



ORIGINAL RESEARCH PAPER

Dental Science

MOTIVATIONAL INTERVIEWING AND APPLICATIONS IN DENTISTRY.

KEY WORDS: Motivational interviewing, Motivation, behavioral change, Traditional dental health education, patient communication

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ABSTRACT

Motivational Interviewing is patient counseling technique which has been utilized effectively for a wide range of health behaviors. Being an effective behavior change method, it has applications in diverse field of medicine including dental practice setting. Dental diseases particularly dental caries and periodontal diseases are chronic diseases which are usually the result of faulty life styles. So life style modifications can be achieved through the use of motivational interviewing. Motivating patients to adopt healthy life styles related to oral health behaviors can be a promising step in prevention of such diseases. Motivational interviewing can be used as a brief intervention to increase motivation to improve patients' oral hygiene behaviors as well as providing a framework for delivering diet, smoking cessation, oral health changes, and alcohol advice.

INTRODUCTION

Literature shows much research on chronic disease prevention which focused on behavioral outcomes like smoking cessation, weight loss, increase in physical activity. Positive changes in health behaviors are predictors of decreased risk for development of disease. Change in behavior is an important outcome in prevention efforts. Various theories of health-behavior change provide important perspectives on the factors that promote behavior change and maintenance, including Social Learning Theory,¹ the Health Belief Model,² the Theory of Reasoned Action,³ the Transtheoretical Model,^{4, 5} and the Precaution Adoption Model.⁶ All these theories put forth different forerunners which bring about change, but self efficacy, decisional process, social support and vulnerability have been identified as important. All the factors which bring about the behavior change need to be strengthened. Prevalent point in all these theories is the importance of motivation to change behavior. In the 1970s and 1980s the research on Behavior change focused on the development of the skills needed to change behavior by these theoretical models.⁷

What is motivational interviewing?

Motivational interviewing (MI) is a counseling approach developed in part by clinical psychologists William R. Miller and Stephen Rollnick. It is a directive, client-centered counseling style for eliciting behavior change by helping clients to explore and resolve ambivalence. The examination and resolution of ambivalence is a central purpose, and the counselor is intentionally directive in pursuing this goal.⁸ MI is most centrally defined not by technique but by its spirit as a facilitative style for interpersonal relationship.⁹

MI was first described by Miller (1983) in an article published in the journal, Behavioural and Cognitive Psychotherapy. Miller and Rollnick elaborated on these fundamental concepts and approaches in 1991. Motivational interviewing (MI) is a person-centered strategy.¹⁰ It is used to elicit patient motivation to change a specific negative behavior. MI engages clients, elicits change talk and evokes patient motivation to make positive changes.

Unlike clinical interventions and treatment, MI is the technique where the interviewer (clinician) assists the interviewee (patient) in changing a behavior by expressing their acceptance of the interviewee without judgement.¹⁰ By this, MI incorporates the idea that every single patient may be in differing stages of readiness levels and may need to act accordingly to the patient's levels and current needs. Change may occur quickly or may take considerable time, depending

on the client. Knowledge alone is usually not sufficient to motivate change within a client, and challenges in maintaining change should be thought of as the rule, not the exception. The incorporation of MI can help patients resolve their uncertainties and hesitations that may stop them from their inherent want of change in relation to a certain behavior or habit. clinicians need to have well-rounded and established interaction skills including asking open ended questions, reflective listening, affirming and reiterating statements back to the patient.¹¹ The practice of MI is based on following five principles.^{12,13}

1. Express empathy
2. Develop discrepancy
3. Avoid arguments
4. Roll with resistance
5. Support self-efficacy

There are four steps used in motivational interviewing. All these steps prepare a way to establish trust and connection between the patient and the clinician. Using these steps clinician can point out reasons for particular behavior change or holding out to a behavior and can concentrate on areas needed to change. These four points are:¹⁴

- Engaging
- Focusing
- Evoking
- Planning

Motivation to change may vary in different patients who require customized interventions according to patients readiness to change. Patients can be generally categorized into (1) those not ready for change, (2) those who may be ambivalent or unsure about change, and (3) those who are ready to change.^{15,16} In MI clinician respects the patient's autonomy and acknowledges patients readiness level to change that they are not ready to change. The clinician gives information with the patient's permission. Any solutions explanations should be given with permission. If the patient is unsure, the clinician's role is to explore ambivalence further and build on the motivation and confidence to change.¹⁵

It is a guiding clinical style that allows patients to reflect on their own motivation to change.¹⁷ Here the patient is in driver seat and the clinician is in passenger seat as an expert guide.

The Spirit of MI includes four aspects¹⁷:

Partnership: Working together with equal input from patient and clinician, respecting patient autonomy.

Acceptance: understanding the patient's perspective and not being judgmental; ensuring that we focus on their positive health behaviors and support them with their self-efficacy to change unhealthy behaviors.

Compassion: supporting patients who may be struggling with behavior change, showing real compassion and empathy towards them.

Evocation: is an attempt to explore what is important to the patient and how they would like to make a change. Skills and methods used to communicate effectively with patients in MI are-(OARS)¹⁸:

OARS

1. Open-ended questions: facilitate a dialogue between the clinician and patient so that the patient is encouraged to speak and the clinician listens.
2. Affirmations: notice and name what is positive and helpful to change, show that they are special, and give hope, support and self confidence. Acknowledge that behavior change is difficult but possible.
3. Reflective listening: this is about listening and understanding what the patient has expressed. It enhances the relationship between the clinician and the patient, encouraging them.
4. Summarizing: this demonstrates that the clinician has listened to the patient and provides a concise overview of what has been discussed. This may also support dealing with ambivalence.

Applications of motivational interviewing in dentistry

MI represents a total reenvasion and a reforming change in dental intervention. Practicability of MI in dental setting is a matter of reluctance among dental professionals. Effective MI counseling could be done by dental personnel if they receive short training and practice.

1. Pediatric dentistry and motivational interviewing

Dental caries is one of the life style diseases. It is a chronic disease with multifactorial origin. Life styles which adapt healthy behavior like regular tooth brushing, proper diet and timely dental visits helps to prevent it.^{19,20} Promoting healthy dental lifestyles is identified by the WHO as a priority and strategic orientation for oral health promotion.²¹

Caries is a behavioral disease. To treat the cause of caries behavior needs to be changed and Behavior change in Pediatric dentistry starts with the mindset of the dental professional. Oral health practices like regular tooth brushing and oral care which can be established in early years of child's life depends on parental/caregiver behaviors. So the beliefs, attitudes, self-efficacy of the care givers and social circumstances are important factors which will affect oral health-promoting behaviors in the ECC development.^{22,23}

Reviewers have cited MI as the most promising intervention for the control of Early Childhood Caries.²⁴⁻²⁶ Evidence-based behavior change models can be used successfully in dentistry for effective oral hygiene programs.²⁷⁻²⁹ Literature shows that MI can be effectively used to control and prevention of caries. Clinical trials on prevention of ECC engaging pregnant women and mothers of young children have shown the effectiveness of MI.^{28,29}

Harrison et al. in their study involving indigenous children in Quebec, Canada, found that MI had an impact on the severity of caries.²⁸ Successful communication and behavioral interventions between parent/caregiver and an oral health provider can bring about positive changes in decision making related to risk behavior promoting development of ECC.²⁸

Ismail et al evaluated the effectiveness of a tailored educational intervention using two educational groups – the intervention group (MI + DVD) in which the interviewer engaged the caregiver in a dialog on the importance of and

potential actions for improving the child's oral health. After the MI session, the caregivers developed their own preventive goals²⁷.

Healthy habits can be established and sustained for life time if they are taught at early childhood stage. And also there is benefit that parents also are more receptive at this stage.³⁰ Early childhood is a period where behavioral interventions will be more fruitful. Cultivating dentally healthy habits among preschool children, whose permanent teeth will later erupt, would maximize the chance of a caries-free permanent dentition throughout a lifetime³¹. Health education focuses on delivering information or knowledge and providing advice. Conventional Dental Health Education (DHE) improves the knowledge but use of this knowledge in changing dental behavior is less. It is not translated to sustained changes in behavior.³² This is the disadvantage of traditional DHE which can be overcome by use of MI.

System dynamics model which contained various interventions singly and in combination had great effect on reducing caries experience and cost. MI is one of the combinations utilized in such model.³³ Weinstein et al showed that MI with appropriate follow up can reduce cavity prevalence by 63%.³⁴ Manchanda et al. concluded that motivational intervention was effective in reducing dental decay in children as compared to other techniques.³⁵ Authors showed the evidence that using an MI approach to deliver oral health information had positive effect on parent/ care givers knowledge, attitude and behaviors compared to traditional dental health education. in Trinidad.³⁶ Kapoor et al compared the behavioral change in parents of children at high risk for caries following two dental education interventions – motivational interviewing (MI) and traditional dental health education. They found that a single MI intervention changed the reported oral health behaviors better than the traditional approach.³⁷

2. Tobacco cessation

MI can be effectively used for prevention of oral cancer in patients who are chronic tobacco users.

3. Periodontal therapy

The use of MI as an adjunct to periodontal therapy might have a positive influence on clinical periodontal parameters like plaque values, gingival and periodontal inflammation and psychological factors related to oral hygiene like self efficacy³⁸.

4. Patients with hyposalivation

The applications of oral hygiene instructions based on cognitive principles and MI offers benefits for periodontal health.³⁹

5. MI and dental hygienist

It is a key tool to motivate patients to adopt positive health behaviors and assume responsibility for their health. As prevention specialist dental hygienist should apply evidence based approaches to support behavior changes that effectively prevent diseases and promote oral and systemic health.⁴⁰

Other applications of motivational interviewing

Motivational interviewing was initially developed for the treatment of substance use disorder but recently MI is continuously being applied across health fields and beyond that. Following are applications of MI

1. Health coaching

Motivational interviewing has been implemented in health-based coaching to aid in a better lifestyle for individuals. The use of MI resulted in increase in self efficacy, life style change and perceived health status.

2. Substance use disorder

MI has been used in the treatment of substance disorder,

where it helped to eliminate temptations which lead to disorder and create health environment.

3. Parenting

The application of MI with parenting can significantly impact outcomes regarding the children of the parent. It is been used by child parenting coach and psychologists to counsel parents for better parenting styles which will help to groom up children in healthy and stress free and friendly environment.

4. Alcohol dependence

MI along with its use in substance abuse has been used for treating patients with alcohol dependence

5. Stigma Reduction

Stigma is the deleterious, structural force that devalues members of groups that hold undesirable characteristics. HIV-related stigma has negative effects on health outcomes, including non-optimal medication adherence, lower visit adherence, higher depression, and overall lower quality of life. HIV-related stigma causes people living with HIV to lose social standing. MI can be utilized to counsel such persons. It is also used to reduce stigma towards mental illness and schizophrenia.

6. Weight reduction

Emerging research shows the contribution of MI to weight loss treatment. Behavioral weight loss management shows great scope to MI.⁴¹

7. Smoking intervention

MI appears to have efficacy for smoking cessation.⁴²

8. Diabetes and life style modification

MI exist as an effective way of enhancing diabetic treatment through helping patients to address their barriers to behavior change and MI can be used as preventive intervention as well as treatment method.^{43,44}

LIMITATIONS

1. Underlying mental health conditions - Patients with an underlying mental illness present limitation to motivational interviewing.
2. Pre-contemplation - Patients in the pre-contemplation stage of the stages of change present a further limitation to the model. If the patient is in this stage, they will not consider they have a problem and therefore are unlikely to be receptive to motivational interviewing techniques
3. Group treatment - Although studies are somewhat limited, it appears that delivering motivational interviewing, in a group may be less effective than when delivered one-on-one.

CONCLUSION

Motivational Interviewing is particularly based on initiating change within a constructive working relationship. For some behaviors MI has strongest effect on motivation and become a cornerstone of various approaches in which motivation is first addressed. It is an effective behavior change method, which can be utilized in the dental practice setting.

It can be a effective intervention to motivate patients to improve their oral hygiene behaviors as well as providing a framework for delivering diet, smoking cessation, and alcohol advice. Motivational Interviewing produces behavior change in a safe, non-judgmental and supportive environment to enable patients to take control of their behaviors. Motivational Interviewing contributes to both shared decision-making and patient-centered care. It can also be used for a range of behaviors relevant to both oral and general health, thereby improving patient outcomes.

Motivation becomes much easier when the task is shared; we as a dental professional can share the task to help our patients to achieve their dental aims. It requires effort, caring and persistence.

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