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Motivational Interviewing as a Problem Solving Intervention to Improve Adherence: Review of the Related Literature

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ABSTRACT

Patient behavior changing through adherence therapy is very difficult. Identifying the most effective approach is very important regarding adherence. Motivational Interviewing (MI) is a clinical approach involving communication, collaboration, evocation, autonomy and increasing motivation alongside the final results of behavior change. The principles underlying MI include empathy, developing differences, avoiding debate and supporting self-efficacy. MI interventions allow for the changing of the relevant cognitions and self-regulation processes that leads to adherence to the treatment.

Method: A literature review was conducted focused on journals published between 2013 and 2018. Fifty relevant journals were obtained and data was extracted from 25 relevant selected journals. The search was carried out by entering the keywords 'adherence', 'motivation' and 'MI' into the SCOPUS, ScienceDirect, Sage, ProQuest, Elsevier, SpringerLink and Google Scholar databases.

Conclusion: MI studies show that MI-based interventions are effective in promoting health behavior changes. It is also associated with positive health outcomes such as low blood pressure, diet, decreased smoking, lower cholesterol, and better blood sugar control.

Keywords: *adherence, motivation, MI*

Introduction

It is very important for clients to change their behavior in order to undergo success within the therapy program. Adherence is defined as the client's decision to receive and follow instructions related to the stated regulations. In the regulation of chronic medical conditions, bad adherence leads to worse results in the context of medical care, higher rates of hospitalization and increased health care costs. Adherence can be said to be "a key mediator between medical practices and client outcomes". The strategies to improve medication adherence must involve clear and specific information. The average level of non-adherence is about 50% and this results in a large use of funds in the context of health care costs per year. Motivational Interviewing (MI) has proven to be more effective than other strategies, such as traditional informative strategies. It has been shown to be as effective as adherence cognitive therapy but with fewer time costs.[1]

MI is a clinical approach used to increase the motivation of the clients to change by helping them in exploring and solving their ambivalence and resistance toward changes in a client-centered approach. MI is a goal-oriented communication method.[2] MI is a patient-centered care approach to maintaining the intrinsic motivation in all individuals formed between the clinician and the client. The clients are guided towards goal setting, identifying potential barriers, and increasing self-efficacy and commitment to achievement goals. Patients articulates their ideas and plans rather than communicating so to their health care providers. The role of health care providers is to facilitate, not dictate, and what may have felt like the struggle now is cooperation and egalitarian relationships. MI was originally developed as a model for treating substance abuse, but it has now been modified for other cases. MI uses open questions, reflection and understanding the personal nature of the clients. It also involves partnerships

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with anyone in the medical setting. The MI technique is portable, low-tech and it can be integrated into the existing consultation model.[3] MI-based interventions are short, consisting of three sessions which last for 20 to 30 minutes each, followed with another over the telephone. The interventions are managed by nurses in the client's own home which is conducted when are doing home care visits.[4]

Readiness for change is defined as a processor state of movement between no intention to make changes in behavior to committing and maintaining behavior change.[5] MI follows positive results in other health care domains with respect to behavior change.[6]

Method

Study Design, Setting and Inclusion criteria: The method used a search process by entering the keywords 'MI', 'motivation' and 'adherence' on databases such as SCOPUS, ScienceDirect, Sage, ProQuest, Elsevier, SpringerLink and Google Scholar. A screening of the articles was done. The purpose of this study was to see the extent to which MI interventions affect client adherence to therapy. The inclusion criteria used in this literature review was articles in the year range of 2013 - 2018. The articles used were articles that had been published internationally of a standard level 1 - 2 (including RCTs and R randomized). All of the articles were written in English.

Data Analysis: The data analysis was conducted by collecting the articles that used a quantitative design focusing on diabetes mellitus, cardiovascular disease, alcohol dependence, mental illness and schizophrenia, chronic disease, HIV disease and kidney failure.

Results

There were a total of 50 articles obtained from the search strategy, evaluation and methodological assessment. Of this total, 25 articles did not meet the study criteria and thus were dropped out of this study. The aggregation of the review of the quantitative design articles showed that the results were grouped through the MI in the areas of diabetes mellitus, cardiovascular disease, alcohol dependence, mental illness and schizophrenia, chronic diseases, HIV disease and kidney failure.

A. **Clients with diabetes mellitus:** The research conducted by Chlebowy et al examined MI as an intervention to improve the degree of health and adherence of therapy of the clients with cardiovascular problems.[7] The study findings were that MI affected drug adherence and the diabetic markers. Other studies from Boved-Fontan et al found that MI conducted by health workers aimed at clients with dyslipidemia achieved significant reductions in all lipid parameters, cardiovascular risks, weight reduction and dietary adherence.[2] The study's MI was therefore a problem solving treatment that could reduce type 2 diabetes and cardiovascular disease risk in real life.[8] The intention to treat and the following analysis showed there to be a significant difference in the outcomes between the two groups. The strengthening of the MI interventions in diabetes mellitus clients was examined by Moura et al, which states that the clients reported an increase in care over a 6-month period in the quality of the diabetes care received.[9] It was reported that there was an increase in their level of physical activity, fruit and vegetable consumption and medication adherence. Another study found that MI is not a single intervention.[10] It covers a variety of specific techniques to encourage behavior change and it requires training and time to come to fruition. The results of the study support the adoption of MI.

B. **Clients with cardiovascular disease:** A previous study conducted by Al-Ganmi et al was based on RCT studies.[11] The client conducted a brief semi-structured interview to identify the level of adherence to treatment and to determine the predictive factors for non-adherence. The results showed that MI led by nurses had the potential to increase the adherence of therapy. Another study by Hardcastle et al reported there to be significant differences between the obese client group and hypercholesterolemia at baseline, thus showing a significant increase in BMI and cholesterol level between the intervention and control groups.[12] From the results of the study, it can be concluded that low intensity MI counseling interventions are effective at bringing long term changes to some, but not all, health-related outcomes. Other studies took on the subject population of 1,704 participants and this total was randomized to

receive MI interventions delivered by healthy lifestyle facilitators trained in a group, in individual formats or ongoing their usual care.[13] The primary results showed changes in weight and physical health. Secondary outcomes included changes in the low-density lipoprotein cholesterol and Cerebro Vascular Disease (CVD) risk scores.

C. **Clients with HIV disease:** The study by Ekwunife et al. was conducted in six hospitals offering HIV care. The participants were randomized for the population of the intervention and control groups.[14] The structured adherence support scheme was called the 'Incentive Scheme'. The findings prove that applying conditional economic incentives combined with MI can increase the retention and adherence of ARV consumption among HIV patients. Other studies have developed a project called IMPACT (Individuals Motivated to Participate in Adherence, Care and Care).[15] It is multi-component approach for newly incarcerated HIV-infected people that specifically targets treatment, retention and medication adherence by overcoming various obstacles in terms of treatment involvement. Research by Sued et al[16] showed that the doctor-based MI intervention was feasible and effective at improving and maintaining client adherence, viral suppression and client-doctor communication and attitudes about the treatment.

D. **Clients with psychological disorder:** A research study by Mallisham and Sherrod emphasized the enthusiasm and MI intentions in training programs used to produce translations of newly acquired knowledge into nursing practices.[17] The results showed that MI can develop meaningful, client-centered communication skills and that this can lead to improved medication adherence. Another studies by Barkhof et al consisted of a randomized controlled study including 114 clients who experienced psychotic relapses due to medication non-adherence within the past year.[6] The participants received an adapted MI form or an active control intervention in the form of health education (HE). The results showed that MI improved treatment adherence in previously non-adherent clients who experienced a psychotic relapse. The study focused on medication adherence in patients with schizophrenia and the researcher conducted a qualitative case study of several MI sessions to analyze the interaction processes that affects motivation in clients with schizophrenia.[18] The results found there to be three success factors for MI-based interventions, which are the relationship of trust between the client and the therapist, the ability of the therapist to adapt his MI strategy to the client's processes and linking client values with long-term treatment adherence. Another researcher conducted a study on sixty-four outpatient clients and conducted 2 MI sessions focused on cognitive function.[19] The condition of MI is associated with a great improvement in task-specific motivation along with the presence of larger training sessions.[20] The results of interview-based motivational interventions for people with schizophrenia can be effective at reducing symptom severity and hospitalization, and it can increase medication adherence, functions and insights into both diseases and treatment through the medium term (six months) follow-up period. In this study, n = 1,000 adolescents were screened and adolescents with results indicating anxiety or depressive symptoms (n = 162) were advised to seek psychological health care in the group.[21] The result showed that the MI results need to be offered to adolescents to function as models to optimize their health care management in daily clinical practice.

E. **For clients with alcohol disorders:** A study by Crane et al involved 60 offenders who were randomly asked to attend a brief motivational interview (BMI) session or control intervention before the start of their treatment.[22] The findings showed that binge drinkers had a lower medication adherence than the participants who did not binge-drink binge. The BMI participants who binge-drank attended more treatment sessions and were proved to have lower dropout rates than the binge-drinker control participants. Other studies have quantified the extent of MI in terms of adherence to a reduction in alcohol consumption and drug use.[23] Three contexts of general MI research evaluate the efficacy of MI, the effectiveness of MI and MI training. The results show that MI adherence is usually the lowest and most varied in the context of evaluating MI training and conversely, that adherence is usually the highest and lowest variable in the context of evaluating the efficacy and effectiveness of MI.

F. **Research on clients with kidney disease:** A research study by García-Llana et al was conducted to determine the effectiveness of individuals in the context of pre-dialysis intervention programs (90 minute monthly sessions over a 6-month period) in terms of adherence, their emotional state and quality of life as related to health (HRQL).[24] The results showed that after the intervention, the clients reported significantly higher levels of adherence, lower levels of depression and anxiety and better HRQL.

F. **Research on chronic diseases:** The study was conducted by Mutschler et al.[5] The purpose of the review is to understand how MI works to change the behavior of teenagers. **Results**: based on SDT (self-determination theory), three mechanisms were found in the studies that were reviewed, including competence, linkages and autonomy. Other researchers found there to be effectiveness in MI-based pre-treatment in the context of pain rehabilitation.[25] Another study was conducted on 1000 adolescents with this single-center approach. Adolescents were screened if their results indicated anxious or depressive symptoms (n = 162).[21] The results showed that MI for adolescents can serve as a model for optimizing health care management in daily clinical practice. Other studies obtained results indicating that MI techniques that can provide effective and essential costs in terms of functional activities, thus reducing the rate of decline in quality of life.[4] Research by Pirlott et al addresses the counselor's enthusiasm, empathy and global direction, as well as calculating the behavior that is consistent with MI which correlates significantly with an increased intake of fruits and vegetables.[26]

Discussion

The main components of MI are RULE. MI has four guiding principles, represented by the aforementioned acronym. "R" stands for "resisting the righting reflex." Reflexing righting occurs immediately when showing the risks or problems with the client's current behavior. "U" is to "understand client motivation". Clients have their own reasons for adhering to behavior changes. "L" stands for "listening." Listening involves more than just using one's ears to hear the words that the client says. Listening is not the same as asking. "E" stands for "empowering clients", in order to explore the clients' ideas about the changes that they can make to improve their health. Empathy is an important skill in MI. Empathy does not judge and it does not indicate that the counselor always agrees with the client. It demonstrates how the counselor can be patient. The approach to the MI's skills is represented by the OARS acronym: open questions, affirmations, reflective listening and summaries. Open questions are unstructured and do not suggest a response. Affirmation is a statement that recognizes the strength of the client and this helps the counselor to create relationships with their clients. Listening or reflecting reflectively is another important MI skill. Using reflection allows the counselor to convey the counselor's understanding of the client's situation and to make the client feel understood.

Conclusion

MI is an interview style designed to promote behavior change and it is defined as a set of targeted communication skills to motivate clients to change their own behavior in the interest of their health.

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