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Early intervention of psychosis and re! ections for programmes in India

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Review Article

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Abstract

Mental illness is perhaps the most common and most debilitating among non-communicable diseases. Schizophrenia, for example, normally occurs before the age of 25, affect the most productive years of life. The World Economic Forum graphically illustrates that mental illnesses will be a major contributor to the erosion of gross domestic product over the next 20 years. The developed world has established programs that have proven to be clinically and economically effective and sustainable.[1] Early intervention has played an important role in demonstrating that outcome can be improved if patients are treated in the early phase of illness. It is believed to be potentially effective in arresting or delaying the progress of psychosis.

In these programs, boundaries between hospital and community care overlap, and provide much needed continuous, convenient, and safe therapeutic environments. Criticisms of cost-effectiveness and investments in program development are outweighed by the clinical benefits. These programs rely on an integration of a variety of facets tailored toward local culture, and specific needs are required. Although under evaluation, there needs to be a high degree of optimism and confidence in developing these services. Developing EI programs in India and other low and middle income countries is challenging due to number of problems most important being available funding. Such programs in these countries need to be culture specific. EI of psychosis is a preventative program administered through community based treatments that are effective, feasible and successful. The future of schizophrenia care lies in early, patient-centric and economic treatment.

Keywords: Early intervention, schizophrenia, psychosis, prevention, programs. Services

Introduction

Prevention of psychiatric disorders is relatively a new initiative due to recent evidence that these disorders can be effectively treated, and the patient's life can be significantly improved.[2, 3] Early intervention (EI) has played an important role in demonstrating that outcome can be improved if patients are treated in the early phase of illness using program-based intervention. By itself it is not a new concept. Back in 1938, Cameron observed that the outcome of therapies obtained in schizophrenia, are considerably better in patients who do not progress towards chronicity.[4] Over the last 20 years early intervention programs (EIP) have been developed in several countries across the world though not without controversy. These programs have been shown to be both clinically and economically beneficial, and such benefits have also been sustained for long periods of time.[5, 6] Despite its proven effectiveness, development and implementation of such programs in Indian context remains challenging.

In this paper, we examine EIP, and also discuss relevant issues in program development in Indian context.

The program

EI represents an interface between biological, and social psychiatry that firmly demonstrates the success of a community-based psychiatric intervention.[7] Most neurobiological changes take place during the early phase of the illness, thus delay in intervention, in a highly sensitive developmental period, is inherently damaging. EI may delay, if not prevent further deterioration. In these programs, boundaries between hospital and community care overlap, and provide much needed continuous, convenient, and safe therapeutic environments.[8, 9]

The objective of these programs goes beyond EI as, 'there is more to early intervention than merely intervening early'.[10] These interventions strategies are phase-specific and consist of comprehensive and multidisciplinary treatment. Both early detection and phase-specific treatment may be offered as supplements to standard care, treatment as usual (TAU), or may be provided through a specialized EI team. Successful programs have incorporated components of service, education, and research and have integrated four other dimensions to the development of a qualitative program: hospitalized care, community outreach, awareness drive, and marketing and networking. EIP offers a client-centric approach which typically implements psychotherapy, various forms of group therapy, case-manager based approaches, psycho-education, recreational therapy, rehabilitation, suicide prevention, assertive community programs, and shared care.[11, 12]

These programs depend upon referrals from communities, therefore a strong public awareness campaign, and networking is required to overcome these difficulties in obtaining referrals in a timely manner. There are two important aspects for a public campaign which can be developed to surmount these issues. Firstly, a public awareness campaign has to be implemented to shorten the interval between the onset of illness, to first help-seeking behaviour. Secondly, professionals need to have a greater knowledge, and awareness of identification of psychosis in its early phase.[13] As such, partnerships between the health care providers and voluntary agencies in the community have become an increasing priority.[14] Langeveld et al. studied the referral pattern of teachers, and reported that most were able to recognize psychotic symptoms from a case vignette, but they displayed little awareness of the psychiatric implications.[15] It is essential to target such professionals, who are in continual, direct contact with young individuals, which may require constant training and education. The key to the success of EIP lies in effective networking and developing a people oriented outreach programs

Achievements and Merits of EIP

There has been a growth in research surrounding the areas of improving services for better outcome and enhancing clinical and neurobiological research. One of the advantages concerns clinical benefits for clients which ensures certainty of support to patients within the community. These programs seek to reduce the burden of care, which may become severe, particularly in cases where care-giving by family is challenging.[16] Clinical research has demonstrated that there is a 'critical period', or window of opportunity, for intervention before psychosis is established and good outcome is likely.[17] This hypothesis proposes that deterioration occurs aggressively in the first 2 to 5 years of psychosis, therefore it is crucial to intervene within this period to ensure a functional recovery.

Another significant finding has been the role of 'duration of untreated psychosis' (DUP) and its relation to short and long term outcome.[18, 19] Evidence now suggests that reducing DUP can result in better symptomatic and functional recovery, which has been further suggested to be a clinical marker of outcome.[20] Studies have shown that effective EIP can reduce delay in treatment seeking within a given community,[21]and lead to good short term

outcome, reduces re-hospitalization, decreases burden of care, reduces suicide attempts, and increases possibilities for gainful employment. [22, 23]

One of the outcomes of research in EI has been involved in re-conceptualizing phenomenology and psychopathology of schizophrenia for diagnostic purposes. Thus far, diagnostic criteria of schizophrenia are based upon a categorical model which concludes that a person either has schizophrenia, or does not have schizophrenia. Due to the longitudinal nature of the illness, just as stages of cancer or hypercholesterimia, there has been a shift in conceptualizing the framework for diagnosis from a categorical one, to a dimensional one. EI research has found main support for development of a 'staging model' of psychosis. [24] According to this model, symptoms of schizophrenia can be classified on a range of symptoms from stage 0 to 5, where stage 1 is earliest symptoms seen in 'high risk, help seeking individuals' and stage 4 and 5 constitute full blown schizophrenia.[25, 26]

Neurobiological research in EI has provided an opportunity for examining the brain changes throughout the progression of the illness using advancements in new technologies.[27] These findings have shown that neurobiological changes take place during early childhood and adolescence primarily involving, but not limited to, the prefrontal cortex. These findings have strengthened biological theories, and have attempted to explain the role environmental factors play in genetic expression. Detailed description of advances in neurobiological understanding of schizophrenia is out of the scope of this paper, (for details please see Keshavan et al. 2005; Keshavan & Jindal[28, 29]). These findings provide strong support for the benefits of developing EIP.

Controversies (Economic and Clinical Effectiveness)

There is lack of agreement amongst researchers and scholars regarding the clinical and economic benefit of EIP. Although the aforementioned findings and characteristics have made EIP highly valued by consumers, implementation of these services is threatened unless sufficient and consistent funding is made available.[30] A recent report highlighted that an investment of one pound sterling saves 40 in suicide prevention programs, 18 for EIP, and 4 for awareness programs for depression.[31] However, funding agencies fail to perceive this. A 'lack of demonstrable evidence of success' has been overcome to some extent with the advancement in research findings, but poor investments in these programs prevent clinicians from developing evidence on larger numbers of patients.[32, 33]

Whilst there is a growing body of evidence concerning the effectiveness of early detection and EI services, some argue that cost-effectiveness of EI for first-episode psychosis (FEP) is a waste of clinical resources. Valmaggia et al. suggests it is possible to offer help in the early stages of psychosis in a cost-effective manner.[34] The Early Assessment Service for Young People with Early Psychosis (EASYPEP), developed in Hong Kong, reported this EI program likely to be more cost-effective in improving outcomes, specifically in reducing hospitalizations and clinical symptoms.[10] Similarly, an Italian study also reported significant changes in initial assessments which were recorded from the Health of National Outcome Scale.[35] They also reported larger effect sizes in EIPs than in the standard care group, and suggested a net saving of €-1204 for every incremental reduced score of severity.

An Australian group showed that specialized early psychosis programs can deliver a higher recovery rate at one-third the cost of standard public mental health services.[36] Direct public mental health service costs incurred subsequent to the first year of treatment. Results showed that 56% of the Early Psychosis Prevention and Intervention Centre (EPPIC) cohort was in paid employment over the last 2 years, compared with 33% of controls. Each

EPPIC patients cost, on average, was $3445 per annum, compared with controls who each cost $9503 per annum. Similarly, an EI service offered in London, UK examined the cost-effectiveness using a net-benefit approach. [37] Their results showed that these services did not increase costs, but were likely to be cost-effective when compared to standard care practices. Although hospitalization was reduced, the overall cost difference in favour of EI was not significant. These results suggest that it could be possible for these services to be cost-effective by reducing inpatient stays, and preventing relapse in a more effective manner than TAU.

An argument cited against EIP development comes from studies suggesting improvement in outcome due to EIP is modest, at best, lasting for the duration of the intervention only, and these benefits are not sustainable after five years. A recent Cochrane data base concluded that there is emerging, yet inconclusive evidence, to suggest that people in the prodromal stage of psychosis can be helped by some interventions. [38] A meta-analytical approach examined the benefits of EI and standard care for patients with recent onset psychosis.[39] They reported that EI was significantly more effective than standard care in improving symptoms within a one-year period. Although most EIP last for about two years, fewer studies have looked at long term outcomes. A recent study examining the Early Intervention Program for Psychosis (PEPP) from London, Ontario, Canada demonstrated the benefits of a specialized EIP for two years which had sustained benefits in the long term, for at least five years.[40] In addition to this, one of our own studies from a long-term, ten year follow-up from Mumbai, showed good outcome in 61% of first episode schizophrenia patients using a semi-structured program which appears a modest outcome, but not better than what has been reported from India in TAU programmes.[41]

Despite criticisms of cost-effectiveness, the clinial benefits of the EIP outweigh the investmentsin program development. It should cbe noted that these cost-effective factors have only been evaluated only in developed countries. Little is known about what will be cost-effective in low to middle income countries.[42] Therefore, the criticisms of the cost-effectiveness being poor, does not apply universally. Future evaluations are required in developing countries, which should involve scaling up study sizes and testing conceptual frameworks.

EIP in Indian conditions

There are three main questions regarding developing EIP for psychosis in India: 1) Is this program necessary? 2) Are there similar programs already developed? 3) If not, how do we develop such programs? Though there has been significant advancement in mental health services, education, and research in India, including Indian Mental Health Policy and Indian Mental Health Act, the need of the patients are far from fulfilled. Ground realities in India regarding funding resources, manpower, awareness and poor governmental involvement are far too well known.[43] At the same time, there are newer strengths which these communities have acquired. There has been an increased interest in mental health which has resulted in an increased awareness and available training services, involvement of voluntary agencies, and psychiatric education, which is already incorporated into undergraduate curriculum.[44] Furthermore, this growing interest provides an opportunity to develop, integrate and tailor programs to local needs.

Mental health programs developed, in India specifically, have shown encouraging results. Although these programs are not as structured as many EIP in western countries, they are consistent with the objectives of EIP.[45, 46] Many of these programs are based upon the Health Service Research model which appears to be a feasible option for community services.[47] There are a number of innovative models of care which have been tried for service delivery, namely mobile community

psychiatric clinics,[48] case identification by community health workers in primary health care centres,[49] community outreach programs within the psychiatric departments of teaching and non-teaching hospitals,[50] mental illness screening by family physicians trained for psychiatric care in their catchment to establish a referral network, identification, and intervention by means of telephone help-line.[51] In most of the community based programs visits from mental health professionals to rural communities provide an effective pathway between referrals from rural to urban centres, which have been a successful avenue in the development of treatment programs. This diversity in practice and services should not be seen as limitation but strength and opportunities for newer public private partnership.

Although these programs have been found to be successful, there are two ways we can develop more effective EIP in India; 1) by strengthening existing community mental health services by focusing on identification, treatment, and continuity of care; 2) by incorporating the program contents within the services which are going to be developed. There are no straightforward answers to setting up these programs in the background of limited resources; nonetheless, the possibilities exist due to forthcoming change in Indian mental health systems.

There are some key points which need to be remembered for success in setting up these programs, which rely heavily on a significant change in the role of the psychiatrist. Continued training, education and professional development on the part of the clinician, and the community workers, is required to evolve these programs on an ongoing basis.[52] It is important to set up achievable goals, and to develop visible evidence of success to earn confidence of stakeholders. By keeping the program within a small, well defined catchment, the clinicians are better able to cope with practical challenges, and educate both the patient and relatives throughout recovery. It is beneficial to keep structured assessments and develop clear outcome parameters and incorporate psychosocial, crisis intervention, and family support as much as possible. It is vital that these programs are evaluated frequently throughout their evolution, in order to increase effectiveness.

The most important aspect of these programs is successful networking. Newer services such as 'telepsychiatry' offer care to professionally deprived regions, Such methods may offer hope for unique program development in the future for Indian society.[53] EIP are about breaking the boundaries of independent private practices and mental health institutions. A number of privately owned centers which offer excellent care, with a service oriented team, will be effectively able to tailor their functioning into the requirements of these EIP.[54]

The Next Step

We have seen that EIP can improve outcome and help in unfolding the complexity of schizophrenia. The task ahead is developing treatment which can facilitate social integration of these individuals into society. Another challenge for the future is to develop models of prevention. Since the illness is multifactorial in nature, with a significant genetic and environmental interplay in its pathogenesis, it appears that a primary preventive measure is almost impossible,[55, 56] therefore, the option of secondary and tertiary prevention measures should be optimized.[57, 58] There have been advances in identifying at-risk candidates, despite being faced with severe opposition from many scientists and advocacy groups on account of stigma and ethical issues. These groups are concerned about 'labeling' an individual with a mental illness; however, this research is unavoidable for learning about prevention, and the patients can benefit immensely.[59, 60] EIP have improved and

evolved significantly overtime and is one of the initiatives which can minimize the impact and consequences of psychosis in an individual.

Conclusion

Finally pessimism in care of schizophrenia from hundreds of years is over. These EIP initiatives are based on the fact that mental illness is a treatable condition, and care needs to reach those affected at the earliest stages of the illness. There needs to be a high degree of optimism and confidence in our knowledge, wisdom and commitment; however, regrettably, there are academics thoughts that reject not only the benefits, but the value of the program itself. [61]

To summarize, EI of psychosis is a preventative program administered through community based treatments that are effective, feasible and successful. These programs are cost-effective, needs-based, multidisciplinary, and can be developed in many communities by incorporating the necessary changes to suit the local requirements. The future of schizophrenia care lies in early, patient-centric and economic treatment.

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