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Pathways to resilience and pathways to flourishing: Examining the added-value of multisystem research and intervention in contexts of war and forced displacement

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Abstract

This paper examines the added-value that multisystem approaches bring to research and intervention in contexts of war and forced displacement. I highlight what is useful and truly innovative about systems-level work, aware that providing data-related evidence is only part of the story when connecting research to policy and practice. I discuss four types of added-value: these are conceptual, instrumental, capacity-building, and connectivity impacts that, respectively, aim to change current knowledge, improve implementation, build research skills, and strengthen network connectivity. Specifically, systems-based research can help transform the key frames of humanitarian work, fostering the more integrated and distributive models of professional assistance known as resilience and network humanitarianism. I argue that systems-level approaches on resilience and flourishing in war-affected and refugee populations help to articulate new mindsets, methodologies, partnerships, and ways of working relevant for humanitarian research, policy and practice. I focus attention on interdisciplinary, interventionist, prospective, transgenerational, and network-building initiatives. My specific examples cover the family context of mental health and trauma memory in Afghanistan, as well as program evaluation with Syrian refugees in Jordan, connecting stress biology to human experience, and social networks to psychological empowerment. The paper suggests future directions to support more effective and impactful systems-level work in protracted humanitarian crises.

Keywords: Conflict; flourishing; network; refugee; resilience

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Introduction

Lived experiences in contexts of war and forced displacement are often marked by insecurity, loss, and violence - as well as by courage, faith, and resilience. In conflict settings, scholars have emphasized both immense humanitarian need and striking human resilience; their research can offer critical evidence to inform humanitarian policy and practice. For example, the literature has shown that, for children and adolescents, growing up with violence or peace matters in terms of biological and cognitive wiring, emotional and social learning, mental health and psychosocial wellbeing, and basic competencies including a disposition to love and sociality (Britto et al., 2021; Leckman et al., 2021). In terms of take-home messages relevant to policy and practice, however, scholarly research often needs to do more than offer data-related evidence on the scars of war and forced displacement. Specifically, research in conflict settings has been helpful for evaluating the effectiveness and relevance of humanitarian interventions and

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reflecting upon the approaches, methodologies, priorities, and added-value of humanitarian work (see for example Tol et al., 2020; 2023). In this paper, I focus on examining and clarifying the added-value of multisystem research and intervention undertaken with war-affected and refugee populations, highlighting how systems-led approaches can help foster transformational change.

As a medical anthropologist, trained in human biology and the social sciences, I strive to connect scientific research to humanitarian practice and policy through emphasizing fieldwork, teamwork, and innovation. Through fieldwork, my first goal is to understand people's lived experiences of adversity. For example, I have documented the lived experiences of stress, trauma, and resilience in the wake of war and forced displacement, but also, since people are not solely defined by the past, the salience of hope, aspirations, and social networks for their healing or flourishing. Adopting a systems lens on human development during fieldwork in conflict settings helps to better understand the complex pathways linking individual-level outcomes to more upstream economic and sociopolitical structures. In essence, my units of analysis encompass body-mind relationships, individual and social wellness, cultural values and economic challenges to understand how to foster human dignity in adversity. Through teamwork, my second goal is to build interdisciplinarity and connectivity in ways that help us articulate useful conceptual

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questions and answer these with scientific rigor and cultural relevance. For example, how do we work to influence programing that is both grounded in science and humanity? Interventions with refugee communities to build resilience best engage with a plurality of local, regional, and international perspectives before decisions are taken to prioritize funding for human needs that include education, employment, health, housing, peacebuilding, and social inclusion. Through innovation, my third goal is to energize research-to-policy initiatives. There is much to do to improve our institutional cultures - how we work in interdisciplinary teams, promote equitable institutional collaborations, integrate diverse perspectives in project design, implementation, and funding (Panter-Brick, 2022). In brief, as an anthropologist, I seek to connect research with policy and practice in spaces that engage donors, practitioners, institutions, families, and communities. In this paper, I hope to demonstrate what innovative multisystem approaches can do in humanitarian settings to generate useful understanding of the pathways to human resilience, flourishing, and social inclusion.

What is useful and truly innovative about systems-level work in the context of insecurity, precarity, violence, or crisis? As Ungar et al. (2023:3) have written, multisystemic approaches examine the "dynamic interactions within and between systems," namely their interdependency. Multisystemic approaches track changes in resource flow for understanding dynamic change across society, linking individual-level outcomes to macro-level social and economic structures over time. For example, the Resilient Youth in Stressed Environment project is a longitudinal, mixed-methods study of youth in communities experiencing the boom-bust cycles of the oil and gas industry, in Canada, South Africa, and Russia. It calls for observing a "cascade of effects" at multiple levels of analyses for discerning ways to analyze data from multiple sources (Ungar et al., 2023). In longitudinal analyses of human development outcomes, systems-led resilience modeling will thus be focused on understanding change and flow, capturing all at once the biological, behavioral, cognitive, psychological, cultural, economic, social and political aspects of individual, family, and community life. The implications of multisystemic approaches are far-reaching in that the descriptive and analytical work focuses on change, helping to identify what is important for reforming practice and policy. In mapping resilience, scholars might thus adopt a network analysis, seeing resilience as underpinned by a network of interrelated resources from psychological, social, institutional, cultural and environmental systems (Höltge et al., 2020; Kalisch et al., 2019; Masten et al., 2021). Mapping pathways and interactions might well promote in-depth understanding of what is needed at societal level to promote equity and inclusion, not just a better understanding of what can be done at an individual or family-level to boost human development, health, and resilience.

In this paper, I draw upon examples of multisystem research and intervention conducted with war-affected and refugee communities. I focus on research that is interdisciplinary, interventionist, prospective, transgenerational, and network-building: this kind of research serves our goals to be innovative as scholars and it also leverages science in ways that serve humanity. The paper has four sections. In the first, I review the types of impacts that help clarify the added-value of research for practice and policy. In the second, I contrast different frames of humanitarian action, and show how multisystem work on resilience and flourishing can help transform professional models of humanitarian assistance. The third section offer examples of research and intervention work undertaken in Afghanistan and Jordan, showing how synthetic knowledge and dedicated

partnerships has helped to foster human wellbeing and social equity. The last section suggests future directions for multisystem research and intervention in humanitarian contexts.

Clarifying research impacts for policy and practice

In my recent work evaluating interventions in conflict settings, I have strongly felt the need for clarifying the added-value of research for practice and policy. Throughout the process of data analysis and results dissemination, I strive to capture the main take-home messages of a research project, repeating to myself this motto: "providing more evidence is only part of the story; work on clarifying added-value." I say this because synthetic knowledge on a cascade of effects is difficult to convey to stakeholders in ways that are both practical and meaningful. In this regard, I was inspired by a guidance note commissioned by the UK government and its research councils, which emphasized what donors find important when funding quality research: "ensuring that the evidence informs policy goals, strategy, policy design and implementation by adding value to what is already being done" (Shaxson, 2016:4). Why is this so critical? It sharpens our thinking about how and why research in humanitarian contexts is important, and it encourages us to be both innovative and clear. Providing evidence is only part of the narrative when it comes to speaking with funders, policymakers, practitioners, local communities, or media (Panter-Brick, 2022). Moving forward, the main ask of all these stakeholders is to generate simple and compelling messages of what multisystem resilience work has to offer.

What types of research impacts do we look for? Building on the insights conveyed by Shaxson (2016), Figure 1 shows four types of impacts defining the added-value of multisystem research and intervention. First, we look to conceptual impacts to change current knowledge and mindsets. For example, can we broaden our knowledge and change the ways we understand human development through interdisciplinary and cross-cultural research? If so, can we change the mindsets of international donor or governmentfunded research councils regarding the scope of interventions needed in conflict settings? In humanitarian settings, many funding preferences have been successfully shifted from siloed, targeted programs on school-based education towards integrated programs building social and emotional learning (SEL), and from trauma-focused programs towards broader, multi-level systems of psychosocial support. Second, we look to instrumental impacts, changing core aspects of policy and practice. This helps to build "a model of research that firmly embeds implementation science within the fabric of an intervention study" (Betancourt & Fazel, 2018:542). Thus in conflict settings, strong arguments have been made for implementing research-led interventions that address both risk and resilience in child development (Masten & Narayan, 2012), both human misery and human dignity (Eggerman & Panter-Brick, 2014), both recovery and transformation and both systems-based resilience and transitional justice (Ungar, 2021).

Third, we can strive for capacity-building impacts, changing scholars' ability to conduct work, especially future work, through building more diverse research skills and practices. The push for interdisciplinary data collection (integrating the insights of small data with the patterns inherent in big data) and the push for systems-led research (capturing the interdependency of multiple systems) are both good examples of capacity-building. Both interdisciplinary and systems-oriented approaches will continue to change the body of research skills needed by the next generation of scholars, encouraging the pursuit of research that is longitudinal in nature, interventionist in scope, synthetic across disciplines, and



Figure 1. Four types of impacts defining the added-value of multisystem research and intervention.

intergenerational in significance. The fourth category of impacts has to do with connectivity, shaping the existence and strength of networks that inter-link people and organizations making use of research evidence. With an eye to strengthening the quality of our networks, we can strive to be more inclusive in terms of North-South collaborations, and more creative and equitable in our relationships when it comes to research, analysis, and publication. In terms of working with people in the wake of war and forced displacement, these four types of impacts might entail 'making a difference' with respect to the conceptualization of mental health support, the scope and modalities of programs implemented, the skills learnt and practices adopted during research activities, and the formation of creative, enduring partnerships (Panter-Brick, 2022). It is thus worth reflecting on types of impacts, as well as evidence, in examining how research will be meaningful for policy and practice.

Three key frames of humanitarian work

Specifically, systems-based research could help transform the key frames of humanitarian action. Broadly speaking, I see three different ways of framing humanitarian action: three key mindsets directing the scope of funding, the breadth of activities on the ground, the diversity of partnerships, and the depth of engagement with people living with adversity. These are crisis humanitarianism (addressing emergency needs), resilience humanitarianism (integrating systems), and network humanitarianism (prioritizing connectivity). All three are useful, yet imperfect models of what we can do to make the world a better place, open to necessary critique.

Crisis humanitarianism (addressing emergency needs)

Crisis humanitarianism is a model of professional assistance that serves humanity by saving lives and alleviating suffering, intervening where no state institution is willing or able to lead. It focuses on emergency responses to acute needs. Also known as classic humanitarianism (Hilhorst, 2018), this model has been critiqued heavily, and somewhat harshly, by social scientists, humanitarians, and think-tank organizations. Crisis humanitarianism has embraced definitions of acute needs and human worth that are oriented towards international priorities. It has promoted a top-down interventionist mindset with limited room for local voices and local agency. A memorable starting point for highlighting the unintended consequences of a crisis mindset is

recounted in the parable of the monkey and the fish (Elmer, 2002, p.14). The parable tells this story:

A typhoon had temporarily stranded a monkey on an island. In a secure, protected place, while waiting for the raging waters to recede, he spotted a fish swimming against the current. It seemed obvious to the monkey that the fish as struggling and in need of assistance. Being of kind heart, the monkey resolved to help the fish.

A tree precariously dangled over the spot where the fish seemed to be struggling. At considerable risk to himself, the money moved far on a limb, reached down and snatched the fish from the threatening waters. Immediately scurrying back to the safety of his shelter, he carefully laid the fish on dry ground. For a few moments the fish showed excitement, but soon settled into a peaceful rest.

This Tanzanian folktale goes on to explain that more than one monkey tried to save the fish, and did so because they could see that fish were without legs and were doomed to drown. One of the monkeys says, "Had it not been for us, all these poor creatures without legs would have drowned." Another replies: "When they wake up, they will be very grateful because we have brought them salvation."

The moral of this story is that action must be guided by more than good intentions. The way we see the problem is often the problem, paving the road of humanitarian responses with little more than good intentions. The 'kind heart' model of crisis humanitarianism has been critiqued because of the limits of charity and compassion, where awareness of human needs triggers little more than forms of emergency rescue. Western-led humanitarian aid operations have often framed their expertise in ways that left many assumptions unchecked - their mindset, for example, tended to medicalize the suffering of war, focus on posttraumatic stress, and fund psychological therapies in ways that proved disconnected from local contexts (Summerfield, 1999). By contrast, new forms of humanitarian action ask us to build sustainable, resilient systems "with people," not "for people" (Slim, 2020). They ask us to eschew top-down, paternalistic approaches in order to work more upstream on systems of harm and cascade of effects. Limited to addressing acute human needs, crisis humanitarianism fails to address the structures of harm such as colonialism, imperialism, fascism, racism, sexism, and the toxic inequality that drive violence and exclusion. Rather than work for people in conflict zones as one would rescue fish out of raging waters, new models of humanitarian assistance strive to work with people to build resilience, equity, justice and peace in ways that potentially lead to intergenerational, transformational change.

Resilience humanitarianism (integrating systems)

Resilience humanitarianism is an approach that tackles systems to address, in structural terms, power dynamics and social compacts. For refugees in protracted displacement, for example, this means addressing the multiple issues of citizenship, education, employment, health, housing, and social cohesion after resettlement. In the fields of peacebuilding, specifically, the systemic transformation of political, economic, and social systems is a pressing, present-day agenda. This requires approaches that can link together psychosocial and structural resilience to achieve sustained changes across generations. Indeed, systems-level thinking on resilience has been transforming the architecture of the humanitarian and peacebuilding agenda (Masten et al., 2019, 2021; Panter-Brick, 2022).

In examining the roots of fragility and resilience, policyoriented scholars have argued for adopting systems-level interventions to achieve synergistic impacts and strengthen the interactions between international mandates, state policies, and civil society action. To quote one humanitarian policy brief, "resilience brings the entire political-societal system into focus and moves interventions away from discrete conflict problems and project-based responses. The key question becomes what intervention or accumulation of interventions will tip the conflict system to a nonviolent system that is improving over time, which requires a systems-level, not a project-level, theory of change" (van Metre, 2016, p. 3). For the international organization Mercy Corps, building resilience means designing interventions across multiple systems, at economic, social, political, and ecological levels (Panter-Brick, 2021). It also means transforming the architecture of humanitarian systems, such that responses to protracted conflict are transformative and sustained, rather than achieved within humanitarian silos.

Approaches to building resilience in humanitarian contexts are not without criticisms. Indeed, several criticisms have been leveled against resilience-building approaches. First, resilience is not easy to use as an operational concept across multiple sectors. In Uganda, for example, building resilience eluded developed practitioners due to the difficulty of anchoring this construct into national and regional government planning and translating shortterm economic gains in longer-term social stability (Panter-Brick, 2021). Second, a focus on resilience can mistakenly imply individual-level responsibility for thriving or suffering, and thus perpetuate the status quo that leaves oppressive structures unchanged. This view, however, ignores the entire point of systems-led work that clarifies how to empower individuals as well as how to examine interdependencies between individual-level, family-level, social and economic change (Hajir et al., 2021). Third, a resilience approach can be code for disengagement, leaving local institutions that are on the ground to take local action without international funding and state investment. For example, humanitarian scholars warn of the real risk that the "politics of resilience" towards refugees turn into a "politics of abandonment" (Hilhorst, 2018, p. 40). There is the danger of a politics of laissezfaire that expects all coping to be done at an individual level without much strengthening of resources at a social and structural level.

A strategic focus on human flourishing can be a useful way to address some of the above criticisms. In terms of policy-relevant messages, we can intuitively understand that interventions must bolster the capacities of children, families, communities, and sociopolitical systems to support capacities to flourish (to live well),

over and above capacities to withstand or 'bounce back' from adversity. Research in Soweto, for example, has emphasized the concept of ukuphumelela (lit: becoming victorious) as an encompassing term to foster capacities to flourish within the collective spaces of the community (Cele et al., 2021a). This calls attention to the material, social and structural conditions that help support people in adversity: "what it means to flourish extends well beyond the internal worlds to include what happens in the social world as well as the less visible structural forces that shape our lives" (Cele et al., 2021b; p.9). Within indigenous and Spanishspeaking South America, developing a sense of collective, harmonious development is captured by terms such as sumak kawsay in Quechua language or buen vivir in Spanish (lit: living well), a worldview that emphasizes rich and multiple pathways to development (Gudynas, 2011) and a way of doing things that is community-centric and ecologically-sensitive. This way of understanding capacities to flourish requires research approaches than are not narrowly predicated on positive psychology and individuallevel wellbeing, as well as more expansive approaches to care provision in health systems (Willen et al., 2021). For example, five domains of human flourishing (happiness and life satisfaction; physical and mental health; meaning and purpose; character and virtue; close social relationships) have been operationalized for measurement across cultures; in addition, a sixth (material and financial stability) helps to evaluate the sustainability of flourishing states over time (VanderWeele, 2017; Węziak-Białowolska et al., 2019). Importantly, conversations about flourishing need interdisciplinary dialogue (Willen, 2022) in ways that can focus attention on the linkages between health, power, and justice.

Network humanitarianism (prioritizing connectivity)

A third approach seeks to fundamentally reform current 'ways of working' within humanitarian systems. It addresses calls for a 'rethink' and a 'modernization' of international models of humanitarian assistance, an upgrade that puts actual 'people' squarely at the center of humanitarian action (Bennett, 2018). Network humanitarianism envisions itself as a system of distributed power whereby the flow of resources – information, technology, supplies – is distributed to a set of actors that have the capacity to self-organize and inter-connect (Currion, 2018). The word 'network' refers to building structures and connections that are relational and dynamic in nature, in contrast to the hierarchical architecture of humanitarian assistance led by the United Nations.

Examples of network approaches, building resilience through flexible, distributed, and responsive flows of assistance, include self-organized groups using WhatsApp to support famine-stricken families in Somalia and Arabic-language Facebook to share resources during refugee migration to Europe (Currion, 2018). Network approaches have also been proposed to bring the 2014 Ebola epidemic under control through empowering local people, improving the resilience of health-care systems, and improving connectivity between social actors to coordinate health care prevention and treatment on the ground (Mellor, 2014). Arguably, network humanitarianism provides a "better fit with cultural expectations and technological capabilities" in crisis (Currion, 2018:18), by engaging global and local communities more openly. Thus network humanitarianism can bring about transformational change through supporting policies that support connectivity and agency - through digital networked technologies, networked partnerships, and distributed structures changing the ways resources flow.

Approaches to network humanitarianism are still relatively new, partly because humanitarian funding priorities are largely focused on addressing emergency needs. Yet calls have been made to secure more dedicated funding for the purpose of enhancing agency, connectivity and social inclusion in crisis settings (see Panter-Brick, 2021). In recent years, new forms of humanitarian action have championed a 'whole-of-society approach' to work in contexts of forced displacement. Whole-of-society approaches the phrase used in the Global Compact for Refugees and in UHNCR documents, when advocating for new ways of working for communities in need - characteristically strive to be inclusive. They recognize that local communities and other civil society actors are often a catalyst for change, acting with refugees to improve lives and livelihoods, foster wellbeing, and sustain human dignity. This approach opens up spaces for community engagement and different ways of enacting change - to foster resilience and flourishing, wellbeing and agency, inclusion and justice. The 'systems change' approach here is to act at global, regional, and local levels to work more broadly, with a broader set of partners to address, for example, not just health needs, but social inclusion. It also opens us spaces to create different kinds of partnerships that connect research to practice more closely.

Multisystemic work in humanitarian contexts

In this section, I provide specific examples of multisystemic work in conflict settings, illustrating how evidence-based research can bring about transformational change. In doing so, I highlight conceptual innovations, methodological shifts, implementation efforts, and network-led partnerships that brought added-value to specific projects.

Pathways to resilience in Afghan communities

Speaking as an anthropologist, I first became attentive to resilience, as a framing concept, during interdisciplinary research work in Afghanistan. After the fall of the Taliban in 2001, there was a concerted surge of efforts to rebuild systems of care and, specifically, develop a public mental healthcare system in the country (Alemi et al., 2023; Ventevogel et al., 2013). I obtained funding to conduct research on adversity, risk, and resilience in the wake of war and displacement. Our team conducted a systematic, longitudinal survey of mental health, lifetime trauma exposures, everyday stressors and social resilience in three areas of the country. Our survey was based in schools: this provided the best point of contact to draw a community-level sample, reaching female as well as male respondents, given a volatile security situation and strict restrictions on reaching women and girls. We interviewed a random sample of 1,011 boys and girls (11-16 year old), together with 1,011 male and female caregivers and 358 school-teachers (Panter-Brick et al., 2009). We also tracked a smaller cohort (364 child-adult pairs) in Kabul at one year followup. Our survey examined which aspects of violence and poverty were the most critical predictors of adolescent mental health. Notably, the mixed-methods study featured a thematic analysis of lived experiences, regarding main challenges in daily life and capacities to overcome adversity.

We reached novel insights into adolescent mental health in conflict zones, regarding the significance of war-related and family-level violence and the nature of trauma memory. In terms of mental health in the wake of war, Afghan respondents underscored the overriding importance of economic insecurity as the root of all

human misery, using the Dari expression iqtisad kharab ('broken economy') to capture a pervasive state of entrapment (Eggerman & Panter-Brick, 2010). Poverty led to overcrowding in the home, strained social relationships, and domestic conflict. Economically frustrated parents become 'ill natured' (bad khalqi), an expression denoting difficult, abusive or morally reprehensible behavior. Domestic violence was often attributed to takleef asabi ('a mental problem') and a lack of family ittifaq and wahdat ('harmony and unity'). Afghans spoke of suffering engendered by ongoing political violence, frustration with the lack of economic momentum, a dearth of service infrastructure in health and education, poor governance, and fraught relationships played out at family and community level. Very powerfully, however, Afghans also stated that life and wellbeing were sustained by hope and future aspirations, through opportunities created by jobs and education (Panter-Brick & Eggerman 2012; Eggerman & Panter-Brick, 2014). In their words, "life feeds on hope" - something that is very important to note if we think of capacities to flourish.

Research on mental health in conflict settings is now poised to capture these points: future aspirations, as well past and present adversities, matters to human resilience, whilst family-level violence, not just war-related violence, is an important driver of adolescent mental health. In terms of mental health trajectories, the science of resilience has already clarified how modeling individuallevel health outcomes over time can help identify pathways to resilience, resistance, or posttraumatic growth; this is often done, however, with reference to acute-onset trauma such as a disaster or terrorist attack (Bonanno et al., 2015; Masten & Narayan, 2012). In protracted or post-conflict settings, pathways to mental health and resilience can be more complex to ascertain, due to the interplay of ongoing and past adversities (Betancourt et al., 2013; Tol et al., 2013), potential differences in environmental sensitivity affecting responses to war exposure (Popham et al., 2021), and developmental cascades across multiple, nested systems providing context to life-course experiences (Masten and Cicchetti, 2010). Recent work now pays careful attention to the role of family environments in examining changes in child mental health over time (Popham et al., 2022). In our own work, we specifically documented the intergenerational aspects of risk and resilience and the strong associations between caregiver and child mental health. Thus in the Afghan study cohort, one standard deviation change in caregiver mental health was prospectively associated with a 1.04-point change on child posttraumatic stress symptoms, equivalent to the predictive impact of a child's lifetime exposure to one-to-two trauma events; it was also associated with a 0.65-point change in child depressive symptoms, the equivalent of two-thirds of the effect attributed to female gender (Panter-Brick et al., 2014). Intergenerational data provided insights into how mental health difficulties as well as psychosocial competencies could cascade from one generation to the next, paving the way to multisystem approaches to research and intervention.

Thinking about inter-connections between past, present, and future across generations was important to Afghans. It led us to ask more specific questions about the nature of trauma memory. We know relatively little about the consistency of an individual's trauma memory over time, and how this affects prospective changes in mental health, especially during adolescence. Longitudinal survey data have generally been limited to adults, for whom we know that trauma memories are malleable - the opposite of a flash photograph of the past - and impacted by posttraumatic stress disorder (PTSD). For example, work with US

war veterans led Southwick (1997) to argue that, because memory is not a faithful record of what happened in the past, we see complexity, rather than simplicity, when examining relationships between exposure to violence, recall of trauma, and PTSD over time (Southwick et al., 2011). There is no ground truth in the recollection of war trauma, given that US veterans modified their recall over time, in relation to PTSD severity. Likewise, Dekel and Bonanno (2013), who interviewed 9/11 World Trade Center survivors seven months and 18 months after the attacks, showed that while the recollection of trauma attenuated over time, survivors with sustained PTSD switched events in their trauma recall and were unable to create more benign trauma narratives over time. In a rare study of Bosnian refugees living in Croatia, Mollica et al. (2007) concluded that PTSD was associated with the failed extinction of traumatic memories. In these studies, resilience was largely understood as the ability of putting the past behind you.

In Afghanistan, our team showed that trauma memories were embedded in subjective and social experiences, and that ongoing family-level violence, not just war-related violence, shaped trauma recall and PTSD trajectories over time (Panter-Brick et al., 2015). We implemented a Traumatic Events Checklist, covering different types of exposure and adding an open-ended section where youth reported which lifetime event had been the most distressing. This allowed for youth to provide context - regarding the meaning and significance of trauma events. Over the period of one year, only 10% of our adolescent sample recalled exactly the same event as their most distressing trauma - others switched events in their recollection of the most frightening lifetime experience, and 'forgot' or repressed memories of trauma. Specifically, over time, they reported fewer trauma pertaining to violence against self, violence against another, loss of a loved one, and loss of a home; the only trauma recalled with any consistency was witnessing military action. Our research team learnt to be attentive to traumatic memory, as well as traumatic exposure. We learnt from Afghan respondents that the forgetting of past trauma is embedded in the lived experiences of the present and future. This process of meaning-making is helpful to understand how experiences of trauma and resilience are variously interpreted by young people across different war-affected societies (Barber, 2013). We would not expect self-reports of trauma events to faithfully mirror exposure to adverse experiences without a complex interplay of emotional, social, and neurobiological filters. We would also not expect the 'weight of the past' to remain unfiltered by family values and social representations across generations (Cordonnier et al., 2022).

To characterize mental health trajectories, we used latent transition analysis to identify changes in PTSD symptomology, measured from intrusion and avoidance items on the Child Revised Impact of Events Scale. Over one year, 12% of our cohort sustained high level of traumatic stress; 15% showed rising symptoms, 21% showed declining symptoms. Half the cohort maintained low or zero PTSD symptoms, despite exposure to conflict - this cautions against simplifying assumptions equating war-related trauma and psychopathology in ways that elude consideration of meaning-making and family functioning. Indeed, Afghan youth were practiced at distinguishing between violence that was normative and violence that was 'senseless.' They reported domestic violence as lifetime trauma only when it went beyond normative disciplinary violence or stressful outbursts triggered by poverty and insecurity - largely because 'senseless' violence ruptured the fabric of family life and destroyed hope. We then examined the relative importance of child-level, family-level, and area-level predictors of mental health outcomes in multivariate regressions. Youth sustaining high distress - who 'bucked the trend' in being unable to forget the past and extinguish PTSD symptomology - were more likely to be girls, report higher trauma exposures, and live in families with ongoing stressful domestic violence. Youth with rising distress were more likely to be girls, report multiple adversities and higher trauma exposures, have a literate mother and live in poverty. This indicated that households with domestic violence and educated mothers had very different dynamics. Poor households with a literate mother, for example, experienced heightened conflict when making decisions about near-adolescent children to remain in school, at an age when girls are expected to marry, and boys expected to work. How conflict cascades from one generation to the next, and how trauma memory is underpinned by social experience, can be illustrated with the following case study.

One 15-year-old girl recalled that her father threw acid on her mother's face, in a fierce domestic quarrel, before he killed himself. In her interview with the field team, where she reported 11 lifetime trauma events, including domestic abuse and having being made homeless 10 years ago, this particular quarrel was her most distressing lifetime experience. At that time, she tried "to think a lot and remain calm. "One year later, in the follow-up interview, she reported only 3 lifetime trauma events, including the attack on her mother - she was "trying hard to forget." And yet her PTSD symptoms had sharply risen over that period of time. Her family's tragedy had ongoing social and emotional consequences: the family was now accusing her mother of having caused the death of her father, and both girl and mother found themselves "alone" without crucial family support. Caught in a liminal social position, about to be married without parental protection, the girl's traumatic distress accentuated, as one violent trauma triggered social repercussions that unfolded beyond her control and "ruined her life."

How does these subjective, relational, and social dimensions of trauma memory speak to resilience in adversity? Memories of trauma are narrated in ways that accentuate or sustain distress because of their ongoing subjective significance: it is not only the trauma of war, but the trauma of poverty and the trauma of powerlessness that is salient in experiences of violent and frightening events. Afghans will tell you that their families cannot hold because of the toxic stressors of poverty, over and above the toxic violence of war. Building resilience in Afghanistan thus entails strengthening families and communities, addressing multilevel factors that work towards perpetuating crisis and misery rather than a hopeful, dignified future: poor governance, economic and political insecurity, severe overcrowding, recurrent domestic violence and unequal opportunities for education and advancement. The implication of such research findings is that structural injustices in Afghanistan need to be addressed through a multilevel system of interventions that cuts across sectors of health, education, employment and social work.

Until the 2021 takeover of the country by the Taliban, there had been remarkable efforts to build integrated systems of care, promote stability, and encourage health and social equity in Afghanistan. A recent thematic review of four decades of research and interventions in the field of mental health and psychosocial support (MHPSS), written by a network of 30 scholars, practitioners and program managers, mostly Afghan nationals, makes this point forcefully (Alemi et al., 2023). Whilst interacting with this network, I gained a much greater appreciation for the kinds of dedicated partnerships that work to evidence mental

health needs, integrate mental health services with community-based psychosocial interventions, and promote the mental health and psychosocial wellbeing of Afghan people. I have better appreciated that, in the Afghan context, culturally and structurally-relevant interventions must build resilience at family and community level to sever the insidious linkages between political insecurity, economic instability, and domestic violence - and promote a human right to flourish, not just recover in the wake of war. To accomplish this requires policies that focus on resource provision to enhance a sense of safety, coherence, moral order, and family connectedness – principles at the heart of resilience, flourishing, and mental health support. I have also learnt that, for resilience and flourishing work to resonate with lived experiences, we must strive for interventions that have sustained, intergenerational impacts.

Pathways to resilience and flourishing in Syrian communities

I now turn to research evaluating the effectiveness and scope of interventions, with two examples of programs serving refugees and host communities in Jordan. The first program was led by Mercy Corps: this international nongovernmental organization has adopted an explicit focus on resilience in complex crises to "partner with local people to put bold ideas into action" (https:// mercycorps.org). With international funding from humanitarian donors, it implemented youth-focused programs to improve lives and livelihoods, mental health and social cohesion. The second program was led by Taghyeer, an organization that "fosters learning and social empowerment through people-driven change, skill-sharing, and confidence-building" (https://welovereading. org). Its flagship program, We Love Reading, grew from a local initiative in Amman to an award-winning foundation with worldwide reach on three continents. Both initiatives are examples of people-centered interventions aiming to change ways of working, namely, the architecture of humanitarian and development assistance. Both are successful examples of inclusive programing, one rooted in resilience humanitarianism, the other in social entrepreneurship. The former is working with a global agenda to partner with local communities, while the second is catalyzing a local approach onto the global stage.

In Jordan, Mercy Corps invited me to evaluate the impacts of a remarkable intervention implemented with 11-15-year-old youth affected by the Syrian war. Known as Advancing Adolescents, the program aimed to alleviate toxic stress, improve learning skills, build resilience, and heal conflict, through close mentorship with trained adult coaches (Mercy Corps, 2014). It focused on profound stress attunement (PSA), an approach akin to mindfulness, as the basis for improving wellbeing, learning, and social understanding. I led this research with Dr Rana Dajani, Professor at Hashemite University and founder of Taghyeer, and with UK and US partners to provide specific expertise in medical anthropology, cognitive psychology, and Middle Eastern studies. Together, we measured intervention impacts in terms of the biological, cognitive, and psychosocial dimensions of child and adolescent wellbeing. One of the most innovative aspect of this research had to do with measuring stress in the body, through linking biomarkers with selfreported data on psychosocial stress, insecurity, and mental health difficulties. Syrian refugees were fascinated to know that we could monitor levels of physiological stress from tiny hair samples: we explained that embedded in human hair, the hormone cortisol functions as a biological diary of chronic stress. By analyzing cortisol levels over time, within a randomized control trial, we

demonstrated that levels of physiological stress fell by a third for the youth engaged in Advancing Adolescents relative to their peers in a control group (Dajani et al., 2018; Panter-Brick et al., 2020). Other innovative aspects of the research evaluation focused on ethnographic work to capture narratives of resilience (lit: muruuna) and the development of the Arabic-language Child Youth Resilience Measure (CYRM) for use in regional surveys (Panter-Brick et al., 2018). The work also featured experimental tests of cognitive function to evaluate whether exposure to violence or socioeconomic deprivation mattered the most for the cognitive skills required for lifelong learning (Chen et al., 2019). Following analyses of gene x environment (GxE) effects on response to trauma (Mulligan et al., 2022), forthcoming work now focuses on the epigenetic signatures of exposure to war-related violence across three generations, at the request of Syrian families who sought to understand more about the intergenerational effects of war exposure. Designed as a contribution analysis, the research initiative thus sought to provide robust, credible, and multi-level data that could advance knowledge, develop methodologies, and engage with multiple stakeholders.

Connecting stress biology to human experience, and bolstering capacities for lifelong learning, are key to health and resilience. They are also key to human flourishing. Many Syrian youth portrayed themselves as having the agency to realize their dreams, the right to live in dignity after resettlement, and the hope to gain social respect. Our research helped provide an analytical lens on the social and political economy of resilience, connecting analysis at the individual, family, and community levels to regional and global compacts on refugees developed led by the United Nations in partnership with state governments. In linking refugee resilience to social inclusion and equity, our study focused attention on the structural changes needed to build individual-level and systemlevel capacities to live well in the wake of forced displacement.

As scholars, we positioned our work within the framework of resilience humanitarianism, moving away from underlining the scars of war as a prime take-home message (Save The Children, 2017) to emphasizing the processes of resilience (Bourke, 2020; Underwood, 2018) in the wake of war. We demonstrated that levels of physiological stress in war-affected adolescents were malleable: they were responsive to a relatively brief, 8-week intervention combining mindfulness with social support to attune profound stress. We also cautioned, however, that levels of resilience, as measured by the CYRM, did not change in response to the intervention in the absence of larger social or structural changes. This spurred Mercy Corps to seek sustained funding for its Future Proof Framework with a multi-level package to enhance the health, learning skills, and social development of crisis-affected youth. For example, Mercy Corps reached out to local businesses and social institutions to help provide employment and learning opportunities for youth, going beyond teaching skills and mindfulness. Within Jordan, our work also impacted the Mercy Corps approach to SEL and livelihood programing, as well as a juvenile justice program led in collaboration with the Ministry of Social Development in Jordan. Regionally, it informed approaches to peace and conflict programing - the mindfulness and social inclusion model was folded into broader community-based interventions aimed at preventing violent extremism in youth. In brief, Mercy Corps officers reported that our research had increased their confidence in an empathy-type of youth programing (Elrha, 2023a, Panter-Brick, 2022). The study was selected as a case analysis of humanitarian health research in a collection of Research in Practice articles commissioned by the Fogarty

International Center of the U.S. National Institutes of Health (Mistry et al., 2021). It was also featured as an exemplar case study of interdisciplinary work and partnerships in humanitarian crises by Elrha, the U.K. funding body (Elrha, 2023a,b). Elrha seek to influence policy and practice to benefit people affected by humanitarian crises, describing themselves as "a global charity that finds solutions to complex humanitarian problems through research and innovation." For example, they situated our project, together with other funded research projects, within larger impact capacity frameworks to establish 'lessons learnt' for health-related research in humanitarian crises.

A second example of community engagement and inclusive programing is Taghyeer's We Love Reading program, an initiative to encourage the love of reading within families and communities. The program mobilizes local community members (women, men, and youth) to establish informal libraries and organize read-aloud sessions in public spaces - such as in mosques, railway stations, and refugee camps (Mahasneh et al., 2021). Over time, these local volunteers become known as Reading Ambassadors. This model of community engagement starts with volunteer work and builds confidence for social connectivity and entrepreneurship: in key aspects, it links together a sense of agency, local ownership, and flexible learning, to take action in one's local community. It is a grassroot system change that strives to foster agentic change in local communities and support lifelong learning in the next generation. This model is relevant to thinking about effective and sustainable ways to foster human development in war-affected and refugee populations: a distributive approach to power and social networks, led by (unpaid) community volunteers. Dajani, who founded the program, explains that Reading Ambassadors see themselves as change-makers in their own communities: catalysts of change, they provide support in ways that are intrinsic to local communities.

To robustly evaluate this model, *Taghyeer* invited US and UK scholars to seek funding for evaluating its interdisciplinary and intergenerational effects. Some of this research focused on assessing multi-level influences associated with Syrian refugee children's literacy and attitudes toward reading (Hadfield et al., 2022). This led to examining whether Syrian children's war-related trauma was associated with avoidance or sustained attention to anger or threat (Michalek et al., 2022), which together with research conducted with Afghan adolescents (Mirabolfathi et al., 2020), suggested that affective working memory capacity can be a promising target for intervention. Another study analyzed the processes of negotiation and transformation that underlie changes in coparenting and family caregiving systems (Khraisha et al., in press).

Our most recent work focused on documenting social networks as pathways to empowerment and social change. We aimed to understand how people think about social ties, empowerment, and wellbeing, and why urban poor women take leadership roles in their communities. We described the size and characteristics of social networks for a cohort of Syrian and Jordanian women, then analyzed how they mattered for empowerment and wellbeing (Eggerman et al., 2023). Strikingly, levels of psychological empowerment decreased as networks were increasingly kin-based - family ties tended to restrict women's social interactions to a homogeneous in-group. We also implemented visual and qualitative methods, known as net-mapping, to portray how women perceived the links between social networks, social activities, and psychological states. For example, Syrian and Jordanian women, living in culturally-conservative communities, explained that volunteering work helped them feel more connected outside the home; local concepts of empowerment hinged on developing their "capacities" and finding their right place in the world as "proof of existence." Through quantitative, qualitative, and visual methodologies, our research team could represent the ways women perceived their social worlds and what it meant to feel empowered and connected to the community. This kind of systems science research focuses on the pathways to social change: it links individual mindsets to networked opportunities for people to work, learn, and socially interact. In brief, we envisaged social networks as pathways to multisystemic resilience and human flourishing.

Future directions and implications

Approaches that focus on systems change help us think holistically about human development, health, and healing. In terms of future directions, what would help support more effective, impactful work in contexts of protracted humanitarian crises? Personally, I would like to see closer connections between the science of resilience and generative approaches to human flourishing: this will enrich research with implications for humanitarian practice and policy. I would also like to see researchers take more specific steps to communicate the added-value of evidence-based research: this means developing explicit strategies to convey how we innovate current knowledge, improve research-led practice, develop skills and abilities, and create network-led partnerships.

Figure 2 conveys some possible ideas for adding value to multisystem research and intervention in humanitarian contexts. In terms of innovating research (a), connecting resilience to flourishing can extend assets-based, salutogenic approaches to human lives and livelihoods. The salutogenic mindset - going beyond a harm-reduction, crisis-mitigation mindset of saving lives (akin to rescuing fish from raging waters) - is very important for war-affected people, who ask to live in dignity and aspire to a future worth living for. This is where we must be careful to avoid elusive, disengaged, or laissez-faire implications of resilience theory. Specifically, one might go beyond strengthening people's capacities to develop 'better-than-expected' outcomes when confronting structures of harm: one might confront and dismantle systems of harm. To give salient examples, systems-led approaches to human wellbeing must seek to confront and dismantle racism, colonialism, and violence, not just help people withstand racism, colonialism, and violence. Refugees ask that humanitarian action do more than rescue them from crisis; they ask for access to key resources to help them move from suffering to flourishing, from misery to dignity, from loss to justice.

To improve research-led practice (b), we can establish more explicit strategies to co-create frameworks for knowledge implementation with a diverse set of stakeholders. To-date, there are rich conversations on resilience and flourishing currently sustained in the fields of anthropology, critical public health, disability, ethics, human rights, and human development (Willen, 2022). However, their insights are seldom applied to bolster multisystemic work with children and families in contexts of war and forced displacement. Fundamentally, we need to develop research, practice, and policy in ways that are relevant to lived experiences. In recent decades, the field of mental health and psychosocial support (MHPSS) was developed specifically to implement research-led practice in contexts of protracted adversity, as well as to identify the top-ranking priorities for research relevant to humanitarian practice (Tol et al., 2023). In Afghanistan, for example, program officers could draw upon

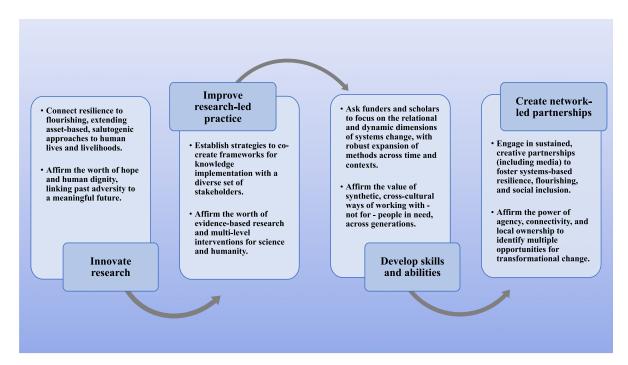


Figure 2. Future directions for multisystem research and intervention in humanitarian contexts: (a) innovate research, (b) improve research-led practice, (c) develop skills and abilities, (d) create network-led partnerships.

research evidence to bolster both systems of public mental health care and community-based psychosocial initiatives (Alemi et al., 2023). In many countries, think tanks, research councils, and funding bodies are also paying more explicit attention to 'lessons learnt' from research that can influence humanitarian policy and practice; the short case studies, co-created by scholars and program officers within Elrha's impact capacity frameworks (Tol et al., 2020; Research for Health in Humanitarian Crises, 2023 a, b), are a good example of this. Explicit strategies to co-create frameworks for knowledge implementation, and to infuse these with sound science and culturally-relevant insights on human experience - can help develop future studies and implement effective interventions, across different settings and new locations.

In terms of developing skills and abilities (c), the relational and dynamic aspects of a multisystem conceptual frame demand new forms of training and methodological innovations. Specifically, we need to ask funders and policymakers - not just scholars - to develop context-specific understandings of human development, resilience, and flourishing, in ways that assess individual, collective, and intergenerational dimensions over time. Given that both resilience and flourishing are polysemic terms in everyday and scholarly discourse, this demands a robust expansion of methods to capture relevant data and to promote multi-level interventions in specific contexts. To better analyze a cascade of effects, for example, one might build knowledge about intergenerational aspects of systems change. This would usefully add to research calls for more cross-cultural, interdisciplinary, and longitudinal data collection to better understand the pathways to human resilience. Intergenerational approaches to data collection can also be critical to understand which key resources can sustain pathways to human flourishing.

Finally, creating network-led partnerships (d) provides the generative motor for working on systems change. Concerted funding efforts to engage in sustained, creative partnerships across

different sectors of expertise would help develop systems-level research on resilience, flourishing, and social inclusion – ways of working that help us understand how people strive to live well, as well as withstand adversity. It would also boost the 'after-life' of scientific work by encouraging scholars to explain the value of multisystem approaches for a lay audience. For example, engaging with media is a creative, powerful way to help convey how children, families, and societies bolster their capacities for withstanding adversity and striving to live well. One good example of networks and media engagement led to an award-winning documentary (Bourke, 2020), offering the viewpoints of scientists, humanitarian staff, and Syrian refugee families. This short film sought to clarify why and how research makes a difference to war-affected and refugee people when it fosters good science, local ownership, and human agency and dignity (Dajani et al., 2021).

Based on field experience, my hope is that systems-level research will help us achieve important humanitarian goals. This could help us affirm the worth of hope and human dignity, through insights on lived experiences linking past adversity to a meaningful future. It would affirm the worth of research-led practice and multi-level interventions for science and humanity, especially efforts to interlink human development, wellbeing, and social inclusion. It would affirm the value of synthetic, cross-cultural training to work with people, not for people in need, to better understand the cascade of effects that matter for individual, familial, societal, and planetary health across generations. Finally, it would affirm the power of agency, connectivity, and local ownership, helping us identify multi-level opportunities for transformational change. These four types of impacts will add value to a systems science approach working to strengthen individual and collective capacities to withstand adversity and to live well.⁵⁸

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