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The impact of public health insurance on healthcare utilisation for mental disorders in low and middle-income countries apropos of India: a systematic review

Abstract

Background: The explicit inclusion of mental healthcare in sustainable development goals (SDGs) seems appropriate. Accomplishing the universal health coverage (UHC) agenda promises equity in health services to everyone without financial hardship. UHC has propelled an array of initiatives taken by governments of low and middle-income countries (LMICs) around the globe in terms of public health insurance to increase the utilisation of health services. Innumerable research points out that coverage under different public health insurances has led to a substantial escalation in healthcare utilisation, nonetheless, there is a lack of clarity on these financial services bringing a transition in terms of increased mental healthcare. Following the global order, India too has formulated its own Mental Healthcare Act of 2017 that treats psychiatric troubles on par with physical ailments for financial coverage. **Methods:** Five databases were systematically searched, viz., Elton B. Stephens Company (EBSCO) host, Cochrane, PubMed, Scopus, and Web of Science, and the review is reported consistent with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines. **Results:** A total of four studies could be discovered lining with our title and the first research objective was included. **Conclusion:** Studies made it discernible that initiatives of public health insurance did exert plenteous influence over the health of the people. Albeit, difficult to draw judgements for its convoluted and intricate nature, one cannot say with maximal assurance if public health insurance had an unswerving impact on minimising mental disorders. Nonetheless, deductions were possible and have been made by making appurtenant connections.

Keywords: Psychological well-being. Mental health policy. Insurance cover.

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INTRODUCTION

Globally, poverty transpires as an alpha constituent for the voluminous psychiatric troubles by tethering and weaving the vicious cycle of out-of-pocket (OOP) payments and subsequent catastrophic health expenditures (CHE); escalating more families into this annual imbroglio. OOP spending induces the termination of the continuing psychiatric treatment, thereby, aiding and creating an incumbent relapse. Worldwide, 264 million people suffer from depression which incorporates all age groups. According to the World Health Organization (WHO), every one in eight persons suffers ill mental health. Around eight lakh people die every year by suicide which clocks one death happening every 40 seconds.[1] The determinative idea of universal health coverage (UHC) was enshrined in the spirit of the constitution of WHO in an implicit manner until the 2030 agenda for sustainable development goals (SDGs) made it conspicuous to achieve the target 3.8 of SDGs.[2] The system of UHC enables the people of society to have access to preventive, promotive, palliative, curative, and rehabilitative care without austerity regardless of place and time.[3-5] Data analysis shows that each year, nearly 100 million people get dragged into penury due to OOP spending. Slashing OOP spending justifies the need for a funding mechanism so that encumbrances in the way of availing requisite health services are retrenched and equity for healthcare accessibility is buttressed.[3,5-7] Estimates from 2015 lay bare CHE being expanded by 808 million people on the planet.[8] Additionally, research in recent years has tried to depict that indulging in CHE has a cataclysmic impact on households.[8-11] Wherein, CHE is the expenditure incurred by a household equal to or more than 40% of its capacity to pay.[12] Invariably, an abundance of studies is available associating CHE and physical health but a shortfall of literature for harnessing the relationship between CHE and the mental health of the people for the same.[13]

WHO presses ahead for the implementation of compulsory mechanisms of payment, i.e., public health insurance in the form of national health insurance (NHI) and social health insurance (SHI) for successfully implementing UHC in low and middle-income countries (LMICs).[5,14] Recent studies

exemplify steady improvements and uninterrupted initiatives in bringing forth UHC in LMICs via numerous healthcare financing reforms in countries such as Vietnam, Sri Lanka, Philippines, and Chile.[15,16] Currently, in the World Bank's classification of upper-middle-income and high-income economies; the countries of China in 2012; Georgia in 2015, and South Korea in the last decade of the previous millennium are success stories of transformations that took place in recent history. Previously belonging to the LMICs, these were successfully able to soar their gross national income (GNI) per capita to develop and transform their financial structure in terms of pooling arrangements and provide UHC to the entirety of their population.[7,15,16] Hence, studies proffer a need for sharing apposite knowledge and experiences in connection to patient cost sharing, pooling arrangements, funding sources, and policy-making to the nations struggling in their nascent stages of developing their financial structure for health coverage, especially mental health.[5,14]

In NHI, resources get pooled nationally and the services are purchased for every citizen regardless of their contribution towards it.[14,17-19] Emerged in Europe, SHI is a state-centred facility warranting mandatory incorporations from the employees, their employers, and from self-employed for purchasing health covers which protect the insured and their dependents; varying nation to nation.[20] Evidence underscores poorer sections of society being more vulnerable to exhibiting higher concentrations of mental health complications, thus, revealing a clear-cut dependence between socioeconomic status and mental well-being;[13] where one socioeconomic unease factor implies financial worries of the household.[21-24] These NHI and SHI help in minimising the direct financial implications of the utilisation of healthcare services over the households.

Poor mental health causes unemployment, penury, and absenteeism. The patterns of an individual's antisocial behaviour tend to affect people in general and family members in specific.[25-27] Cullen and Whiteford[28] explored that inadequate mental health may tend to have a negative connotation concerning social capital in a society. Widespread stigma, low prioritisation, discrimination, traditional ways of healing, and insufficient funding are key factors that prove to be hindrances in extending requisite mental care in LMICs.[29-32] The benefits of public health insurance, especially the coverage ensured by SHI in its entirety are dependent upon the scope it proffers. Murray and Lopez[33] predicted that the proportion of mental problems accounting for 12% of the global disease burden would increase to 15% by 2020. This drastically spiked when the coronavirus disease 2019 (COVID-19) pandemic hit the world with estimates pointing to an annual hike of 26-28% increase in major depressive and mental disorders than normal.[2] Patel et al.[34] elucidated that around 1.1 billion people are affected by mental disorders globally with disability-adjusted-life-years (DALYs) accounting for eight per cent and years-lived-with-disability (YLDs) accounting at 18.5%. Chisholm et al.[35] pointed out that the incorporation of mental health reforms in NHI would be the most appropriate way for enabling sustainable health financing. Multifarious studies done in LMICs have highlighted the necessity of NHI and SHI in enhancing healthcare, but it remains to be determined whether the utilisation of these insurances had any impact on the mental health of the people.[36,37] Thus, this study propels itself with the following objectives: (1) to examine the effect of public health insurance on mental healthcare utilisation in LMICs; (2) to trace success stories of LMICs for funding, pooling arrangements, and policies to achieve better mental healthcare utilisation; and (3) to understand the lessons "that India can learn from the existing approaches to integrate mental healthcare into its financing reforms toward UHC."

METHODS

The conduct of this systematic review imbibes the spirit of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines in completeness. A complete flowchart has been prepared to quantify the process of identification, screening, eligibility, and then the inclusion of the studies in their entirety (Figure 1).

Inclusion criteria

It included studies: (1) which had adopted either quantitative analysis or a fusion of quantitative-cum-descriptive approaches; (2) if it included in the list of an array of mental disorders prepared beforehand, viz., mood disorders (i.e., anxiety disorder, bipolar disorder, depression), post-traumatic disorders, psychotic disorders (i.e., schizophrenia), eating disorders, disruptive behavioural and dissocial disorders, neuropsychiatric disorders (i.e., dementia, intellectual disability, epilepsy, autism spectrum disorder, Alzheimer's disease), substance use disorders (i.e., opioid use disorder, marijuana use disorder, alcohol use disorder); (3) in the English language; (4) which examined the influence of public health insurance, national health insurance, and social health insurance on LMICs as per the definitions of the World Bank for the span between 2012 and 2022 to allow flexibility of transition in incomes of countries; (5) if it were carried out only in LMICs; and (6) which had full-text availability.

Exclusion criteria

It excluded studies: (1) which completely followed a descriptive approach; (2) systematic reviews, narrative reviews, literature reviews, review of reviews, prescription reviews, scoping reviews, comprehensive reviews, meta-reviews, book chapters, abstracts of a conference, editorials, commentaries; (3) conducted in higher income countries; (4) written in other than the English language; (5) which determined the impact of private and community-based health insurance; and (6) studies unavailable for open access due to a lack of financial resources.

Sources of information and search strategy

A proposition of an entirely time-bound and focused approach was kept forth, respected, and obeyed with mutual agreement from the authors. A systematic search was conducted for peer-reviewed journal articles between 23 September 2022 and 30 September 2022 in five appurtenant databases: Elton B. Stephens Company (EBSCO) host, Cochrane, PubMed, Scopus, and Web of Science for LMICs including India. The
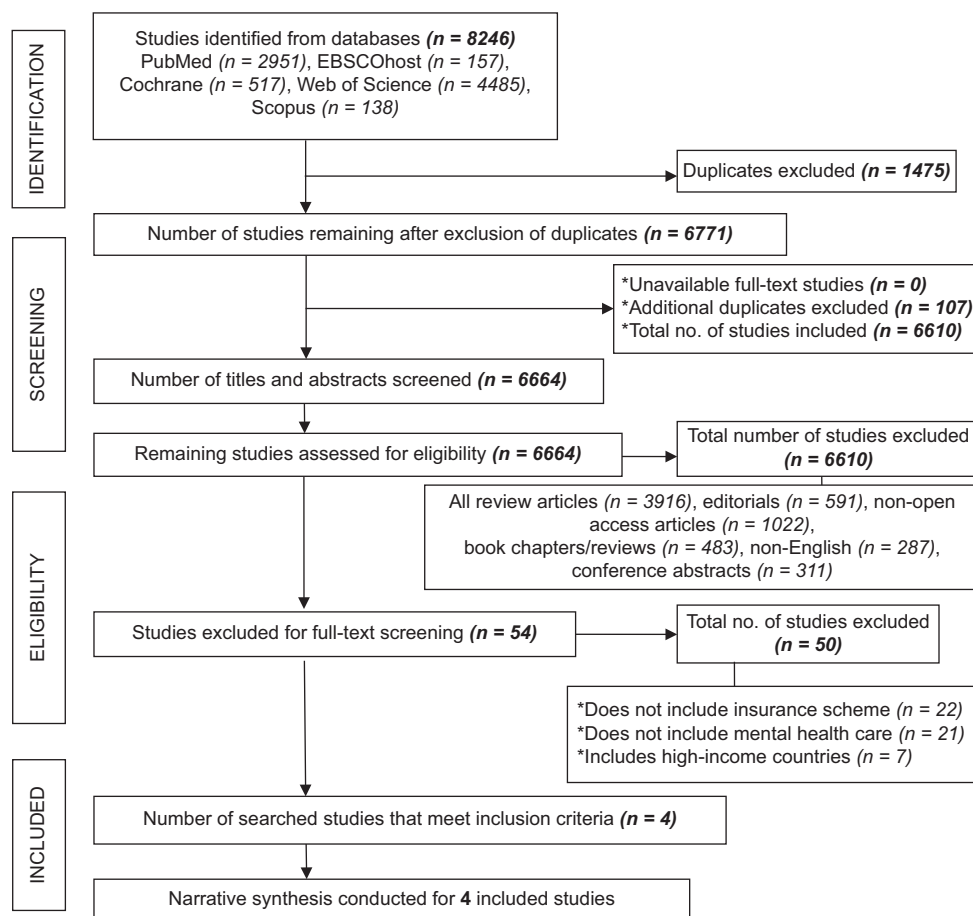
Figure 1: A systematic break-up of process for studies included in this systematic review. EBSCO: Elton B. Stephens Company.

journal articles were searched from inception and the search strategy was constructed in consonance to include free-text and the Medical Subject Headings (MeSH) terms for titles and abstracts. It is worth mentioning that public health insurance was conceptualised as encompassing two kinds of health insurance coverages, i.e., NHI and SHI. Filters for human-only subject studies and the English language were applied. The searches were made for the following key terms: (1) public health insurance; (2) NHI; (3) SHI; (4) LMICs; (5) mental healthcare; (6) mental healthcare services; (7) mental disorders; (8) neurological disorders; and (9) substance use disorders. Vague terms were avoided and Boolean operators were employed, i.e., 'AND', 'OR', and 'NOT' to keep the search outcomes as precise as possible, e.g., searches like mental healthcare services OR mental healthcare OR mental healthcare utilisation. These search strategies varied slightly from one database to another as per their limitations and features. The expansive detail of the database search strategy is appended (supplementary material 1).

Importing the data generated, screening, and eligibility

Ensuing a comprehensive search of all five databases, the records culled out were collated into the Zotero library. This citation manager was used to enable sorting and removing repetitive/duplicate articles based on the recurring names of titles, authors, and dates of publications. Thereafter, all the search results were placed into a Microsoft excel spreadsheet to check for duplicates manually, just in case, any leftovers existed. Finally, all the eligible titles were imported into the Rayyan web tool where the titles and abstracts underwent rigorous screening by both authors separately and the ones not germane to this study were ostracised. The included and excluded titles were compared after the entire process was discharged. For the ones where conflicting decisions were made by the authors, the differences were resolved and a conclusion was sought via logical reasoning. The penultimate pool of articles was prepared for full-text analysis from which the ultimate bunch of four studies were gleaned in line with the first objective which also proposes the title of this study. It is vital to be cognisant of the additional sources of literature that were consulted for citations with parallel content which were drawn from within the body of the articles and the references section.

Data extraction and analysis

A purposefully pre-designed excel sheet was prepared in which the compilation of the final pool of studies was extracted. The heads of this pre-designed excel sheet were named as - the name of the author, year of the study, name of the country, study design, type of insurance mechanism, type of disorder, name of the journal, and period of data collection. To assess the final selected pool of studies, a quality assessment tool for quantitative studies,

viz., the Effective Public Health Practice Project (EPHPP)[38] was employed to gauge the quality of the studies (Table 1), the details of it are appended as (supplementary material 2). The principal idea behind this effort was to gain cognisance of the amount of literature that is available portraying the impact of public health insurance utilisation on mental healthcare specifically in LMICs, including India. It was discovered that studies undertaken in this regard and in line with our objectives were hardly few. Therefore, all kinds of writing and depicting styles were incorporated. The studies obtained in the ultimate pool were extremely heterogeneous in nature thus, only a narrative synthesis was sought.

RESULTS

The volume of articles identified from a bunch of five databases was 8246. Out of these, 6664 articles were screened for eligibility (Figure. 1). In total 54 articles were chosen for complete text reading. Out of these 54 articles, 41% of articles, i.e., n = 22 had no component of public health insurance present in them; 39% of articles, i.e., n = 21 did not talk about any mental health disorder; 13% of articles, i.e., n = seven include some countries in them that belonged to the high-income group as per the World Bank. Hence, the total articles for the final review were n = four, i.e., seven per cent.

From the finalised articles, n = two articles were published in Asia, i.e., China; n = one article in Africa, i.e., Ghana; and n = one article in three continents comprising 11 LMICs, viz., Nepal, Thailand, Malaysia, Chile, Kenya, Zambia, Azerbaijan, Bulgaria, Georgia, Kyrgyzstan, and Pakistan. Herein, three articles examined the impact of SHI while one article examined the impact of NHI on mental health and three of them had components of OOP expenditures, CHE, and financial vulnerability of the individual and the household. Talking about mental, neurological, and substance use disorders, n = one study encapsulates psychological distress, depression, and anxiety; n = one explored anticholinergic medication (ACM) for patients with schizophrenia; n = one study describes psychological distress, and n = one study illustrates mental disorders in general.

Study characteristics and quality

There were three studies following a case study research design.[20,39,40] Two out of them had strong methodological quality scores[20,40] and one was accorded weak, as per the results extracted from the EPHPP quality assessment tool. While fourth study was reported to follow a cross-sectional research design and was conceded of moderate quality.[41] All studies were of critical importance to this research. The dates of publication of these studies ranged between 2006 to 2021. Variations are observed in the methodologies of the studies that were conducted based on sample sizes, types of mental disorders, types of insurance, measurement technique used, period of data collection, and type of sampling technique employed, etc. (Table 2).

Findings

Chirwa et al.[40] used vigorous techniques in the form of propensity score matching (PSM) methods and instrumental

Table 1: The quality of the studies included

Author	Year	Selection bias	Study design	Confounders	Blinding	Data collection	Withdrawal and dropouts	Intervention integrity	Analysis	Score	Importance of study
Yang and Hu	2021	1	1	1	1	1	N/A	N/A	0	Strong	Critical
Chirwa et al.	2020	1	1	1	1	1	N/A	N/A	0	Strong	Critical
Dixon et al.	2006	2	1	1	3	3	N/A	N/A	0	Weak	Critical
Yu-Tao et al.	2007	1	3	1	1	1	N/A	N/A	0	Moderate	Critical

Assessment is made by using the Effective Public Health Practice Project's (EPHPP) quality assessment tool. Herein, zero weak ratings symbolise a strong study; one weak rating typifies a moderate study; and two ratings stand for a weak study.
Herein, N/A signifies 'Not Applicable'.

Table 2: The methodology of the included studies

Author, year	Region	Disorder type(s)	Study design	Data source	Type of mental insurance	Target population age group	Sample size	Health insurance mechanism	Measurement technique used	Sampling type	Year of data collection
Yang and Hu (2021)	Asia	Psychological distress, anxiety, and depression	Case study	China Health and Retirement Longitudinal Study (CHARLS)	Social Health Insurance	Individuals of age group ≥60 years	13,166 respondents	The Urban Employee Insurance (UEI), the Urban Resident Insurance (URI) and the New Rural Cooperative Medical Scheme (NCMS)	Center for Epidemiologic Studies-Depression (CES-D) scale	Four-staged cluster sampling	2011, 2013, and 2015
Chirwa et al. (2020)	Africa	Psychological distress	Case study	Ghana social economic panel survey	National Health Insurance	Individuals with age >12 years	10,007 respondents	Ghana National Health Insurance	Kessler Psychological Distress Scale (K10)	Two-staged stratified sampling	2009-2010
Dixon et al. (2006)	Europe, Asia, and Africa	Mental disorders	Case study	Case studies of the respective countries and literature review	Social Health Insurance, Taxation, Out-of-Pocket payments	-	-	Chile - Fondo Nacional de Salud (FONASA), Pakistan & Nepal - out-of-pocket (OOP) payments, Georgia - State Medical Insurance Company (SMIC)	-	-	2000-2001
Yu-Tao et al. (2007)	Asia	Schizophrenia	Cross-sectional	Interviews with randomly selected people in Hong Kong and Beijing	Social Health Insurance	Individuals of the age group (12-60) years	505 respondents	Urban Employee Basic Medical Insurance (UE-BMI); Urban Residence Basic Medical Insurance (UR-BMI), or Government Insurance Scheme	Brief Psychiatric Rating Scale (BPRS), Simpson and Angus Scale of Extrapyramidal Symptoms (SAS), Barnes Akathisia Rating Scale (BARS)	Random sampling	2005-2006

variable (IV) models measured by the Kessler psychological distress (K10) scale. Applying the IV technique estimates without matching sample implied that on average, the K10 score produced for the insured came out to be 11.8% (p<0.001) lower than the ones for the insured. This further came down to with K10 score of 10.6% (p<0.001) after applying IV regression on the matched sample. Propensity scores match method estimates illustrating a lower K10 value for the insured (−0.023; p<0.05). Furthermore, there existed tremendous levels of heterogeneity across different regions and income slabs across Ghana wherein, wealthier people extracted more benefits of health insurance for psychological distress than the poorer ones. The study accentuated that in the presence of public health insurance schemes, mental healthcare utilisation increases. Also, financial vulnerability decreases which further aids in reducing psychological distress and, thus, the mental health of the people gets enhanced.

Yang and Hu[20] demonstrated that CHE is related to poor mental health by incorporating quantile regression and panel data regression models in their study alongside the Centre for Epidemiologic Studies - Depression (CES-D) scale to assess the results, p-value and chow test to check the statistical significance. CES-D scores for older people who made CHE versus the ones who did not were differentiated at the threshold levels of ten per cent, 20%, and 25%. The scores were drastically higher who had made CHE at the threshold of ten per cent which was afresh proved by applying robustness checks. At the threshold level of ten per cent, the coefficient of incidence of CHE for older people who did not get the benefits of SHI was 3.08 (p<0.5) but for the ones who were receiving it was 1.05 (p<0.001); where the difference between their values was more than twice. They expanded on the aid dispensed by SHI during old age which imparts a positive and protective characteristic and acts as a cover by absorbing the expenditure on health thus not letting mental health degrade for expending CHE. Moreover, they found poor mental health, functional capability, and chronic diseases to be directly related to CHE which contrasted with those who did not incur. Additionally, it also illustrated and compared the effectiveness of CHE to SHI in the case of mild and moderate cases, and to the ones with severe and chronic cases.

Dixon *et al.*[39] analysed and drew comparisons of different systems of financing mental healthcare services like OOP, taxation, SHI, and private health insurance between the realm of LMICs and developed nations. In LMICs, care for mental health is directly funded from the pockets of the people in the shape of OOP expenditures which serves as an extremely regressive way of funding healthcare. Additionally, in under-developed and developing societies where there is a dearth of robust monitoring systems. Extremely low priority is appended to mental healthcare here which can be attributed to the degree of taboo attached to the utilisation of these services. Moreover, this study highlights that if there is no commitment on the part of the government to disburse financial resources as per the needs and requirements of its people, any kind of health access will remain restricted. It emphasises the ability of the political leaders to adapt themselves and their policies as per the altering situations, exhibit the willingness to learn with changing times and have

a crystal-clear outlook towards the multitudinous politico-economic challenges that lie ahead. It also tries to implore political leaders and policymakers to diligently design policy frameworks.

Xiang *et al.*[41] in their samples taken from Hong Kong and Beijing detected that the frequency of ACM prescription was found in 47.7% of the total sample size, wherein, both the samples from Hong Kong (54.1%) and Beijing (41.2%) had stark variations in their readings despite the same ethnicity. This use of ACM has been connected with a lack of health insurance among the people; less common usage of oral, atypical antipsychotic drugs and clozapine; more frequent usage of atypical antipsychotic drugs, antipsychotic polypharmacy, an amalgamation of depots and oral anti-psychotics, the extremity of extra-pyramidal side-effects (EPS), a greater number of antipsychotic drugs prescribed, and the location of the sites under study. Higher doses of antipsychotic drugs, the location of the study sites, and less repetition of atypical antipsychotic drugs comes out to be remarkably concomitant to ACM during the multiple regression analysis.

DISCUSSION

This research reports on four journal articles from 6664 screened abstracts following an original systematic search strategy.

Chirwa *et al.*[40] emphasised wider coverage of health insurance to attenuate psychological distress in Ghana. This observation was homologous to research done by others.[42-46] It demonstrated health insurance as a potential reason to absorb psychological distress which they explained in a stepwise order. First, having health insurance guarantees treatment for physical ailments. With physical ailments getting adequate care would probably result in mental relief; reduced anxiety, stress, and depression. Second, the people who are insured through public health insurance are less likely to make CHE, thereby, reducing OOP expenditures that in turn buttress mental health. Consequently, the 'peace of mind' effect manifests through it. Possessing health insurance imparts confidence to people plummeting their stressors.[47]

Yang and Hu[20] in their investigation found suffering from CHE had an enormous correlation with the delipidated mental health of the individual. This finding is harmonious with multitudinous studies which point to the concatenation of events where poor mental health causes depression, anxiety, and distress owing to negative economic repercussions.[48-51] First, SHI curtails inhibitions and eliminates trepidations of people apropos of financial vulnerability to an incumbent ailment compared to those not receiving it. People having expended a CHE are at greater risk of a malady. Thus, it mitigates financial expenditures-cum-losses and vulnerability, subsequently, ameliorating the mental health of individuals and the corresponding household. Second, it depicts that the consequence of SHI differs for people suffering from varying stages of psychiatric troubles. By displaying deterioration in their mental health, older people exhibit depressive symptoms indicating high vulnerability to the negative outcomes of CHE. As the intensity of depressive symptoms enhances, the interrelation between mental health and CHE gets weaker.

This implies that quashing the factor of the financial burden of psychiatric care might not be enough in bringing relief to people who possess greater degrees of depressive symptoms. A more methodologically designed, higher quality, timely medical intervention is justified for sophisticated cases.

Dixon *et al.*[39] in their research on eleven LMICs discovered that people in Pakistan and Nepal incurred OOP payments to receive psychiatric care. In Pakistan, people paid from their pockets at both private and public hospitals.[52] In Nepal, an increasing trend of people visiting local healers and a lack of financial and human resources work as hindrances to obtaining optimum mental services.[53,54] In Kenya, consultations from mental practitioners were free-of-charge while charges are levied against medicines rendering people skipping essential medicines necessary for their mental health.[55] Similarly, Ghana facilitated its psychiatric patients to obtain free-of-charge healthcare exempted from any sort of user fee.[56] Stewart[57] found that free psychiatric facilities are made available to the people enrolled in SHI at government facilities.[57] Besides, in Georgia, some conditional inpatient and outpatient free psychiatric care to people suffering from psychosis were extended.[58,59]

Xiang *et al.*[41] discussed the ACM prescription in China for outpatients suffering from schizophrenia. Out of the total sample size obtained, around 47.7% accorded ACM usage which was congruous with findings[60,61] but differing in outcomes.[62] The study propounded that socio-cultural factors paired with the system of health delivery and the traditional routines of prescriptions play a tremendous role. Adding on, the studies also illustrate the prescription of ACM antithetical to the recommendations of WHO. It advises its prescription if EPS have occurred or, are in the nascent stages of treatment for schizophrenia.[60,63] Another reason for its prescription is if the reduction of doses of antipsychotic drugs has proven to be non-workable.[63,64] It was also discovered that the quality of life (QOL) of people with ACM prescription is similar to those with non-ACM possibly because of two factors, viz., the relationship between QOL and ACM needs quality appraisal or their study did not inspect the relationship between ACM and QOL in relatively stable outpatients because of a lack of responsiveness of World Health Organization Quality of Life Schedule-Brief version (WHOQOL-BREF). It also validated interrelatedness between ACM to be greatly in harmonious terms among severity of EPS, and doses and types of antipsychotics, and also substantiated the findings of the precursory studies.[65]

As a part of the second objective, our incessant attempts to trace success stories of LMICs for funding, pooling arrangements, and policies to achieve better mental health were pursued. We found passing references of recent studies exemplifying positive initiatives inter-fused with active political leadership bringing forth UHC in LMICs via numerous health financing reforms in nations, viz., Vietnam, Sri Lanka, Philippines, and Chile.[7,15,16] Having achieved upper-middle-income status in China in 2012, Georgia in 2015, and high-income status in South Korea in the last decade of the previous millennium as per the World Bank's classification, these are some success stories of transformations that took place in recent history towards which we came across. Previously belonging to the LMICs, they were successfully able to soar their GNI per capita to transform their financial structure by pooling arrangements and provide UHC to the entirety of their population.[15,16] Recent research proffers apposite knowledge and experiences apropos of patient cost sharing, pooling arrangements, funding sources, and policy-making among the countries grappling their way through limitations to develop their financial structure for health coverage including mental health.[5,7,14]

This leaves this study to take care of the final objective.

Mental health in the Indian context

Statistically, 197.3 million people were diagnosed with mental disorders in 2017. According to WHO, India houses the maximum, i.e., 57 million people suffering from depression and has unequivocally become the epicentre of mental disorders.[66] Stronger than a billion, before the COVID-19 pandemic more than 150 million people needed psychiatric services. COVID-19 has further accentuated the weak mental health structure of the nation.[67] In 2021 in India, 1.64 lakh people died by suicide accounting for a jump of 7.2% from 2020.[68,69] Besides, people with chronic mental ailments may many-a-time require the continuance of medication for a lifetime to attenuate its fatalistic impacts which certainly mandates large sums of investments. Estimations of 2030 portray that India might suffer a gargantuan loss of over $one trillion due to the sheer volume of its populace suffering from psychiatric troubles. Guesstimates render urban metro spaces possessing thrice the volume of caseload than the rural areas concerning specific disorders like psychosis, schizophrenia, neuroticism, mood, and stress-related disorders.[66] Adversely enough, India's workforce taking care of mental health possesses a petit figure of 9000 psychiatrists.[70,71] The calculations based on this suggest that India has 0.75 psychiatrists[71,72] which is well below the minimum requirement of three psychiatrists per 1,00,000 populace in LMICs like India as advocated by WHO [71,73]. Subsequently, the declining contribution to the health sector from the GDP of India especially to mental health allocations raises eyebrows in the already complex scenario.

Mental Healthcare Act, 2017

Mental Healthcare Act (MHCA) passed in April 2017, supersedes the previous iteration of the Mental Health Act (MHA) of 1987. Before its advent, the Government of India had attempted unsuccessful enforcement of the National Mental Health Programme (1982) and the District Mental Healthcare Programme (1996) to address the mental health exigencies of people with the objectives of extending accessibility and availability of the least possible psychiatric services; inspiring minimum knowledge and skills for mental care coupled with its promotion among the community for participation.[74] Later, MHA 1987 was abrogated for non-conforming with the rights of mentally ailing people.[67,74] The latest iteration of MHCA aims to achieve SDG 3 on its road to accomplishing the utopian agenda of UHC. This law protects, fulfils and promotes the rights of the people while availing mental health or associated services.[1]

It directs the central and state governments to train psychiatrists and professionals alongside aid in the provision of insurance to the sufferers, thereby, making mental care more affordable and accessible with early detection of deterioration of symptoms. Albeit a stride in the right direction, it surely is not untouched by flaws. Public health insurance companies like National Insurance Company Limited and Oriental Insurance Company Limited included mental illness in their packages and supplement indemnification only if hospitalisation is made. Seemingly unfair, mental health does not always require hospitalisation; some require counselling, psychotherapy, or even rehabilitation. Moreover, medication may continue for a considerable length of time even after a span of hospitalisation. Hence, the adoption of preventive measures grasped from experiences push forth: (1) celebration of important days to raise consciousness among the people; (2) combating the taboo associated with mental health needs robust and pronounced efforts; (3) political stewardship corresponding to robust legislation, policy design formulation and implementation with timely response needs rectification; (4) the understaffed and underfunded health facilities, their respective allocation needs remedy; (5) packages of mental health services must be integrated into the insurance schemes at primary health facilities; (6) requirement for the upgradation of the present infrastructure coupled with coverage of the treatment extended to all promoting equity for everyone; (7) community level participation in the form of informal caretakers need to be trained and instituted to work with the local administration; (8) proper balance must be maintained between personal and professional lives to avoid mental ill health; and (9) lastly, prime importance must be imparted to generate a legal recourse to ensure equity and equality in practice.

Limitations

Most studies did not examine the impact of public health insurance on inpatient and outpatient mental healthcare. Consequently, none talked about specific inpatient treatment like electroconvulsive therapy (ECT). The duration of admission in most studies is not considered. Outpatient mental healthcare is considered only in a single study as most of the health insurance schemes in LMICs make provisions for inpatient psychiatric care. These provisions have not mentioned the frequency of mental consultations for avail. Exploring the amount of inpatient and outpatient mental care and depicting its severity for gauging the impact of health insurance on the scope of its provision for appropriate care are missing aspects varying study-to-study. Apart from the successes of China, Chile, and South Korea, we could not find any others where UHC was successfully discharged. We did not find any detailed research that emphasised the impact of public health insurance on mental disorders in India despite having formulated its own mental health policy, maybe because of its lackadaisical implementation. It must be noted that in this review we encountered voluminous articles which were unavailable for open access and due to monetary and time constraints we remained bereft of them. Thence, databases that were not a part of this study have a possibility of comprising studies apposite to our title of research.

Conclusions

The paucity and limited scope of research examining the correlation between the utilisation of public health insurance and its effects on mental well-being were strikingly apparent. This unequivocally highlights the modest body of existing literature in this domain and underscores the urgent necessity for further investigation in this particular area. By implementing innovative financial measures aimed at bolstering healthcare access for individuals, policymakers have concurrently fostered an environment conducive to alleviating the burden of various psychiatric conditions. Throughout the annals of time, this matter has regrettably not been bestowed with the commensurate degree of gravitas it deserved. The escalating burden of mental care in the coeval milieu has expressed sine qua non of bringing requisite interventions using policymaking fused with trained human capital. Public health insurance has acted as a bulwark; a protector for people by ensuring coverage of financial uncertainty, thereby, improving the economic conditions of the households and attenuating the potential incurrence of OOP outlays and resultant CHE. Health insurance not only dispensed physical health treatment but also helped ameliorate psychological disorders. Therefore, policymakers and political leaders are implored to implement policies that include a wider range of medical packages in a more decentralised manner. Invariably, insurance covers in LMICs must be designed to comprehend critical factors i.e., an increase of access and improvement in the quality of psychiatric care while keeping the expenditures under check.

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SUPPLEMENTARY MATERIALS

Supplementary material 1

Detailed keywords for database search

National Health Insurance OR State Health Insurance OR Social Health Insurance OR Public Health Insurance OR Mental Health Care Services AND Mental Health Care Utilization OR Mental Healthcare OR Mental Health Care Utilisation AND Low and Middle-Income Countries OR LAMIC OR LMICs NOT High-Income Countries

National Health Insurance OR State Health Insurance OR Public Health Insurance OR Social Health Insurance AND Mental Health Care Utilisation OR Mental Healthcare OR Mental Health Care Services OR Mental Healthcare Utilization OR Mental Health Care Utilization AND India Mental Health Policy OR Mental Disorders OR Neurological Disorders OR Substance-Use Disorders AND Mental Health Act India OR National Mental Health Policy India OR Mental Healthcare Act 2017 OR Mental Health Policy India 2014

Afghanistan OR Burkina Faso OR Burundi OR Central African Republic OR Chad OR Congo Democratic Republic OR Eritrea OR Ethiopia OR Gambia OR Guinea OR Guinea-Bissau OR Democratic People's Republic of Korea OR Liberia OR Madagascar OR Malawi OR Mali OR Mozambique OR Niger OR Rwanda OR Sierra Leone OR Somalia OR South Sudan OR Sudan OR Syrian Arab Republic OR Togo OR Uganda OR Republic of Yemen OR Zambia OR Low and Middle-Income Countries OR LAMIC OR LMICs OR Low-Income Countries

LMICs OR LAMIC OR Low-Income Countries OR Middle-Income Countries OR Low and Middle-Income Countries OR Angola OR Algeria OR Bangladesh OR Benin OR Bhutan OR Bolivia OR Cabo Verde OR Cambodia OR Cameroon OR Comoros OR Republic of Congo OR Côte d'Ivoire OR Djibouti OR Arab Republic of Egypt OR El Salvador OR Eswatini OR Ghana OR Haiti OR Honduras OR India OR Indonesia OR Iran, Islamic Rep OR Kenya OR Kiribati OR Kyrgyz Republic OR Lao PDR OR Lebanon OR Lesotho OR Mauritania OR Federated States of Micronesia OR Mongolia OR Morocco OR Myanmar OR Nepal OR Nicaragua OR Nigeria OR Pakistan OR Papua New Guinea OR Philippines OR Samoa OR São Tomé and Principe OR Senegal OR Solomon Islands OR Sri Lanka OR Tanzania OR Tajikistan OR Timor-Leste OR Tunisia OR Ukraine OR Uzbekistan OR Vanuatu OR Vietnam OR West Bank and Gaza OR Zimbabwe OR Middle-Income Countries

Supplementary material 2

Quality assessment tool for quantitative studies

Component Ratings

A)   SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?
1. Very likely
2. Somewhat likely
3. Not likely
4. Can't tell

(Q2) What percentage of selected individuals agreed to participate?
1. 80 - 100% agreement
2. 60 – 79% agreement
3. less than 60% agreement
4. Not applicable
5. Can't tell

Rate this section	Strong	Moderate	Weak
See dictionary	1	2	3

B)   STUDY DESIGN

Indicate the study design
1. Randomized controlled trial
2. Controlled clinical trial
3. Cohort analytic (two group pre + post)
4. Case-control
5. Cohort (one group pre + post (before and after))
6. Interrupted time series
7. Other specify _____
8. Can't tell

Was the study described as randomized? If NO, go to Component C.

No   Yes

If Yes, was the method of randomization described? (See dictionary)

        No   Yes

If Yes, was the method appropriate? (See dictionary)

        No   Yes

Rate this section	Strong	Moderate	Weak
See dictionary	1	2	3

C) CONFOUNDERS

(Q1) Were there important differences between groups prior to the intervention?
1. Yes
2. No
3. Can't tell

The following are examples of confounders:
1. Race
2. Sex
3. Marital status/family
4. Age
5. SES (income or class)
6. Education
7. Health status
8. Pre-intervention score on outcome measure

(Q2) If yes, indicate the percentage of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?
1. 80 – 100% (most)
2. 60 – 79% (some)
3. Less than 60% (few or none)
4. Can't Tell

Rate this section	Strong	Moderate	Weak
See dictionary	1	2	3

D) BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the intervention or exposure status of participants?
1. Yes
2. No
3. Can't tell

(Q2) Were the study participants aware of the research question?
1. Yes
2. No
3. Can't tell

Rate this section	Strong	Moderate	Weak
See dictionary	1	2	3

D) DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?
1. Yes
2. No
3. Can't tell

(Q2) Were data collection tools shown to be reliable?
1. Yes
2. No
3. Can't tell

Rate this section	Strong	Moderate	Weak
See dictionary	1	2	3

E) WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?
1. Yes
2. No
3. Can't tell
4. Not Applicable (i.e. one time surveys or interviews)

(Q2) Indicate the percentage of participants completing the study. (If the percentage differs by groups, record the lowest).
1. 80 -100%
2. 60 - 79%
3. less than 60%
4. Can't tell
5. Not Applicable (i.e. Retrospective case-control)

Rate this section	Strong	Moderate	Weak	
See dictionary	1	2	3	Not Applicable

F) INTERVENTION INTEGRITY

(Q1) What percentage of participants received the allocated intervention or exposure of interest?
1. 80 -100%
2. 60 - 79%
3. less than 60%
4. Can't tell

(Q2) Was the consistency of the intervention measured?
1. Yes
2. No
3. Can't tell

(Q3) Is it likely that subjects received an unintended intervention (contamination or co-intervention) that may influence the results?
  4. Yes
  5. No
  6. Can't tell

G) ANALYSES

(Q1) Indicate the unit of allocation (circle one)
community organization/institution
practice/office   individual

(Q2) Indicate the unit of analysis (circle one)
community organization/institution
practice/office   individual

(Q3) Are the statistical methods appropriate for the study design?
  1. Yes
  2. No
  3. Can't tell

(Q4) Is the analysis performed by intervention allocation status (i.e. intention to treat) rather than the actual intervention received?
  1. Yes
  2. No
  3. Can't tell

GLOBAL RATING

Component Ratings

Please transcribe the information from the gray boxes on pages 1-4 onto this page. See dictionary on how to rate this section.

		Strong	Moderate	Weak	
A	Selection bias	Strong	Moderate	Weak	
		1	2	3	
B	Study design	Strong	Moderate	Weak	
		1	2	3	
C	Confounders	Strong	Moderate	Weak	
		1	2	3	
D	Blinding	Strong	Moderate	Weak	
		1	2	3	
E	Data collection method	Strong	Moderate	Weak	
		1	2	3	
F	Withdrawals and dropouts	Strong	Moderate	Weak	
		1	2	3	Not Applicable

Global rating for this paper (circle one):

1	Strong	(No weak ratings)
2	Moderate	(One weak rating)
3	Weak	(Two or more weak ratings)

With both reviewers discussing the ratings:

Is there a discrepancy between the two reviewers with respect to the component (A-F) ratings?

No   Yes

If yes, indicate the reason for the discrepancy
  1. Oversight
  2. Differences in interpretation of criteria
  3. Differences in interpretation of study

Final decision of both reviewers (circle one):   1 Strong
                                                    2 Moderate
                                                    3 Weak