

Brief Motivational Interventions

Strategies for Successful Management of Complex, Nonadherent Dental Patients



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KEYWORDS

• Motivational interviewing • dental settings • substance abuse

KEY POINTS

- Motivational interviewing (MI) is an evidence-based approach to resolving patient ambivalence to change.
- MI techniques can be effectively used by dentists in assessing and managing substance use risk and may add minimal time to the patient interview.
- Although MI's greatest utility has been in the area of improving general oral hygiene in order to reduce caries and other preventable conditions, its use in addressing controlled substance risk is well established in other health care disciplines.
- These techniques do not require special training in mental health assessment and can be effectively used by dentists and dental hygienists.

INTRODUCTION

Motivational interviewing (MI) has been used in various forms in dental medicine for more than 20 years, with a review of the literature indicating that its applications have focused to a greater extent on general dental health than on substance misuse and abuse issues. This focus on the use of MI primarily for issues of general oral health is not surprising, because much of oral health (eg, prevention of pediatric cares) is

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contingent on self-management,¹ with a 2016 systematic review² concluding that oral health education for patients is provided most effectively within the context of an MI approach. Several studies and reviews have concluded that MI training in general dentistry results in improved oral health and oral health knowledge,^{3,4} and recent research indicates that MI training is progressively being successfully integrated into undergraduate and postgraduate dental and dental hygiene training.^{5–7} The ultimate goal is to provide dentists and dental hygienists with the professional communication and listening skills required to achieve trusting relationships with patients before the completion of their training. This goal will allow them to enhance history taking as well as treatment planning and thus to provide the appropriate dental health care in a setting of a nationwide substance use crisis.

ALCOHOL ABUSE

Given that MI has its roots in addiction treatment, some of the earlier clinical applications and empirical investigations of the efficacy of MI in dentistry pertained to reducing the use of potentially dangerous substances. An early review by Smith and colleagues⁸ addressed the benefits of an MI approach to patients with maxillofacial pain who were traumatically injured while intoxicated by alcohol. The investigators noted that many of these patients were binge drinkers and were not particularly amenable to more direct behavioral change approaches. They noted that those with facial injuries were often overwhelmed by feelings of vulnerability, so clinic visits presented an opportune setting and time for brief MI interventions, because the patients' vulnerability enhanced readiness to change. Smith and colleagues⁸ were not graniose in their experiences and expectations, suggesting that such an approach would require only a brief amount of time to implement, and that perhaps 10% of such patients would alter their self-destructive drinking behavior consequently. A more recent study of MI for dental patients with alcohol-related facial trauma⁹ in which behavioral intervention was provided by nurses yielded encouraging results. At 12 months post-intervention, those patients who received brief MI had reduced their alcohol consumption significantly more than the control group, which received educational pamphlets on alcohol misuse. In addition, a 2017 narrative review¹⁰ determined that an abridged form of MI that the investigators called a brief alcohol intervention is effective in reducing reinjury occurrence and modifying alcohol intake, and recommended that patients with alcohol-related facial injury presenting to emergency departments should be treated with such interventions.

In addition to studies of the efficacy of MI for prevention of alcohol-related facial injuries, there exists a robust body of empirical literature supporting MI for alcohol abuse generally. Further, there is literature emphasizing the need for dentists to screen for alcohol abuse for purposes of oral cancer prevention. A 2006 study¹¹ found that more than 75% of dental patients approved of dentists screening and counseling regarding inappropriate consumption of alcohol. However, irrespective of the formidable body of literature in medicine and psychology supporting MI for the treatment of hazardous drinking more generally,^{12–16} studies have not addressed this treatment approach in the dental literature. This omission may be caused by dentists' senses of embarrassment and perceived incompetence in addressing problematic alcohol use, despite their beliefs that doing so is beneficial to their patients.¹⁷ Neff and colleagues¹⁸ performed a comprehensive review of all articles published in the *Journal of the American Dental Association*, *Journal of Dental Education*, and the *Journal of Public Health Dentistry* between 1980 and 2010, finding that a total of only 2 articles addressing alcohol cessation counseling (both in the *Journal of the American Dental Association*)

were published during this 30-year period. Neither of these articles^{19,20} makes any mention of MI. However, since 2011, an empirical investigation of MI in dental settings for reducing alcohol consumption has appeared. Neff and colleagues²¹ developed and applied a screening and brief intervention protocol (a principal component of which was MI) in a cluster-randomized trial to successfully reduce consumption quantity and frequency of alcohol use. Dental providers should be comfortable screening patients for potential alcohol use disorder and be prepared to recognize the most common general warning signs associated with alcohol abuse, such as irritability and/or extreme mood changes, isolation from friends and family members, or drinking alcohol to deal with stress, as well as the usual oral red flags such as poor oral hygiene and high prevalence of caries and periodontal disease. If these signs are present, the dentist or dental hygienist should take action accordingly and refer the patient to a local substance use specialist immediately. Appropriate motivational interview strategies facilitate a fluid communication based in mutual respect and appreciation between the dental provider and the patient, which helps more effectively address any potential substance use issues that might exist.

TOBACCO USE

Numerous studies of MI in dentistry relating to smoking cessation appear in the literature. An early study was published by Koerber and colleagues,²² in which the investigators found that dental student training in brief MI resulted in students using more brief MI techniques in their counseling of patients regarding smoking cessation. A more recent article²³ on integrating smoking cessation advice and support into daily dental practice highlighted the need for training dentists in MI. When combined with brief advice, MI in the dental setting has been shown to promote smoking cessation.²⁴ Although the randomized controlled trial did not address smoking, per se, Severson and colleagues²⁵ found that MI in military dental clinics was effective for reducing smokeless tobacco use. The efficacy of MI for smoking cessation has been addressed to a considerable extent in the general medical literature,^{26–30} which may explain why the second European Workshop on Tobacco Use Prevention and Cessation for Oral Health Professionals³¹ issued a consensus recommendation for the use of MI by oral health professionals for smoking cessation. Not surprisingly, a few recent studies of the benefits of MI for smoking cessation in medical settings used telephonic^{32–34} and Internet-based^{35,36} interventions, which suggests that such cost-effective telehealth and Internet-based approaches could potentially be clinically effective and cost-effective in dental settings as well. Routine dental checkups represent a good opportunity to promote smoking prevention as well as to promptly identify potential tobacco use disorder. Dental providers' communication and listening skills play an important role in educating patients on the impact of smoking tobacco in both general and oral health, as well as on the numerous benefits of smoking cessation.

ILLICIT DRUG USE

Although myriad studies of the efficacy of MI for prevention and reduction of illicit substance abuse have appeared in the literature over the past quarter century, the dearth of such in the oral health literature serves to limit conclusions that can be drawn with complete confidence. This limitation is consistent with a 2016 evidence synthesis of MI in general dental practice,² in which the investigators noted that although 20,000 articles on MI had been published since 1983, randomized controlled trials accounted for only 200 of these. Their inclusion criteria yielded only 52 studies of MI that could be applied to general dental practice, only 8 of which were of sufficient quality for

inclusion in their systematic review. None of the 52 studies addressed illicit substance abuse. Accordingly, dentists interested in MI approaches will be required to extrapolate from the general medical, psychiatric, and substance abuse literature. Over the years, MI approaches have been effective in reducing the use of various types of drugs, including illicit, nonprescription opioids,³⁷ marijuana,³⁸ cocaine,³⁹ and methamphetamine.⁴⁰ Although approximately 6% of the population in the United States have an addiction,⁴¹ a review of the literature indicates no current data on the incidence of illegal substance use in dental practice; irrespective, it can be surmised that it is common. Thus, clinicians' abilities to effectively use MI techniques over the course of their relationships will potentially benefit certain patients (particularly those that have not yet developed a severe substance use disorder) without threatening the sanctity of their patient-provider relationships.⁴²

By a wide margin, cannabis remains the most abused illicit drug worldwide.⁴³ In addition to myriad of health concerns associated with its use as levels of delta-9 tetrahydrocannabinol (THC) increase,⁴⁴ there are concerns regarding cannabis use that are unique to dentistry. Many of these concerns pertain to smoking, which remains the most common form of introducing the drug to people's systems.⁴⁵ In dental medicine, primary concerns associated with cannabis use include dry mouth and poor oral hygiene in cannabis users contributing to caries,⁴⁶ soft tissue diseases (eg, gingival enlargement, thought to relate to the high combustion temperature of cannabis compared with tobacco),⁴⁷ fungal infections such as oral candidiasis,⁴⁸ and oral cancers.⁴⁹ Cocaine and crack use have also been linked to dental problems, including periodontitis,⁵⁰ oral mucosal lesions,⁵¹ and palatal perforation.⁵² Methamphetamine may be the substance of abuse that has gained the most notoriety over the past 2 decades, with the destruction caused by the habit causing an oral condition known as "meth mouth". In a clinical dental hygiene appointment, generalize, dark, heavy staining associated with methamphetamine use were associated with more severe and frequent caries^{53,54} and poor oral hygiene during periods of extended use. Subsequent literature has associated its abuse with xerostomia,⁵⁵ bruxism,⁵⁶ dental necrosis specifically at the roots of the anterior maxillary teeth,⁵⁷ oral cancers,⁵⁸ and pain (more than half of methamphetamine users in a recent study⁵⁹ reported painful aching in their mouths, discomfort in eating, and consequent avoidance of certain foods). Complicating care are the financial difficulties of chronic methamphetamine abusers, which often leaves extraction of affected teeth as the only dental option.⁶⁰ Because of the loss of teeth, a 2010 study⁶¹ found that, despite their relative youth (36.5 years of age), 60% of habitual methamphetamine users were missing a mean of 4.58 teeth (excluding third molars), with 13.3% of the sample already wearing dentures. As a result of dental issues, 28.6% of these patients expressed concern with their dental appearance. The dental hygiene process of care includes a full mouth evaluation. Part of the evaluation involves the use of MI to gain knowledge on frequency of dental visits, health history, and chief concerns. Severe discoloration accompanied by a dry mouth warrants more information on diet, water consumption, and tobacco use, which is used as a gateway question into recreational drug use.

Although numerous studies of the efficacy of MI for reducing and eliminating methamphetamine use appear in the general literature, no such empirical investigations have been published specific to dental medicine. Once again, extrapolation from these studies seems reasonable. A 2015 study noted, "In addition to using dental treatment to improve morale and self-esteem, the concerns about appearance could be used as the basis for brief behavioral interventions in dental settings."^{62(p883)} Based on its track record in the treatment of substance abuse disorders, MI in the dental setting can be considered a brief behavioral intervention of choice among this patient population.

OPIOID USE

Working toward safer and more effective opioid prescribing is another aspect of dental practice in which additional work is imperative. Dentists were indicted during the prescription opioid crisis in the United States for overprescribing during the height of the crisis. For example, in 2011, they were responsible for the prescription of 12% of all immediate-release opioids in the United States, with family practitioners identified as the only group prescribing more.⁶³ However, to their credit, dentists' decrease in prescribing between 2007 and 2012 was exceeded only by that of emergency department physicians.⁶⁴ Irrespective, many believe that dental prescribing rates in general are still too high.⁶⁵ Numerous efforts continue to be made to reduce opioid prescribing in dentistry. However, there is little current literature on dealing with individual cases of opioid aberrancy in oral health settings.

As in medicine, improving opioid adherence in dental medicine is crucial in order to make practice safer. In medical settings, MI has been found to be a useful tool to improve medication adherence. For example, a 2014 review⁶⁶ of studies of interventions combining cognitive behavior therapy and MI yielded a conclusion of efficacy regarding medication adherence, generally, with a more recent study of older adults with chronic pain at risk for opioid misuse⁶⁷ determining that MI increased opioid adherence more specifically. MI has also been found to be a useful tool for enhancing outcomes of opioid tapering.⁶⁸ However, in dentistry, there is a complete absence of empirical literature addressing the issue of opioid adherence, with only minimal investigation of medication adherence in general.⁶⁹ Accordingly, dentists interested in applying MI with regard to opioid adherence will need to extrapolate from data from studies of such an approach in nondental medicine (discussed earlier) if they are invested in improving adherence and thus the safety of their practice patterns.

To consider MI in dental medicine as a tool to increase opioid adherence, it is important to consider conditions that result in chronic pain. Considerable progress has been made over the past decade to reduce opioid prescribing for acute pain, with an emphasis on consideration of nonopioid medications,⁷⁰ wider use of prescription drug monitoring programs,⁷¹ and prescription of smaller amounts of opioids after minor procedures (eg, third-molar extractions).⁷² Although these improvements have been caused largely by raising dentists' awareness and institution of specific opioid prescribing protocols, MI is not necessarily the most effective approach for addressing the expectations of patients who had thought that they would receive high dosages of opioid analgesics to treat postprocedure pain. Much of this expectation likely relates to histories of receiving unnecessarily high and potentially dangerous dosages of opioids postprocedure before the onset of the opioid crisis. However, strategies that have been effective in preventing overprescription of opioids for acute pain in dental medicine do not necessarily translate to conditions that may require longer-term analgesia. Even third-molar extractions, in some patients, can result in pain for lengthier periods. For example, Conrad and colleagues⁷³ determined that, at 7 days postextraction, as many as 15% of those undergoing third-molar removal rated their pain as severe. However, many legitimate chronic pain conditions are treated in dentistry, often with opioids. In addition, because addiction is now rampant in the United States in general, dentists are going to see patients for whom levels of risk for aberrancy are high.⁶³ These are the cases for which MI interventions for enhanced medication adherence are likely to be most valuable. For example, data indicate that orofacial pain conditions afflict over a quarter of the population, causing disability and a significant reduction of quality of life.⁷⁴ Although it has been posited that patients with chronic orofacial pain requiring opioid analgesia should undergo biobehavioral

evaluation,⁷⁵ finding mental health clinicians with suitable training and experience is not realistic in many areas.⁷⁶ As has been the case in pain medicine (as discussed earlier), MI has the potential to be a powerful clinical strategy for use in dental medicine, and accordingly should be considered appropriate in dental medicine as well.

SUMMARY

For almost half a century, MI has been used as a clinical strategy in the treatment of numerous conditions, most of which involve a significant degree of self-management. Based on the original work on MI by Miller and Rollnick,¹ it is not surprising that many of these conditions have been various types of substance abuse regarding which patients have been ambivalent about changing their behaviors. In dental medicine, a review of the literature indicates that MI's greatest utility has been in the area of improving general oral hygiene in order to reduce caries and other preventable conditions. Irrespective, the literature has shown effectiveness for reduction of the use of dangerous substances, most notably tobacco. However, there have also been a significant number of studies of MI in dentistry as a tool for reducing alcohol abuse, many of which relate to alcohol-related facial trauma.

That such a minute percentage of the thousands of studies on MI in dental medicine have been randomized controlled trials is troubling, because, although the authors have been compelled to extrapolate from studies of MI in general and addiction medicine, the paucity of robust empirical literature has perhaps had an unfortunate adverse impact on the number of dentists willing to use MI to treat substance abuse in their practices more generally. That dentists need help in improving their evaluation and treatment of substance abuse is demonstrated by a study by Parish and colleagues,⁷⁷ in which, although more than three-quarters of dentists reported that they questioned patients about issues of substance abuse, two-thirds of those surveyed considered substance abuse assessment to be outside their professional roles. The irony of this professional ambivalence is not lost in this examination of dentists' use of MI, a strategy that gently exploits patients' own ambivalences regarding behavioral change.

Beyond general oral hygiene and the use of tobacco and alcohol, the extrapolation of data on MI from other areas of medicine in which substance abuse treatment occurs is necessary in order to ascertain a reasonable evidence basis in dentistry. Given the prevalence of addiction in American society and data indicating that oral health is very important to 85% of the population,⁷⁸ dentists are among the health care providers that individuals see most regularly, thereby putting them in an excellent position to evaluate and perform brief, effective treatments such as MI for their patients at risk for substance abuse. Furthermore, although most dentists in practice work primarily with acute pain conditions (for which the MI approach has not been determined to be of great efficacy), the incidence of chronic orofacial pain that may require longer-term opioid analgesia suggests that MI should be a useful tool in the treatment of these patients, particularly those at higher risk of opioid aberrancy.

In conclusion, MI has built a strong following, with the body of published literature on the topic already impressive. However, more randomized controlled trials are sorely needed to further bolster the evidence basis, particularly in many areas of dental medicine. It is hoped that this article has familiarized the reader with the great potential benefits of MI as a treatment strategy in areas of dentistry in which substance misuse/abuse is often found, and that more dentists will avail themselves of training in this exciting and rewarding treatment approach.

ACKNOWLEDGMENTS

This work was funded in part by a grant from the Coverys Community Healthcare Foundation.

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