	1.220	-0.338	-0.377	-0.334	-0.006	-0.011	-0.012	0.000	-0.006	-0.005
	[1.236]	[1.237]	[1.238]	[0.343]	[0.344]	[0.345]	[0.035]	[0.036]	[0.036]	[0.063]	[0.063]	[0.063]
S.e.s. now vs pre-conflict	-1.876***	-1.897***	-1.877***	0.045	0.029	0.034	-0.108***	-0.110***	-0.111***	-0.118***	-0.120***	-0.121***
	[0.487]	[0.488]	[0.489]	[0.134]	[0.135]	[0.136]	[0.014]	[0.014]	[0.014]	[0.025]	[0.025]	[0.025]
Gender (1 = Female)	4.135***	4.045***	4.031***	1.250***	1.205***	1.194***	-0.010	-0.013	-0.014	0.202***	0.193***	0.193***
	[1.065]	[1.064]	[1.065]	[0.297]	[0.296]	[0.296]	[0.029]	[0.029]	[0.030]	[0.053]	[0.053]	[0.053]
Age group	0.784*	0.797*	0.736*	0.110	0.109	0.091	-0.020*	-0.020*	-0.021*	0.019	0.019	0.017
	[0.414]	[0.414]	[0.414]	[0.114]	[0.114]	[0.114]	[0.011]	[0.011]	[0.011]	[0.021]	[0.021]	[0.021]
Education level	-0.319	-0.312	-0.353	-0.049	-0.045	-0.052	-0.003	-0.002	-0.002	-0.013	-0.014	-0.012
	[0.376]	[0.376]	[0.377]	[0.102]	[0.101]	[0.102]	[0.011]	[0.011]	[0.011]	[0.019]	[0.019]	[0.019]
Household role (1 = head)	0.385	0.304	0.273	0.089	0.031	0.007	0.061*	0.056*	0.055*	0.046	0.037	0.034
	[1.166]	[1.164]	[1.165]	[0.326]	[0.324]	[0.325]	[0.033]	[0.033]	[0.033]	[0.059]	[0.059]	[0.059]
Displacement (1 = camp)	2.244	2.428	2.400	1.466***	1.538***	1.532***	0.190***	0.199***	0.196***	0.362***	0.379***	0.373***
	[1.887]	[1.886]	[1.889]	[0.510]	[0.509]	[0.512]	[0.053]	[0.053]	[0.054]	[0.094]	[0.094]	[0.095]
Level 2 (street variables)												
Physical destruction level	0.078	0.576	1.459	0.483	0.657*	0.882**	0.054	0.114	0.203*	0.091	0.163	0.275*
	[2.289]	[2.231]	[2.358]	[0.394]	[0.391]	[0.428]	[0.082]	[0.089]	[0.112]	[0.130]	[0.126]	[0.156]
Socioeconomic level	1.397	2.311	3.165*	0.450	0.656**	0.881**	-0.059	0.063	0.158*	0.024	0.164*	0.279**
	[1.845]	[1.745]	[1.825]	[0.333]	[0.323]	[0.344]	[0.064]	[0.068]	[0.084]	[0.103]	[0.097]	[0.119]
Social cohesion level	-6.869***			-1.717***			-0.808***			-0.969***		
	[2.308]			[0.432]			[0.080]			[0.128]		
Institutional trust level		-6.217***			-1.526***			-0.677***			-0.840***	
		[1.984]			[0.378]			[0.076]			[0.109]	
Public participation level			-4.726**			-1.197***			-0.599***			-0.715***
			[2.058]			[0.391]			[0.095]			[0.133]
Random effect (street)	1.180***	1.159***	1.251***	-1.560	-1.435	-0.938*	-2.063***	-1.935***	-1.666***	-1.640***	-1.662***	-1.377***
	[0.186]	[0.189]	[0.179]	[1.437]	[1.092]	[0.484]	[0.166]	[0.163]	[0.150]	[0.180]	[0.186]	[0.163]
N individuals	674	674	674	684	684	684	727	727	727	705	705	705
N streets	30	30	30	30	30	30	30	30	30	30	30	30

* p < 0.1, ** p <0.05, *** p < 0.01. Standard errors in parenthesis. Positive coefficient implies a more negative mental health score. Emotional climate index, overall mental health index, and all level 2 variables are standardized with mean 0 and standard deviation 1.

ENDNOTES

1   The use of the acronym ISIL here for the armed group also referred to as IS, ISIS, and Daesh is in line with UN OCHA proposed language for reporting on Iraq.

2   Daya Somasundaram, "Addressing Collective Trauma: Conceptualisations and Interventions," *Intervention* 12, sup. 1 (2014): 43-60; and Elizabeth Gallagher, Brandon Hamber, and Elaine Joy, "Perspectives and Possibilities: Mental Health in Post-Agreement Northern Ireland," *Shared Space: A Research Journal on Peace, Conflict and Community Relations in Northern Ireland* 13 (2012): 63-78.

3   Lauren M. Sippel et al., "How Does Social Support Enhance Resilience in the Trauma-Exposed Individual?" *Ecology and Society* 20, no. 4 (2015): art. 10; Darío Páez et al., "Social Sharing, Participation in Demonstrations, Emotional Climate, and Coping with Collective Violence After the March 11th Madrid Bombings," *Journal of Social Issues* 63, no. 2 (2007): 323-37; and Inter-Agency Standing Committee, *IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings* (Geneva: IASC, 2007).

4   Mila Kingsbury et al., "The Protective Effect of Neighbourhood Social Cohesion on Adolescent Mental Health Following Stressful Life Events," *Psychological Medicine* 50 no. 8 (2020): 1292-1299; Allison R. Heid et al., "Exposure to Hurricane Sandy, Neighborhood Collective Efficacy, and Post-Traumatic Stress Symptoms in Older Adults," *Aging & Mental Health* 21, no. 7 (2017): 742-50; and Kaveh Aminzadeh et al., "Neighbourhood Social Capital and Adolescent Self-Reported Wellbeing in New Zealand: A Multilevel Analysis," *Social Science & Medicine* 84 (2013): 13-21.

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