ABSTRACT

Topic: literature review investigating strategies to overcome medication non-compliance in mental health.

Background: The proof of non-compliance being the foremost yet avoidable reason for relapse is well documented and a number of strategy aimed at enhancing compliance have been investigated. This literature review aims to review research studies that have investigated strategies to overcome non-compliance with medication in mental health.

Method: Research journals from 1999-2010 were selected and studied to find consistent and contrasting views. There themes namely educational intervention, Compliance therapy and the role of mental health nurse were identified by the author; these themes will be discussed throughout this literature review.

Findings: Literature revealed that Education seems to increase patients’ knowledge of their illness and treatment but does not promote compliance, however strategies like compliance therapy, based on cognitive-behavioural therapy and medication management training package for nurses seem to be efficient in improving compliance and prevent relapse.
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INTRODUCTION

Literature review is defined as a summary of research on a topic of interest often prepared to put a research problem in context (Polit and Beck 2008).

Antipsychotic medication in the treatment of schizophrenia has proved to be effective however a lot of people with schizophrenia do not comply with their prescribed medication regimen, this results to a significant decline in the promise of antipsychotic medication (Zygmunt et al. 2002). The rates of medication non-adherence have been found to approach 50% among patients with schizophrenia during the first year after discharge from hospital, the rates may even be higher taking into account that the estimates do not include individuals who refuse treatment or drop out of follow-up studies and in spite of atypical antipsychotic medications having less serious and disabling side effects, there is little proof of any progress made at increasing compliance. (Zygmunt et al. 2002). Parashos et al. (2000) argued that the prevalence of non compliance with antipsychotic medication in patients with schizophrenia is at 50%.

Non-compliance with medication means failure on the part of a client to follow the recommendations of a mental health professional with regards to their medication, however modern health care is concerned with working with clients and has therefore suggested that ‘concordance’ should replace the use of the word ‘compliance’. Concordance projects patient rights, need for information, the importance of two-way communication and decision-making such as stopping medication even if clinicians do not agree with the decision (Gray et al. 2002).
According to Kumar and Sedgwick (2001) the reasons for non-compliance include intolerable side-effects, cost of medication, psychotic explanations which include delusions and hallucinations. In addition, Parashos et al. also identified social pressure and lack of insight as reason for noncompliance. The consequences of non-compliance according to Parashos et al. (2000) include frequent relapses, poor outcome and poor quality of life for patient, increased burden on the relatives and increased financial cost to society.

Little research efforts have been made at devising and testing interventions to improve compliance with prescribed antipsychotic medication in spite of the relationship between good compliance and outcome. (Gray et al. 2002). According to Gray et al. (2002) various interventions have been evaluated in patients who present with both physical and mental illnesses, although much of the research has focused on acute psychosis or schizophrenia.

This literature review aims to investigate research studies that have investigated strategies to overcome non-compliance with antipsychotic medications. The author’s rationale for choosing this topic is because of the high rate of non-compliance and relapse resulting in the revolving door phenomena in psychiatric hospitals (Gray et al. 2002).
SEARCH STRATEGY

The author utilized electronic searches to gather relevant articles. These databases include CINAHL, PubMed, Google Scholar and PsycINFO Pubmed. The search terms used were antipsychotic medication, compliance, concordance, adherence, schizophrenia, interventions, mental health and psychiatric nurse. 17 Articles were helpful from these searches.

Articles selected are dated from 1999 to 2010. The author had to look this far in order to gain better understanding of the background of the studies. Of the 17 articles found one was qualitative, twelve were quantitative, three were literature reviews and one was anecdotal. The literatures originated from Britain, Denmark, Ireland, Australia, Thailand, Germany, Italy, and Amsterdam.

Themes from the literature are educational intervention, compliance therapy and medication management. The literature will be review under these themes.
Educational interventions

According to Gray et al. (2002) the aim of educational intervention is to provide patients with information regarding their illness and medication with the aim of increasing understanding and promoting compliance. Kavanagh et al. (2003) state that a lot of psychiatric patients have no knowledge about medications prescribed to them. The focus of this theme is therefore to evaluate the benefit of clients’ education on medication compliance.

Kavanagh et al. (2003) conducted a qualitative study using experimental design with a convenient sample size of 15 participants in a psychiatric intensive care unit in Britain. The study aimed at exploring the effectiveness of a medication group on knowledge about drug treatment as well as insight and drug adherence. Data was collected by assessing patients before and after attending the educational groups using five measures namely UMQ, (Understanding of Medication Questionnaire designed to measure knowledge of anti-psychotic treatment) SAIE, (Expanded Schedule for Assessment of insight, which has components of treatment compliance, awareness of illness and ability to re-label psychotic symptoms) Compliance Rating Scale, (a seven-point rating scale completed by the patients primary nurse) ROMI, (Rating of Medication Influence, an instrument designed to assess patients’ subjective reason for compliance, and non-compliance) BPRS, (Brief Psychiatric Rating Scale, a semi-structured interview for the major psychiatric symptoms). The validity of this tool was not mentioned in the research. Maneesakorn (2007) argues that there is no valid gold standard measure of compliance. The findings of this study revealed that though there was an increase in insight due to the education session, there was no effect on compliance.
compared with the group who did not attend any education group. This research also found that group education regarding drug issue is effective in the increase of insight even when given to acutely ill patients. The finding of this study can not be generalised due to small sample population. Further evidence to support this finding is provided by Merinder et al. (1999) in a quantitative research using randomized controlled trial and sample size of 46 patients and 36 relatives conducted in a community mental health centre in Denmark aimed at probing the effectiveness of an eight-session educational intervention for patients with schizophrenia and their family on variables which include compliance. The study found that a short patients and relative education program seems to influence knowledge and some aspect of satisfaction but does not seem to be enough to improve important variables such as compliance, psychopathology, insight or psychosocial functioning. Merinder et al. (1999) also concluded that educational intervention without behavioural elements do not seem able to reduce relapse. Both studies suggest that though educational interventions are effective in the improvement of patient knowledge they don’t provide any significant impact on compliance. This could mean that group interventions are not the most effective method of providing patients with information regarding their treatment (Gray et al. 2002).

In contrast to Kavanagh et al. (2003) and Merinder et al. (1999) finding, Parashos et al. (2000) in a quantitative research aimed at investigating reasons for non – compliance from patients and their relative perspective sampled forty-five stabilised patients and their relatives with the use of anonymous questionnaires. The research found that the most important cause of non-compliance from patients and relative opinion was the lack of knowledge about the illness and compliance was noticed to improve by
30% after a series of psychoeducation sessions and by the provision of knowledge concerning medication. However the findings of this study can not be generalized because the population sample was not randomly selected. It should be noted however that questionnaires were deposited in a box located in a specific room in the centre’s building so as to ensure accurate and honest responses. Similarly, Peveler et al. (1999) in a randomised controlled trial with 250 participants in a primary care hospital in Wessex, United Kingdom, aimed at evaluating two different method of improving compliance to antidepressant medication i.e. drug counseling or information leaflet. This study found that counseling about drug treatment significantly improved compliance. It is however worthy of note that the participants in this research were stabilized unlike the sample population in Kavanagh and Merinder et al.’s studies.

Interestingly Gray (2000) in a quantitative research and a randomized controlled trial of 44 patients aimed at testing the hypothesis that brief patient education is more effective than routine care in enhancing insight and attitudes towards treatments in patients taking clozapine. Patients received three sessions of one-one educational intervention in a room in the hospital ward. Patients were assessed blind by a research worker who was not involved in delivering the intervention or their standard care pre-intervention, and also after five weeks, using two standardized, valid and reliable self-report scales. The Result of this study revealed that compliance did not improve with this intervention. This negative finding could be attributed to the fact that patients on clozapine tend to be more disabled by their illness (Gray, 2000). It is reasonable from the above findings to conclude that although simple educational interventions is effective in improving patients knowledge about medication they are generally not effective in promoting compliance.
Compliance therapy

Interventions may need to look into other factors which influence compliance if improvement of clients understanding about their medication does not promote compliance. One of such interventions is compliance therapy devised by Kemp *et al.* (1996, 1998, as cited by Gray *et al.* 2002, p. 282). Compliance therapy is based on motivational interviewing and cognitive-behavioural techniques (Donohoe, 2006). Concordance therapy involves patients in making decision that are right for them, instead of trying to get them to obey professional advice. This theme will focus on outcome of studies carried out on this intervention.

O’ Donnell *et al.* (2003) in a quantitative research study using randomised controlled trial with 56 randomly selected participants in a large hospital in Dublin Republic of Ireland, aimed at examining the effectiveness of compliance therapy for improving compliance to prescribed drug treatment among patients with schizophrenia. Structured clinical interview was used in data collection by assessing patients’ subjective response and attitude to antipsychotic medications. Symptoms, overall level of functioning, insight and quality of life were measured. Five sessions of compliance therapy lasting 36 minutes each was administered to the experimental group. These sessions addressed the patient’s illness history, understanding of illness, and ambivalence to treatment, maintenance medication and stigma. However the control patients received non-specific counseling without any discussions regarding their medications. Participants were re-assessed one year after intervention by a researcher blind to the type of intervention delivered. Assessment involved same variables assessed at baseline but included patients psychiatric admissions.
one and two years after entering the trial. The outcome of this study revealed that compliance therapy does not have any advantage over non-specific therapy for patients with schizophrenia in terms of patience compliance to treatment, attitude to medication, insight, symptom, global social functioning, quality of life, or re-admission to hospital. This result is consistent with Gray et al.’s (2006) large-scale quantitative research using 300 participants in a multi-centered randomised controlled trial which took place in routine general adult psychiatric hospitals in four locations namely Germany, Italy, Amsterdam and London, with the aim of examining the effectiveness of compliance therapy in improving quality of life of people with schizophrenia. Participants received eight weekly sessions of adherence therapy or health education, each lasting about 30 and 50 minutes. This study found that adherence therapy did not improve compliance nor other variables tested in this study. The negative result of these studies may be attributed to the fact that the duration of intervention was short and measurement of compliance was not sophisticated. Because both studies are quantitative research, they fail to adequately explain the complexity of medication compliance behaviour and are only able to explore a small number of variables. (Kikkert et al. 2006)

Unlike the result found by Gray et al.’s (2006) and O’ Donnell et al.’s (2003), Maneesakorn et al. (2007) in a quantitative research and the use of randomised controlled trial carried out in a psychiatric unit in Thailand using sample size of 32 patients who were randomly selected to either be in the experimental group who received eight sessions of adherence therapy lasting eight weeks for 15 to 60 minute per session or the control group who received treatment as usual for the same duration of time. The aim of the study was to assess the effectiveness of adherence therapy on people with schizophrenia. The finding of this study reveled that adherence therapy had a positive influence on psychotic symptoms, attitude towards
and satisfaction with medication. It was found in this same study that similar to Gray et al.’s (2006) finding, compliance therapy did not improve general functioning. Generalisation of this study may be restricted due to small sample population who also had slightly lower symptoms and higher general functioning compared with the participants in the study conducted by Kavanagh et al. (2003) and O’ Donnell et al.’s (2003) where participants were from psychiatric intensive care unit. Additionally a single therapist was used for the whole sample of 32 participants and the degree of adherence of the patients before entering the trial was not known. McIntosh et al. 2009 state that there is lack of evidence to support the efficacy of compliance therapy.
The role of mental health nurse

The focus of this theme is to review the role of mental health nurses in medication compliance and to examine if medication management training package for nurses can optimize compliance with medication and clinical outcomes in patients with mental illness.

Gray (2004) conducted a quantitative research study designed as a cluster randomised controlled trial with sample size of 60 CMHN (community mental health nurse) who were randomly selected in two mental health care providers in London. The CMHN were required to pick two patients each from their caseload for the trial. The aim of the study was to find out whether medication management training is better than treatment as usual in improving clinical outcomes for patients with schizophrenia. The CMHN received 80 hours Medication management training programme which was delivered over 10 weeks. Data was collected at baseline and again at 26 weeks after training Using PANSS (positive and negative syndrome scale) which has reputable construct validity (Kay et al. 1989 as cited by Gray 2004). Result found that nurses who had received medication management training produced a considerably greater reduction in clients ‘general psychopathology compared with treatment as usual at the end of the six-month study period. The positive result in this study may have been influenced by the fact that nurses had a choice of which patients to choose, so, they might have had a tendency to pick clients whom they had good relationship with or whom they thought might do well, for this, result can not be generalized. This result is further verified by Harris et al. (2009) in another cluster randomised controlled trial which involved convenient sample of twenty-eight pairs of CMHN from
NHS Trust in England aimed at investigating the effects of medication management training program on a randomly selected group of patients from their caseload. Data was collected using five assessment tool chosen for their clinical utility and ease of administration and these measures have been widely used in research studies. The training lasted nine-months. The result of this study found that as a result of the training received by the mental health nurses there was positive outcome for patients. However it should be noted that only 3 day training was given to the nurses on how to use the assessment measures and this could be a threat to internal validity, the time frame of the study is too short to realize medication related changes and there was no “blind” assessment of service user level outcomes. Similarly Gray, Wykes and Gournay (2003) conducted a qualitative research with convenient sample size of fifty-two nurses selected from two large mental health care providers in London, England. The aim of the study is to investigate whether medication management training is effective in improving the clinical skill of CMHN. The study design had an inside subject repeated measures design. Data was collected pre and post training using knowledge about medication management questionnaire. Result of this study was positive as there was a significant improvement in the medication management skill of the participants. This result may have been influenced by the method of data collection which involved role play before and after training. Anxiety about being videotaped during role-play may have reduced post training therefore yielding a positive result.

The findings of the above studies may suggest that medication management training equips nurses with the clinical skills and knowledge that is needed to promote compliance in psychiatric patients.
Conclusion

The purpose of this literature review was to investigate strategies to overcome medication non-compliance in mental health. The major cause of relapse in mental health is Non-compliance with antipsychotic medication. Patients decision not to take their medication as prescribed is influenced by various factors which include intolerable side-effects, cost of medication, psychotic explanations which include delusions and hallucinations, social pressure and lack of insight. A number of interventions to promote compliance have been tested and some of the outcomes of this intervention within the themes are contradictory.

Educational intervention was tested from group and individual perspective. Educational intervention was found in some studies to improve insight, knowledge about illness and some aspect of satisfaction but not important variable like compliance. However the study conducted by Maneesakorn et al. (2007) found that educating patients about their illness and medication significantly improved compliance. Merinder et al. (1999) concluded that educational intervention without behavioural elements do not seem able to reduce relapse. Worthy of note in all of these studies however is their intensity and short duration. Also these studies make use of few sample population and their results can not be generalized.

Compliance therapy intervention proved to be successful in the study done by Maneesakorn et al. (2007) however the studies conducted by Gray et al.’s (2006) and O’ Donnell et al. contradicts this finding as it found that compliance therapy intervention did not improve compliance. This could be
as a result of both studies being quantitative research they fail to adequately explain the complexity of medication compliance behaviour and are only able to explore a small number of variables. (Kikkert et al. 2006).

The positive result found by maneesakorn et al (2007) suggests that that compliance therapy has prospective to improve compliance.

The role of the nurse theme found that there is overwhelming evidence to prove that nurses who are trained in medication management are able to improve medication compliance in patients with psychiatric illness. Based on these findings, it is important to train nurses to be able to deliver compliance therapy to patients as they spend more time with patients than other health professionals. (Maneesakorn et al. 2007) There is a need to develop a more effective intervention capable of promoting medication adherence in people with mental illness as the few intervention that are available have little effect on patients compliance. It has been found that the rate of relapse in mental illness is high and the revolving door syndrome is a huge problem in the provision of mental care.
Recommendations

During this review the author found that duration and intensity of the reviewed interventions are usually short. It would be beneficial to carry out more intense interventions over a longer period of time. More qualitative researches are also needed in this area. There is a need to carry out studies on patients with other forms of psychiatric illness other than schizophrenia. There is a need for more research to be conducted in the republic of Ireland as only one research was found to have been conducted in the republic of Ireland by the author during this review. There is also a need to train all psychiatric nurses in medication management training.
References


