

# What does it take to offer high-quality, community-based, accessible mental health care in Lebanon?

Mia Atoui<sup>1</sup>, Lea Zeinoun<sup>1</sup>, Zeina Akiki<sup>1</sup> and Pia Zeinoun<sup>1</sup>

<sup>1</sup>Embrace Lebanon, Beirut, Lebanon (Correspondence to Pia Zeinoun: [piazeinoun@embracelebanon.org](mailto:piazeinoun@embracelebanon.org))

## Abstract

**Background:** Armed conflict, economic collapse, the 2020 explosion, the COVID-19 pandemic, and persistent political and social instability have had severe impact on mental health in Lebanon.

**Aim:** To highlight the critical elements for setting up a free community-based mental health care centre in Lebanon.

**Methods:** Following the Beirut blast in 2020, a non-government organization started providing free, essential, person-centred, and holistic mental health care to residents in Lebanon through a multidisciplinary team of psychiatrists, psychologists, social workers, and mental health nurses.

**Results:** During its first year of operation, the health centre provided 5392 free mental health consultations to 590 beneficiaries. Majority (67%) of the beneficiaries were female, and nearly half (45%) were aged 18–24 years. The most prevalent mental health disorders were major depressive disorder, generalized anxiety disorder and post-traumatic stress disorder. Beneficiaries self-reported a 70% improvement in depression and a 76% improvement in anxiety after 3 months of treatment.

**Conclusion:** Based on our experience, we advocate the community-based model as an effective approach to delivering mental health interventions and recommend a continuous evaluation of its impact in community settings.

Keywords: Mental health, community mental health centre, community-based mental health care, depressive disorder, generalized anxiety disorder, post-traumatic stress disorder, Lebanon

Citation: Atoui M, Zeinoun L, Akiki Z, Zeinoun P. What does it take to offer high-quality, community-based, accessible mental health care in Lebanon? *East Mediterr Health J.* 2024;30(8):584–592. <https://doi.org/10.26719/2024.30.8.584>.

Received: 14/08/23; Accepted: 23/05/24

Copyright: © Authors 2024; Licensee: World Health Organization. EMHJ is an open access journal. All papers published in EMHJ are available under the Creative Commons Attribution Non-Commercial ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>).

## Background

One harsh reality is that the average person in Lebanon likely has a mental health issue or has a close family member who has a mental health issue but is unable or unwilling to access treatment due to systemic barriers. This person has experienced at least one of the social determinants of mental health and at least one armed conflict between 2006 and 2022, economic collapse in 2019, an explosion in 2020, and political and social instability during their lifetime, excluding the personal trauma and circumstances (1).

This heuristic description is based on the estimated prevalence of mental health issues in Lebanon: 25% of Lebanese are estimated to suffer from a mental illness requiring treatment during their lifetime (2) and on average one person dies of suicide every 2.1 days (3). This is consistent with meta-analytic data in high-conflict settings that estimate a mental illness prevalence of 22.1% (4). Thus, for these individuals to decide to seek treatment, they must overcome major personal, social and structural barriers. They need to have knowledge or insight that their condition is psychological and treatable and should have a perceived need for help. They need to be able to overcome the social stigma associated with seeking help and should be able to trust the institutions and professionals they will engage with in the process (5-7).

In addition, such persons will likely struggle with other structural barriers like unavailable, unaffordable and poor quality mental health services. This is because, in Lebanon, there are about 1.26 psychiatrists, 3.42 psychologists, and 1.38 social workers per 100 000 population (8) and only 23 mental health workers per 100 000 (9). This is low compared to the estimated 70 mental health workers per 100 000 in high income countries.

Affordability is another major issue affecting mental health service and this is because the services are mostly provided by private practitioners, whose charges are prohibitive. Non-government organizations and public facilities provide more affordable or free services; 34 out of the 263 government-owned primary health centres provide services as part of the national strategy to integrate mental health into primary health care. However, the quality of services provided and perceived trust in the public system are a concern, partly because professional or legal regulation of the education and training for practicing psychologists only began in 2019. Other reasons for the potentially substandard services include lack of government expenditure on mental health, additional pressure due to COVID-19 pandemic on a weak health system, emigration of qualified professionals, and other systemic issues.

To address some of these challenges, a Lebanese non-government organization, Embrace Lebanon, began

offering mental health services to residents in Lebanon in 2020. This paper highlights some achievements and lessons from the community-based mental health services provided by the centre and “what it takes” to make an impact.

## Methods

### **Assessing the need for a value-based community mental health centre**

Long before providing direct mental health services, Embrace Lebanon had focused on addressing stigma and misconception by raising awareness and literacy about mental health at community level and building capacity of allied professionals. From 2013 until 2017 and 2018, the organization implemented mostly community-focused events, media campaigns (including social media campaigns) and awareness sessions, which helped in identifying the community need for accessible specialized mental health services.

Evidence from discussions with community members and professionals shows that there were structural barriers to accessing quality, affordable and dignified psychotherapy and psychiatric consultations. The migration of existing and prospective mental health professionals, following the economic crisis of 2019, significantly affected the availability of affordable services in the country.

In 2018, Embrace Lebanon commenced plans to establish a value-based community mental health centre that would be inclusive, attractive and dignifying and staffed with qualified professionals who could provide mental health services and training.

The community-based mental health care (CBMHC) approach provides accessible services outside the traditional institutions such as hospitals or private clinics (10,11). It provides personalized, inclusive, comprehensive, quality, rights-based, open access care that considers the livelihood of patients through a multidisciplinary team of mental health professionals and healthcare workers. CBMHC recognizes mental health care as a right for everyone and promotes recovery-oriented treatment approaches (10,11). It emphasizes preventive and awareness services, psycho-education, peer support, community outreach, and crisis response (11). Care delivered within the CBMHC model enhances treatment outcomes, prevents hospitalization, and promotes inclusion and reintegration with social life, employment and community participation (12). To make this vision a reality, we liaised with experts, stakeholders, academic institutions, and donors during the early days of the project. However, despite overwhelming moral support, implementation continued to fail until after 4 August 2020.

### **Establishing the community mental health centre**

Three weeks after the Beirut blast, in August 2020, Embrace Lebanon began a temporary walk-in relief clinic in Beirut to support those affected by the blast, while planning for a sustainable community mental health centre. High-stakes decisions were made, including upscaling the physical space, the staff and partners. Establishment of the centre required 3 months of scouting for an affordable and scalable location. Workforce planning, selection, recruitment, and training were done using the community-based approach. The workforce included psychiatrists, psychologists, social workers, mental health nurses, among others, to enable the delivery of comprehensive, person-centred and holistic care. The candidates were screened to ensure that they were licensed, trained and had experience in dealing with trauma-related responses.

Simultaneously, we liaised with local universities to source graduate psychology students willing to conduct their practicum training at the centre. During their one-year intensive training programme, the graduate students observed and engaged in face-to-face psychotherapy sessions under the supervision of seasoned clinical mentors. This allowed the centre to meet its mission of building capacity for prospective mental health professionals and at the same time providing mental health services for the community.

### **Setting standards and defining the scope of operations**

Standard-setting is of particular importance when offering highly regulated human healthcare services. We clarified the values by which the centre would operate and the guiding principles, policies and procedures through consultations and comparisons with benchmarked centres in other countries and with international standards.

The psychotherapy training programme was designed as a competency-based training that aligns with the American Psychological Association benchmarks for training master-level psychologists. Operations at the centre were aligned with the WHO quality rights (Figure 1).

The centre was set up to receive service users aged between early adolescence and late adulthood, suffering primarily from common mental health disorders (e.g. depression, anxiety), trauma and social stressors. It was not particularly equipped to receive those seeking services for substance abuse or dual diagnosis, chronic serious mental illness, or neurodevelopmental disorders (Figure 2).

### **Synchronising with existing mental health system**

During its first year of operation, the community centre complemented, strengthened and enhanced its

Figure 1 Values and principles guiding the Embrace Community Mental Health Centre

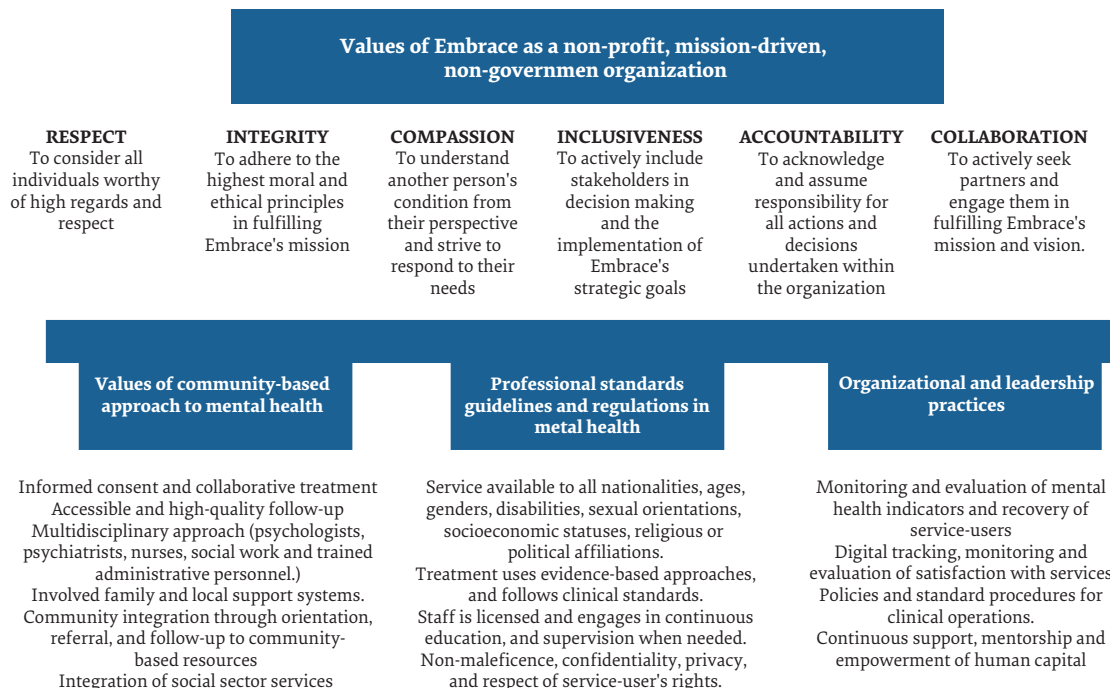
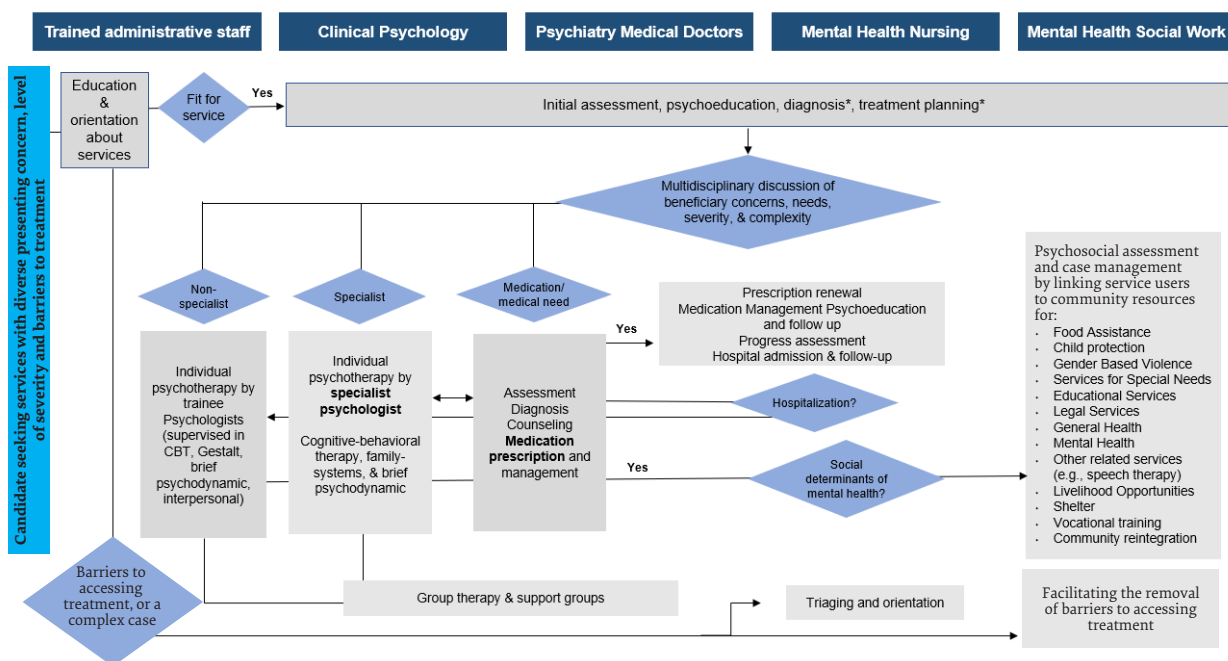


Figure 2 Range of services, service provision pathways and service providers at the Embrace Community Mental Health Centre



services through existing mental health services in the country. For example, individuals who sought outpatient therapy, rehabilitation for substance abuse, learning and neuro-developmental disorder services at the centre were referred to other specialized professionals or non-government organizations in the community. To establish a functional network, the centre established collaborative relationships with pharmacies and hospitals and this enhanced access. Close follow-up with hospital staff and admitting physicians helped reduce the costs of

medication and inpatient services and reduce the length of hospital stay where possible.

## Results

### Service beneficiaries

The centre served 590 beneficiaries during its first year of operation, three-quarters of whom received between 1 and 6 therapy sessions. Keeping treatment brief and

goal-focused is consistent with the model of community mental health and maximizes service availability for new beneficiaries. However, our approach is patient-centred and adapts treatment to the needs of the beneficiary. Therefore, 15% of our beneficiaries received longer-term therapy based on their needs and the severity of their diagnoses, and to accommodate the training needs of trainee therapists.

Most of the beneficiaries were female (67%) aged 18–24 years (45%), highlighting the need for youth-focused access to services (Figure 3). About 84% reported a household income of less than LBP 3 000 000 (about US\$ 33) and 33% reported benefiting from the National Social Security Fund (NSSF) health insurance coverage. NSSF covers only inpatient hospital admissions, however, it is very rare for patients to find vacant psychiatric beds that are covered by NSSF or Ministry of Health. Therefore, they often have to make out-of-pocket payment when psychiatric hospitalization is required. Although some beneficiaries (20%) are insured by private insurance companies, private insurance in Lebanon does not cover outpatient services except for 1 or 2 companies that have integrated mental health into their packages.

The most prevalent diagnoses among service users were major depressive disorder, generalized anxiety disorder, and trauma and stressor-related disorders.

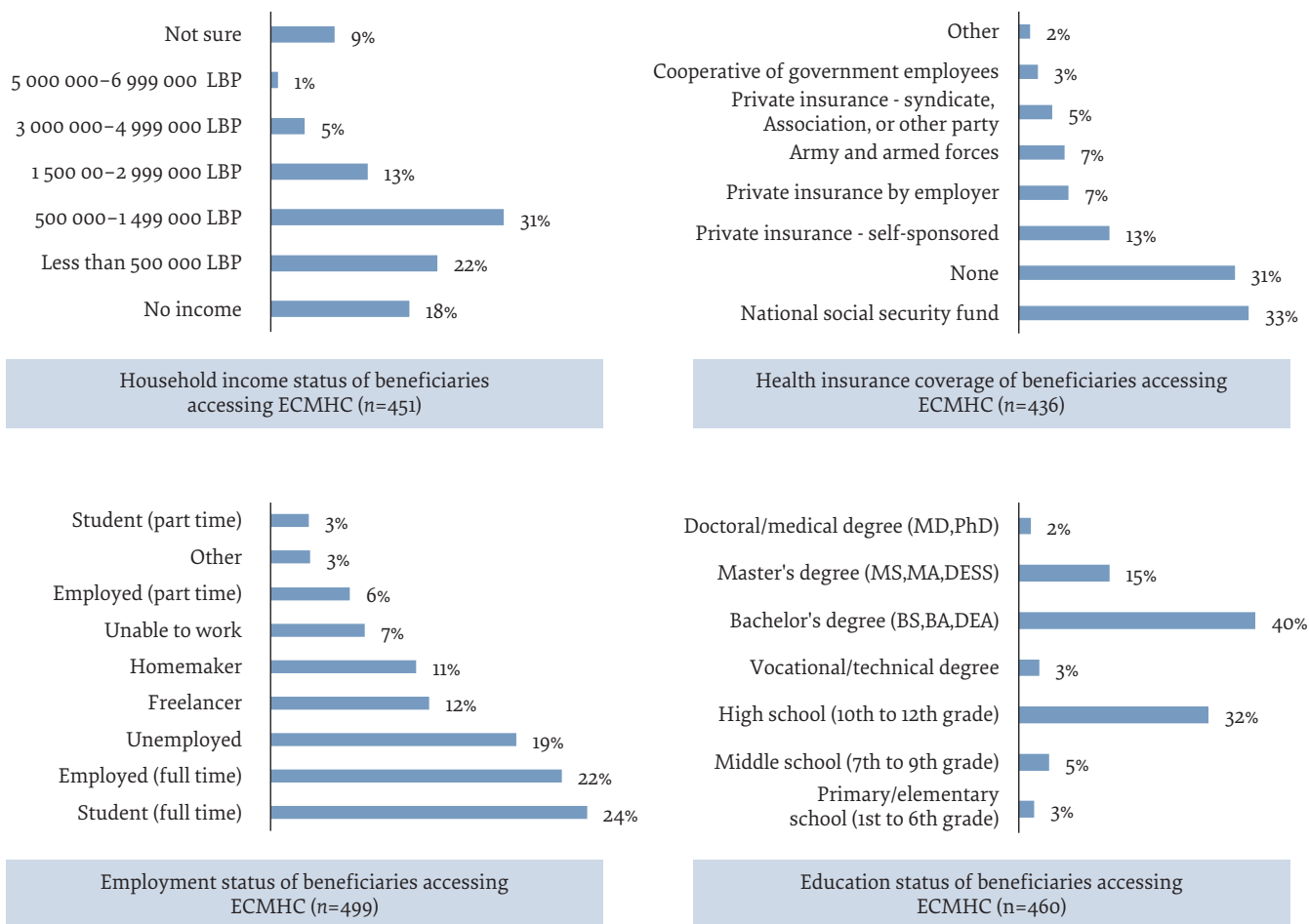
### Mental health services offered

During its first year of operation, the centre provided 5392 mental health consultations to 590 people (Table 1).

#### Direct case management and social work

Community centres aim to adopt a holistic approach to mental health care by offering psychosocial assistance that addresses the social and economic determinants of mental health. At the centre, the mental health social worker fulfils several functions, including: (1) being a point of contact for those seeking treatment but face barriers of transportation, knowledge or stigma; (2) providing assertive case management; and (3) acting as intermediary between the psychosocial needs of beneficiary and community resources. Using a referral network, the mental health social workers orient and refer beneficiaries to psychosocial services, including livelihood, shelter, basic assistance, protection, health, and to organizations catering to the needs of vulnerable groups such as refugees; lesbian, gay, bisexual, transgender, queer, questioning, intersex, asexual+ community; and persons affected by child abuse, gender-

Figure 3 Sociodemographic characteristics of Embrace Community Mental Health Centre beneficiaries



**Table 1. Types of mental health services provided by the community-based mental health care centre**

Service	Frequency
Individual sessions	4517
Psychiatric consultations for assessment and follow-up	1341
Specialist psychological consultations (assessment & psychotherapy)	1586
Non-specialist psychological consultation by trainee psychologists	1590
Group psychotherapy sessions (average of 6 participants per session)	22
Psychiatric nursing consultations (assessment and follow-up)	476
Social work consultations (assessment and follow-up)	377
Hospitalisations (for 10 beneficiaries, 2 of whom were admitted twice)	12
Indicated medical laboratory testing	37
Unique psychotropic prescriptions	170

based violence and torture. This work includes assertive follow-up, encouragement to comply, continuous psychoeducation, and sometimes soliciting feedback on community services.

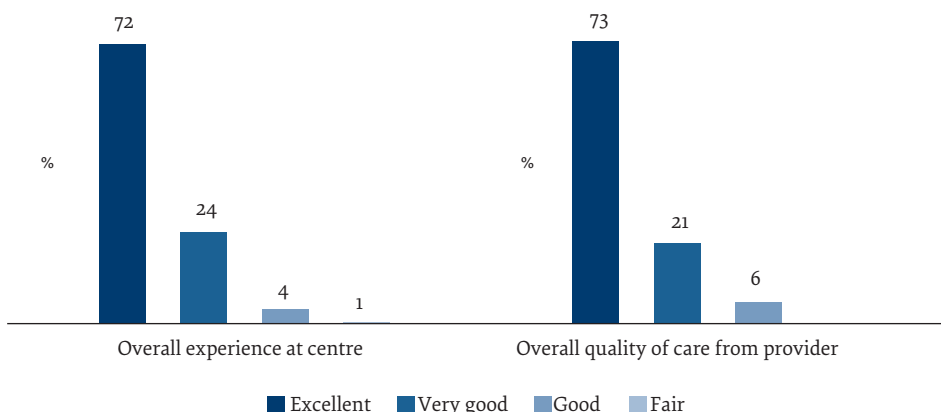
Between October 2020 and September 2021, the mental health social workers engaged 134 beneficiaries, far beyond the average caseload that can be managed by one social worker. Of these beneficiaries, the most pressing concerns were socioeconomic distress (40%). Referrals were mostly made to other non-government organizations (75%).

**Funding for hospitalization**

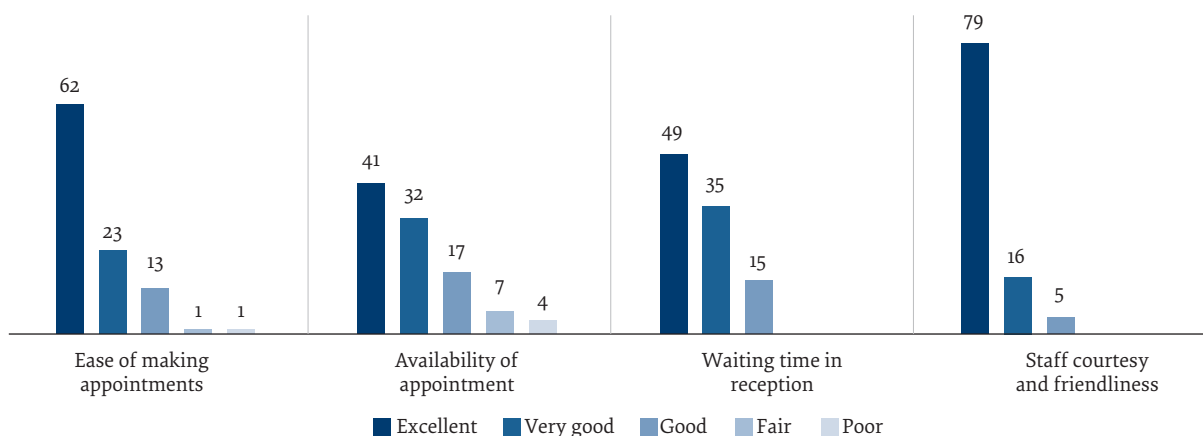
The centre adopts acute hospitalization as a last line of treatment, for serious mental illness or self-harm cases. Close coordination between the hospital psychiatrist, the social worker and the centre’s mental health team helps ensure minimization of hospital stay.

One pressing challenge which continues to haunt the system is the need for healthcare coverage for medication and hospitalization, a service that is scarcely offered by non-government organizations. Between January and September 2021, the multidisciplinary team referred,

**Figure 4 Beneficiary-reported satisfaction with quality of services**



**Figure 4a** Overall experience and quality of care at Embrace Community Mental Health Centre (n = 111)



**Figure 4b** Appointment booking and reception (n = 85)

admitted and covered the cost of psychiatric treatment for 10 persons. The average length of stay was 10 days, and most of these service users continued their treatment at the centre after discharge. Financial coverage for inpatient services is paramount to completing the cycle of care because beneficiaries accessing free outpatient mental health services often cannot afford the cost of treatment, whether medication or hospitalization.

#### **Funding for psychotropic medication and medical testing**

Using psychotropic medication, often in combination with the other services provided, is an evidence-based treatment indicated for specific symptoms or disorders. The centre's psychiatrists prescribed medications for 170 beneficiaries with an average of 2 medications per beneficiary. The most frequently prescribed medications were escitalopram, fluoxetine, quetiapine, sertraline, paroxetine, and venlafaxine.

Referrals for medical laboratory testing are sometimes done as part of a holistic diagnosis or treatment. Such tests include lithium levels, thyroid levels, among others, to make accurate diagnosis and rule out physical causes of symptoms. Overall, 37 medical laboratory test requests were funded for 33 beneficiaries.

#### **Beneficiary experience**

The centre uses patient-reported outcome measures (PROMS) and patient-reported experience measures (PREMS) for evaluating its services (14). With consent, to measure change over time and periodically throughout their treatment, all beneficiaries complete psychometrically robust patient-reported outcome measures for depression and anxiety. They also complete patient-reported experience measures at periodic intervals.

Depression and anxiety are assessed at baseline and every 3 months through self-reports using the Arabic versions of the Patient Health Questionnaire (PHQ-9) and the General Anxiety Questionnaire (GAD-10) (13). The baseline score and the score during the most recent follow-up visit are used to evaluate changes in symptoms. The cutoff value of 10 is used for the detection of major depressive disorders (15). To assess the existence of anxiety, the cutoff point of 10 is used (16). The improvement category includes beneficiaries whose cutoff point is over 10 at the baseline visit and below 10 at the most recent follow-up visit. Seventy percent of beneficiaries reported improvement in depression and 76% reported improvement in anxiety. The differences were statistically significant ( $P < 0.02$ ), with a moderate effect size.

Beneficiaries are invited to complete an anonymous survey that assesses their experience with administration (e.g. ease of booking appointment, courtesy of staff) and the overall quality of care by the provider (Figure 4). On a scale of 1 (poor) to 5 (excellent), about 96% of beneficiaries rated their overall administrative experience as "Excellent" and "Very Good" (Figure 4a). The most pressing point of dissatisfaction was the unavailability of

appointments (28% of responses as 1 (poor), 2 (fair) or 3 (good) on the 5-point Likert scale), while courtesy of staff was the most positive aspect (95% of responses as 4 (very good) or 5 (excellent)). Beneficiaries' experience with the health care providers was overwhelmingly positive (94% of responses were excellent or very good) (Figure 4a).

## **Discussion**

In the past 4 years, mental health services in Lebanon have been accessible only to high-income earning individuals, and since 2019, these services have become increasingly prohibitive. However, the community-based mental health care approach has made services affordable to users, and in some cases, free.

With the support of donors and funders, the community mental health centre helped bridge the gap in mental health treatment and cover medication and patient hospitalization costs. Users benefited from a range of services, including close follow-up with their clinicians through mental health nursing consultations, psychoeducation, medication management, and support with accessing other community-based services. The centre has been described by service users as a comfortable and soothing environment, where they feel respected, empowered and supported beyond their medical treatment. It has helped increase access to care, given the higher levels of stigma associated with hospital-based psychiatric and psychological services (11).

The centre implemented awareness campaigns and outreach activities in the community to prevent mental illness through early detection, psychoeducation during the early stages of illness, and by helping service users build emotional resilience. The centre has contributed to service sustainability by building the capacity of prospective mental health professionals through rigorous high-quality training programmes. It also contributed to public dissemination of national mental health related indicators using real-time data monitoring and evaluation tools.

The centre contributes to implementation of the National Mental Health Strategy by bridging a critical gap in access to quality care and affordable (free) mental health services.

The centre regularly refers individuals to primary health care centres that integrate mental health services and train general practitioners, nurses and social workers on the WHO mental health GAP Action Programme. It operates a mobile mental health clinic that provides services in remote areas and connects beneficiaries to the nearest primary health care centre that has integrated mental health services.

## **Study limitations**

As a case study report, this paper used the authors' experiences and lessons learned, which is not exhaustive of all perspectives. The outcome data was self-reported by the participants, which may have led to self-reporting

bias. There is also the possibility of self-selection bias because completion of the pre- and post-PHQ-9 and GAD-7 were optional for consecutive beneficiaries. As a result, out of 590 beneficiaries, 111 had depression pre- and post-scores and 123 had anxiety pre- and post-scores. To improve confidence in the reported improvements, future research should include randomly selected beneficiaries, informant-based outcomes and qualitative data such as in-depth interviews and stories of change.

### Lessons learned

One of the major take-away messages is that people who need help will come to the centre when quality help is made available to them. The burden of improving help-seeking lies primarily within the help provider and the system. The challenges highlighted in this paper, including unavailability of appointments, high cost of retaining competent professionals, and inability to cope with increased demand for services, have led us to consider alternative solutions such as the training programme. In the future, we will consider establishing a tiered programme where users are routed into different levels of service by different professionals, based on need. This can help reduce the bottleneck of first contact appointments and create a more tailored and holistic model of care that leverages professionals across disciplines and experience. For example, users with mild issues may receive help from social workers and psychiatric nurses, while people with more complex issues can be referred to a higher level of care by medical professionals. These levels of care may be further categorised by using tools such as web-based help, group support, etc. Such tiered programmes have been successfully implemented in countries such as the United Kingdom and Australia (e.g. Improving Access to Psychological Therapies) and can be piloted in our setting.

### Conclusion and future direction

Lebanon is a minefield that witnessed its last war 16 years ago, in 2006, against Israeli occupation, went into a failed State in 2019, and had its capital destroyed in 2020 by the world's most powerful non-nuclear explosion.

These events have left a long-term impact on the mental health of Lebanese residents and many years will likely be needed before the structural and systemic reforms can be truly appreciated. Investing in and advancing mental health in Lebanon, and the health sector generally, should be a national priority, for which serious political will and reforms are needed.

It is no longer viable to deliver mental health care without considering the social determinants and livelihood issues such as access to social safety nets, employment, housing, food security, basic health services, and education. Community-based models are the most suitable for delivering such interventions, and a continuous appraisal of their impact, effectiveness and sustainability should be prioritized.

One recommendation for the future is to assess the cost-effectiveness of a CBMH model like the one presented in this paper and the benefits of expanding its clinical training programme to include more psychologists and to invest in task sharing models. The training programme would be beneficial because therapists in training struggle to find formal, rigorous, accredited training centres in Lebanon. Due to the emigration of Lebanon's well-seasoned psychiatrists and psychologists, new mental health graduates will play an important role in the provision of care and, thus, should be retained. Other groups to further explore are the specialized community mental health care teams and assertive community treatment teams who provide continuous services to small caseloads of service users suffering from more debilitating mental disorders. The community-based model can be expanded to include other health services, general physicians and preventive health services, through the primary health care centres that have integrated mental health services. This however will require continuous funding and investment from local and international institutions to sustain.

**Funding:** None.

**Competing interests:** None declared.

## Quels sont les éléments nécessaires pour fournir des soins de santé mentale communautaires, accessibles et de haute qualité au Liban ?

### Résumé

**Contexte :** Le conflit armé, l'effondrement économique, l'explosion de 2020, la pandémie de COVID-19 et l'instabilité politique et sociale persistante ont eu un impact sévère sur la santé mentale au Liban.

**Objectif :** Mettre en évidence les éléments essentiels à la création d'un centre de soins de santé mentale communautaire gratuits au Liban.

**Méthodes :** À la suite de l'explosion de Beyrouth en 2020, une organisation non gouvernementale a commencé à fournir des soins de santé mentale essentiels, centrés sur la personne et holistiques gratuitement aux résidents du Liban. Ces soins sont assurés grâce à une équipe multidisciplinaire composée de psychiatres, de psychologues, d'assistants sociaux et de personnels infirmiers spécialisés en santé mentale.

**Résultats :** Au cours de sa première année de fonctionnement, le centre a assuré 5392 consultations de santé mentale gratuite pour 590 patients. La majorité (67 %) d'entre eux étaient des femmes et près de la moitié (45 %) avaient entre 18 et 24 ans. Les troubles mentaux les plus fréquents étaient le trouble dépressif majeur, le trouble anxieux généralisé et le trouble de stress post-traumatique. Les bénéficiaires ont signalé eux-mêmes une amélioration de 70 % de la dépression et de 76 % de l'anxiété après trois mois de traitement.

**Conclusion :** En nous appuyant sur notre expérience, nous préconisons le modèle communautaire comme approche efficace pour la prestation d'interventions en santé mentale et nous recommandons une évaluation continue de son impact au sein de la communauté.

### ما هو المطلوب لتقديم رعاية صحية نفسية عالية الجودة ومجتمعية يسهل الوصول إليها في لبنان؟

ميا عطوي، ليا زينون، بيا زينون، زينة عقيقي

#### الخلاصة

الخلفية: لقد تأثرت الصحة النفسية في لبنان تأثرًا شديدًا بالنزاع المسلح والانهبان الاقتصادي وانفجار عام 2020 وجائحة كوفيد-19 وانعدام الاستقرار السياسي والاجتماعي المتواصل.

الأهداف: هدفت هذه الدراسة الى توضيح العناصر البالغة الأهمية لإنشاء مركز مجتمعي مجاني لرعاية الصحة النفسية في لبنان.

طرق البحث: عقب انفجار بيروت في عام 2020، بدأت منظمة غير حكومية في تقديم خدمات رعاية شاملة وأساسية ومجانية للصحة النفسية تركز على الأشخاص للسكان في لبنان، من خلال فريق متعدد التخصصات يتألف من أطباء نفسيين واختصاصيي علم النفس وأخصائيين اجتماعيين وطواقم تريض معني بالصحة النفسية.

النتائج: قدم المركز، خلال السنة الأولى من تشغيله، 5392 استشارة مجانية في مجال الصحة النفسية لما يبلغ 590 مستفيدًا. وكانت غالبيتهم (67%) من الإناث، وتراوحت أعمار نصفهم تقريبًا (45%) بين 18 و24 عامًا. وكانت أكثر اضطرابات الصحة النفسية انتشارًا هي اضطراب الاكتئاب الشديد واضطراب القلق العام واضطراب الكرب التالي للصددمات. وأبلغ المستفيدون عن حدوث تحسُّن بنسبة 70% في الشعور بالاكتئاب وبنسبة 76% في الشعور بالقلق بعد 3 أشهر من العلاج.

الاستنتاجات: بناءً على تجربتنا، ندعو إلى استخدام النموذج المجتمعي بوصفه نهجًا فعالاً لتقديم تدخلات الصحة النفسية، ونوصي بإجراء تقييم مستمر لتأثيره في المرافق المجتمعية.

### References

1. Noubani A, Diaconu K, Ghandour L, El Koussa M, Loffreda G, Saleh S. A community-based system dynamics approach for understanding factors affecting mental Health and Health seeking behaviors in Beirut and Beqaa regions of Lebanon. *Glob Health* 2020;16(1):28.
2. Karam EG, Mneimneh ZN, Karam AN, Fayyad JA, Nasser SC, Chatterji S, et al. Prevalence and treatment of mental disorders in Lebanon: a national epidemiological survey. *Lancet Lond Engl*. 2006;367(9515):1000-1006.
3. Bizri M, Zeinoun L, Mihailescu AM, Daher M, Atoui M, Chammay R, et al. A closer look at patterns and characteristics of suicide in Lebanon: A first nationwide report of cases from 2008 to 2018. *Asian J Psychiatry* 2021;59:102635.
4. Charlson F, Ommeren M van, Flaxman A, Cornett J, Whiteford H, Saxena S. New WHO prevalence estimates of mental disorders in conflict settings: a systematic review and meta-analysis. *The Lancet*. 2019;394(10194):240-248.
5. Abi Doumit C, Haddad C, Sacre H, Salameh P, Akel M, Obeid S, et al. Knowledge, attitude and behaviors towards patients with mental illness: Results from a national Lebanese study. *PLoS One* 2019;14(9):e0222172.



6. Abi Hana R, Arnous M, Heim E, Aeschlimann A, Koschorke M, Hamadeh RS, et al. Mental health stigma at primary health care centres in Lebanon: qualitative study. *Int J Ment Health Syst.* 2022;16(1):23.
7. Karam EG, Karam GE, Farhat C, Itani L, Fayyad J, Karam AN, et al. Determinants of treatment of mental disorders in Lebanon: barriers to treatment and changing patterns of service use. *Epidemiol Psychiatr Sci.* 2019;28(6):655–661.
8. Kheir W, Zoghbi E, Bteich R, Rady A, Chammay RE. Modelling Target Workforce Estimates For Community-Based Mental Health Services In Lebanon. PALGRAVE MACMILLAN; 63776246400000000. <https://www.sciencegate.app/document/10.21203/rs.3.rs-1192774/v1>.
9. Community mental healthcare in Lebanon - El-Khoury - Consortium Psychiatricum. <https://consortium-psy.com/jour/article/view/34>.
10. Thornicroft G, Deb T, Henderson C. Community mental health care worldwide: current status and further developments. *World Psychiatry* 2016;15(3):276–286.
11. World Health Organization. Guidance on community mental health services: promoting person-centred and rights-based approaches [Internet]. World Health Organization, 2021. xxvii, 265 p. <https://apps.who.int/iris/handle/10665/341648>.
12. Roth C, Wensing M, Kuzman MR, Bjedov S, Medved S, Istvanovic A, et al. Experiences of healthcare staff providing community-based mental healthcare as a multidisciplinary community mental health team in Central and Eastern Europe findings from the RECOVER-E project: an observational intervention study. *BMC Psychiatry* 2021;21(1):525.
13. Sawaya, H., Atoui, M., Hamadeh, A., Zeinoun, P., & Nahas, Z. (2016). Adaptation and initial validation of the Patient Health Questionnaire–9 (PHQ-9) and the Generalized Anxiety Disorder–7 Questionnaire (GAD-7) in an Arabic speaking Lebanese psychiatric outpatient sample. *Psychiatry Research* 239;245-252.
14. Bull C, Teede H, Watson D, Callander EJ. Selecting and Implementing Patient-Reported Outcome and Experience Measures to Assess Health System Performance. *JAMA Health Forum* 2022;3(4):e220326.
15. Manea L, Gilbody S, McMillan D. Optimal cut-off score for diagnosing depression with the Patient Health Questionnaire (PHQ-9): a meta-analysis. *CMAJ Can Med Assoc J J Assoc Medicale Can.* 2012;184(3):E191-196.
16. Spitzer RL, Kroenke K, Williams JBW, Löwe B. A Brief Measure for Assessing Generalized Anxiety Disorder: The GAD-7. *Arch Intern Med.* 2006;166(10):1092–1097.