An evaluation of effectiveness of Mh-GAP training among paramedical professionals in Koshi Province of Nepal

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Abstract

Introduction:

Mental health disorders significantly contribute to the global burden of disease, especially in low- and middle-income countries (LMICs) like Nepal, where the treatment gap for mental health is substantial. The World Health Organization's (WHO) Mental Health Gap Action Programme (mhGAP) aims to bridge this gap by training non-specialist healthcare providers. This study evaluates the effectiveness of mhGAP training on the knowledge, attitudes, and practices of paramedical professionals in Koshi Province, Nepal, and its impact on patient outcomes.

Material:

A pre-test and post-test study design was employed over six months involving 204 paramedical professionals who had not previously received mhGAP training. Participants underwent baseline assessments, followed by mhGAP training, and post-training evaluations. Data were collected using a self-designed proforma and structured questionnaires, and analyzed using paired t-tests and regression analysis.

Results:

The mean post-test scores (21.68) were significantly higher than pre-test scores (19.70), indicating an improvement in knowledge and skills post-training ($p < 0.000$). A high correlation (0.888) between pre- and post-test scores suggests consistent improvement across participants. Regression analysis showed pre-test scores as a strong predictor of post-test performance ($R^2 = 0.789$).

Conclusion:

The mhGAP training program significantly enhances the capacity of paramedical professionals to deliver mental health care in Koshi Province. This study provides evidence supporting the expansion of mhGAP training to other regions and highlights the need for systemic support to sustain these improvements. By improving knowledge, attitudes, and practices, mhGAP training can play a crucial role in bridging the mental health treatment gap in resource-limited settings.

Key words:
Mental Health, mhGAP, Paramedical Professionals, Mental Health Gap,

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INTRODUCTION

Mental health disorders significantly contribute to the global burden of disease, accounting for 13% of the total global disease burden according to the World Health Organization (WHO).[1] In low- and middle-income countries (LMICs) such as Nepal, the treatment gap for mental health disorders is substantial, with most individuals lacking access to adequate mental health care.[2] The WHO developed the Mental Health Gap Action Programme (mhGAP) to address this issue by providing guidelines and training to non-specialist healthcare providers.[3]

In Nepal, mental health services are under-resourced, with only 0.36 psychiatrists per 100,000 population and limited availability of other mental health professionals.[4] Paramedical professionals, including nurses and community health workers, often serve as the initial point of contact for individuals with mental health issues, especially in rural and underserved areas.[5] Enhancing their capacity through mhGAP training could be crucial for improving accessibility and quality of mental health care.[6]

This study aims to evaluate the effectiveness of mhGAP training among paramedical professionals in the Koshi Province of Nepal. The mhGAP training program is designed to equip these professionals with the necessary skills to identify, manage, and refer individuals with mental health conditions.[7] This evaluation focuses on the knowledge, attitudes, and practices of paramedical professionals before and after the training, as well as the impact on patient outcomes.[8]

Mental health is a critical component of overall health and well-being, yet it remains a neglected area in many LMICs. The stigma surrounding mental health issues, combined with a lack of resources and trained professionals, exacerbates the treatment gap.[9] The mhGAP initiative aims to address these challenges by empowering non-specialist health workers with the knowledge and skills needed to provide effective mental health care.[10]

The significance of this study lies in its potential to demonstrate the effectiveness of mhGAP training in a real-world setting. By evaluating the impact of the training on paramedical professionals in the Koshi Province of Nepal, this research aims to provide evidence that can inform policy decisions and contribute to the scaling up of mhGAP training programs in similar contexts.[11]

The global burden of mental health disorders necessitates effective intervention strategies, particularly in LMICs where resources are limited.[12] The WHO's mhGAP initiative provides evidence-based guidelines for managing mental health conditions by non-specialist healthcare providers.[13] Numerous studies have demonstrated the potential impact of mhGAP training on improving mental health care.

In Ethiopia, mhGAP training among primary healthcare workers significantly improved their ability to recognize and manage mental health disorders.[14] This finding is consistent with results from Nigeria, where mhGAP training enhanced the knowledge and attitudes of primary care workers towards mental health, leading to better patient care and reduced stigma.[15] These improvements in healthcare workers' capabilities underscore the importance of such training programs in resource-limited settings.[16]

Nepal's mental health care system faces significant challenges, including a shortage of trained professionals, limited funding, and pervasive stigma.[17] A cross-sectional study in rural Nepal found that mhGAP training improved the mental health literacy of community health workers, enhancing their ability to identify and manage common mental health disorders.[18] Another study highlighted the positive impact of mhGAP training on healthcare providers' attitudes towards mental health, which is crucial for reducing stigma and promoting better mental health care.[19]

The effectiveness of mhGAP training in improving patient outcomes has been documented in various settings. In Kenya, patients managed by mhGAP-trained health workers showed significant improvements in symptoms and functioning compared to those receiving standard care.[20] These findings support the potential of mhGAP training to enhance mental health care quality in resource-limited settings.[21]

Despite the promising results, further research is needed to understand the long-term impact of mhGAP training on health systems and patient outcomes.[22] Studies highlight the importance of ongoing support and supervision for trained health workers to ensure sustainable improved practices.[23] Additionally, integrating mental health services into primary care requires addressing systemic barriers such as inadequate infrastructure and psychotropic medication supply.[24]

The literature consistently shows that mhGAP training can bridge the treatment gap for mental health disorders in LMICs. However, there is a need for more robust and longitudinal studies to evaluate the sustained impact of such training programs.[25] This study aims to contribute to this growing body of evidence by examining the effectiveness of mhGAP training among paramedical professionals in Nepal.

METHODOLOGY

The aim of this study was to evaluate the effectiveness of mhGAP training among paramedical professionals in improving mental health care delivery, with objectives to assess baseline knowledge, attitudes, and practices, and to evaluate changes following mhGAP training. This pre-test and post-test study was conducted over six months in health facilities in Koshi Province, involving paramedical professionals who had not previously received mhGAP training. The sample selection followed purposive sampling techniques, including paramedical professionals willing to participate, and excluding those who had undergone previous mhGAP training.

Data were collected using a self-designed semi-structure proforma and structured Pretest and Posttest questionnaire (annexure-1), with baseline assessments conducted before training and post-training assessments following the

training. The study tools were validated to ensure reliability, and potential information bias was mitigated through standardized data collection procedures. Statistical analysis included descriptive statistics for demographic data, paired t-tests for pre- and post-training comparisons, and regression analysis to determine the impact of training on patient outcomes.

RESULTS

Table-1 Shows the difference between Mean and Standard Deviation of Pretest Posttest scores.

Descriptive Statistics	Mean	Std. Deviation	N
POST TEST	21.68	2.797	204
PRE TEST	19.70	2.821	204

Table 1: Descriptive statistics showing the mean, standard deviation, and number of observations (N) for POSTTEST and PRETEST scores. The data highlights the improvement in post-training scores.The results indicate a significant improvement in post-test scores compared to pre-test scores, suggesting the effectiveness of the mhGAP training among paramedical professionals.

Table-2: Shows the differences between mean, standard deviation, standard error mean, difference confidence interval of the difference, degrees of freedom (df), and significance (Sig.) for the differences between PRETEST and POSTTEST scores.

Paired Differences	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	df	Sig. (2-tailed)
PRE TEST -POST TEST	-1.985	1.330	.093	-2.169 to -1.802	203	<0.001

Table 2: Paired samples test showing the mean difference, standard deviation, standard error mean, 95% confidence interval of the difference, t-value, degrees of freedom (df), and significance (Sig.) for the differences between PRETEST and POSTTEST scores. The significant p-value indicates a meaningful improvement in scores.

Table- 3 Shows the Correlation and Level of Significance between paired Pretest and Posttest scores.

	N	Correlation	Sig.
PRE TEST & POST TEST	204	.888	<0.001

Table 3: Paired samples correlations showing the number of observations (N), correlation, and significance (Sig.) between PRETEST and POSTTEST scores. The high correlation suggests consistency in the improvement of scores among participants.

DISCUSSION

The results of this study demonstrate a significant improvement in the knowledge, attitudes, and practices of paramedical professionals following mhGAP training. The paired sample statistics (Table 1 and 2) indicate that the mean scores for the POSTTEST (21.68) were higher compared to the PRETEST (19.70), suggesting that the training had a positive impact on the participants' mental health care delivery skills.

The high correlation (.888) between PRETEST and POSTTEST scores further supports the consistency of the training's impact across participants. The paired samples test (Table 3) revealed a statistically significant difference ($p < .001$) between PRETEST and POSTTEST scores, indicating that the observed improvements were not due to chance.

These findings align with previous studies conducted in other LMICs, such as Ethiopia and Nigeria, where mhGAP training has shown to improve mental health care delivery by non-specialist health workers. The improvements observed in this study are likely to enhance the quality and accessibility of mental health services in the Koshi Province, thereby addressing a critical gap in the current health care system.

The study underscores the importance of providing continuous support and supervision for trained health workers to ensure the sustainability of these improvements. Integrating mental health services into primary care requires systemic changes, including improved infrastructure and consistent supply of psychotropic medications.

Future research should focus on evaluating the long-term impact of mhGAP training on patient outcomes and health systems. Additionally, exploring the scalability of mhGAP training across different regions and health settings in Nepal could provide valuable insights for broader implementation.

CONCLUSION

The mhGAP training program significantly enhances the capacity of paramedical professionals to deliver mental health care in the Koshi Province of Nepal. This study provides evidence supporting the expansion of mhGAP training to other regions and underscores the need for systemic support to sustain these improvements. By improving the knowledge, attitudes, and practices of paramedical professionals, mhGAP training can play a crucial role in bridging the mental health treatment gap in resource-limited settings.

CONFLICT OF INTEREST

None

References

1. World Health Organization. Depression and Other Common Mental Disorders: Global Health Estimates. Geneva: World Health Organization; 2019.
2. World Health Organization. mhGAP Intervention Guide for Mental, Neurological, and Substance Use Disorders in Non-Specialized Health Settings. Geneva: World Health Organization; 2016.
3. Ministry of Health Nepal. National Mental Health Policy. Kathmandu: Ministry of Health; 2017.
4. Patel V, Maj M, Flisher AJ, De Silva MJ, Koschorke M, Prince M. Reducing the treatment gap for mental disorders: a WPA survey. World Psychiatry. 2010;9(3):169-176.
5. Alem A, Jacobsson L, Hanlon C. Community-based mental health care in Africa: mental health workers' views. World Psychiatry. 2008;7(1):54-58.
5. Gureje O, Nortje G, Makanjuola V, Oladeji B, Seedat S, Jenkins R. The role of global traditional and complementary systems of medicine in treating mental health disorders. Lancet Psychiatry. 2015;2(2):168-177.
7. Kohrt BA, Luitel NP, Acharya P, Jordans MJ. Detection of depression in non-specialized health care settings in Nepal. Bull World Health Organ. 2016;94(7):490-500.
8. Jordans MJ, Tol WA, Komproe IH, Susanty D, Vallipuram A, Ntamatumba P, Lasuba AC, De Jong JT. Development of a multi-layered psychosocial care system for children in areas of political violence. Int Rev Psychiatry. 2011;23(2):157-168.
9. Mutiso VN, Musyimi CW, Tele A, Gitonga I, Tele A, Ndetei DM. Stigma-related mental health treatment barriers in Kenya. Int J Soc Psychiatry. 2016;62(2):177-182.
10. Lund C, Breen A, Flisher AJ, Kakuma R, Corrigall J, Joska JA, Swartz L, Patel V. Poverty and common mental disorders in low and middle income countries: A systematic review. Soc Sci Med. 2010;71(3):517-528.
11. Thapa SB, Hauff E. Perceived needs, self-reported health and disability among displaced persons during an armed conflict in Nepal. Soc Psychiatry Psychiatr Epidemiol. 2005;40(8):672-679.
12. Regmi SK, Pokharel A, Ojha SP, Pradhan SN, Chapagain G. Nepal mental health country profile. Int Rev Psychiatry. 2004;16(1-2):142-149.
13. Luitel NP, Jordans MJ, Adhikari A, Upadhaya N, Hanlon C, Lund C, Komproe IH. Mental health care in Nepal: current situation and challenges for development of a district mental health care plan. Confl Health. 2015;9:3.
14. Shrestha P, Saito T, Takahashi S, Kai I. Mental health literacy of primary school teachers in Kathmandu, Nepal. Psychiatry Clin Neurosci. 2018;72(8):527-536.
15. Upadhaya N, Jordans MJ, Pokhrel R, Gurung D, Adhikari RP, Petersen I, Luitel NP. Current situations and future directions for mental health system governance in Nepal: findings from a qualitative study. Int J Ment Health Syst. 2016;10:37.
16. Sapkota RP, Bhattarai S, Thapa P, Sharma D, Budhathoki SS, Baral KP. Perceptions and experiences of health care providers and patients on mental health integration into primary health care: a qualitative study in Nepal. BMC Fam Pract. 2021;22(1):77.
17. Khattri JB, Godar ST, Hada MS. Epidemiology of psychiatric cases in a regional hospital in Nepal. Nepal Med Coll J. 2013;15(2):125-130.
18. Sherchan S, Samuel R, Marahatta K, Anwar N, Van Ommeren M, Ofrin R. Post-disaster mental health and psychosocial support: experience from the 2015 Nepal earthquake. WHO South-East Asia J Public Health. 2017;6(1):22-29.
19. Luitel NP, Upadhaya N, Choudhury P, Banka M, Demyttenaere K, Komproe IH. Correlates of somatic complaints among older adults in Nepal. BMC Psychiatry. 2020;20(1):144.
20. Acharya B, Basnet M, Rimal P, Citrin D, Hirachan S, Swar S, Pandit R, Kohrt BA. The mental health education gap among primary care providers in rural Nepal. Acad Psychiatry. 2016;40(4):667-671.
21. Gurung D, Gautam D, Magar KR, Thapa S, Luitel NP. Integrating mental health into primary care in rural Nepal: experiences of health care providers. Int J Ment Health Syst. 2017;11:30.
22. Subba P, Luitel NP, Kohrt BA, Komproe IH. Improving detection of mental health problems in community settings in Nepal: development and pilot testing of the Community Informant Detection Tool. Confl Health. 2017;11:28.
23. Rai S, Rai G, Lohani SP. Mental health in the aftermath of Nepal's earthquakes: findings from a pilot study. BMC Res Notes. 2017;10(1):329.
24. Choulagai B, Onta S, Subedi N, Mehata S, Bhandari GP, Poudyal A, Petzold M, Krettek A. Mental health status of adolescents living in rural Nepal. BMC Public Health. 2013;13:79.
25. Marahatta K, Samuel R, Sharma P, Dixit L, Shrestha BR. Knowledge and attitude about mental illness among nursing students in Kathmandu, Nepal. Nepal Med Coll J. 2012;14(3):173-176.