ORIGINAL ARTICLE

NON-PARTICIPATORY OBSERVATION OF INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS PRACTICES AT SELECTED BASIC HEALTH UNITS OF DISTRICT ABBOTTABAD, KP, PAKISTAN: A QUALITATIVE HERMENEUTIC STUDY

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Background: It was in 1995 when a strategy was devised to reduce under-five mortality in countries with a prevalence of child mortality above 40/1000 live births. This strategy is called "Integrated Management of Childhood Illness" (IMCI). Improvement in the skills of healthcare workers (HCWs) depends on the IMCI training received by them. To make IMCI training more effective and scale up, a global technical consultation committee in Geneva recommended implementing an innovative training approach in 2014: the distance learning IMCI (dIMCI). This study was conducted to observe qualitatively the practices of IMCI-trained HCWs at their respective workplaces. **Methods:** This qualitative hermeneutic study was conducted through non-probability criterion sampling in the district Abbottabad of Pakistan on all 26 basic health units trained in IMCI (either standard or distance learning) from December 9, 2019, to March 9, 2020. Data collection was done by qualitatively observing consultations and interactions of caretakers of under-five children at basic health units. Inductive thematic analysis was used. This qualitative exploration was underpinned by Hans Georg Gadamer's philosophy of hermeneutics. **Results:** Four themes emerged from the observation notes. These themes are gratification after consultation, altercation for medication, non-observance of protocol, and methodical consultation. **Conclusion:** Improvement in the skills of HCWs in the form of IMCI training, either through distance learning or the common eleven-day standard method, can improve caretakers' satisfaction. However, awareness at the community level is needed for better compliance.

Keywords: IMCI; dIMCI; Qualitative; Non-Participatory Observation; Hermeneutics; Pakistan

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INTRODUCTION

Under-five deaths due to preventable and treatable conditions like pneumonia, diarrhoea, malaria, measles and malnutrition were recorded as 5.2 million in 2019.[1] More than half of these deaths could be prevented through simple, non-expensive methods and measures.[2] It was in 1995 when WHO, UNICEF and other technical partners devised a strategy to reduce under-five mortality in countries with a prevalence of child mortality above 40/1000 live births.[3,4] This strategy, which has three components[5–7] (to improve the skills of health care workers (HCWs), to improve health systems, and to improve family and community practices), is named integrated management of childhood illness (IMCI).

Improvement in the skills of HCWs depends on the IMCI training received by them. Standard IMCI training is an eleven-day continuous activity involving classroom sessions and clinical practice. Integrated Management of Childhood Illness has been in place in Pakistan since 2000, but its coverage and scalability are still debatable due to the expensive and extensive nature of the training. Frequent staff turnover is still another factor that adversely affects IMCI training coverage. To make IMCI training more effective and to scale up, only shortening the duration to under eleven days will not work. Keeping this fact in view, a global technical consultation committee in Geneva recommended the implementation of an innovative training approach in 2014: the distance learning IMCI (dIMCI). This new training is spread over three months, having three single-day face-to-face meetings.[8]

To generate evidence-based information regarding improvement in the case management skills

of the HCWs, a cluster Randomized Control Trial (cRCT) was conducted in which dIMCI training was given to the HCWs of the intervention arm while eleven days of standard IMCI training was given to the control arm.[9] The Current study was conducted as the last part of that definitive trial with the objective of observing qualitatively the practices of IMCI-trained healthcare workers at their respective workplaces.

MATERIAL AND METHODS

This qualitative hermeneutic study was conducted in the district Abbottabad of Pakistan, including all basic health units (BHUs) trained in IMCI (either standard or distance learning) from December 9, 2019 to March 9, 2020. Twenty-six BHUs, out of which half were trained as control and half as intervention, were selected through a criterion sampling technique. Ethical approval was granted by the institutional review board of Health Services Academy Islamabad, Pakistan under F.No.01-07/2014/PhD, dated June 24, 2019. A supplementary verbal consent was obtained from all participants, in addition to the one that had already been obtained in written form. The Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines.[10] were consulted for reporting this study.

A non-participatory observation was conducted from August 11 to September 9, 2020 by the first author, updating co-authors telephonically after every observation. Main areas for observation were identified beforehand in the observation checklist, with the flexibility of including or recording any new area for the next observation.

During observation, informal discussions with HCWs and taking notes of HCWs' consultations were performed. Every BHU was monitored from 9 am. to 12 pm., Monday through Saturday. These were the peak hours for consultation at BHUs. Observations were recorded in a field notebook in scribbled form and then converted to a narrative field journal the same day in the evening. Time, place, and person's information were noted in the field journal, along with important information obtained as a result of informal discussion. Factors like under-five patient tolls at the BHU, adherence of HCW to IMCI protocol during the consultation, active interaction of HCWs with the caretaker of the sick child, and the response of caretakers were noted.

Hans Georg Gadamer's philosophy informed this qualitative research through five key concepts: freedom from the use of scientific methods; mode of inquiry; the concept of prejudice; hermeneutic circle and fusion of horizons.[11] A self-narrated story and discussion with a colleague in Pashto were used to provoke the researcher's prejudice or pre-understanding; both were recorded, transcribed, and analysed in the original language. Keeping in view the philosophical assumptions adopted, inductive thematic analysis was used at the latent level of emergent themes.[12] In this approach, latent themes were generated first, and then those themes were expanded to codes, and those codes were again unified into themes for the sake of initiating a hermeneutic circle. This iterative process was carried out through complete immersion in the data through reading transcripts.

Analysis was conducted manually by the first author using highlighters, pencils, and markers of different colours. Themes and codes were generated in the original language of the transcripts (Pashto for prejudice and Urdu for observation) and then translated into English. To develop a hermeneutic consciousness, transcription and analysis were not delegated to research associates or assistants.[12,13]

All authors are registered medical practitioners. The first author is the principal investigator as well. He was in contact with the trained HCWs through WhatsApp and cell phone.

RESULTS & DISCUSSION

Table-1: Summary of themes & codes

Title	Themes	Codes
Researcher's Prejudice/ Pre-understanding		
	Familiarization with IMCI	Admission in MPH, Institute of Child Health, IMCI training, master training
	No opportunity to practice IMCI	Clinical Practice, PhD project, teaching as a career
Observation		
	Gratification after consultation	facial expressions, gifts, waiting for HCW, care takers' recommending HCW, thanks HCW
	Altercation for medication	Speaking loudly, reasoning, refusing medicines, demanding medicine, labels and packs
	Non-observance of protocol	No chart booklet, no recording forms, missing steps, a quick examination
	A Methodical consultation	Preliminary information, steps of the algorithm, vaccination card, mother's health

Pre understandings of the principal investigator

Two main themes were extracted from the self-narrated story and discussion with a colleague (Table-1). These themes were:

1-Familiarization with IMCI protocol

Regarding his first encounter with the word IMCI, the principal investigator narrated in his own words:

"*I came across the abbreviation IMCI in an admission test for MPH in 2006, which I could not answer. While I was working with an INGO in 2009, I frequently heard this word (IMCI) but never got an opportunity to have a closer view of it, neither at my duty place nor at the institute where I was doing my MPH. It was all due to my busy schedule at my institute."* (Translated from the self-narrated story)

The principal investigator had never been a practitioner after September 2010 and got his first IMCI training as a participant in 2014, a time when he had done his Master in Public Health. It was his first experience getting familiar with the IMCI protocol. After a few weeks of IMCI training, he was selected for a Training of the Trainers and was trained as a master trainer of IMCI.

"*After doing my MPH degree in 2011, I adopted public health teaching and research and, in 2014, joined the Khyber Institute of Child Health as an epidemiologist. This was the place, where I was introduced to the IMCI protocol. I received eleven days of training and then was selected by the institute for three or four days, don't remember exactly, of training of the trainers and became a master trainer of IMCI*." (Translated from dialogue with a colleague)

2-No opportunity to practice IMCI protocol

The principal investigator neither got an opportunity to practice IMCI nor did he train any HCW to date. He only acted as a supervisor from December 2019 to March 2020 when HealthCare Workers from selected health facilities were trained on IMCI protocols as a part of his Ph.D. research project.

"*In 2006, I started working as a medical officer in Pakistan Air Force. It was my first independent clinical experience after my house job. In 2009, I joined an INGO as a medical officer and worked there until September 2010. During this period of clinical practice, I didn't know anything about IMCI, and I never did clinical practice beyond September 2010*." (Translated from the self-narrated story).

After receiving IMCI training; first as a participant and then as a master trainer, he narrated its practical application in the following words:

"*As a part of my PhD research project, I was present in every training session but remained a silent observer and listened to the problems of participants regarding logistics and other administrative issues encountered during the training. I tried to solve their problems."*

(Translated from dialogue with a colleague)

In qualitative research, the investigator is regarded as a research tool, and his/her reflexivity and pre-understandings can have a profound effect on research findings. In this study, the pre-understanding (or prejudice, in the words of Gadamer) of the principal investigator as provoked and reported did not confirm that his own lived experience of the phenomenon of IMCI training and implementation was strong enough to influence the findings of this study. Self-medication or medicine on demand without the prescription of a qualified HCW is an issue in developing and underdeveloped countries.[14,15] This practice is a common cause of drug resistance.[16,17]

Non-participatory observation:

Four themes were extracted from observation notes on twenty-six health facilities.

1-Gratification after consultation

This theme was derived from the observation notes of those health facilities where under-five consultations were less than ten per day. According to IMCI protocol, the child is checked for all five conditions (diarrhoea, pneumonia, malnutrition, measles, and malaria), and the time invested by the HCW is well-regarded by the caretakers. Caretakers were so satisfied with the protocol that they preferred an IMCI-trained healthcare worker for consultation.

"*The IMCI-trained HCW has not reached yet, and an untrained HCW is doing consultation. A woman with an under-five child asks about the lady who checked her nephew yesterday. Lady Health Visitor tells the caretaker that she will arrive in ten to fifteen minutes. The caretaker takes her chit back, saying that she will wait till that lady arrives*." (Control site No:01)

Correct breastfeeding position for lactating mothers is also a target of the IMCI protocol. Mothers expressed their happiness by bringing a gift for the HCW.

"*A young female enters the consultation room with chicken eggs placed in a husk-filled plastic bag. She tells HCW that it is a gift for her as her (young female) 5-month-old son has started breastfeeding. She further explains that it is all because of her (HCW) teaching through pictures how to breastfeed correctly*." (Intervention site No:02)

Patient satisfaction is regarded as a component of the quality of care.[18] As both groups observed in this study were trained in IMCI through two different protocols, the following IMCI algorithm can be regarded as the main stimulus of the caretaker's satisfaction. If the patient toll increases, then it becomes very unlikely that the available HCWs will follow IMCI protocol properly to the satisfaction of caretakers.

2-Altercation for medication

After HCWs prescribe medicine, caretakers move to the medicine counter and hand over the prescription chit to the staff member. When they (caretakers) see that medicine is not as per their desire, they start reasoning with the staff.

"*There was a noise, and I came out of the consultation room. I see a woman talking to the staff at the medicine counter about how much syrup she needs (pointing to the medicine cabinet). The staff member says that it is not prescribed by the doctor on duty, so he cannot give it. The woman throws her medicine chit and leaves with her four-*

year-old child without taking her ORS sachets." (Intervention site No:16)

A caretaker demanded an injectable against the advice of HCW:

"*An old-aged woman insists on administering an injectable to her three-year-old grandson when he is given a syrup for fever as per the prescription of the doctor on duty*." (Control site No:19)

A lot of published literature is available on self-medication among different groups, but hardly any in the case of the caretakers of under-five children. A qualitative study conducted by Renosa *et al* in the Philippines reports that HCWs felt frustrated because parents preferred antibiotics and other medicines as compared to advice on non-medical solutions.[19] The majority of the studies conducted on the self-medication of caretakers for their under-five children are from African countries. A cross-sectional study conducted by Simon & Kazuara in Tanzania reports that parental self-medication for under-five children was almost half of the total sample. They further conclude that awareness and health education of the general public and the role of regulatory bodies need to be strengthened.[20] A qualitative study conducted by Okunola in Nigeria also reports that orientation, sensitization, and awareness of child health care in the community through different stakeholders' campaigns are necessary for addressing parental self-medication for their children.[21] A qualitative study conducted by Butler *et al* in the UK reports that doctors, in a pursuit to maintain a good patient-doctor relationship, acceded to patients' expectations for antibiotics.[22] Cole reports that more than half of the general practitioners included in a UK-based study confirmed that they felt under pressure to prescribe antibiotics irrationally.[23] A cross-sectional study conducted by Atif *et al*. in Pakistan attributes irrational and polypharmacy practices by physicians in private setups to the incompetency of physicians, lack of continuous medical education and evidence-based guidelines, and provision of incentives.[24]

3-Non observance of IMCI protocol

This theme was extracted from the observation of those health facilities where the under-five patient toll was more than ten per day, and only a single trained HCW was present either because no other HCW was trained or because the other trained HCW was on leave. As trained HCWs, they not only examined under-five children but also those above five. That is why she/he got exhausted when the patient toll increased.

"*Here, every third or fourth patient is an under-five child. Initially, the HCW completed all the attributes given in the under-five recording form, but as the number of patients crossed six, the HCW's started shortening their history taking and focusing only on the main complaints. If the complaint is fever only, then she records the temperature and not otherwise. The patient is not checked for all five conditions."* (Control site No:11)

"*I am sitting in the consultation room with HCW but cannot see any recording forms for under-five consultations, and two under-five children were examined without a recording form. I reminded her about recording forms, and then she took out a bundle of them from her drawer with a smile on her face*." (Intervention site no:15)

A study conducted by Edward *et al* regarding patient toll as a factor for non-adherence to the IMCI protocol[25], while Kruger *et al* report that no refreshers and the patient's age greater than two years are significant contributors to non-adherence.[26]

4-A Methodical consultation

HCWs also practised under-five consultations in a very systematic way.

"*I see that under-five children enter the consultation room with recording forms in the hands of caretakers and all preliminary information like name, age, temperature, weight, etc. is already written at the registration desk. HCW starts from checking for general danger science and stops at the vaccination schedule*."
(Intervention site no:03)

At another site, a male HCW sent an under-five child to a female colleague for a breastfeeding assessment and then completed the rest of the protocol.

"*HCW asks about the problems of a child as the rest of the initial information has already been written on the recording form at the registration desk. The child was checked for all general danger signs, then his breath rate was counted for one minute by looking at the wall clock, and all fields were filled till the vaccination history. Then the child was sent to a female HCW to record their feeding history. After some time, that child came again, and the HCW completed the rest of the form by consulting the chart booklet for classification and dosage*."
(Intervention site no:09)

Though the IMCI algorithm is a systematic protocol, it can easily be followed if there is task sharing. A single trained individual dealing with all patients, including those who are over five, can hardly follow the sequence of steps in the protocol.

CONCLUSION

Improvement in the skills of HCWs in the form of IMCI training, either through distance learning or through the common eleven-day standard method, can improve caretaker satisfaction. However, awareness at the level of the community is needed for better compliance. A dedicated staff of at least three HCWs will be there, including a front desk history taker and noting anthropometric measurements, a medic or para medic for consultation, and a female for teaching correct positioning during breastfeeding. This arrangement is especially recommended for BHUs with high patient tolls.

REFERENCES

1. WHO. Children: improving survival and well-being 2020. [Internet]. [cited 2020 Dec 11]. Available from: https://www.who.int/en/news-room/fact-sheets/detail/children-reducing-mortality
2. WHO. Deliver now for women plus children 2005. [Internet]. [cited 2020 Dec 12]. Available from: https://www.who.int/pmnch/activities/dn_fs_childmortality.pdf
3. WHO. Towards a Grand Convergence for Child Survival and Health 2016. [Internet]. [cited 2020 Dec 12]. Available from: https://www.who.int/publications/i/item/towards-a-grand-convergence-for-child-survival-and-health
4. Gove S. Integrated management of childhood illness by outpatient health workers: technical basis and overview. The WHO Working Group on Guidelines for Integrated Management of the Sick Child. Bull World Health Organ 1997;75(Suppl 1):7–24.
5. Boschi-Pinto C, Labadie G, Dilip TR, Oliphant N, Dalglish SL, Aboubaker S, *et al*. Global implementation survey of Integrated Management of Childhood Illness (IMCI): 20 years on. BMJ Open 2018;8(7):e019079.
6. Bryce J, Victora CG, Habicht JP, Black RE, Scherpbier RW. Programmatic pathways to child survival: results of a multi-country evaluation of Integrated Management of Childhood Illness. Health Policy Plan 2005;20(Suppl 1):i5–17.
7. WHO. Child health and development 2014. [Internet]. [cited 2019 April 13]. Available from: http://www.emro.who.int/child-health/imci-strategy/three-components
8. WHO. IMCI Distance Learning Course: Implementation – Introduction and Roll Out 2014. [Internet]. World Health Organization. [cited 2017 Feb 23]. Available from: https://apps.who.int/iris/bitstream/handle/10665/104772/9789241506823_Introduction_roll-out_eng.pdf?sequence=14
9. ChiCTR. Trial Search 2019. [Internet]. [cited 2020 December 14]. Available from: http://www.chictr.org.cn/searchprojen.aspx?title=&officialname=&subjectid=&secondaryid=&applier=&studyleader=&ethicalcommitteesanction=&sponsor=&studyailment=&studyailmentcode=&studytype=0&studystage=0&studydesign=0&minstudyexecutetime=&maxstudyexecutetime=&recruitmentstatus=0&gender=0&agreetosign=&secsponsor=&regno=1900027201&regstatus=0&country=&province=&city=&institution=&institutionlevel=&measure=&intercode=&sourceofspends=&createyear=0&isuploadrf=&whetherpublic=&btngo=btn&verifycode=&page=1
10. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. Int J Qual Health Care 2007;19(6):349–57.
11. Gadamer H. Gadamer Truth and Method. 2nd ed. London UK: Continuum Group; 2006.
12. Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol 2006;3(2):77–101.
13. Fleming V, Gaidys U, Robb Y. Hermeneutic research in nursing: developing a Gadamerian-based research method. Nurs Inq 2003;10(2):113–20.
14. Shaamekhi HR, Jafarabadi MA, Alizadeh M. Demographic determinants of self-medication in the population covered by health centers in Tabriz. Health Promot Perspect 2019;9(3):181–90.
15. Sridhar SB, Shariff A, Dallah L, Anas D, Ayman M, Rao PG. Assessment of Nature, Reasons, and Consequences of Self-medication Practice among General Population of Ras Al-Khaimah, UAE. Int J Appl Basic Med Res 2018;8(1):3–8.
16. Horumpende PG, Said SH, Mazuguni FS, Antony ML, Kumburu HH, Sonda TB, *et al*. Prevalence, determinants and knowledge of antibacterial self-medication: A cross sectional study in North-eastern Tanzania. PLoS One 2018;13(10):e0206623.
17. Kassie AD, Bifftu BB, Mekonnen HS. Self-medication practice and associated factors among adult household members in Meket district, Northeast Ethiopia, 2017. BMC Pharmacol Toxicol 2018;19(1):15.
18. Getachew T, Abebe SM, Yitayal M, Persson L, Berhanu D. Assessing the quality of care in sick child services at health facilities in Ethiopia. BMC Health Serv Res 2020;20(1):574.
19. Reñosa MD, Bärnighausen K, Dalglish SL, Tallo VL, Landicho-Guevarra J, Demonteverde MP, *et al*. "The staff are not motivated anymore": Health care worker perspectives on the Integrated Management of Childhood Illness (IMCI) program in the Philippines. BMC Health Serv Res 2021;21(1):270.
20. Simon B, Kazaura M. Prevalence and Factors Associated with Parents Self-Medicating Under-Fives with Antibiotics in Bagamoyo District Council, Tanzania: a Cross-Sectional Study. Patient Prefer Adherence 2020;14:1445–53.
21. Okunola OA. Patterns of Self-medication Practices by Caregivers to Under-five Children in South-Western Nigeria. Child Care Pract 2020;10:1–11.
22. Butler CC, Rollnick S, Pill R, Maggs-Rapport F, Stott N. Understanding the culture of prescribing: a qualitative study of general practitioners and patients' perceptions of antibiotics for sore throats. BMJ 1998;317(7159):637–42.
23. Cole A. GPs feel pressurised to prescribe unnecessary antibiotics, survey finds. BMJ 2014;349:g5238.
24. Atif M, Azeem M, Rehan Sarwar M, Malik I, Ahmad W, Hassan F, *et al*. Evaluation of prescription errors and prescribing indicators in the private practices in Bahawalpur, Pakistan. J Chin Med Assoc 2018;81(5):444–9.
25. Edward A, Dam K, Chege J, Ghee AE, Zare H, Chhorvann C. Measuring pediatric quality of care in rural clinics—a multi-country assessment—Cambodia, Guatemala, Zambia and Kenya. Int J Qual Health Care 2016;28(5):586–93.
26. Krüger C, Heinzel-Gutenbrunner M, Ali M. Adherence to the integrated management of childhood illness guidelines in Namibia, Kenya, Tanzania and Uganda: evidence from the national service provision assessment surveys. BMC Health Serv Res 2017;17(1):822.

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