

Energizing partnerships in research-to-policy projects

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Abstract

On the ground, how can research initiatives unfold to make meaningful contributions to real-world practice and real-time policy? This article draws on a case study evaluating an innovative program to alleviate toxic stress, boost resilience, and promote social inclusion among Syrian refugee and Jordanian nonrefugee youth. I describe the kind of project design and community engagement that animates research on stress biology and lived experiences, connecting people with humanitarian practice and policy. I highlight why and how biocultural work generates fluency in multiple forms of evidence to guide mental health interventions, reflecting on ways to anchor research in shared humanity and shared scientific purpose. I clarify what types of added value, pursued during intersectoral collaborations, help achieve plural, sustained, and inclusive contributions. This article shows how “creative relationality” can energize research-to-policy initiatives to bring about transformational change.

KEYWORDS

biocultural research, ethics, humanitarian policy, relationality, implementation science

Resumen

En el terreno, ¿cómo pueden las iniciativas de investigación desarrollarse para hacer contribuciones significativas a la práctica del mundo real y la política del momento? Este artículo se basa en un estudio de caso que evalúa un programa innovador para aliviar el estrés tóxico, elevar la resiliencia y promover la inclusión social entre los jóvenes refugiados sirios y la juventud jordana no refugiada. Describo la clase de diseño del proyecto y la involucración de la comunidad que anima la investigación sobre la biología del estrés y las experiencias de vida, conectando a la gente con la práctica y la política humanitaria. Resalto el por qué y cómo el trabajo biocultural genera fluidez en formas múltiples de evidencia para guiar las intervenciones de salud mental, reflexionando sobre las formas de anclar la investigación en la humanidad compartida y el propósito científico compartido. Aclaro qué tipos de valor añadido, buscados durante colaboraciones intersectoriales, ayudan a lograr contribuciones que son múltiples, sostenidas e incluyentes. Este artículo muestra cómo la “relacionalidad

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creativa” puede dinamizar las iniciativas de investigación-a-política para lograr un cambio transformacional. [*investigación biocultural, ética, política humanitaria, relacionalidad, ciencia de la implementación*]

الملخص

كيف يمكن للمبادرات البحثية ان تقدم على أرض الواقع مساهمات ذات مغزى في السياسات و الممارسات الواقعية، تستند هذه المقالة على دراسة حالة تقيّم برنامجاً مبتكراً للتخفيف من الإجهاد الحاد، تعزيز المرونة، وتعزيز الدمج المجتمعي بين اللاجئين السوريين والشباب الأردني غير اللاجئ. في هذه المقالة، أصف هذا النوع من تصميم المشروع و الانخراط المجتمعي الذي يحد على اجراء البحث على بيولوجيا الإجهاد والتجارب الحية، ويربط الناس بالممارسات والسياسات الإنسانية. وأيضاً، أسلط الضوء على سبب وكيف يولد العمل البيولوجي الثقافي الطلاقة في أشكال متعددة من الأدلة لتوجيه برامج الصحة النفسية، و التفكير في طرق لترسيخ البحث لأهداف إنسانية و علمية مشتركة. كما و أوضح ما هي أنواع القيم المضافة، التي يُطمح إليها من خلال التعاون بين القطاعات المختلفة ، والتي تساعد على تحقيق مساهمة متعددة ومستدامة وشاملة. يوضح هذا المقال كيف يمكن للعلاقات الإبداعية تنشيط مبادرات البحث-إلى-السياسة لإحداث تغيير تحويلي جذري. [البحوث البيولوجية الثقافية ، الأخلاق ، والسياسة الإنسانية ، العلاقاتية ، علم التنفيذ].

Interdisciplinarity is useful for generating new insights about health and often critical for producing transformational change. As a medical anthropologist trained in human biology and the social sciences, I find that bridging conceptual frameworks and diversifying methodologies helps to provide a holistic understanding of human well-being. In working with refugees, I know that biocultural research also helps to identify compelling opportunities for intervention. Research that connects people to policy, in ways that improve refugee health, livelihoods, and human dignity, has inherent creative value. Where it makes sense to conduct biocultural research with war-affected populations, I argue for developing holistic knowledge in ways that connect strongly with real-world practice and real-time policy. I also argue for energizing relationships in ways that anchor research in shared humanity and shared scientific purpose, clarifying what types of added value can be achieved during intersectoral collaborations.

During 2015–2017, I led interdisciplinary research to evaluate an innovative program focused on children and adolescents to alleviate toxic stress, boost resilience, and promote social inclusion among Syrian refugee and Jordanian host communities. The project was funded through an initiative that engaged both academic and humanitarian actors to “build the evidence” for health-related interventions in crisis settings. Through partnerships that crisscrossed research, policy, and community-based networks, I evaluated changes in biological, cognitive, and psychosocial data—measuring stress alleviation in the body, brain, and mind—and connected narratives of agency, dignity, and resilience to larger sociopolitical contexts through the lens of ethnography. Measurement at such different levels and scales, and understanding connections across diverse systems of being, is at the heart of biocultural inquiry.

Synthetic Knowledge for Diverse Audiences

Yet how do anthropologists make meaningful contributions to real-world practice and real-time policy? While biological anthropologists study stress responses to a range of ecological challenges, they seldom engage in testing the effectiveness of specific interventions. It is unusual, for example, to deploy stress biomarkers to inform health policy and practice in real time—especially in humanitarian settings. Having pioneered the use of biomarkers in remote settings, anthropologists mainly study stress to situate biological burden within social systems (see, among others, Brewis et al. 2021; Kohrt et al. 2014; McDade 2010; Panter-Brick et al. 2020a; Sancilio, Eggerman, and Panter-Brick 2016; Worthman and Costello 2009) rather than focus on intervention work. For their part, sociocultural anthropologists are uniquely suited to document lived experiences, amplify community voices, and articulate strong critiques of systems that perpetuate structural inequities and social marginalization. In crisis settings, they have taken health-related forms of humanitarian intervention as critical sites for ethnographic observation (Abramowitz, Marten, and Panter-Brick 2014; Good et al. 2014). Yet insights gained from sociocultural analyses are rarely developed through intentional (and funded) partnerships with the humanitarian sector. To make stronger contributions to refugee health, one starting point for anthropologists is to work synthetically within their discipline in ways that knit together research, practice, and policy more closely.

Stepping out of academic circles, it becomes crucial to develop fluency in multiple forms of evidence and present a clear yet multilayered narrative that makes impactful contributions to policy and practice. This fluency becomes a real-world test of scholarly expertise and, by extension, a test of the coherence and relevance of one’s discipline. It involves far more than balancing epidemiological with interpretive data, which is of course necessary for a holistic understanding of conflict and health (Adams 2016; de Waal et al. 2014; Roberts 2021); it requires the ability to

crystalize compelling arguments that engage the interest of a diverse audience. Providing clear, compelling reasons for undertaking biocultural research matters to both policymakers and refugee communities. For example, at a global level, the ability to convey a synthetic understanding of multiple dimensions of refugee well-being is often well received. During research dissemination meetings convened in Amman, Geneva, London, or Washington, DC, the findings I presented from biocultural work were welcomed as clear, credible, and innovative. Policymakers told me, “I didn’t know anthropologists did this,” referring to how biomarkers could show that levels of biological stress in Syrian refugees fell in response to a community-based intervention. Others noted, “I thought anthropology was so theoretical,” seeing how a qualitative understanding of lived experiences could be threaded into real-world practice.

At a local level, biocultural approaches proved motivating, even inspiring, to Syrian and Jordanian communities. Refugee families embraced the science of biomarkers as a fascinating way to connect stress biology with human experience, one that would help tell their story to the outside world. Young people were fascinated to know that we could monitor levels of stress from sampling about one hundred strands of hair: embedded in human hair, the hormone cortisol functions as a biological diary of chronic stress. Our research team measured cortisol concentrations in segments of hair, cut 1 cm away from the scalp, to reveal an individual’s stress physiology over the past month of hair growth; this was done both pre- and post-intervention to evaluate changes for the individual over time. We rooted this project in open and inclusive discussions of the “science” guiding health research and program evaluation. We also found creative ways to engage with young people: for example, we hired local hairdressers, both men and women, to give a professional haircut during data collection. This showed we were serious about the science of stress in a manner that proved engaging and culturally appreciated.

Humanistic and Scientific Engagement

Engagement with diverse audiences has led me to reflect more deeply on the value of biocultural work and meaningful partnerships in crisis settings. In Jordan, in-country partners saw that community engagement was at the forefront of anthropological work, an approach they found truly refreshing. On-the-ground collaborations were characterized by humanistic and scientific engagement in, for example, energizing partnerships to value human dignity and co-create the research process. I use the phrase “humanistic engagement” rather than “humanitarian engagement” or “cultural engagement” to denote people-centered approaches that affirm the values of human dignity and shared humanity. I use the phrase “scientific engagement” rather than “scientific collaboration” to anchor research in a sense of shared scientific purpose. As discussed below, this project generated many discussions with respect to what biocultural work with refugees might achieve, inspiring reflections on the nature of partnerships rooted in an ethos of shared values and creative purpose. Within anthropology, this resonates with efforts to develop more inclusive and relevant forms of knowledge production, extending the characterization of anthropological practices as moving from reciprocity to relationality (Eckert 2016; Mondragón 2018; West 2018). This approach is also in line with calls for “new ways of working” in the field of humanitarianism—disrupting systems of power such that humanitarian practice can work ethically “with” people rather than “for” people (Slim 2020).

When framing health interventions, we find many different strategies of community engagement practiced on the ground within humanitarian and development spaces. As operationalized in the humanitarian field, community engagement starts with a “two-way dialogue” between crisis-affected communities and humanitarian organizations (OCHA 2015) to engage in a proactive process of “meaningful participation.” The goals of engagement, however, often reflect power differentials that lead to a continuum of practices ranging from information sharing, mutual learning, and active listening through to, less commonly, co-sharing knowledge, collective decision-making, and local ownership. We know that, conceptually, models of community engagement are either driven by utilitarian perspectives, aiming to improve health services or health outcomes, or social justice perspectives, aiming to achieve empowerment or social and structural change (Brunton et al. 2017), and that these two principles of community engagement matter to building equity in health research, implementation, and dissemination (Schlechter et al. 2021). We also know that a monolithic understanding of the local “community” often proves naïve, especially in settings characterized by structural inequalities and political insecurity. In Lebanon, for example, community-empowerment tool kits proved insufficient to tackle entrenched power hierarchies, lack of trust, and conflict over material resources; these effectively undermined a project to address health inequities and build social cohesion among refugees and host populations (Jirmanus, Ziadee, and Usta 2021). In this context, an active collaboration between researchers, nongovernmental organization staff, and community members was not powerful enough to foster meaningful changes of actual practices.

Within the field of mental health and psychosocial support, ways of handling intersectoral relationships speak to addressing issues of credibility, efficacy, relevance, and trust, building alliances with civil society actors, developing holistic methodologies, and articulating the moral and social argument for culturally relevant and effective mental health care (Bemme and Kirmayer 2020; Hinton and Good 2016; Jain and Orr 2016; Kienzler, Spence, and Wenzel 2019; Kirmayer 2012; Kirmayer, Gomez-Carrillo, and Veissière 2017; Kleinman 2006, 2012; Kohrt et al. 2014; Patel 2012, 2014; Tol et al. 2011; Weaver and Kaiser 2014). When working with refugee and war-affected communities, I believe that specific innovations and creative insights can be gained from biocultural research on mental health and psychosocial support, as long as knowledge generation is anchored in creative, ethical engagement and empathetic, sustained partnerships.

Structure of This Article

On the ground, how do synthetic knowledge and relational approaches unfold to make meaningful contributions to real-world practice and real-time policy? In seeking to answer this overarching question, I divide this article into three sections. The first provides context on *why* launch biocultural research to evaluate health-related interventions with refugees and host communities: I describe the value of synthetic work for building diverse conversations, handling evidence, and securing impact. The second focuses on the case study to show *how* to foster creative partnerships while being responsive, inclusive, and holistic. The third offers reflections on the afterlives of this project, explaining what was learned and raising the *so what* question to delineate what impacts a project's contributions to transformational change. These three questions—why, how, and so what—are fundamental to biologically and socially situated research. The article is written in a discursive style. It foregrounds the relationships that guided research on the ground—namely, the human story behind project implementation, research dissemination, shared decision-making, and plural impacts. In concluding this article, I characterize the research process as one guided by *creative relationality*.

CONTEXT: WHY TAKE A SYNTHETIC APPROACH?

Biocultural research can speak the language of life sciences, social sciences, implementation science, and the humanities. This helps with building more diverse and creative conversations and, ultimately, more professional and inclusive platforms of change. Biocultural research also helps with building robust and relevant conceptual frameworks for assessing the health-related dimensions of lived experiences, which are singularly important to help bridge gaps between knowledge, practice, and policy. To show how synthetic work can make both creative and useful contributions to refugee mental health in crisis settings, I begin with discussing notions of evidence and impacts.

Evidence: Rigor and Relevance

In contexts of war and forced displacement, the need for rigorous evidence has been strongly articulated, given that because many health-related interventions have been implemented without robust evaluation of effectiveness (Ager et al. 2014; Bangpan et al. 2017). For example, “child-friendly spaces” have been one of the most common programs for psychosocial support in humanitarian emergencies, despite, until recently, a lack of robust documentation regarding whether these programs actually protect children, strengthen well-being, and mobilize local communities (Hermosilla et al. 2019; Tol et al. 2020). We simply need to do better for crisis-affected young people in terms of knowing what works and why in given contexts.

With the increased deployment of mixed-method approaches to evaluate responses to humanitarian crises (Smith and Blanchet 2019), the question of what constitutes “rigorous evidence” has often proved thorny. “Not all evidence is equal,” acknowledged the authors of a practice guide on using research evidence in the humanitarian sector (Blanchet et al. 2018, 21). In policy circles, the perceived hierarchy of evidence (between experimental, quantitative, and qualitative methods) is being increasingly challenged—and so it must be, especially for mental health, a field of research and practice that requires holistic understanding and inclusive ways of working. And while the concept of scientific rigor can be controversial, the term “relevance” means different things to different audiences. It is a crucial term of engagement for sociocultural anthropologists, who argue for the practical utility of holistic frameworks and for the power that ethnographies can bring to epidemiological, clinical, or biological data (Adams 2016; Bourgois 1999; Hansen, Holmes, and Lindemann 2013; Roberts 2021). Working with a network of evidence, rather than assembling hierarchies of evidence, is important for understanding whether, how, and why mental health interventions work in real life, as well as for whom.

Careful thought is needed to strike a fruitful balance between rigor and relevance, thus opening ourselves to different ways of sharing knowledge (Abimbola 2021), especially in crisis settings (Tol et al. 2011, 2012). Cultural relevance comes from knowledge gained through immersion in community life and a place of humble respect for the local realities of people who are often systematically marginalized. Practical relevance comes from the need for articulating clear take-home messages, without excessive scholarly nuance, to guide humanitarian policy and practice. As articulated by the director of a global agency working to end injustice and poverty, “Academics are good because they challenge our conclusions and how we reach them—we need to get more rigorous. But they need to get less perfectionist” (Elrha 2012, 55). Clear messaging is also needed to show whether interventions are relevant to the concerns of war-affected people. In previous research in Afghanistan, for example, I learned from interlocutors that there is no health without mental health, no mental health without family unity, no family unity without work, dignity, and a functioning economy, and no functioning economy without good governance (Eggerman and Panter-Brick 2010, 82). Synthetic knowledge is useful here to answer the call for interventions that can help address the interrelated dimensions of health, lives, and livelihoods.

Impacts: Types of Added Value

Donors who support work in crisis settings are increasingly assessing the quality of funded research in terms of the contributions it makes to policy and practice. One guidance note commissioned by the UK government and its research councils has articulated this point forcefully:

“providing more evidence is part of the story,” but equally important is “ensuring that the evidence informs policy goals, strategy, policy design and implementation by adding value to what is already being done” (Shaxson 2016, 4). To clarify what “added value” might look like, the guidance document delineated four types of impact: conceptual (changing knowledge, understanding, and attitudes), instrumental (changing policy and practice, given research findings), capacity-building (changing researchers’ ability to conduct future work), and connectivity (shaping the existence and strengths of networks of people and organizations using the research).

In terms of refugee well-being, these *four types of impact* might entail “making a difference” with respect to the conceptualization of mental health support, the specific modalities of programs implemented, the skills learned and practices adopted during research activities, and the formation of strong, enduring partnerships. It is worth reflecting on types of impact, as well as evidence, in examining how research will be meaningful for policy and practice. This helps to understand how the nature of partnerships will underpin research processes and knowledge translation.

CASE STUDY: HOW TO FOSTER CREATIVE PARTNERSHIPS

This brings me to detail a specific example. In 2015, research and evaluation officers from Mercy Corps, an international nongovernmental organization, invited me to evaluate one of their programs in Jordan, a psychosocial intervention for young people in war-affected communities. They had come across the research I had led in Afghanistan, which integrated qualitative case studies with epidemiological, biological, and cultural data. This work showed how hope and resilience, as well as suffering, could cascade from one generation to the next (Eggerman and Panter-Brick 2010; Panter-Brick et al. 2011), how memories of trauma were malleable to social experience (Panter-Brick et al. 2015), and how the vocabularies of stress, insecurity, and dysphoria differentially mapped onto systolic and diastolic blood pressure (Sancilio, Eggerman, and Panter-Brick 2016). What had caught the eye of Mercy Corps officers were publications on mental health, stress biomarkers, and community-level resilience in the wake of war and forced migration.

Mercy Corps had been funded as part of the No Lost Generation initiative, launched in the Middle East region to potentially reach 400,000 war-affected youth. Their program (called Advancing Adolescents) rested upon a Profound Stress and Attunement (PSA) approach, drawing on neuroscience to communicate with youth how toxic stress impacts human emotions and everyday behaviors and featuring structured activities to build their skills and community support networks (Mercy Corps 2014; Panter-Brick et al. 2020a, 2021). Adolescents (eight to fifteen years old) learned to practice empathy and mindfulness, build social connections, and work toward life goals and community projects through eight weeks of group-based activities (such as language training, mobile-phone repair, arts and crafts, sports, hairdressing) led by trained local volunteers. The program served both refugee and host communities. Mercy Corps sees adolescence as a pivotal time for life-changing transitions: in the short term, mental health and psychosocial support programming can have positive impacts on young people’s lives; in the long term, it can help improve the chances of a flourishing life.

Mercy Corps sought an external evaluation of this program to provide rigorous evidence of benefits for crisis-affected adolescents and secure donor funding. For this impact evaluation work, I applied to Elrha under their Research for Health in Humanitarian Crises (R2HC) funding call. Elrha is a global charity dedicated to finding solutions to complex humanitarian problems through research and innovation. The proposal needed to specifically address an open call to strengthen humanitarian health practice and policy through building academic-practitioner partnerships and research that contributed to more effective interventions in humanitarian response (in 2014–2019, R2HC funded eighteen studies focused on mental health and psychosocial support; Tol et al. 2020). I saw two main gaps that needed addressing. The first was “what works” in mental health and psychosocial support to address the consequences of violence and forced displacement. The second was “what works” in biocultural research as a body of knowledge and methodologies relevant to refugee well-being. Policymakers were calling for “reliable, credible, and useful data” regarding the effectiveness of psychosocial support for war-affected communities. As an anthropologist, I called for ways of working that are mindful of cultural and practical concerns, building “relevant *and* relational data” to knit together community, science, practice, and policy. This was the challenge: How might biocultural research both further health-related knowledge to inform crisis responses and foster sustained, people-centered partnerships? I turn to explain how we built meaningful partnerships, a strong but responsive research design, and an inclusive research culture with attention to multiple dimensions of well-being.

Intersectoral Work

The way forward was to build a research consortium predicated on intersectoral, interdisciplinary, and equitable partnerships. The dynamics of building such partnerships proved intriguing. Once Mercy Corps headquarters had invited me to work in Jordan, I reached out to Professor Rana Dajani to lead the in-country research team and to scholars from Western universities to strengthen interdisciplinary expertise. Dajani had built trusted partnerships with refugee families and community-based organizations in Jordan and also had preexisting contacts with Mercy Corps officers in Amman. Dajani is both a scientist—a professor of biology and biotechnology at Hashemite University—and a social innovator who founded

a nongovernmental organization (Taghyeer) and a flagship program (We Love Reading) to empower men, women, and youth to take action in their local communities.¹ We had met during one of her prior visits at Yale University, and I knew that her foundation had won prestigious awards for refugee education and social entrepreneurship.

Mercy Corps had approached me to lead the program evaluation because I was well positioned to apply for competitive grants that would fund community-based health research in crisis settings. My first application for funding support, however, was unsuccessful. Elrha had submitted all applications for peer review, and mine was deemed overly ambitious. For one, it included not just refugee and nonrefugee youth but also their caregivers to build a broader picture of family dynamics; for another, it sought to understand social resilience in war-affected settings and not just assess trauma exposure and psychiatric outcomes. My second application, a year later, was strictly focused on adolescent health outcomes; it won funding for eighteen months of fieldwork. I supplemented this funding with faculty research grants to support additional field-based and lab-based work to address wider questions of interest: as the project developed, new questions were raised by local research partners and by refugee families. Our research program unfolded in responsive ways, given our ethos of equitable partnerships and humanistic engagement.

Responsive Research

Research goals were to assess the biological, cognitive, and psychosocial dimensions of well-being, as well as specific impacts of the Advancing Adolescents program. We aimed for a randomized controlled trial (RCT). RCTs have both scientific and symbolic power in terms of building the evidence base for specific interventions, enabling one to speak authoritatively on matters of scientific rigor and scientific relevance. They have, however, come under scrutiny when used for evaluating social interventions and generating evidence-based policy (Bonell et al. 2012, 2013, Marchal et al. 2013; Mowat, Subramanian, and Kawachi 2018; Robinson et al. 2004). Many researchers put “too much trust in RCTs over other methods of investigation,” failing to ask broader conceptual questions to discover not just “what works” but “why things work” (Deaton and Cartwright 2018, 2). How, then, did the internal logic of an RCT serve our biocultural research design? For one, adopting the frame of an RCT while carefully layering in health outcomes pertinent to the body, brain, and mind, as well as social inclusion, would help demonstrate intervention impacts in convincing and holistic ways. Moreover, this research design did not fundamentally exclude the kind of community engagement we wished to foster, nor the network of evidence we sought to assemble.

In this project, there was considerable give-and-take with respect to the final research design. On the one hand, Mercy Corps had convinced us (scholars) to work with both refugee and host communities. Initially, we had wanted to focus research time and resources on Syrian refugees, but there were two powerful arguments for a more inclusive approach: the government of Jordan had mandated that international funding be channeled in equal parts to Syrian and Jordanian communities in need, and an exclusive focus on refugee youth could fuel resentment in host communities. Indeed, Advancing Adolescents was directed to both displaced Syrians and poor Jordanians living side by side in low-income apartments in the same urban centers close to the Syrian border. On the other hand, we scholars wanted to employ research staff from Taghyeer, rather than staff from Mercy Corps, and follow a control group that did not engage in Mercy Corps programming: it is best to have different personnel conducting the program implementation and the research evaluation and best to compare control with intervention groups to test the added value of program participation. Attention to potential response bias and unreliable evidence is crucial to a robust research design.

Local partners also have a stake in evidence-based programming: on the ground, RCTs can raise serious ethical or practical concerns. In Amman, Mercy Corps field officers were hesitant to implement an RCT, even though US headquarters had signed off on the research design. Was it ethical to defer access to Advancing Adolescents to children in need just because they were assigned to a control group? This was a wholly valid concern, but Dajani and I turned the question around: Was it ethical to invest substantial resources in a community-based program, intended to benefit refugee youth on a regional scale, without robust evaluation? Given that Advancing Adolescents was iterated in local communities every two months, youth in the control group would be able to access the program with only a slight delay, thus addressing a major ethical concern. However, we discovered that Mercy Corps field officers were no longer in a position to promise deferred access to the program. Timelines were out of sync: delays with grant-funding approval and international fund transfers had pushed back the start of fieldwork evaluation, while Mercy Corps, operating within six- to twelve-month donor-funding cycles, had not yet obtained assurance of continued funding for Advancing Adolescents.

At that point, Dajani and I decided to drop the proposed randomization methodology: the RCT did not have sufficient buy-in, given pressing ethical, practical, and funding considerations. We proceeded with a simpler experimental trial: youth were allocated to intervention versus control groups based on their readiness to start the program—who was ready versus preferred to wait—from the pool of families registered for the next program iteration. We launched the fieldwork having recruited and trained a team of six young women, university students and young professionals, both Syrians and Jordanians. Six months later, we shared our data with Mercy Corps and with local communities near the border. These data were very promising. Seeing that Mercy Corps had renewed funding and were calling on families to participate in new iterations of Advancing Adolescents, we proposed to repeat the evaluation. As before, we would collect data at three time points (before the intervention, immediately after the intervention, and at one-year follow-up) and recruit a representative sample of Syrian and Jordanian male and female youth. But this time,

we would run with the stronger research design of a randomized trial. This, we argued, would deliver stronger evidence of program benefits to stakeholders, namely, the scientific, donor, and local communities.

Inclusive Culture

Dajani and I also worked to change an institutional culture that saw refugee and host communities as implementing partners in the research rather than co-producers of evidence. Dajani, herself of Syrian-Palestinian-Jordanian heritage, saw local communities as key partners in the design and implementation of “good science.” We did not follow a model of top-down expertise delivered to intended beneficiaries. Two examples, pertaining to community participation and youth selection, illustrate this important point.

With respect to community participation, Dajani explained our research goals to youth and their families in this way:

A lot of good people from international organizations have come to help us, but we local people know what works for us here. We want to make sure these programs work, or advise how to make them better. So how shall we evaluate these programs? The best way is to go to science. I am a scientist, I am Syrian and Jordanian like you, let's go to science together. I don't have all the answers, so let's go to where science is the best. What do you think? For stress, science says that the body does not lie, and the new thing in science is hair cortisol. Can we do this, now? We can measure stress in the body—so now, shall we measure stress in blood pressure, shall we measure it in saliva, shall we measure it in hair? What do you think will work? (fieldnotes)

Dajani always situated the science within local concerns and a global context, emphasizing common purpose and agency in shared decision-making. During multiple community meetings, she would emphasize a sense of local ownership, underscoring that when Syrian and Jordanian families invited international organizations in their midst, they had the right to learn whether programs did or did not work and have a timely opportunity to help refine them.

With respect to the selection of youth into intervention and control groups, the process needed to be transparent and fair. Together with Dajani, Syrian and Jordanian families generated a simple solution to the potentially complicated process of randomization. After completing the baseline survey, youth would draw lollipops of two different colors from an opaque bag. A flipped coin would designate one of the lollipop colors to either treatment or control, such that some children would access the program then and others later: the process of randomization was visible to all, and families spoke of chance allocation as the manifestation of the will of Allah. Implementing a randomized trial could be enabled with proactive and respectful community engagement.

Community engagement is thus key to the resolution of ethical and logistical concerns. I learned this in Afghanistan when asking school directors across three provinces to help recruit a systematic random sample of boys and girls for research interviews. Many school directors remained unconvinced as to why randomization—such a complex method of choosing interlocutors—was necessary given the time and work necessitated in drawing master lists of all eligible participants. Only some, but not all, children and adolescents would be included in the study. But when families were not selected for participation by the random sampling procedure, they were likely to say, quite simply, “Allah did not choose us” (Eggerman and Panter-Brick 2011, 149). For me, this opened a space to think more deeply about how participants make sense of a research project; from the perspective of local communities, questions about the nature and meaning of research work are clearly of central importance.

Embedding research within people-centered partnerships, equitably, is an iterative process that traces an arc from project design to dissemination. In Jordan, an unexpected contribution to research evaluation was proffered by the six fieldworkers who, energized by the project, began to write about their research experiences: they narrated aspects of the lives of refugee and nonrefugee youth, described logistic and ethical challenges, wrote down thoughts and ideas to contribute to regular debriefing sessions, shared emotional roller coasters, and articulated their sense of purpose. Such writing was their own idea: they hoped to collate their experiences into a book, in Arabic, independently from any other planned scholarly output. Their stories were humorous, including observations about “Dr. Rana” and “Dr. Catherine” and their ways of working. I never saw these pages, but after some time asked two fieldworkers, Dima Hamadmad and Ghufuran Abudayyeh, to share some examples. One of the narratives they shared, the testimony of a Syrian refugee youth, was both simple and compelling: “before Advancing Adolescents, I did not have a goal and I was hopeless, but now I have a strong personality and I am willing to become a successful man in my life. My dream will start now.” We find in his story the seeds of agency and human dignity and a sense of trajectory made possible after experiences of war and forced displacement. We also see how local fieldworkers took initiative and, being part of a project in which they had a voice, became creative partners in the research process.

Holistic Well-Being

This research project sought to evaluate the psychosocial, biological, cognitive, and social impact of Advancing Adolescents for refugee and nonrefugee youth (Figure 1). To assess these multiple dimensions of well-being, we needed useful, feasible, and culturally grounded methods



FIGURE 1 Assessing the psychosocial, biological, cognitive, and social dimensions of well-being.

(A) Psychosocial: self-reports of stress and mental health. (Photo credit: Al-Safadi)

(B) Biological: hair cortisol as a marker of chronic stress. (Photo credit: Taghyeer Foundation)

(C) Social: self-reports of resilience and lived experience. (Photo credit: Al-Safadi)

(D) Cognitive: game-like tests of executive-function skills. (Photo credit: Taghyeer Foundation)

[This figure appears in color in the online issue]

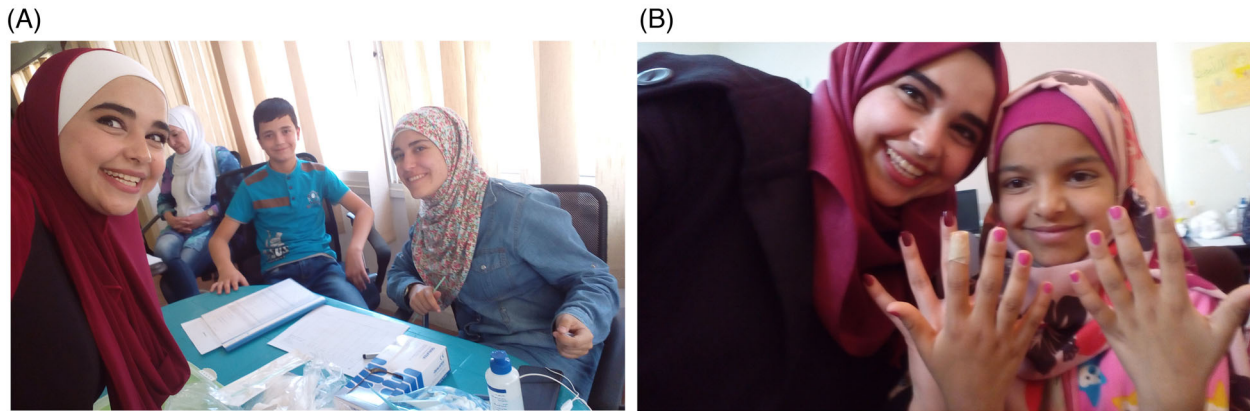


FIGURE 2 Fieldworkers in action: (A) beginning interviews, (B) painting the nails of young girls waiting to engage in data collection. (Photo credit: Taghyeer Foundation) [This figure appears in color in the online issue]

of evaluation. To evaluate mental health, we chose both international and regional psychometric instruments relevant to conflict-affected populations. For example, we adopted the Human Insecurity Scale, originally developed for use in Gaza and the West Bank for Palestinian populations (Ziadni et al. 2011). It captures a dimension of insecurity akin to fear, which in conflict zones is qualitatively different from common understandings of “stress.” Constructs such as insecurity, stress, anxiety, depression, and post-traumatic stress are distinct dimensions of human well-being; all were included in our survey.

For biomarkers, we also implemented a range of physiological measures, with a view to select those most relevant to war-affected youth. Blood pressure is one of the most easily understood biomarker of stress, one that I had successfully implemented with Afghan adults. For adolescents with ongoing developmental changes, however, tracking blood pressure over time, while culturally relevant, is less revealing of short-term intervention effectiveness; we dropped such measurements after the first trial. The biomarker of choice proved to be hair cortisol, as it tracks the cumulative effects of stress in the body. Moreover, youth preferred hair to saliva collection, appreciating the offer of a professional haircut, and finding saliva messy.

To track the cognitive impacts of stress and trauma, we asked youth to complete Rapid Assessment of Cognitive and Emotional Regulation (RACER) tests, which measure executive-function skills such as inhibitory control and working memory; designed to be independent of literacy level, these game-like tasks are taken on laptops or iPads and prove well suited to cross-cultural work with children and adolescents. To evaluate current and past adversities, we collected socioeconomic data and lifetime trauma exposure, but also epigenetic data, at Dajani’s request, to better understand the biological signatures of war-related violence. In all, fieldwork was a complex operation given the limited space and unstable electricity supply in the community centers, the scheduling of multiple research tasks, and the long car journey to Amman to refrigerate biological samples. The field team would get very busy, as young people would often arrive together with friends and relatives; our office spaces, rented from local community centers, were hubs of scientific research but also hubs of people-centered engagement. Our fieldworkers, for example, took initiative in offering a “beauty treatment” to young girls who waited for their turn to engage in data collection, painting nails for impromptu fun (Figure 2).

Turning to socially embedded dimensions of well-being, we appraised lived experiences, and specifically narratives of resilience. We focused on resilience only once young people told us, during structured conversations held to elicit participant feedback, that we were too negative in appraising trauma and social stressors. Why did we not look at the positive aspects of their lives? Appraising resilience was thus an explicit “ask” from the youth themselves; it was also a dimension of well-being we had dropped from the project design because peer review had deemed our initial grant proposal too ambitious to undertake in war-affected settings. We immediately set aside research time to understand the conceptualization of resilience, or *muruna* (lit: flexibility), through interviews and focus groups. In a few months, we developed a brief, reliable, and culturally relevant measure—the Arabic-language version of the Child Youth Resilience Measure (CYRM; Ungar and Liebenberg 2011). It captured what young people identified as their personal, relational, and contextual sources of support for use in war-affected settings (Panter-Brick et al. 2018). This contributed to a stronger analytic understanding of resilience as a process to navigate or negotiate a culturally relevant network of resources.

A final task was to think more broadly about social inclusion and the political economy of resilience—namely, its social and structural aspects in humanitarian contexts. For this, I drew on ethnography, and more specifically on an approach described as “vertical slice ethnography,” a methodology useful to examine the multiple and constituent parts of a phenomenon, akin to taking vertical slices of terrain to examine its constituent parts. Holmes (2013), for example, drew on vertical slice ethnography to analyze the risks of cross-border migration into the United States within contexts of structural vulnerability, global economic markets, and federal border policy. I wanted to examine how individual lives connected to local, national, regional, and international policy initiatives for migrants and refugees (Panter-Brick 2021a). This meant knitting together lived experiences for both refugee and nonrefugee youth with larger social compacts to better understand issues of need, rights, equity, and social inclusion.



FIGURE 3 Connecting stress biology to human experience is key: Mural on the wall of a community center, painted by a Syrian refugee youth. (Photo credit: Panter-Brick) [This figure appears in color in the online issue]

During visits to the field, I also found that visual ethnography was an effective starting point to document narratives of refugee well-being and human dignity. I took photographs of the places—local community centers—where young people came to engage with Mercy Corps. On the walls of one center was a six-foot-high mural (Figure 3). It showed a young man painted with a black, muscular body framed by giant blue-grey wings; on his right shoulder was pictured a large heart, painted in red, and on his left shoulder a large brain, painted in yellow (Figure 3). The image was stunning and powerful—it captured an emic understanding of how youth struggling with emotional and social challenges strive to move forward (in Arabic, the Advancing Adolescents program is called *Nubader* [lit: moving forward]). To my mind, the painting clearly meant to show that once young people are able to connect their emotions and life goals, the heart with the brain, they will have the wings to fly rather than stumble under the weight of adversity. I have drawn upon this image to express to international audiences what it means for a young refugee to understand the science of stress and resilience and to experience the impacts of an intervention in one's body, heart, and brain. I also uncovered many other instances of artwork from Syrian refugee youth (Abu Alhayat 2018; Khaldiya 2016) touching on issues we know are salient to refugees from the Middle East (Inhorn and Volk 2021)—namely, belonging, memory, and social inclusion.

AFTERLIVES: RESEARCH, PRACTICE, AND POLICY

What was learned from this study? First, biocultural research can help generate robust and relevant data if anchored in strong, effective, equitable, and sustainable partnerships. Second, where carefully implemented, it can be a useful, realistic approach to inform crisis responses, marrying scholarly rigor with cultural relevance. However, it is also a lot of work. In hindsight, our main contribution was to find creative ways to render visible the connections between forms of intervention, human experiences, and signatures of stress.

Actionable Messages

Our research findings needed to be translated into clear and actionable messages before they could matter to humanitarian practice, policy, funding, and local communities. For example, by analyzing hair cortisol, we demonstrated that stress levels in the body fell by one-third because of the intervention. This evidence was well received, especially by Mercy Corps officers in Amman, who were rather apprehensive about our use of biomarkers: if “the body does not lie,” what if cortisol levels showed that the program was not effective? We had offered our work as proof of concept: if program officers could see with their own eyes how Advancing Adolescents benefited the youth, then biomarkers might truly convince humanitarian donors that an eight-week stress-attuning intervention will track onto a young person’s body. Strikingly, our data showed different patterns of physiological responses: on the one hand, there was downregulation of chronically high cortisol levels for youth whose bodies were “hyper-vigilant,” being on constant alert to life’s challenges; on the other hand, there was upregulation of chronically low levels for youth whose bodies showed “low arousal” and a blunted sensitivity to stress (Dajani et al. 2018; Panter-Brick et al. 2020b). In response to a community-based intervention, both patterns demonstrated a beneficial regulation of stress physiology.

We also showed that self-reported mental health improved after youth participated in Advancing Adolescents (Panter-Brick et al. 2020a). Here we needed to convey the magnitude of change over time, for both Syrians and Jordanians, girls and boys, youth with and without symptoms of post-traumatic stress. We found that improvements with respect to feelings of insecurity, stress, and anxiety/depression showed small to medium “effect sizes” (comparing the change of outcomes for program participants relative to community controls). To emphasize that small to medium effect sizes in mental health were actually important, I drew comparison to the fields of education and human biology: a small effect size raising academic achievement in schools represents a substantial achievement, especially where improvements apply to all students and effects are sustained over time, while a medium effect size for adolescent growth is large enough to be visible to the naked eye, capturing height differences between thirteen- and sixteen-year-olds in the United States. To an interdisciplinary audience, this conveyed the point that “small wins” in mental health did matter for intervention impacts: our findings had a substantive, not just statistical, relevance to health and well-being.

However, we had found no program benefits in terms of improved cognitive skills, nor for that matter in terms of resilience. This was unexpected, given Mercy Corps’ explicit programmatic aims to help mindfulness and boost young people’s resilience. It signaled that a short-term intervention, while demonstrably alleviating biological stress and mental health burden, did not necessarily alter school, family, and community environments that would help a young person move forward with learning and flexibility. In terms of resilience and cognition, we made mostly analytical contributions. Efforts to measure individual, relational, and contextual dimensions of resilience were useful to further cross-cultural work, operationalizing resilience-building resources for youth in network analysis (Höltge et al. 2021). And in comparing refugee and nonrefugee youth living in the same urban communities (Chen et al. 2019), we disentangled the effects of war-related violence and socioeconomic deprivation. This helped inform global debates regarding whether violence or poverty was more damaging to brain function.

While research was in progress, we poured time and energy into activities that would help bridge research into practice and policy. The process of sharing results went well beyond the usual channels of North–South, scholar–humanitarian exchanges. For example, Dajani organized regular Arabic-language forums in local communities; these generated local ownership and even palpable excitement about “science” in back-and-forth discussion. Mercy Corps also convened multiple forums at regional and international levels to discuss research findings and implications with funders, humanitarian stakeholders, community leaders, and field research and evaluation teams. We all had slightly different, yet complementary, takes on research outcomes. Mercy Corps staff were keen to convey concise, actionable messages, such as “Adolescents affected by the Syria crisis benefit from psychosocial support programming.” I leaned toward cautious statements, such as “Well-designed interventions can bring substantial benefits,” given that we had demonstrated sustained improvements in stress and mental health outcomes but no detectable changes in resilience and cognitive skills. Keen to manage expectations, one of my take-home messages became “Regulating stress does not necessarily boost resilience, or cognitive skills, or social cohesion: to achieve all these outcomes requires *substantial* investments—more than individual-level approaches.” This proved to be a message important for practice and policy: it sanctioned broader community-level programming, to provide youth with opportunities for economic work and social participation through reaching out to local businesses and institutions. It put the spotlight on the fundamental roles that donors can play in supporting more comprehensive interventions relevant to health, lives, and livelihoods.

Added Value

Thinking about ways in which research can have diverse and multiple impacts, to what extent did our project bring added value to questions of refugee well-being? Had we made a difference with respect to existing knowledge, practices, or partnerships? Conceptually, our team had put the science of stress and resilience “to the test” with a proof-of-concept study to monitor the health and developmental dimensions of well-being, pre- and post-intervention (Underwood 2018). By developing a culturally grounded measure of resilience for use with children and adolescents in war-affected contexts, we had also turned the focus of research attention - from trauma or toxic stress, to social resilience. Importantly, we had moved beyond narrow academic-humanitarian collaborations to feature inclusive partnerships with local fieldworkers, Syrian refugee families, Jordanian host communities, and civil society actors.

Our study helped to change donor mindsets, as well as humanitarian practices. In 2021, one senior director stated to funding and research agencies that Mercy Corps now viewed the social and emotional well-being of young people as a “must” for their programming initiatives. What underpinned this statement was evidence from our biomarker data showing that trajectories of high-level chronic stress responded to well-designed interventions. Stress alleviation was now a foundational aspect of Mercy Corps programming for youth in postconflict settings: it directly impacted the organization’s approach to social and emotional learning and livelihood programming; it informed a juvenile justice program in Jordan, led in collaboration with the Ministry of Social Development; and regionally, it was integrated into the Mercy Corps approach to peace and conflict programming. Methodologically, our research tools also experienced a project afterlife. For example, the Arabic-language resilience scale developed in Jordan has been used in refugee projects in Australia, Germany, Lebanon, Libya, Turkey, Uganda, and the United States. During the COVID-19 pandemic, Save the Children Fund Syria asked if we could validate this scale for online rather than in-person platforms of research evaluation (Panter-Brick et al. 2021).

The project also changed the direction of our scholarly work. It was selected as case exemplar for a collection of *Research in Practice* case studies (Mistry et al. 2021). Deep reflection went into the often-contested concepts of evidence, science, resilience, and trauma; this helps ensure partners do not talk at cross-purposes (Hajir, Clarke-Habibi, and Kurian 2021). My writing on crisis settings took a turn to generate analytical work on resilience humanitarianism, peacebuilding, and social inclusion—then pivoted from linking refugee well-being with resilience to linking refugee well-being with social justice (Panter-Brick 2021b).

To my mind, the best thing about this project was the richness of the people-centered partnerships it engendered. For example, fieldworker Dima Hamadmad applied for her first (Syrian) passport and obtained a visa to the United States to visit partner institutions, despite the travel ban enforced by the Trump administration; she then applied to a PhD research position in the United Kingdom. For her part, Dajani raised new questions about the impacts of violence on human health and development. Syrian families had asked her whether the signatures of stress, trauma, and violence could be transmitted from one generation to the next, a concern engendered by women’s experiences of fleeing war zones while pregnant. Our team thus began, in 2017, a study of the epigenetic signatures of war-related trauma in three generations of Syrian refugees. In 2021, further opportunities were found for renewing research collaborations. This time, the tables were turned: it was Dajani who invited scholars from Western institutions to evaluate We Love Reading, the program she had nurtured in Jordan, now reaching half a million children across sixty-two countries (Dajani 2019). She wanted to put the effectiveness of We Love Reading on the same scientific footing as programs designed by international NGOs and deployed to disadvantaged communities. I am now part of a team engaged in this evaluation; this new research shows that partnerships seeded in 2015 could be sustained and grow into other areas of work.

Engagement with civil society actors took an unexpected turn when US filmmaker Ron Bourke, who wished to document issues related to war and refugees, asked to film some aspects of the project and came to Jordan to interview the research team, program officers, and refugee families. His thirty-two-minute documentary, *Terror and Hope: The Science of Resilience*, won multiple awards, including best short documentary at the 2020 Raw Science Film Festival, Sci-On Film Festival, and AFMX Festival. Unexpected invitations came to host webinar discussions centered on the documentary; one such invitation came from NIH program officers interested in how science works in crisis settings. From the perspective of the local research team, the film showed “how local and international scientists can work together not only to do better science, but to ensure that research participants are part of the process, respecting their dignity” (Dajani, Hamadmad, and Abudayyeh 2021, 120). Interviewed by the film crew, Syrian fieldworker Dima Hamadmad stated, “Science is very important, but it needs feelings and passion and heart to be effective.” Her comment is a strong reminder that future work with refugees needs to strive for a better balance between science and humanity.

Shared Humanity

During a recent field visit to Amman, in January 2022, Dajani and I had an impromptu conversation about the essence of partnerships in collaborative work. To my mind, our research project illuminated the difference between a transactional and a relational approach to working with local communities. A transactional approach, I ventured, would be guided by a demarcation of tasks whereby I, as grant-holder, might ask my local research partner to take care of project implementation, along the lines of “I take care of project design—I have your permission, but don’t ask for

your opinion.” By contrast, a relational approach puts a value on responsive partnerships and shared decision-making. Dajani, however, thought that the concept of relationality did not go far enough in dismantling the mentality of most forms of research and humanitarian action. She said,

Do you call our approach relational? It's more than relational, it's about solving this together. It's about belonging; at some level, we are one. Look, we have shared experiences, whether as women, scientists, Syrian or Jordanian people—we have this shared humanity as the bridge to connect us. The bridge is at the level of family, kinship, being human—that's what's missing in all the refugee in-group, out-group conversations. Even the term “refugee” is so alienating.

She added, “Even here, we find that many Jordanians fall unwillingly in the mentality of *Black Skins, White Masks*—you know the book by Fanon [1967]—when working with international organizations. The ‘us and them mentality,’ that's when you lose people. This is what social entrepreneurship does to change this mentality—it disrupts power structures and comes up with new systems of being” (field recording, 2022). In closing this animated conversation, Dajani and I agreed that our research process reflected an ethos of shared experiences and creative thinking. We found ways to energize partnerships through humanistic and scientific engagement beyond asymmetric forms of collaboration. We fostered what I would call *creative relationality*.

CONCLUSION

Approaches that foster synthetic knowledge and creative partnerships through biocultural and people-centered research are not easy to implement and certainly unusual in conflict zones. To my mind, two benefits of biocultural research are to create room for synthetic conversation with diverse audiences and creative ways of working with communities. Biocultural research on refugee well-being helps to reach a diverse range of interlocutors: scholars, practitioners, policymakers, funders, and civil society actors who work with crisis-affected people. Importantly, biocultural work can be rooted, creatively, in practices that respect and value our shared humanity.

In the past, intersectoral partnerships have suffered from a lack of investment and relationship-building (Camburn 2011), wide gaps in goals and values (Locke 2015), and contested approaches to evidence-building (Carden, Hanley, and Paterson 2021) in the humanitarian sector. Going forward, we can find better ways of sharing knowledge, ones that will connect community-based knowledge with academic, practice-based, and policy-based knowledge. To advance global health equity, this means valuing leadership from local communities. It also means fostering more fruitful conversations between activists, practitioners, policymakers, and scholars—a quadrant of knowledge users characterized by Abimbola (2021) as emancipators, plumbers, engineers, and professors. Our case study is an example of careful, creative, ethical, and shared decision-making in the field to advance interdisciplinary and intersectoral work and connect research, practice, and policy more closely.

I am also often asked what lessons I would have for pursuing future biocultural projects. In Jordan, the sheer work of assessing the biological and cognitive signatures of stress to evaluate a humanitarian program has often felt like trying to crack a nut with a sledgehammer. At times, however, one needs a sledgehammer for decision-makers to pay attention: stress biomarkers can be an effective tool for impact evaluation, demonstrating, for instance, that the embodiment of profound stress is responsive to well-designed interventions that target psychosocial well-being. The main issue, however, is how to anchor research-to-policy projects in co-leadership and sustained, inclusive partnerships in order to deliver sound, ethical, and well-grounded research in crisis settings. I see that biocultural work helps with developing fluency in multiple forms of evidence while striving for a plurality of impacts and strengthening connections across research and policy agendas. This case study thus joins those of many other scholars who discuss the worth of dialogic research practices (e.g., Abimbola 2021; Bell and Wynn 2020; Hansen, Holmes, and Lindemann 2013) and who orient themselves to build equitable, effective, locally embedded health research with dedicated funds supporting North–South collaborations (e.g., Kok et al. 2017). Working across research, policy, and practice with crisis-affected communities provides a tremendous opportunity for change. In brief, this article shows how creative relationality can energize partnerships in research-to-policy initiatives through affirming humanistic and scientific engagement.

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NOTE

¹ See: <https://weloveread.org/>.

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