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Does volunteering impact refugee women's life satisfaction, empowerment, and wellbeing? Experimental evidence, local knowledge, and causal reasoning

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ABSTRACT

Background: There are gaps in the evidence base addressing whether volunteering programs enhance the well-being, empowerment, and life satisfaction of individual volunteers. Program impacts are seldom rigorously evaluated, whilst construct meanings remain largely unspecified, especially in the Middle East. This study tested the impacts of *We Love Reading*, a program training volunteers to read aloud in their local communities. It also mapped local knowledge representation.
Methods: We conducted a mixed-method program evaluation based on a randomized cluster trial with 105 Syrian refugee women from poor households in Amman, Jordan. At three time points (baseline, 5-month and 12-month-follow-up), we implemented a survey to measure levels of life satisfaction (Cantril), psychological empowerment (PE), and psychological wellbeing (PWB). We used regression models on panel data to estimate individual-level impacts, adjusting for women's characteristics and the moderating effects of their social networks. We also conducted net-mapping sessions to clarify local concepts and their causal connections, generating thematic analyses and fuzzy cognitive maps (FCMs) to represent local knowledge and causal influences.
Results: Life satisfaction was the only outcome variable showing a significant impact for *We Love Reading* (Cantril, $\beta = 3.00$, $p = 0.002$). Thematic analyses and FCMs made explicit the multi-dimensional aspects of lived experiences: emphasis was placed on reaching goals, having "the full right to act," the freedom to take decisions, willingness and determination. Women explained that building their empowerment and agency was a main driver of life satisfaction, and that volunteering boosted the resolve of "not giving up" on life goals.
Conclusion: This program evaluation integrates scientifically-rigorous and culturally-relevant methodologies to identify impacts, local knowledge systems, and causal pathways of influence. This helps clarify how and why volunteering works in real-life situations across cultural contexts, calling attention to what programs seek to achieve, how they avoid volunteer burden, and why they generate social change.

1. Introduction

Globally, volunteering is thought to provide unique benefits to organizations, to communities, and, potentially, to the individual volunteers themselves (Nichol et al., 2023). The United Nations has defined volunteering as an act of free will, resulting in benefits to people other than close family members, and taking form as a structured, regular commitment; any compensation received is less than the value of the work undertaken (United Nations, 2000). It has framed volunteering as a "powerful means to engage people" in ways that support inclusion and

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participation as a pathway to achieve the 2030 Agenda for Sustainable Development (Millora, 2020, p.9). Importantly, volunteering activities have self-building goals and likely benefits in terms of fostering knowledge, skills, experience, networks, and wellbeing (Millora, 2020, p.15).

Yet there are many gaps in the evidence base currently addressing individual-level impacts for the volunteers. First and foremost, very few studies have examined the impacts of volunteering on health and wellbeing outside of US and European countries (Hansen et al., 2018). Second, few studies have been able to establish evidence of causal links, generating a call for experimental trial data to evaluate the effects of different kinds of volunteering (Piliavin and Siegl, 2015). Third, volunteering interventions are rarely assessed through indigenous analytical frameworks. For example, women's empowerment in the development sector has often been framed "as a relatively straightforward and uncontested objective," focused on agency and decision-making - without adequate attention to local meanings of empowerment (O'Hara and Clement, 2018:112). This has certainly limited our understanding of how people can pursue their goals in different domains of life (Hanmer and Klugman, 2016). Moreover, volunteerism is often understood as promoting psychological benefits for people who derive satisfaction from their service in their communities (Maes et al., 2015). Yet studies in low-resource contexts show that satisfaction and 'empowerment' through volunteer work is often assumed, rather than demonstrated (Closser et al., 2019:300; Maes, 2012). Lastly, while there is narrative and observational evidence of volunteering benefits, scientific evidence shows heterogeneous impacts across population groups (Jenkinson et al., 2013). A recent systematic review of volunteering interventions concluded that "there was limited robustly designed research to guide the development of volunteering as a public health intervention" (Jenkinson et al., 2013:773). That review made several important recommendations: future evaluations must seek to better describe the interventions tested, explicitly map intervention design to health outcomes, and use robustly design pragmatic RCTs to test impacts.

We conducted a study to address such knowledge gaps and to map out a methodology for evaluating volunteering programs with refugee women. We thus engaged Syrian women living in Jordan in a mixed-methods study, with the aim to provide both rigorous evidence on program impacts and to reach culturally-relevant insights into causal pathways and community-level volunteering. Research on volunteering is a fruitful avenue for understanding the range of life experiences that lead to personal wellbeing, life satisfaction, and a sense of meaning and purpose in life; indeed, it offers a counterbalance to stress theory and its sole emphasis on explaining how life adversity produces negative outcomes (Thoits and Hewitt, 2001). When working with displaced migrants and refugees, for example, a salutogenic mindset – focusing on the positive drivers of health and wellbeing, in contrast to a pathogenic orientation on illness and disease - can helps us generate a systems-level understanding of human agency, resilience, and flourishing (Willen, 2022; Panter-Brick, 2023). Many volunteering programs, for example, are designed to help refugee women engage in their local communities, creating opportunities to learn, work, and socially interact to support their empowerment and wellbeing. Our mixed-method study, conducted in Jordan, followed a cohort of Syrian refugee women over a one-year duration. It tested the impacts of *We Love Reading*, a program that trains volunteers to read aloud to children in their neighborhoods, on levels of life satisfaction, psychological empowerment and wellbeing. It also mapped what volunteers themselves thought of such constructs and causal relationships, namely, local knowledge representation.

Approximately 5.4 million Syrian refugees and asylum-seekers live in neighboring Middle Eastern countries (UNHCR, 2023a). In Jordan, some 660,607 Syrians are registered as refugees or asylum-seekers, 80% of whom live outside of refugee camps, subsisting below the poverty line. This makes Jordan the second-largest host of Syrian refugees per capita, after Lebanon, with about 1 in 10 of its population a Syrian refugee (UNHCR, 2023b). Severe political tensions, economic difficulties, and strains on social inclusion in the Middle East region have followed the onset of the 2011 Syrian Civil War and the massive displacement known as the Syrian refugee crisis. Host countries, alongside international actors and non-governmental organizations, are providing a wide range of humanitarian and development assistance, including cash-based transfers and vocational training, as well as education and healthcare services. In Jordan, programs are framed around 'durable solutions' for refugees and host communities, and specifically attentive to issues of social development and women's empowerment and wellbeing. The Government of Jordan has made women's social and economic empowerment a national priority, promoting women's employment, vocational training, and entrepreneurial capacity (Ait Ali Slimane et al., 2020; El Kharouf et al., 2021). Taking the form of state-funded, international NGO, and/or local NGO initiatives, vocational and volunteer programs are often specifically conceived to help women and girls step outside of traditional family structures to engage with a "peer-to-peer support mechanism and empowerment process" (Jabbar and Zaza, 2016:307). Multiple Cash-for-Work (CfW) public work programs for men and women, which have been donor-funded in Jordan since 2016, are thought to contribute to social protection and to changing stereotypes regarding women's work participation outside the home (Zintl and Loewe, 2022).

1.1. The need for robust evaluations in local contexts

Volunteering programs are seldom rigorously evaluated in the Middle East region. In Jordan, specifically, we found just one peer-reviewed publication investigating whether vocational programs improve women's self-confidence, empowerment, and entrepreneurial or business skills; this was a small-scale study, conducted with 26 women in Zaatari refugee camp (Jabbar and Zaza, 2016). With respect to CfW programs implemented with Jordanian and Syrian communities, Zintl and Loewe (2022, pp.1285–6) noted that "little is known on the questions whether [CfW] have effectively contributed to social cohesion, local economic development, and gender relations and on how they operate in a refugee-hosting context."

To our knowledge, no studies have evaluated whether volunteering activity can boost levels of life satisfaction, empowerment, and wellbeing among refugee populations in the Middle East region. Qualitative studies, while offering culturally-grounded insights into refugee lived experiences, have rarely focused on program evaluation. They also work with small samples: in Australia, for example, one study interviewed just 9 African refugees to evaluate how employment and volunteering engendered a sense of self-worth, belonging, and wellbeing (Wood et al., 2019). Given the increased use of mixed-method approaches to evaluate responses to humanitarian crises (Smith and Blanchet, 2019), working with a network of evidence (including experimental, quantitative, and qualitative data) is increasingly important for understanding whether, how, and why interventions work in real-life situations, as well as for whom (Panter-Brick, 2023).

1.2. We Love Reading

We partnered with *Taghyeer*, an organization registered with the Ministry of Social Development and the Ministry of Culture in Jordan, to evaluate its flagship *We Love Reading* (WLR) program. First implemented inside Syrian refugee camps in 2014 and in South Sudanese refugee camps in 2017, WLR has received global recognition for implementation in socially-marginalized communities across four continents (Dajani, 2017, p.4). Originally developed in Amman, the program is now active in 65 countries of the world (We Love Reading, 2022). It is a rare example of South-to-South and South-to-North program diffusion, aiming to create social change through socially inclusive, inter-generational volunteering practices.

WLR is a community-based intervention which mobilizes local

community members (mostly women, but also men and youth) to establish informal libraries and organize read-aloud sessions for children (Mahasneh et al., 2021). It rests entirely on (unpaid) volunteer work: volunteers receive no external incentives or compensation, not make any formal agreement of time committed to reading activities. Participants become 'Reading Ambassadors' in their local neighborhoods, reading aloud to children in their neighborhoods in their native language. To be accessible to children, the libraries are established in commonly used spaces, such as mosques and community centers, adapted for non-religious activities. The key aspects of this model of community engagement are ones that link together a sense of local ownership, intrinsic motivation, and learning. *We Love Reading* encourages grassroots change by developing the entrepreneurial capacity of volunteers, and through supporting volunteers' agency, empowerment, competencies, and wellbeing, as well as furthering the lifelong learning and development of children in the community.

We Love Reading was featured in UNESCO's Effective Literacy and Numeracy Practices Database (LitBase), an online platform administered by its Institute of Lifelong Learning, and described as follows: "this programme aims to bring about positive social change […]. It seeks to achieve its goals by establishing a library in every neighborhood [.], while training and mobilizing adults, women in particular, as reading-aloud volunteers for children, thereby promoting reading as a shared value across generations" (UNESCO, 2017, p.1). The program aims to impact adult volunteers on a personal level, "to encourage them to change their attitudes and become more responsible citizens with greater control of their lives […]. The focus of the training is on capacity-building in multiple areas, including teaching, communication, confidence building and soft skills. The participants also learn about time management, planning and financing. They are instructed in how to set up and run libraries, as well as in how to read aloud […]. A course on creative thinking and time management encourages open-mindedness to other perspectives and outlooks on life. This includes learning how to formulate persuasive arguments to defend a perspective and how to internalise criticism positively" (Hanemann, 2018). This proves important for women from socio-economically marginalized and/or culturally-conservative households, who, in reading to children, "discover their voices" and are "empowered to become changemakers" in their community (We Love Reading, 2022, p.4). As photojournalist Saskia Keeley (2018) reported, "the program empowers the adults who wish to better their own lives and the lives of those around them." Its transformational impact on the lives of Syrian women has been captured in a documentary film (The Neighborhood Storyteller, 2021), produced by Home Storytellers, a non-profit organization that draws on human stories to highlight refugee self-reliance.

Reading Ambassadors use a mobile application for monitoring and evaluation, to maintain quality and create a virtual community for sharing resources and best practices (Dajani, 2017, p.5). By 2014, WLR had trained 700 women within Jordan, and created 300 libraries. By 2022, the program had expanded to 65 countries, trained 8135 Reading Ambassadors (mostly women), and enriched the learning environment of 53,100 children (We Love Reading, 2022, p.20). Over the last few years, the organization *Taghyeer* has partnered with academic institutions in Canada, Ireland, the U.K., and the U.S. to robustly evaluate its program. To-date, randomized controlled trials have assessed WLR impacts on children's attitudes toward reading and learning (Hadfield et al., 2022). This paper evaluates WLR impacts on the individual volunteers themselves.

1.3. Research goals

The study had two main research goals. *First,* we sought to test the impacts of the intervention on quantitative measures of (i) life satisfaction, (ii) psychological empowerment, and (iii) psychological well-being for women over time. To this end, we conducted a cluster randomized trial, collecting data on outcome variables and participants' sociodemographic and network characteristics. We pre-registered analyses on September 13, 2022 on https://osf.io/krba6. *Second*, we sought to generate local discussion of how women described key constructs and pathways of influence, based on their lived experiences. We implemented a participatory methodology (Net-Map), developed for social network research to enhance development policy and humanitarian advocacy (Schifffer and Hauck, 2010; International Rescue Committee, 2016; Eggerman et al., 2023), whereby participants generate maps to visually represent their knowledge and causal reasoning (Barbrook-Johnson and Penn, 2022). The net-mapping sessions served to (i) generate a discussion of local concepts, (ii) generate a visual representation of local concepts and pathways of influence, and (iii) understand how community-level volunteering and *We Love Reading* related to life satisfaction, empowerment, and agency.

2. Methods

2.1. Research design

The study received formal approval from the Prime Minister's Office of Jordan (project number 21/11/142253, dated 5/10/2021) and ethics approval from the Institutional Review Board of Yale University (protocol 1502015359). Fieldwork was implemented through *Taghyeer* and through six community-based organizations (CBOs) who contacted women registered in their database and invited them to study participation. Eligible women were 18 years and above, Syrian or Jordanian, with no prior engagement with *We Love Reading* at baseline. The CBOs also offered their indoor spaces for research implementation.

For the trial, CBO clusters were randomly assigned to either treatment and control groups by LQ, the program manager based in Amman. In order to recruit a cohort with treatment and control groups of equal sizes, and also accommodate the logistics of data collection across CBOs with different cluster sizes, 4 CBOs were assigned to the *We Love Reading* intervention, and 2 CBOs remained in the control group. Meetings were then scheduled in each CBO, during which written informed consent was secured from respondents. Training sessions for the *We Love Reading* program were conducted by Taghyeer-affiliated female practitioners (RD, assisted by LQ and another staff member) from Amman. The training sessions took 2 days per cluster, during the period of 16th January to February 21, 2022: participants engaged in peer-to-peer coaching sessions that focus on storytelling techniques, reading aloud practices, personal agency, and social responsibility. As for the control group, women attended the initial information session held at the community-based organizations but were not trained in reading aloud techniques; however, they were wait-listed and invited back for WLR training at a later date.

Survey data collection was conducted at three time-points: before the intervention (9th January to March 2, 2022), at 5-month follow-up (6th June to 2nd August 2022), and at 12-month follow-up (15th February to 20th March 20, 2023). An all-female team, hired for the purpose of executing the survey, conducted the in-person interviews, each lasting about 1 hour, within private spaces of CBO facilities. Local field staff were experienced in face-to-face data collection; they read survey questions aloud, and inputted responses in Arabic into Qualtrics, the data collection software. The project manager was always on-site, supervising fieldwork activities and checking data completeness on a daily basis. Sample retention rate was 93.33% (98 of 105 Syrian women) at 5-month follow-up, and 91.42% (96 of 105 Syrian women) at 1-year follow-up; of the nine women lost to follow-up, three went abroad, three were ill, busy, or unreachable by phone, and three refused to continue study participation. Baseline data were conducted with both Syrians and Jordanians (Eggerman et al., 2023). Panel data at all three points were collected only for Syrians. This is because we decided to extend the study to include a 12-month follow-up data collection with Syrians, rather than fund a shorter study for the whole cohort, as originally planned.

We conducted qualitative work, both before and after the survey. Pre-survey, the research team conducted panel discussions and pilot analyses to inform the choice of survey instruments relevant to life satisfaction, empowerment, and wellbeing. The team also conducted interviews with 34 Syrian and Jordanian women, randomly selected from a separate cohort study of poor women in East Amman, to understand their experiences of volunteering work and psychosocial states of being (Eggerman et al., 2023). After the baseline survey, we implemented three net-mapping sessions (16th January to February 2, 2023) on psychological empowerment and wellbeing, with a total 29 women (n = 14 Syrian and 15 Jordanians). These qualitative data were published elsewhere (Eggerman et al., 2023). As part of the follow-up survey, we conducted six net-mapping sessions (21st May to August 20, 2023) on life satisfaction, empowerment, and agency, with another 53 women (n = 29 Syrians and 24 Jordanians), all of whom had completed the *We Love Reading* training. Two of these sessions were with Jordanians, two with Syrians, and two were mixed nationalities; the qualitative data presented in this paper are based on the latter four. The first session was poorly attended (four Syrians and two Jordanians); while it informed discussion of concepts, it was not used for mapping. The next two sessions discussed both life satisfaction and empowerment (each session included 10 Syrians). The fourth session discussed both life satisfaction and agency (with five Syrians and five Jordanians). Each session lasted between 2-3 hours and were audio-recorded. Each was led by the project manager, in the role of facilitator, assisted by one note-taker.

2.2. Survey measures

Survey instruments were piloted to check item face validity, with small changes in vocabulary made to better reflect local context. Pilot survey (n = 15 women) were excluded from analysis. At follow-up, women in the treatment group were asked to report on their reading aloud behaviors in terms of daily, weekly, or monthly frequency.

a. Sociodemographic characteristics and social networks

Women reported their (i) age, (ii) marital status and number of children, (iii) education level, (iv) monthly household income, and (v) work status. Education was classified as having no, elementary, secondary, or tertiary schooling. Very poor households were those earning less than 350 Jordanian Dinars (JOD) per month (~500 USD/month), a threshold used to denote the poorest tenth of Jordan's population (Hastings et al., 2021; UNICEF, 2019). The remainder were from households earning 350–850 JOD/month, below the Jordanian national average (937 JOD/month; Department of Statistics, 2017). At baseline, women were also asked if they currently engaged in volunteer work in the community.

Network structure and composition was measured using PERSNET, a standard network survey instrument (Perry et al., 2018). Sections include (i) Name Generator: the names of peers who socialized with or could give advice to respondents; (ii) Name Inter-relator: the strength of connections between peers and respondents; (iii) Name Interpreter: the compositional characteristics of personal networks. Asked to name "someone who is close to you, or whom you socialize with, and can talk of matters of importance to you," women were able to credibly report peer characteristics (relationship with respondent, nationality, age, marital status, education, household income, work status), because their social ties were largely with kin and neighbors within the Syrian refugee and the Jordanian host community. Network measures included: (i) network size: the total number of peers reported by a respondent; (ii) proportion of peers with a kinship relation to the respondent; (iii) proportion of peers with college or university education. Other peer characteristics, analyzed in previous work (Eggerman et al., 2023), did not impact data variation.

b. Life satisfaction

The Cantril Ladder of Life Scale (Cantril, 1965) is a widely used measure of life satisfaction, used to generate Gallup Poll data in Jordan and other Middle Eastern countries for the 2022 World Happiness Report (Helliwell et al., 2022). It has been used to assess life satisfaction in relation to employment or entrepreneurial activity (Lambert et al., 2020) and the degree to which individuals view themselves as achieving their overall goals (Kahneman and Deaton, 2010) at the present time. Respondents are asked to visualize their goals and achievements as spanning a ladder with 10 rungs. The Cantril Ladder (1 item) features responses ranging from 0 (worst possible life) to 10 (best possible life).

c. Psychological empowerment

The Psychological Empowerment (PE) scale assesses the cognitive dimensions of empowerment to link social structure and behavior in the workplace (Spreitzer, 1995). Higher values denote a higher sense of empowerment; we used scores in terms of the overall construct (12-item), after examining constituent sub-scales: meaning (e.g., "the work I do is meaningful"), competence (e.g., "I have mastered the skills necessary for my job"), self-determination (e.g., "I can decide on my own how to go about doing my work"), and impact (e.g., "my impact on what happens in my workplace is large"). In our study, given that few women were employed, we substituted 'volunteer activities' for work, and also 'community' for workplace. In the Middle East, PE has been used to assess leadership styles (Asiri et al., 2016). Our survey data showed very good reliability (Cronbach's alpha = 0.87) for this instrument.

d. Psychological wellbeing

The Psychological Wellbeing (PWB) scale, recommended as a brief instrument for cohort studies (VanderWeele et al., 2020) captures levels of happiness and sense of purpose and optimism (scored 0–10). It asks respondents "how satisfied are you with life" and "how happy do you usually feel," the extent to which they think "things you do in life are worthwhile," whether they have "a sense of direction and purpose in life," "expect more good things to happen than bad," and feel that "if something can go wrong for me, it will." Its 6 items (one reverse coded) were elected from other scales implemented with women in Jordan (Hamdan-Mansour and Dawani, 2008) and Palestinians (Banat, 2019). Our survey data showed acceptable reliability (Cronbach's alpha = 0.64) for PWB.

2.3. Net-mapping sessions

The net-mapping sessions were best focused on elucidating no more than two constructs at a time. We asked participants two questions: "what does life satisfaction mean to you?" and "what does a sense of empowerment mean for you?" In our final net-mapping session, we interrogated the related concept of agency, asking women two questions: "what does life satisfaction mean to you?" and "what does a sense of agency mean for you?" We prioritized these questions to better understand these concepts in relation to volunteering in the community, and because women brought up notions of agency in relation to life satisfaction and empowerment. Importantly, women were not prompted by the facilitator about volunteering (or *We Love Reading*) as a factor that might be consequential to lived experiences. Once women mentioned volunteering as a factor of influence, the facilitator could probe further about *We Love Reading* per se.

The main strength of the net-mapping methodology is to have participants generate a visual representation (or map) of local knowledge and causal reasoning. Seated in a semi-circle to facilitate group interaction, women discussed not just what empowerment and life satisfaction meant to them, but also what factors influenced these constructs - and what causality or reverse causality defined their social experience.

Rather than use pen-and-paper, the facilitator (LQ) used a laptop and projector to map all the variables that women mentioned in ongoing discussion and color-code all positive and negative pathways of influence. Women could see how their work was progressing; indeed, they felt validated by the process, confirming that this is how they saw things and that this was "their map." Such maps are known in the literature as 'fuzzy cognitive maps' (FCM), given that this approach is well-suited to the discussion of 'fuzzy' (un-clear) concepts (such as empowerment) and to modeling the 'fuzzy' logic of cause-and-effect reasoning across different stakeholders (Papageorgiou and Salmeron, 2013; Barbrook-Johnson and Penn, 2022).

2.4. Analyses

a. Panel data

We tested all variables for potential differences between treatment group and across time-points, after examining data distribution (and imputation of missing Likert-scale items, in 0.5%–4% of cases for outcome variables). The final dataset included missing scores for 2 women who did not attempt the PE Likert scale and missing values for sociodemographic or peer characteristics (n < 5 women); it excluded one woman from the control group, who started *We Love Reading* between the 5-month and 1-year follow-up period of study. We also tested for potential differences between women who, at baseline, engaged (yes/no) in volunteer activities, and for potential changes in social network characteristics over time (there were none). We then ran two sets of multiple regression analyses, adjusting for potential clustering by community-based organization. In step one, we tested differences between treatment and control groups at follow-up, using baseline scores, respondent characteristics, and network characteristics as independent variables. In step two, we included time point and interaction variables, to account for differences in trajectories due to baseline levels and/or due to interactions effects between baseline scores and treatment group. We ran, with similar results, sensitivity analyses with alternative inclusion of predictor and moderator variables. Analyses were run with R (v4.3.0) in R Studio (v2023.06.0) using the packages lme4 (v1.1-33), lmerTest (v3.1-3), Epi (v2.47.1), and MuMIn (v1.47.5). They adjusted for the non-independence of data, namely, the data contributed by the same individuals at different time points (Bates et al., 2015). We developed predicted probability plots to visualize the statistically significant effect of key associations in the regression models (using ggplot2, v3.4.2).

b. Cognitive mapping

The analyses of net-mapping sessions consisted in two steps: in-depth analysis of participant narratives during group discussion, and careful examination of maps the women had themselves generated. In step one, we thematically analyzed the narratives recorded in the focus group discussions of net-mapping sessions. Two co-authors worked with the Arabic-language recordings, three co-authors with English translations. We then convened as a team, for discussions in Arabic and English language, using video conferencing convening lead authors and field team members. We focused on identifying the lived experiences of respondents and theorizing local constructs as understood by the women themselves, using inductive thematic analysis (Braun and Clarke, 2006). This helped us to tabulate specific instances of how women discussed empowerment, life satisfaction, and agency. In step two, we used the online tool known as mental modeler (www.mentalmodeler.com) to help with visual analysis. This allowed the research team to digitally highlight the causal relationships of interest, such as the influence of volunteering activities on empowerment and life satisfaction. For example, we examined all unidirectional arrows that women drew between *We Love Reading* and a sense of empowerment, life satisfaction, or agency: such arrows indicated that women attributed causal relationships, rather than mere associations, in cognitive reasoning. The research team used video conferencing in Arabic and English to facilitate an extensive discussion of all maps throughout analysis.

3. Results

3.1. Sample characteristics

Table 1 shows sample characteristics at baseline, in terms of respondent and peer characteristics and outcome variables. Survey respondents (n = 105) averaged 39.76 (SD 10.34) years of age; three-quarters (83.81%) were married. In terms of education level, two-thirds (66.67%) of the cohort had no/elementary education; one third (n = 35 women) had reached secondary or tertiary education (n = 24 and n = 11, respectively). Four in five (84.76%) came from very poor households earning less than 350 Jordanian Dinars (JOD) per month. While only 12 women held a formal job, paid or unpaid, a third of the cohort (34.29%) engaged in volunteer activities: this included charity work for the sick or the poor, cleaning streets, mosques, or parks, and working for community-based organizations. When asked "can you to

Table 1
Characteristics of Syrian women at baseline.

Variables	Total	Treatment	Control	Group differences
	(n = 105)	(n = 54)	(n = 51)	p value
Respondent characteristics				
Age (mean, SD)	39.76 (10.34)	39.53 (9.89)	40.01 (10.88)	0.812
Marital status, married (n, %)	88 (83.81)	46 (85.19)	42 (82.35)	0.698
Education level (n, %)				
Secondary/tertiary[a]	35 (33.33)	17 (31.48)	18 (35.29)	0.682
Socioeconomic status (n, %)				
Household income, poorest[b]	89 (84.76)	45 (83.33)	44 (86.27)	0.678
Volunteering in the community	36 (34.29)	23 (42.59)	13 (25.49)	0.065
Network characteristics (mean, SD)				
Network size	3.71 (2.26)	3.44 (1.82)	4.00 (2.64)	0.215
% peers who are kin	66.68 (0.34)	71.82 (0.32)	61.20 (0.37)	0.136
% highly-educated peers	14.61 (0.24)	15.19 (0.26)	13.98 (0.22)	0.799
Outcome variables (score, SD)				
Life Satisfaction (Cantril)	5.30 (2.32)	5.52 (2.49)	5.06 (2.13)	0.310
Psychological Empowerment (PE)	3.94 (0.50)	3.93 (0.52)	3.96 (0.49)	0.767
Psychological Wellbeing (PWB)	36.37 (10.62)	38.21 (11.31)	34.42 (9.56)	0.067

Differences between treatment and control groups (*t*-test) were non-significant for respondent, network peer characteristics, and outcome variables.
[a] Compared to elementary/no formal education.
[b] <350 JOD/month.

name someone who is close to you, or whom you socialize with, and can talk of matters of importance to you," women named an average 3.71 peers; of these, 66.68% were kin by marriage or descent, and 14.61% peers were highly-educated women who had gone onto college or university.

At baseline, we noted very few differences in sociodemographic and peer characteristics across groups of respondents. Specifically, there were no baseline sociodemographic differences between the control and treatment groups (Table 1). We did note that women who volunteered in the community had fewer kin in their social networks, relative to non-volunteers (proportion of kin-based peers, 59.36% vs 76.29%, $p = 0.025$), whilst having the same size of social networks and the same proportion of highly-educated peers. There was also very little heterogeneity across community centers: respondents did not differ in terms of marital status, household poverty level, or volunteering status, but differed in age ($p < 0.001$) and level of education ($p = 0.08$; data not tabulated). Neither respondent variables nor peer characteristics showed significant changes over the time-points of study.

3.2. Intervention impacts

Life satisfaction was the only variable showing a significant impact for the *We Love Reading* intervention. Fig. 1 displays results for the three outcome variables. The marginal effect curves account for the fact that, at baseline (timepoint 0), Cantril scores were already higher for women in the treatment group, relative to controls. They show that at 5-month (timepoint 2) and 12-month (timepoint 3) follow-up, Cantril scores remained significantly higher for the treatment group. No treatment effect was found for other outcomes, although graphs indicated more favorable trajectories for the treatment group.

Results are tabulated for mixed linear regression models. In step 1, we tested the panel data for main intervention effects, comparing treatment vs. control groups; we found significant intervention effects for Cantril scores, controlling for baseline (Supplementary Table 1). In step 2, we took into account potential time point and interactions effects (Table 2). This analysis confirmed our results for life satisfaction: there were positive treatment impacts ($\beta = 3.00$, $p = 0.002$) for women engaged in *We Love Reading* relative to controls, independently from baseline score ($\beta = 0.03$, $p = 0.004$) and baseline*treatment group interaction ($\beta = -0.33$, $p = 0.041$) effects. The change in average life satisfaction scores between baseline and timepoint 2 was 0.32 and 0.95 points for control and treatment groups (respectively), and the change between baseline and timepoint 3 was 0.05 and 0.65 (respectively). There were no treatment group effects for psychological empowerment or wellbeing. We noted positive changes in psychological wellbeing ($\beta = 7.89$, $p = 0.014$) for women with more highly-educated peers and larger social networks ($\beta = 0.66$, $p = 0.047$). Notably, our regression models explained 54% of data variation. Among the treatment group, we observed a heterogeneous uptake of *We Love Reading* volunteering activity: at one-year follow-up, 8.30% of women read daily, 18.75% read weekly, 10.41% read bi-weekly, 54.16% read monthly, and 8.30% read every 3–6 months, to children in the community. These frequencies were unrelated to their education level, to the proportion of highly-educated peers in their social networks, or to any other sample or peer characteristics such as age or household income.

3.3. Understanding constructs

The net-mapping sessions generated a grounded understanding of local constructs, namely, their real-world meaning in the context of women's lived experience. They engaged 36 women (n = 29 Syrians and 7 Jordanians) with the same characteristics as survey participants. The constructs of life satisfaction and empowerment were easily articulated, yet multi-dimensional.

For participants, life satisfaction (الرضا عن الحياة) included eight components of acceptance, adaptation, contentment, fulfillment, not giving up, self-reconciliation, trust in Allah, and understanding life (Table 3). The notion of acceptance included both acceptance of reality, because life must go on, and acceptance of destiny, because one's circumstances had been determined by Allah. In turn, adaptation was seen as the willingness to adapt to new places, people, and life circumstances, while contentment and fulfillment were primarily associated with the sense of being satisfied or fulfilled by what one had reached in life, both as regards to family and to material goods. Importantly, women identified a commitment to never giving up, which for them, meant having control over decision-making. Knowing the limits of one's ability (self-reconciliation), having trust in Allah, knowing that "life is all hard," and understanding life and its larger meaning, were also how Syrian women summarized what life satisfaction meant to them. Two groups of participants, independently convened, were in broad agreement with each

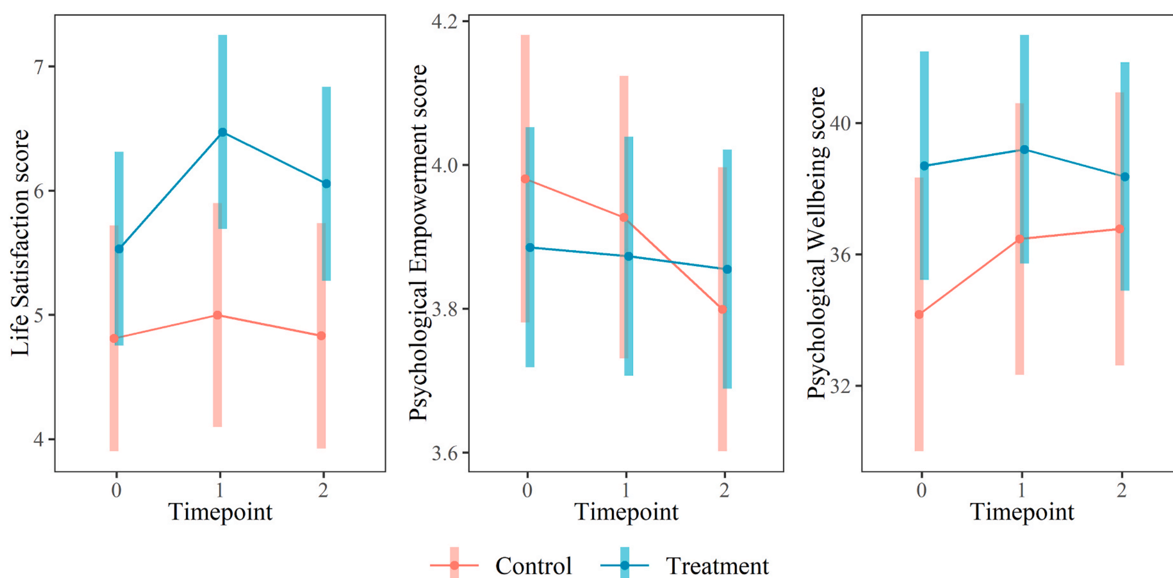

Fig. 1. Levels of life satisfaction, psychological empowerment, and psychological wellbeing, at three time-points (baseline, 5-month and 12-month follow-up). Intervention impacts for women in the *We Love Reading* treatment group, relative to the control group, are significant for life satisfaction. The marginal effect curves account for differences in baseline scores.

Table 2
Linear mixed regression models testing treatment vs control effects, together with timepoint interaction effects.

	Life Satisfaction			Psychological Empowerment			Psychological Wellbeing		
	Coef.	95% CI	p value	Coef.	95% CI	p value	Coef.	95% CI	p value
Treatment Group	3.00	[1.18, 4.83]	0.002	−0.40	[-1.53, 0.73]		−3.86	[-14.76, 7.04]	
Timepoint	−0.30	[-0.74, 0.14]		−0.06	[-0.15, 0.02]		−0.30	[-2.08, 1.48]	
Baseline score	0.03	[0.13, 0.63]	0.004	0.26	[0.03, 0.48]	0.027	0.19	[-0.03, 0.41]	
Baseline*treatment group	−0.33	[-0.65, −0.02]	0.041	0.11	[-0.18, 0.39]		0.15	[-0.13, 0.43]	
Network characteristics									
Network size	0.03	[-0.15, 0.21]		−0.01	[-0.04, 0.03]		0.66	[0.02, 1.31]	0.047
% peers who are kin	−0.09	[-1.26, 1.08]		0.11	[-0.10, 0.32]		−0.20	[-4.59, 4.18]	
% highly-educated peers	0.66	[-0.94, 2.26]		0.29	[-0.05, 0.62]		7.79	[1.69, 13.88]	0.014
Respondent characteristics									
Age	0.03	[-0.01, 0.06]		0.00	[-0.01, 0.01]		−0.03	[-0.18, 0.12]	
Married	−0.36	[-1.41, 0.69]		0.06	[-0.13, 0.25]		−1.50	[-5.30, 2.30]	
Education, secondary/tertiary	0.21	[-0.58, 1.01]		−0.12	[-0.27, 0.03]		2.09	[-0.95, 5.13]	
Income <350 JOD/month	−0.34	[-1.29, 0.62]		−0.03	[-0.20, 0.15]		1.88	[-1.76, 5.53]	
Volunteering in the community	−0.35	[-1.17, 0.47]		−0.00	[-0.15, 0.39]		−1.79	[-4.79, 1.21]	
Model R^2	54.45%			54.08%			53.51%		

Regression models account for potential clustering by community-based organization.

Table 3
Life satisfaction (الرضا عن الحياة), as discussed by Syrian women in net-mapping sessions.

Acceptance (التقبل) Acceptance of reality (قبول الواقع): "Acceptance of the present and reassurance about the future." Acceptance of destiny (الرضا بقضاء الله و قدره): "To accept what is meant for me, what Allah wrote for me, to know that Allah chose this for me and put me in this place."	**Not giving up** (عدم الاستسلام) "When I am in charge of my own decisions, I don't let anyone control my decisions, I don't give up to other people's decisions."
Adaptation/coping (التأقلم / التكيف) "If I am someone who is adapting to every new situation, then I am life satisfied."	**Self-reconciliation** (التصالح مع النفس) "Not to burden the self beyond scope; when you are life satisfied, you won't burden yourself with what is beyond your ability"
Contentment (القناعة) "To be satisfied with what I reached in life, content with what Allah has given me, like money, children, and a husband."	**Trust in Allah** (الثقة بالله) "Life is all hard … but there is hope that Allah will get us out of anguish one day, we will not be quitting life."
Fulfillment (الاكتفاء) "It is all about being fulfilled with what you have. It's right that we all seek for better, but there's also something called gratification, being fulfilled with what you have. Whenever I see someone who has a better status, I stop being satisfied, even if I have many things."	**Understanding life** (فهم الحياه) "To understand how life is, to understand it the right way; this is how I summarize life satisfaction."

other, except that the first group wished to differentiate five sub-types of satisfaction in life (with Allah, with one's appearance, with one's self as a person, with one's social status, and with one's financial status), while the second asserted that life satisfaction was a unified concept, one that could not be sub-divided.

Turning to empowerment (التمكين)), participants identified this concept as meaning the following: ability, achievement, awareness, freedom to take decisions, opportunities, reaching goals, proof of existence, self-confidence, self-reliance, strength, acquiring a right, willingness and determination (Table 4). They gave specific examples, from lived experience, showing how these twelve components were distinct, yet interrelated, aspects of empowerment. Notions of ability and achievement rested on the freedom "to be able to do a certain thing, [...] address a specific subject [or] act in a certain situation," as well as "achieve something on your own will." Women expressed empowerment as reaching their goals, being self-confident, self-reliant, and strong without the support of other people; in essence, empowerment meant having the self-confidence and strength to act independently. In the realm of social interactions, a woman's empowerment was evidenced when she "able to show [her] self," namely, become visible in the community. This meant that empowerment rested upon becoming aware of opportunities, having the freedom to act and taking decisions, and acquiring "the full right to act," however small a step. Women insisted on "freedom" and the "right to act" because their behaviors outside the home were socially regulated, and often came under scrutiny of male kin. At an existential level, empowerment meant that "if I reached something and managed to do a certain thing, then I proved myself in that thing" - this empowerment was a "proof of existence."

Women also identified four dimensions of empowerment: cultural, financial, self (personal), and social empowerment (alphabetically ordered). In terms of cultural empowerment, women mentioned opportunities "to learn, to study, to educate oneself, …to become productive in the community." Financial empowerment had to do with possessing (economic) "resources" that a woman could manage the way she wanted and led her to "running a project, …being employed." Self-empowerment was to be (intrinsically) self-confident and determined regarding decision-making, else to result from a boost of morale and a stronger resolve to take on a project of one's own. As one woman

Table 4
Empowerment (التمكين) as discussed by Syrian women in net-mapping sessions.

Ability (القدرة) Ability (القدرة) as freedom: "To be able to do a certain thing, to be able to address a specific subject, to be able to act in a certain situation. Also, to have the freedom to perform and act a certain way to particular situation or subject." Ability and capability (الإمكانية و الإتقان): "To be capable (well-versed) of doing something ultimately [eventually]."	**Proof of existence** (اثبات وجود) "If I reached something and managed to do a certain thing, then I proved myself in that thing."
Achievement (الإنجاز) "It could be anything, even the housework, but doing something on your own will and having a strong personality. To achieve something without being frustrated, without anything getting you down."	**Self-confidence** (الثقة بالنفس) "To be confident to be doing a certain work, to rely on that work … to be self-confident that she can do a certain thing".
Awareness (الوعي) "To empower a woman so that she becomes aware"	**Self-reliance** (الاعتماد على النفس) "If I relied on myself, I would be able to show myself [be visible in the community]."
Freedom (الحرية) "Freedom to act" and "to be able to take her own decisions."	**Strength** (قوة) "To give a woman the opportunity to become strong" … "to shed light on the woman [make her visible], to show her skills," … "to strengthen her."
Opportunities (فرص) "To open the way for her to learn … to give her opportunities in all areas"	**Acquiring a right** (اكتساب حق) "If I want to work on something but I don't have the full right to work on it the right way, it won't be completed. I'll be afraid to take any step, even cooking a dish. It's best when you have the full right to act, meaning [to acquire] the full right to act."
Reaching goals (الوصول إلى الهدف) "To be self-confident and determined regarding decisions and actions to reach a specific goal … this is a self-empowerment without social support or support from any other people."	**Willingness and determination** (الإرادة و الإصرار) "For example, it is willingness and determination … I was determined that I want to read every day …"

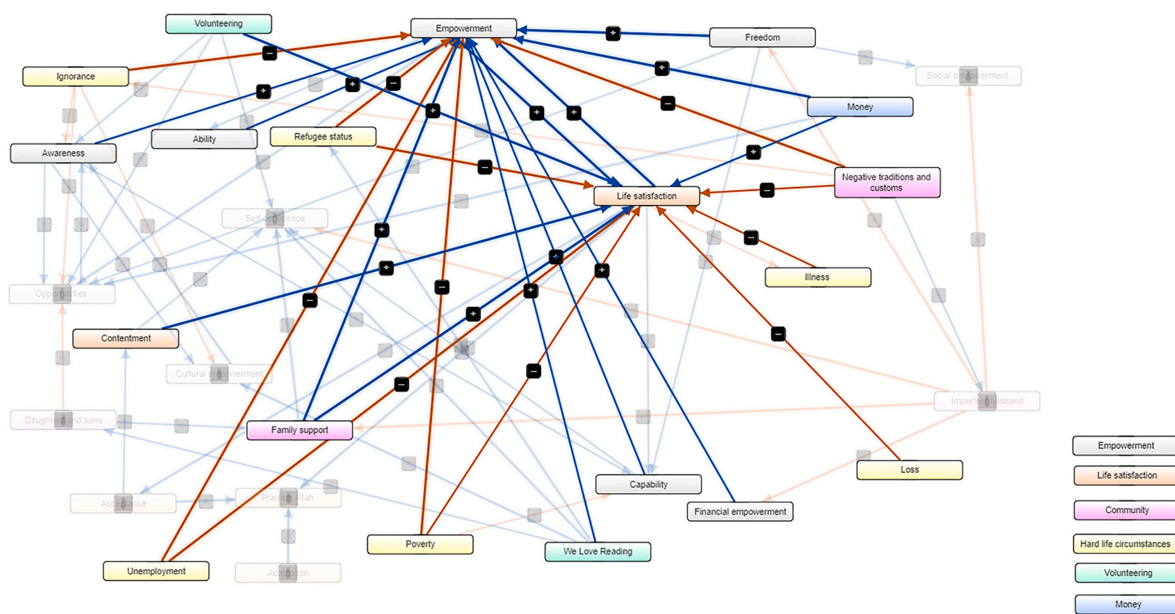

Fig. 2. Variables *directly* impacting life satisfaction and empowerment, as mapped by Syrian women. Women established a direct (one-way) link between volunteering and life satisfaction; a direct (one-way) link between *We Love Reading* and empowerment; and direct (bi-directional) links between empowerment and life satisfaction. Women grouped together community-level factors, hard life circumstances, volunteering, and money (shown in pink, yellow, green, and blue, respectively). This figure shows a sub-set of the mental map drawn in Supplemental Fig. 1. The directionality of positive and negative influences is depicted by blue and red arrows. (For interpretation of the references to color in this figure legend, the reader is referred to the Web version of this article.)

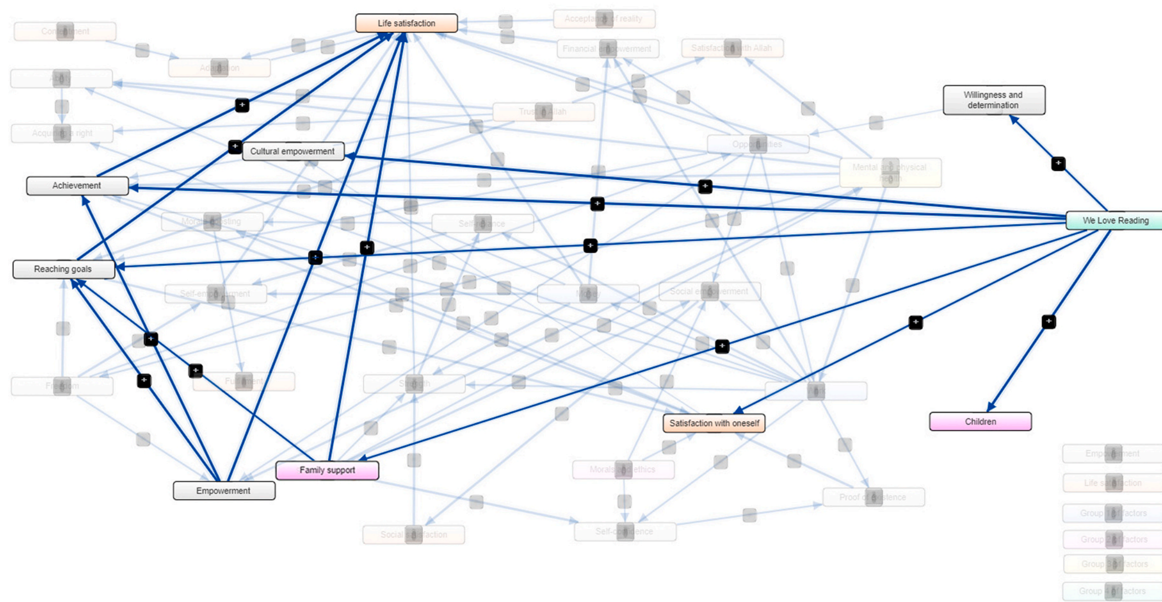

Fig. 3. Impacts of *We Love Reading*, as mapped by Syrian women in a session discussing empowerment and life satisfaction. Women established direct impacts to satisfaction with oneself (shown in orange), and to achievement, reaching goals, and cultural empowerment (shown in grey). They also described a direct link from empowerment to life satisfaction. This figure shows a sub-set of the mental map drawn in Supplemental Fig. 2. (For interpretation of the references to color in this figure legend, the reader is referred to the Web version of this article.)

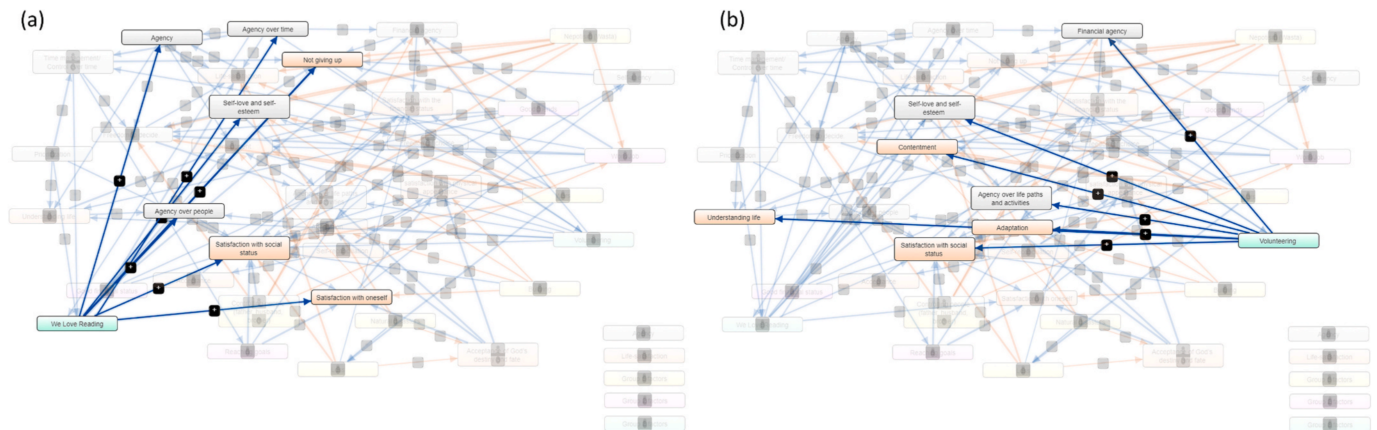

Fig. 4. The impact of (a) *We Love Reading* and (b) Volunteering, as mapped by Syrian women discussing agency and life satisfaction. Women described (a) *We Love Reading* engagement as increasing three components of life satisfaction (not giving up, social and self-satisfaction, shown in orange), as well as increasing agency, agency over time, agency over people, and self-love/esteem, shown in grey). They described (b) volunteering as increasing four components of life satisfaction (contentment, adaptation to new circumstances, social satisfaction, and understanding life, shown in orange), as well as increasing three components of agency (financial agency, agency over life paths/activities, and self-love/esteem, shown in grey). This figure shows part of the map selecting only direct links from We Love Reading or Volunteering to other variables. (For interpretation of the references to color in this figure legend, the reader is referred to the Web version of this article.)

explained: "it's about morale, morale means self-confidence, I work, and I don't care what other people say." As for social empowerment, this was associated with the "people around you." Women stated that "social empowerment can get something out of you that you didn't know is there," achievable through "the people around you … family … and friends."

Lastly, women described four components of agency ((الملكية)): "freedom" to decide or freedom of choice (e.g. "I am in charge of my life," and choose "the people I want in my life"); control over time (e.g., "no one intervenes in my own time without me specifying when I am free"); prioritization (e.g.: "I decide what is more important and work on it"); self-love and self-esteem ("to provide for my needs before providing for other people's needs"). Moreover, they differentiated agency over time, agency over people, financial agency, agency over life paths, and activities, and self-agency. Notably, "agency over people" was explained as "how I impact people," while self-agency was defined as "to be able to control my opinions, my feelings."

3.4. Causal reasoning

During each net-mapping session, women identified perceived factors of influence and made explicit which causal connections were to be drawn, visually, to generate a cognitive map representing their collective lived experience as Syrian refugee women. An example is shown in Supplemental Fig. 1: in this net-mapping session, women listed all the variables influencing life satisfaction and empowerment, mapped their interrelationships, specifying whether links denoted positive or negative influence, and how strong or weak links were perceived to be. Fig. 2 shows a sub-set of these connections – those with *direct* (without intermediaries) impacts on life satisfaction and empowerment. Strikingly,

Syrian women saw a direct (uni-directional) link between volunteering and life satisfaction, and a direct (uni-directional) link between *We Love Reading* and empowerment. They drew direct (bi-directional) links between empowerment and life satisfaction. They were clear that "hard life circumstances" (illness, loss, refugee status, poverty, and unemployment) impacted life satisfaction, while "ignorance" impacted empowerment. Having money boosted levels of both life satisfaction and empowerment. In terms of community-level factors, family support positively impacted levels of life satisfaction and empowerment, while "negative traditions and customs" - to do with confining women to the home - diminished them. Strikingly, women drew directional links between ability, awareness, capability, and freedom (to act and make decisions) to empowerment per se. The mental map showed that women connected "negative traditions and customs" with having an "imperfect husband," then linked having an "imperfect husband" with having less freedom, self-confidence, and family support, as well as having less financial and social empowerment (Supplementary Fig. 1).

Fig. 3 shows how Syrian women mapped, in a different net-mapping session, the impacts of *We Love Reading*. They described how *We Love Reading* directly enhanced a sense of satisfaction with oneself (self-satisfaction), as well positively impacted the children they would read aloud to, and family support. In turn, having a supportive family directly increased life satisfaction, as well as a sense of reaching goals, which itself impacted life satisfaction. *We Love Reading* also directly impacted cultural empowerment (learning) and a sense of achievement, reaching goals, willingness and determination. The full mental map is shown in Supplementary Fig. 2; notably, women described how *We Love Reading* influences "willingness and determination," which in turn impacted "opportunities," which then impacted both life satisfaction and empowerment. Here too women described a direct link from empowerment to life satisfaction.

3.5. Forms of volunteering

The final net-mapping session yielded a lively discussion of volunteering in relation to women's sense of life satisfaction and agency. Fig. 4 has two panels showing how women explained (a) the impacts of *We Love Reading*, as compared to (b) the impacts of volunteering, more generally. Thus, women described how *We Love Reading* program boosted the resolve of "not giving up" on their goals, hopes and aspirations, as well as enhanced both satisfaction with oneself and with one's social status. The program also enhanced agency, agency over people, agency over time, and self-love/esteem. By contrast, women saw volunteering activities, more generally, as impacting four components of life satisfaction – adaptation, contentment, satisfaction with social status, and understanding life - as well as three components of agency - financial agency, agency over life paths and activities, and self-love/esteem. With two notable overlaps (satisfaction with social status; self-love and self-esteem), women established that *We Love Reading* directly impacted their sense of "not giving up," satisfaction with oneself, and agency over people and time, while volunteering in general enhanced a sense of adaptation, contentment, understanding life, financial agency, and agency over life paths.

4. Discussion

Many governments and globally-funded NGOs see volunteering programs as ways to engage people in their local communities, improve human wellbeing and social capital, and decrease health and socioeconomic inequalities, especially where they prioritize the engagement of underrepresented populations (Jenkinson et al., 2013). This study aimed to establish whether a community-level program such as *We Love Reading*, which aims to create social change through inter-generational volunteering practices, benefited Syrian refugee women with respect to life satisfaction, empowerment, and wellbeing. *We Love Reading* has been praised as a global example of a community-level program serving refugee communities, having won notable prizes (such as the IDEO.org best refugee education program in 2015 and the UNESCO International Literacy Prize in 2017). Our mixed-methods program evaluation used standard scales to measure individual levels of life satisfaction, empowerment, and wellbeing over time, as well as interrogated how Syrian refugee women evaluated their lives and the impacts of volunteering opportunities in the local context. Results from the randomized cluster trial established that engagement with *We Love Reading* positively impacted levels of life satisfaction, but not levels of psychological empowerment and wellbeing, relative to a control group of women with no *We Love Reading* training.

All three measures – life satisfaction, empowerment, and wellbeing - are certainly important as a guide to program evaluation and global policy. Women's empowerment, for example, is "a core goal of global institutions and governmental organizations around the world," being defined as "a process of acquiring new resources that facilitates change from a less agentic status to a more agentic status, which in turns, allows women to achieve self-defined goals" (Qutteina et al., 2019:33–4). However, effective measurement of multi-dimensional concepts such as agency and empowerment across cultures presents a daunting challenge (O'Hara and Clement, 2018). Accordingly, there is "no basis to assume a priori that such measures capture what they are intended to capture when used in this [the Arab Middle East] region" (Qutteina et al., 2019:38). This raises the question as to how the constructs under examination performed in the local context, especially given findings of heterogeneous impacts across outcomes.

4.1. Knowledge evaluation in the local context

For life satisfaction, we noted that the weighted difference in the treatment group, relative to controls, was equivalent to moving up 3 steps on a ladder with just 10 rungs ($\beta = 3.00$, $p = 0.002$, Table 2). The Cantril Ladder of Life Scale, also known as the Cantril's Self-Anchoring Scale, asks respondents to "imagine a ladder with steps numbered 0 at the bottom and 10 at the top" and to evaluate their life in terms of "which step of the ladder would you say to personally feel you stand at this time? It is a "serious contender for the best tool for measuring the degree to which individuals view themselves as achieving their goals, both material and other" (Kahneman and Deaton, 2010:16492).

To some extent, the Ladder of Life overlaps with the two measures of psychological empowerment and wellbeing used in our survey - with important distinctions. The Psychological Empowerment scale taps a sense of meaningfulness, competence, and self-determination, but additionally, measures one's perceived impact in the workplace (or community) in terms of behaviors and interactions. The Psychological Wellbeing scale measures the extent to which respondents are satisfied with life, but additionally, how happy they usually feel, whether they have a sense of direction and purpose, as well as whether they feel something might go wrong for them. Importantly, "life evaluation" - as measured by Cantril - is distinct from emotional wellbeing: the former refers to "the thoughts that people have about their life when they think about it," while the latter refers to "the emotional quality of an individual's everyday experience" (Kahneman and Deaton, 2010: 16489).

One interpretation of the results of our randomized trial is that levels of life satisfaction are more malleable - more readily amenable to change - than levels of psychological empowerment and wellbeing, given the absence of any larger-scale social or structural change implemented in the community. The Ladder of Life, as a measure of life satisfaction, may be better suited to tracking individual-level changes in psychological states over time. We do not rule out alternative explanations: the Ladder of Life may be better understood by refugee women, or better capture dimensions of local knowledge, relative to other survey instruments. Indeed, there is a potential methodological bias in using a simple ladder scale for life satisfaction (10 items) vs. multidimensional scales for psychological empowerment (12 items) and wellbeing (10 items). We noted that at the time of survey, two Syrian women declined to respond

to the Psychological Empowerment scale, stating that work-related items were not relevant to their life circumstances – even though the PE scale had been adapted by substituting "volunteer activities" for work and "community" for workplace. We were also aware that women responded to one item on the Psychological Wellbeing scale ("If something can go wrong for me, it will") not only in terms of their personal outlook on the future, but also in terms of their belief that Allah controls all human destiny. For Syrian refugee women, concepts such as empowerment and wellbeing are not restricted to engagement with the workplace, nor merely equated with psychological dimensions which survey instruments were designed to measure.

Our study engaged a cohort of Syrian women who live in economically disadvantaged households, within a culturally conservative society where the gender construction of women offers few choices for independent activities outside the home (Miles, 2002; Al-Krenawi and Bell, 2023). It evaluated a volunteer program which bolsters a belief in intrinsic agency more so than instrumental agency - the former defined as a woman's "belief in herself and awareness of her rights (power within)", and the latter as "her ability to affect her life by having power to make choices and to control acquired resources" (Qutteina et al., 2019:34). Arguably, Syrian women who engaged in *We Love Reading* might well think about their life differently, even if they did not fulfill their goals at the present time or make immediate impacts in the community: for them, a salient component of empowerment (ability and capability) was "to be capable of doing something ultimately (eventually)." One can also foresee that life satisfaction could be expressed through formulating the hope of becoming more visible in the community - through volunteering - without changes in happiness or emotional wellbeing, given that in that in this context, a woman's social interactions were largely constrained by the authority of male kin.

Syrian refugee women, who also identified empowerment as "willingness and determination," knew that decision-making had to be negotiated with family members: the meaning of empowerment became couched as "being able to act", "having the freedom to act," being capable of doing something, "ultimately" if not immediately, and acquiring "the full right to act" (Table 4). Empowerment gave a woman the opportunity to become strong in ways that "shed light" on her, namely, made her visible in the community beyond the confines of the home. It was "proof of existence" in the context of women's limited resources and the web of largely homogeneous social ties structured around nationality, gender, education, and household income (Eggerman et al., 2023). Women stated that family support positively impacted levels of life satisfaction and empowerment, while negative traditions and customs diminished them. Specifically, they connected "negative traditions and customs" with having an "imperfect husband," and an imperfect husband with having less freedom, self-confidence, and family support, as well as less financial and social empowerment. Family situations were thus crucial to levels of empowerment, which is why "willingness and determination" to "reaching goals" loomed large in local discourse. On the other hand, women gave specific examples of situations akin to what items on the Psychological Empowerment scale seek to capture in association to social structure and social behavior. Specifically, they explained the links between boosting morale, work, and social interactions in this way: "it's about morale, morale means self-confidence, I work, and I don't care what other people say."

4.2. Causal reasoning

Insights from qualitative data were particularly helpful to understand the extent to which constructs overlap or reflect distinct aspects of lived experience. We found it relatively straightforward to ask women to explain their local knowledge and identify causal reasoning. We used fuzzy cognitive mapping, an approach well-suited to the modeling of complex causal systems, allowing the capture of stakeholder knowledge, without prior empirical data, to build a network map of causal influences (Barbrook-Johnson and Penn, 2022, p.80). This approach is helpful for modeling interdependent variables, providing a visual representation of complex social problems or dynamic systems; in the social sciences, it has been used, for example, to identify which factors result in the "complex system of homelessness" in western societies (Mago et al., 2013). In this study, we found the visual methodology well-suited to understand the complex system of women's empowerment and agency. Moreover, the visual maps were helpful in tracing the causal, direct impacts of community-level volunteering (Fig. 4). *We Love Reading* impacted agency over people and time (women gathered children, found appropriate locations for reading-aloud sessions, built family support and self-organized for activities in the community). It also impacted the resolve of "not giving up" as well as satisfaction with oneself and with one's social status. However, *We Love Reading* did not impact financial empowerment: indeed, those who graduated from the training program were never financially compensated for their volunteer work. This contrasts with other forms of volunteering, provided by state and international non-governmental organizations in Jordan, which do offer minimal financial compensation. As documented elsewhere, most notably in the award-winning documentary (The Neighborhood Storyteller, 2021) about Asma, a Syrian refugee who established reading aloud sessions in Zaatari refugee camp, *We Love Reading* volunteers are fueled by intrinsic motivation to become 'changemakers' in their local community. Taking action to serve in their local community, while fostering in themselves and in other refugees a sense of human dignity, individual volunteers have often sustained their *We Love Reading* activity over the span of many years.

4.3. Implications

This brings us to consider our study's implications for refugee programming practice and policy. We see three important ways of developing knowledge with a view to understand – rather than assume – why and how volunteering programs work from the standpoint of individual volunteers. The first is a call to assess the range of psychological, social, and/or spiritual benefits conferred to individual volunteers. A combination of qualitative, observational, and experimental evidence is helpful here, to guide research and policy in cross-cultural contexts. For example, in this study, Syrian refugee women differentiated between cultural, financial, personal, and social empowerment. They also differentiated between agency over self, agency over people, agency over time, and as agency over life paths. In terms of enhancing access to opportunities, for people who are socially and economically marginalized in society, this encourages a more in-depth reflection on whether volunteering programs are designed to boost self-love, human dignity, and social responsibility, or alternatively, boost the kind of skills and competencies that underscore the transactional nature of work experiences within most organizations. As expected, having money does influence both life satisfaction and empowerment in this cohort of women (Fig. 4). Yet for women who describe their experiences as "life is all hard," necessitating a strong trust in Allah, the sense of human dignity is channeled through the resolve of "not giving up." In volunteering to read to children in the neighborhood, women engage in acts of social solidarity in line with "Islam's strong emphasis on social cohesion, charity, social justice, collective responsibility for the welfare of society, (…) and the duty to help the poor and strangers at all times" (El-Said and Harrigan, 2009:1238). The benefits of this kind of volunteering encompass positive social functioning as well as positive psychological functioning, in ways that promotes human flourishing and a sense of shared humanity. As an example of a community-level volunteering program, *We Love Reading* is thus important for fostering a sense of human dignity in the wake of conflict, forced displacement, and social marginalization. What volunteering programs seek to achieve, in terms of intrinsic motivation, human flourishing, or economic and social inclusion, is important to clarify.

Second, we call attention to how volunteer community programs are organized with respect to social participation. Notably, *We Love Reading*

is a program which has spread through community-level diffusion and peer-to-peer networks, rather than through institutional scale-up: it is an example of south-to-south social entrepreneurship and south-to-north networked humanitarian action (Dajani, 2017; Panter-Brick, 2023). In that respect, engaging women from low-resource households in *We Love Reading* activities is very different from government-backed programs asking largely poor women to volunteer to deliver vaccinations and family planning to help their local community. In low-resource contexts such as rural Nepal and Ethiopia, a dominant narrative in global health and international development has seen volunteer work as empowering poor women and creating model citizens who enact change in their local communities (Maes et al., 2015). On the basis of empirical studies gathering qualitative and observational panel data, however, scholars have argued that encouraging women – such as Community Health Workers - to work without pay for government or globally-funded NGOs is structurally and ethically problematic, and may, in some instances, constitute labor exploitation (Closser et al., 2019:298). For example, narratives about empowerment and psychological benefits are "empirically questionable" in rural Ethiopia, where government policy has targeted one woman out of every five households to deliver health care labor as unpaid community volunteers (Maes et al., 2015). A program such as *We Love Reading*, which depends on word-of-mouth recommendation, peer support, and local ownership has structured social participation very differently; notably, it minimizes the power differentials inherent in more top-down approaches to recruitment and volunteer work activity. Globally, there are many different forms of formal and informal volunteering programs in existence, which calls for more comparative and theoretical work (Piliavin and Siegl, 2015).

Third, we call attention to the intensity of volunteering activity and its relationship with individual-level outcomes. In this study, Syrian refugee women in Amman were volunteering at a relatively low intensity; by contrast, health workers in Addis Ababa spent 15 hours/week in unpaid community-based care, which carried concerns about overburdening low-income women (Maes et al., 2015:56). A commitment in time, when it comes to community volunteering, reflects what programs are fundamentally asking of volunteers, and whether programs are oriented to being more people-centered or outcome-centered. *We Love Reading* volunteers are fueled by intrinsic motivation to become 'changemakers' in their local community. Here we see empowerment through choice - the pathway to personal agency commonly highlighted in organizational research - as well as empowerment through social interdependence - a pathway to agency valued in many non-western cultures (Chua and Iyengar, 2006). 'Reading Ambassadors' volunteer a few hours per week, month, or year: their efforts are constrained by existing responsibilities at home, and in socially conservative households, by kinship groups who enforce the expectation that women work within the home, rather than work in the community (Miles, 2002; Eggerman et al., 2023). We found that within the treatment group, women who read more intensely (at one year follow-up, 27.05% of women read daily or weekly to children in the community) did not average better outcome trajectories than women who read less intensely. Some women dedicated only limited time to volunteering, given their life circumstances and responsibilities inside the home - yet they could still derive psychological and spiritual benefit from enacting change in their community. Women's resolve of "not giving up" on their goals was not dependent on the intensity of volunteering time and effort. In other words, *We Love Reading* volunteering activity was not associated with life satisfaction outcomes in a dose-response manner: 'more' was not necessarily 'better.'

4.4. Strengths and limitations

Our study has notable strengths. We successfully completed a randomized trial with refugee women, a difficult-to-reach population group, and experienced a remarkably low attrition rate (8.58%) over the one year follow-up. To the best of our knowledge, our study offers representative data on urban poor women – available datasets offer limited statistical information on women in Jordan (UN Women, 2021). All study participants came from families earning less than the national average of urban household income (950 JOD/month; Department of Statistics, 2017, Table 3.3). We found no national dataset estimating the proportion of women engaged in volunteering activities (for Syrian refugees in Lebanon, volunteer work is described as an invisible career; Drif, 2018).

The study also has three main limitations. First, we worked with a small number of community-based organizations, which reduced analytical power and yielded few clusters for randomization. We noted that unbalanced cluster sample data are common in group randomization designs, but lead to the possibility of false-positive, Type I error inflation (Johnson et al., 2015). Our small sample size reflected logistical constraints in the field, as well as limited opportunities for women to attend community centers, given their family responsibilities at home and culturally-prescribed need for male kin oversight. Second, our analyses only lay the groundwork for future work. In statistical models, we used regression models that account for potential within-cluster, noting that synthesizing findings from methodological literature on cluster size impacts has proved difficult (Zhan et al., 2021). In net-mapping sessions, we analyzed cognitive representations of local knowledge and causal influence; further analyses, using fuzzy cognitive maps as a tool for simulation of dynamic changes, are forthcoming. Finally, our data speak to differences between intervention and control groups, but do not imply that, for given individuals, higher intensity of *We Love Reading* volunteering will lead to higher life satisfaction scores.

5. Conclusion

Our study offers a rigorous approach to testing program impacts on life satisfaction, empowerment, and wellbeing, as well as a culturally-grounded approach to knowledge representation and causal reasoning.

It highlights the value of developing systematic and grounded methodologies to evaluate volunteer-based interventions in cross-cultural contexts. Volunteering is thought to provide unique health and life satisfaction benefits, as well as to promote social inclusion for marginal communities. This study helps clarify how and why different forms of volunteering initiatives work, for refugee women, in real-life situations.

CRediT authorship contribution statement

Catherine Panter-Brick: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing. **Jannik J. Eggerman:** Conceptualization, Data curation, Formal analysis, Methodology, Resources, Software, Writing – original draft, Writing – review & editing. **Philip Jefferies:** Data curation, Formal analysis, Software. **Lina Qtaishat:** Data curation, Formal analysis, Investigation, Project administration, Resources, Software, Supervision, Visualization, Writing – review & editing. **Rana Dajani:** Conceptualization, Formal analysis, Funding acquisition, Investigation, Methodology, Writing – original draft, Writing – review & editing. **Praveen Kumar:** Data curation, Formal analysis, Methodology, Software, Visualization, Conceptualization.

Data availability

Data will be made available on request.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.socscimed.2024.116735.

References

Ait Ali Slimane, M., Lundvall, J., Mohindra, K., Al Abbadi, S., Kurshitashvili, N., Hisou, O., 2020. Women's economic empowerment in Jordan. In: MENA Knowledge and Learning Quick Notes Series. World Bank, Washington, DC. No. 179. World Bank. https://openknowledge.worldbank.org/handle/10986/33587. (Accessed 28 October 2023).

Al-Krenawi, A., Bell, M.M., 2023. Gender differences in Syrian refugees in Jordan: psychological, self-esteem, family function, marital satisfaction, and life satisfaction. Int. J. Soc. Psychiatr. 69 (3), 714–723. https://doi.org/10.1177/00207640221140286.

Asiri, S.A., Rohrer, W.W., Al-Surimi, K., Da'ar, O.O., Ahmed, A., 2016. The association of leadership styles and empowerment with nurses' organizational commitment in an acute health care setting: a cross-sectional study. BMC Nurs. 15 (1), 38. https://doi.org/10.1186/s12912-016-0161-7.

Banat, B., 2019. Life Orientation Among Palestinians. Pozuelo de Alcarón, Madrid.

Barbrook-Johnson, P., Penn, A.S., 2022. Fuzzy cognitive mappping. In: Barbrook-Johnson, P., Penn, A.S. (Eds.), Systems Mapping: How to Build and Use Causal Model Systems. MacMillan, Palgrave, pp. 79–95. https://doi.org/10.1007/978-3-031-01919-7_12.

Bates, D., Mächler, M., Bolker, B., Walker, S., 2015. Fitting linear mixed-effects models using lme4. J. Stat. Software 67 (1), 1–48. https://doi.org/10.18637/jss.v067.i01.

Braun, V., Clarke, V., 2006. Using thematic analysis in psychology. Qualitative Research in Psychology 3 (2), 77–101. https://doi.org/10.1191/1478088706qp063oa.

Cantril, H., 1965. The Pattern of Human Concerns. Rutgers University Press.

Chua, R.Y.-J., Iyengar, S.S., 2006. Empowerment through choice? A critical analysis of the effects of choice in organizations. Res. Organ. Behav. 27, 41–79. https://doi.org/10.1016/S0191-3085(06)27002-3.

Closser, S., Napier, H., Maes, K., Abesha, R., Gebremariam, H., Backe, G., Fossett, S., Tesfaye, Y., 2019. Does volunteer community health work empower women? Evidence from Ethiopia's Women's Development Army. Health Pol. Plann. 34 (4), 298–306. https://doi.org/10.1093/heapol/czz025.

Dajani, R., 2017. Promising Practices in Refugee Education: We Love Reading: Promoting Literacy and Education through Reading Aloud in Community Settings. Pearson, Save the Children International, UNHCR, United Nations High Commissioner for Refugees. https://resourcecentre.savethechildren.net/document/promising-practices-in-refugee-education-4/. (Accessed 28 October 2023).

Department of Statistics, 2017. *Jordan Household Expenditures and Income Survey, 2017-18.* The Hashemite Kingdom of Jordan. Table 3.7. http://www.dos.gov.jo/dos_home_e/main/linked-html/household/2017/G3/Table7G3_King.pdf. (Accessed 28 October 2023).

Drif, L., 2018. To be a refugee and "volunteer": the invisible workers of international aid programs. Critiq. Int. 81 (4), 21–42.

Eggerman, J.J., Dajani, R., Kumar, P., Chui, S., Qtaishat, L., El Kharouf, A., Panter-Brick, C., 2023. Social networks, empowerment, and wellbeing among Syrian refugee and Jordanian women: Implications for development and social inclusion. World Development 170, 106324. https://doi.org/10.1016/j.worlddev.2023.106324.

El Kharouf, A., Abualbasal, A., Abbadi, H.S., Weir, D., 2021. The entrepreneurship ecosytem for enhancing women's entrepreneurship in Jordan. In: Metcalfe, B.D., Bastian, B.L., Al-Dajani, H. (Eds.), Women, Entrepreneurship and Development in the Middle East. Routledge, New York, pp. 133–151.

El-Said, H., Harrigan, J., 2009. "You reap what you plant": social networks in the Arab world—the Hashemite Kingdom of Jordan. World Dev. 37 (7), 1235–1249. https://doi.org/10.1016/j.worlddev.2008.12.004.

Hadfield, K., Al-Hamad, M., Bakhti, R., Dajani, R., El Kharouf, A., Michalek, J., Mukunzi, J., Ataishat, L., Sethi, T., con Stumm, S., Mareschal, I., 2022. Predictors of literacy and attitudes toward reading among Syrian refugee children in Jordan. Int. J. Early Child. https://doi.org/10.1007/s13158-022-00334-x.

Hamdan-Mansour, A.M., Dawani, H.A., 2008. Social support and stress among university students in Jordan. Int. J. Ment. Health Addiction 6 (3), 442–450. https://doi.org/10.1007/s11469-007-9112-6.

Hanemann, U., 2018. We Love Reading, Jordan. UNESCO Institute for Lifelong Learning. https://uil.unesco.org/case-study/effective-practices-database-litbase-0/we-love-reading-jordan. (Accessed 21 October 2023).

Hanmer, L., Klugman, J., 2016. Exploring women's agency and empowerment in developing countries: where do we stand? Fem. Econ. 22 (1), 237–263. https://doi.org/10.1080/13545701.2015.1091087.

Hansen, T., Aartsen, M., Slagsvold, B., Deindl, C., 2018. Dynamics of volunteering and life satisfaction in midlife and old age: findings from 12 European countries. Soc. Sci. 7 (5), 78. https://doi.org/10.3390/socsci7050078.

Hastings, P.D., Partington, L.C., Dajani, R., von Suchodoletz, A., 2021. Adrenocortical and psychosocial responses of families in Jordan to the COVID-19 pandemic. Child Dev. 92 (5), e798–e816. https://doi.org/10.1111/cdev.13662.

Helliwell, J.F., Layard, R., Sachs, J.D., De Neve, J.-E., Aknin, L.B., 2022. In: Wang, S. (Ed.), World Happiness Report 2022. Sustainable Development Solutions Network, New York. https://happiness-report.s3.amazonaws.com/2022/WHR+22.pdf.

International Rescue Committee. Social Network Analysis Handbook: Connecting the dots in humanitarian programs. https://www.rescue.org/resource/social-network-analysis-handbook-connecting-dots-humanitarian-programs.

Jabbar, S.A., Zaza, H.I., 2016. Evaluating a vocational training programme for women refugees at the Zaatari camp in Jordan: women empowerment: a journey and not an output. Int. J. Adolesc. Youth 21 (3), 304–319. https://doi.org/10.1080/02673843.2015.1077716.

Jenkinson, C.E., Dickens, A.P., Jones, K., et al., 2013. Is volunteering a public health intervention? A systematic review and meta-analysis of the health and survival of volunteers. BMC Publ. Health 13, 773. https://doi.org/10.1186/1471-2458-13-773.

Johnson, J.L., Kreidler, S.M., Catellier, D.J., Murray, D.M., Muller, K.E., Glueck, D.H., 2015. Recommendations for choosing an analysis method that controls Type I error for unbalanced cluster sample designs with Gaussian outcomes. Stat. Med. 34, 3531–3545. https://doi.org/10.1002/sim.6565.

Kahneman, D., Deaton, A., 2010. High income improves evaluation of life but not emotional well-being. Proc. Natl. Acad. Sci. USA 107 (38), 16489–16493. https://doi.org/10.1073/pnas.1011492107.

Keeley, S.B., 2018. Photojournalism: creating brighter lives for Syrian refugee children. Fletcher Forum World Aff. https://www.fletcherforum.org/home/2018/1/6/we-love-reading-creating-brighter-lives-for-syrian-refugee-children. (Accessed 28 October 2023).

Lambert, L., Karabchuk, T., Joshanloo, M., 2020. Predictors of life satisfaction in the United Arab Emirates: results based on Gallup data. Curr. Psychol. https://doi.org/10.1007/s12144-020-00873-3.

Maes, K., 2012. Volunteerism or labor exploitation? Harnessing the volunteer spirit to sustain AIDS treatment programs in urban Ethiopia. Hum. Organ. 71 (1), 54–64. https://doi.org/10.17730/humo.71.1.axm39467485m22w4.

Maes, K., Closser, S., Vorel, E., Tesfaye, Y., 2015. A women's development army: narratives of community health worker investment and empowerment in rural Ethiopia. Stud. Comp. Int. Dev. 50 (4), 455–478. https://doi.org/10.1007/s12116-015-9197-z.

Mago, V.K., Morden, H.K., Fritz, C., Wu, T., Namazi, S., Geranmayeh, P., Chattopadhyay, R., Dabbaghian, V., 2013. Analyzing the impact of social factors on homelessness: a fuzzy cognitive map approach. BMC Med. Inf. Decis. Making 23 (13), 94. https://doi.org/10.1186/1472-6947-13-94.

Mahasneh, R., von Suchodoletz, A., Larsen, R.A.A., Dajani, R., 2021. Reading for pleasure among Jordanian children: a community-based reading intervention. Journal of Research in Reading 44 (2), 360–378. https://doi.org/10.1111/1467-9817.12342.

Miles, R., 2002. Employment and unemployment in Jordan: the importance of the gender system. World Dev. 30 (3), 413–427.

Millora, C., 2020. Volunteering practices in the twenty-first century. In: Plan of Action. United Nations Volunteers. https://www.unv.org/sites/default/files/Volunteering%20Practices%20in%20the%2021st%20Century_en_1.pdf. (Accessed 28 October 2023).

Nichol, B., Wilson, R., Rodrigues, A., Haighton, C., 2023. Exploring the effects of volunteering on the social, mental, and physical health and well-being of volunteers: an umbrella review. Voluntas 4, 1–32. https://doi.org/10.1007/s11266-023-00573-z.

O'Hara, C., Clement, F., 2018. Power as agency: a critical reflection on the measurement of women's empowerment in the development sector. World Dev. 106, 111–123. https://doi.org/10.1016/j.worlddev.2018.02.002.

Panter-Brick, C., 2023. Pathways to resilience and pathways to flourishing: multisystem research and intervention with war-affected and refugee communities. In: The Special Issue on Resilience in Development: Pathways to Multisystem Integration, vols. 1–12. Development & Psychopathology. https://doi.org/10.1017/S095457942300113X.

Papageorgiou, E.I., Salmeron, J.L., 2013. A review of fuzzy cognitive maps research during the last decade. IEEE Trans. Fuzzy Syst. 21 (1), 66–79. https://doi.org/10.1109/TFUZZ.2012.2201727.

Perry, B.L., Pescolido, B.A., Borgatti, S.P., 2018. Egocentric Network Analysis: Foundations, Methods, and Models. Cambridge University Press.

Piliavin, J.A., Siegl, E., 2015. Health and well-being consequences of formal volunteering. In: Schroeder, D.A., Graziano, W.G. (Eds.), The Oxford Handbook of Prosocial Behavior. Oxford University Press, Oxford, pp. 494–523.

Qutteina, Y., James-Hawkins, L., Al-Khelaifi, B., Yount, K.M., 2019. Meanings of women's agency: a case study from Qatar on improving measurement in context. J. Arab. Stud. 9 (1), 33–51. https://doi.org/10.1080/21534764.2019.1649828.

Schiffer, E., Hauck, J., 2010. Net-Map: collecting social network data and facilitating network learning through participatory influence network mapping. Field Methods 22 (3), 231–249. https://doi.org/10.1177/1525822X10374798.

Spreitzer, G.M., 1995. An empirical test of a comprehensive model of intrapersonal empowerment in the workplace. Am. J. Community Psychol. 23 (5), 601–629. https://doi.org/10.1007/BF02506984.

UNICEF, 2019. Jordan National Social Protection Strategy 2019-2025. In: Ministry of Planning and International Cooperation. UNICEF. Ministry of Social Development. https://www.unicef.org/jordan/reports/jordan-national-social-protection-strategy-2019-2025 (Accessed 28 October 2023).

The Neighborhood Storyteller (2021) (Accessed 15 October 2023, https://www.homestorytellers.org/theneighborhoodstoryteller.

Thoits, Peggy A., Hewitt, Lyndi N., 2001. Volunteer work and well-being. J. Health Soc. Behav. 42 (2), 115–131. https://doi.org/10.2307/3090173.

UNESCO, 2017. Recognizing Excellence: Sharing Best Practice in Literacy. Institute for Lifelong Learning. https://uil.unesco.org/literacy-and-basic-skills/recognizing-excellence-sharing-best-practice-literacy. (Accessed 28 October 2023).

UNHCR, 2023a. Syria situation. https://reporting.unhcr.org/operational/situations/syria-situation#:~:text=Over%2012%20million%20Syrians%20remained,from%205.7%20million%20in%202021. (Accessed 28 October 2023).

UNHCR, 2023b. Jordan: Statistics for Registered People of Concern. https://data.unhcr.org/en/documents/details/99635. (Accessed 28 October 2023).

United Nations, 2000. United Nations Volunteers Programme: Preparatory Committee for the Special Session of the General Assembly on the Implementation of the Outcome of the World Summit for Social Development and Further Initiatives. Volunteering and social development. A/AC.253/16/Add.7, United Nations.

VanderWeele, T.J., Trudel-Fitzgerald, C., Allin, P., Farrelly, C., Fletcher, G., Frederick, D. E., Hall, J., Helliwell, J.F., Kim, E.S., Lauinger, W.A., Lee, M.T., Lyubomirsky, S., Margolis, S., McNeely, E., Messer, N., Tay, L., Viswanath, V., Węziak-Białowolska, D., Kubzansky, L.D., 2020. Current recommendations on the selection of measures for well-being. Prev. Med. 133, 106004.

We Love Reading, 2022. *Annual Report. Amman, Jordan*. Welovereading.Org. https://welovereading.org/wp-content/uploads/2023/07/EN_annual-report-2022-v3.pdf. (Accessed 28 October 2023).

Willen, S.S., 2022. Flourishing and health in critical perspective: an invitation to interdisciplinary dialogue. Soc. Sci. Med. Mental Health 2, 100045. https://doi.org/10.1016/j.ssmmh.2021.100045.

Wood, N., Charlwood, G., Zecchin, C., et al., 2019. Qualitative exploration of the impact of employment and volunteering upon the health and wellbeing of African refugees settled in regional Australia: a refugee perspective. BMC Public Health 19, 143. https://doi.org/10.1186/s12889-018-6328-2.

Zhan, D., Xu, L., Ouyang, Y., Sawatzky, R., Wong, H., 2021. Methods for dealing with unequal cluster sizes in cluster randomized trials: a scoping review. PLoS One. https://doi.org/10.1371/journal.pone.0255389.

Zintl, T., Loewe, M., 2022. More than the sum of its parts: donor-sponsored cash-for-work programmes and social cohesion in Jordanian communities hosting Syrian refugees. Eur. J. Dev. Res. 34 (3), 1285–1307. https://doi.org/10.1057/s41287-022-00536-y.

UN Women (2021). Assessment of the Status of Gender Statistics in Jordan. UN Women. https://jordan.unwomen.org/sites/default/files/Field%20Office%20Jordan/Attachments/publications/2021/Women%20Count_Assessment%20of%20the%20Status%20of%20Gender%20Statistics%20in%20Jordan/Women%20Count_Assessment%20of%20the%20Status%20of%20Gender%20Statistics%20in%20Jordan_ENG.pdf (Accessed 28 October 2023).

Smith, J., & Blanchet, K., 2019. Research Methodologies in Humanitarian Crises. London:Elrha. https://www.elrha.org/wp-content/uploads/2020/02/R2HC-Research-Methodologies-in-Humanitarian-Crises-new.pdf (Accessed 15 October 2023).