

Financial Lifelines: Cash Transfer Programs as a Tool for Mental Health Recovery in Sudan's War Zones

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Abstract: *The ongoing conflict in Sudan has led to severe socio - economic challenges, including poverty, displacement, and a surge in mental health issues such as depression, anxiety, and PTSD. Traditional mental health services are limited, particularly in rural areas, necessitating alternative approaches. Cash Transfer Programs (CTPs) have emerged as a promising intervention for addressing both economic stability and mental health. This review examines the potential of CTPs, especially Unconditional Cash Transfers (UCTs), as tools for mental health recovery in Sudan's war zones. It explores how CTPs can improve mental health by alleviating financial stress and enhancing social inclusion. The review highlights the differences between UCTs and Conditional Cash Transfers (CCTs), emphasizing their respective benefits and challenges in conflict settings. Evidence from low - and middle - income countries suggests that UCTs are more effective in reducing depression and anxiety symptoms due to their flexibility and fewer stressors. However, implementing CTPs in conflict zones presents challenges, including logistical difficulties, security concerns, and integrating cash transfers with existing health services. The article concludes that while CTPs offer a potential lifeline for mental health recovery in conflict - affected areas like Sudan, their success depends on careful design, sensitivity to local contexts, and integration with broader health and social support systems.*

Keywords: Sudan, conflict, mental health, Cash Transfer Programs, Unconditional Cash Transfers, Conditional Cash Transfers, poverty, displacement, PTSD, depression, anxiety, economic stability

1. Introduction and Background

Sudan has long been plagued by socio - political instability, with decades of civil war and ongoing armed conflict contributing to widespread poverty, displacement, and psychological trauma. The cumulative impact of these conflicts has devastated the country's infrastructure, severely limiting access to basic services, including healthcare. Mental health services in Sudan, in particular, have been historically underfunded and concentrated in urban centers such as Khartoum, leaving vast rural and conflict - affected areas underserved. This urban - rural disparity in access to mental health care has only been exacerbated by the conflict, which has displaced millions of people and further strained the already limited resources of the healthcare system (Ali et al., 2012; Osman & Sabahelzain, 2020).

The mental health crisis in Sudan is deeply intertwined with the country's socioeconomic challenges. Poverty and mental illness are mutually reinforcing, creating a vicious cycle where poverty exacerbates mental health problems, and mental health issues, in turn, perpetuate poverty by reducing individuals' capacity to work and maintain social relationships (Patel & Kleinman, 2003; Lund et al., 2010). In conflict zones, this cycle is intensified as communities face the added burdens of violence, displacement, and the breakdown of social structures.

In regions afflicted by conflict, such as Sudan's war zones, the intersection of socio - economic instability and psychological trauma has created a complex humanitarian crisis. The ongoing conflict in Sudan has displaced millions, leading to widespread poverty and a significant surge in mental health issues, including depression, anxiety, and post - traumatic

stress disorder (PTSD). Traditional mental health interventions in these settings are often inaccessible due to the severely limited healthcare infrastructure, exacerbating the need for alternative approaches that can address both the economic and psychological distress experienced by the affected populations (Zimmerman et al., 2021).

One such alternative intervention that has garnered considerable attention is the implementation of cash transfer programs (CTPs). These programs provide direct financial support to households, aiming to alleviate poverty - related stressors that are closely linked to poor mental health outcomes. The potential for CTPs to serve as a mental health intervention in conflict zones like Sudan is increasingly recognized, as these programs offer a scalable and adaptable solution capable of addressing both the economic and psychological needs of affected individuals and communities (Kilburn et al., 2016).

In this context, Cash Transfer Programs (CTPs) have emerged as a potential intervention to mitigate the adverse effects of conflict on both socioeconomic conditions and mental health. These programs, which provide direct financial assistance to households, aim to alleviate poverty - induced stress and improve mental health outcomes by enhancing economic security. CTPs are particularly relevant in conflict - affected areas where traditional coping mechanisms and access to services are disrupted. By providing financial stability, CTPs can reduce the need for harmful coping mechanisms such as child labor and can help protect vulnerable populations from the mental health impacts of the conflict (Baird et al., 2011).

However, the implementation of CTPs in conflict zones like Sudan presents significant challenges. These include the

volatile security situation, logistical difficulties in delivering aid, and the integration of CTPs with existing health services. Moreover, the success of CTPs depends on their ability to be adapted to the unique challenges of conflict settings, such as the displacement of populations and the scarcity of trained mental health professionals. This review explores the potential of CTPs as a tool for mental health recovery in Sudan's war zones, examining their mechanisms of action, challenges of implementation, and broader implications for the country's health system.

The significance of exploring CTPs as an intervention for mental health recovery in conflict - affected regions cannot be overstated. As global interest in CTPs grows, understanding their effectiveness across diverse contexts, particularly in war zones, becomes increasingly critical. This article review seeks to contribute to this understanding by critically analyzing existing research on the impact of CTPs on mental health. The review aims to highlight the mechanisms through which CTPs operate and discuss the implications of these mechanisms for designing effective interventions tailored to the unique challenges of Sudan's war - affected areas (Evans - Lacko et al., 2023).

The objectives of this review are threefold: First, to critically evaluate the impact of CTPs on mental health outcomes in conflict - affected regions; second, to explore the mechanisms through which CTPs influence mental health, including both direct and indirect pathways; and third, to discuss the applicability of these findings to Sudan, offering recommendations for the design and implementation of CTPs in the country's war zones.

2. Theoretical Framework

The relationship between poverty, conflict, and mental health is well - documented, with numerous studies highlighting how economic instability exacerbates psychological distress. Poverty, in itself, is a significant predictor of mental health disorders, as financial hardship is associated with chronic stress, anxiety, and depression. In conflict zones, these issues are further compounded by the trauma of violence, displacement, and loss, creating a cycle of poverty and poor mental health that is difficult to break (Zimmerman et al., 2021).

Conflict often deepens existing vulnerabilities, disrupting social and economic systems and intensifying the mental health impacts of poverty. Individuals and families living under these conditions are more likely to experience severe psychological distress, which, in turn, diminishes their capacity to work, care for their families, and participate in community life. This cyclical nature of poverty and mental health in conflict settings underscores the urgent need for interventions that address both the economic and psychological dimensions of the crisis.

Cash transfer programs have been proposed as a means to disrupt this cycle. By providing financial relief, CTPs aim to reduce the stressors associated with poverty, thereby improving mental health outcomes. This theoretical framework supports the notion that CTPs can function as a dual - purpose intervention, addressing both economic and

mental health challenges in conflict - affected regions (Zimmerman et al., 2021).

CTPs can influence mental health through several direct and indirect mechanisms. The most direct mechanism is the reduction of financial stress. When households receive cash transfers, they are better able to meet their basic needs, such as food, shelter, and healthcare. This alleviation of financial pressure can lead to immediate reductions in stress and anxiety, which are critical contributors to poor mental health (Baird et al., 2011).

Indirectly, CTPs can enhance mental health by improving access to healthcare and education. Conditional cash transfers (CCTs), for example, often require recipients to fulfill certain conditions, such as ensuring their children attend school or that they receive regular health check - ups. By incentivizing these behaviors, CCTs can lead to improved health and educational outcomes, which are closely linked to better mental health. Additionally, increased social inclusion and self - efficacy are other potential benefits, as financial support allows individuals to participate more fully in social and economic activities, thereby enhancing their sense of belonging and purpose (Evans - Lacko et al., 2023).

The distinction between unconditional cash transfers (UCTs) and conditional cash transfers (CCTs) is crucial in understanding their varying impacts on mental health. UCTs provide financial support without conditions, offering recipients flexibility in how they use the funds. This flexibility can be particularly beneficial in conflict zones, where the conditions required by CCTs may be challenging to meet due to the unstable environment. Conversely, while CCTs can improve specific outcomes by enforcing conditions, the added pressure to meet these requirements can sometimes negate the mental health benefits, particularly in high - stress environments like those found in conflict - affected regions (Ohrnberger et al., 2020).

Moreover, cash transfer programs have demonstrated promising effects on mental health outcomes in low - and middle - income countries (LMICs). Several studies have found that UCTs, in particular, have been effective in reducing depressive symptoms and improving overall mental health, especially among youth and young adults (Kilburn et al., 2016; Ángeles et al., 2019; Ohrnberger et al., 2020). These impacts are often more pronounced in specific subgroups, such as young men and orphans (Kilburn et al., 2016). The effectiveness of CTPs is believed to operate through various pathways, including improved physical health, better lifestyle factors, and reduced caregiver stress (Ohrnberger et al., 2020; Evans - Lacko et al., 2023).

However, it is important to note that the effectiveness of cash transfers can vary significantly depending on the social and economic context, the design of the program, and the specific mental health measures employed. A meta - analysis by Zimmerman et al. (2021) revealed high heterogeneity across studies, with some interventions showing no significant effects on certain mental health outcomes. This variability highlights the need for careful consideration in the design and implementation of CTPs, particularly in conflict - affected settings like Sudan, to ensure that the programs are adapted to

the specific needs and circumstances of the population they are intended to serve (Zimmerman et al., 2021).

In summary, cash transfer programs represent a potentially powerful tool for improving mental health in conflict - affected regions like Sudan. By providing financial stability and reducing the stressors associated with poverty, these programs can alleviate some of the psychological burdens faced by vulnerable populations. However, their success depends on careful design, sensitivity to local contexts, and integration with broader mental health and social support services.

3. Review

Impact of Unconditional Cash Transfers (UCTs) on Mental Health

Research in Kenya has demonstrated the significant impact of unconditional cash transfers (UCTs) on mental health, particularly among young people aged 15 - 24. The program reduced the odds of depressive symptoms by 24%, with especially pronounced effects among young men aged 20 - 24 and orphans (Kilburn et al., 2016). The flexibility of UCTs allowed recipients to allocate resources according to their specific needs, reducing economic pressures and improving overall mental health outcomes. This finding is particularly relevant for conflict - affected regions like Sudan, where similar programs could provide crucial support to vulnerable populations facing severe economic and psychological challenges.

Gender - Specific Outcomes in UCT Programs

In Malawi, a study focused on the impact of UCTs on adolescent girls, revealing that the program significantly improved mental health outcomes by reducing indications of depression by approximately 15 percentage points (Angeles et al., 2019). The researchers identified pathways through which cash transfers contributed to these improvements, including enhanced education, better health and nutrition, reduced caregiver stress, and increased life satisfaction. These findings suggest that UCT programs could be particularly effective in Sudan, especially in addressing the mental health needs of young girls who are disproportionately affected by the socio - economic impacts of conflict.

Challenges and Benefits of Conditional Cash Transfers (CCTs)

In South Africa, a study on the effects of a conditional cash transfer (CCT) program found positive impacts on mental health, primarily through improvements in physical health and lifestyle factors (Ohrnberger et al., 2020). The study reported modest yet significant improvements in mental health, particularly among individuals with poor baseline mental health. However, the researchers also noted that the effectiveness of CCTs might be limited by the stress associated with meeting program conditions, such as maintaining regular school attendance or health check - ups. This is particularly relevant for conflict - affected regions like Sudan, where the added stress of meeting conditions might offset the mental health benefits of CCTs, especially in environments where stability and access to services are already compromised.

CCTs and Gender Dynamics

Another study explored the effects of Tanzania's Productive Social Safety Net (PSSN) program, a large - scale CCT targeting poor households. The findings revealed mixed mental health outcomes, with positive effects among young males but adverse effects among young females, particularly those over 18 years old (Prencipe et al., 2021). The conditions attached to the cash transfers—such as ensuring children's school attendance—appeared to introduce additional stress, particularly for women who often bear the brunt of caregiving and household responsibilities. This stress sometimes counteracted the intended mental health benefits of the transfers, underscoring the importance of designing gender - sensitive cash transfer programs in conflict - affected areas like Sudan.

Meta - Analyses of Cash Transfer Programs in LMICs

A comprehensive meta - analysis reviewed multiple studies on CTPs in low - and middle - income countries (LMICs), finding that UCTs generally had a more substantial positive impact on mental health compared to CCTs (Wollburg et al., 2023). The flexibility provided by UCTs allowed recipients to address their most pressing needs without the added pressure of meeting conditions, making UCTs particularly effective in reducing symptoms of depression and anxiety. However, the review also raised concerns about the sustainability of these mental health benefits, noting that the positive effects of CTPs often diminished after the programs ended. This finding highlights the need for ongoing support and the integration of CTPs with other services, such as mental health care and social support, to ensure long - term mental health improvements in conflict - affected regions like Sudan.

Mechanisms of Action and Sustainability of CTPs

Further exploration into the mechanisms through which cash transfer programs affect mental health emphasized the importance of contextual factors such as the local economic environment and the specific design of the cash transfer program (Zimmerman et al., 2021). While CTPs can lead to immediate improvements in mental health, their long - term sustainability depends on their integration with other forms of support, such as mental health services and community initiatives. For Sudan, this suggests that CTPs should not be implemented in isolation but rather as part of a broader strategy that includes healthcare, education, and social support to address the complex and multifaceted needs of conflict - affected populations. The study's findings highlight the critical need for holistic and sustainable approaches to mental health care in regions experiencing ongoing conflict and socio - economic disruption.

4. Conclusion

This article review has underscored the significant potential of cash transfer programs (CTPs), especially unconditional cash transfers (UCTs), as powerful tools for promoting mental health recovery in conflict - affected regions such as Sudan. The evidence presented suggests that CTPs can effectively alleviate psychological distress by mitigating financial stress and enhancing household stability. However, the success of these programs is highly contingent upon their careful design and implementation, particularly in environments where

access to healthcare and other essential services is severely constrained.

To fully realize the benefits of CTPs, further research is necessary to explore their long - term impact on mental health in conflict zones. It is also essential to identify best practices for integrating these programs with other mental health and social support services. A deeper understanding of the contextual factors that influence the effectiveness of CTPs—such as gender dynamics and the availability of healthcare—will be crucial in developing interventions that are both effective and sustainable.

Investing in CTPs as part of a comprehensive strategy to address the mental health crisis in Sudan's war zones could offer a vital lifeline to many vulnerable populations. By customizing these programs to meet the specific needs and challenges of the region, there is an opportunity to support not only immediate recovery but also long - term resilience within conflict - affected communities. The findings of this review highlight the critical need for ongoing research and innovation in the design and implementation of CTPs, especially in settings where traditional mental health interventions may be limited or unavailable.

List of Abbreviations

CTPs: Cash Transfer Programs

UCTs: Unconditional Cash Transfers

CCTs: Conditional Cash Transfers

LMICs: Low - and Middle - Income Countries

PTSD: Post - Traumatic Stress Disorder

Declarations

Ethics approval and consent to participate

Not applicable.

Consent for publication

Not applicable.

Availability of data and materials

Data sharing not applicable to this article as no datasets were generated or analyzed during the current study.

Competing interests

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Authors' contributions

Mohammed Salah Alfahal was the sole contributor to this article.

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