Short communication

Effect of teaching motivational interviewing via communication coaching on clinician and patient satisfaction in primary care and pediatric obesity-focused offices

Kathryn I. Pollak [a,b,*], Paul Nagy [c], John Bigger [d], Alicia Bilheimer [a], Pauline Lyna [a], Xiaomei Gao [a], Michael Lancaster [e], R. Chip Watkins [e], Fred Johnson [f], Sanjay Batish [g], Joseph A. Skelton [h], Sarah Armstrong [i]

[a] Cancer Control and Populations Sciences, Duke Cancer Institute, Durham, USA
[b] Department of Community and Family Medicine, Duke School of Medicine, Durham, USA
[c] Department of Psychiatry, Duke School of Medicine, Durham, USA
[d] Southern Regional AHEC, Fayetteville, USA
[e] Community Care of North Carolina, Raleigh, USA
[f] Division of Community Health, Department of Community and Family Medicine, Duke School of Medicine, Durham, USA
[g] Batish Family Medicine, Leland, USA
[h] Department of Pediatrics, Wake Forest School of Medicine, Winston-Salem, USA
[i] Department of Pediatrics, Duke School of Medicine, Durham, USA

ARTICLE INFO

ABSTRACT

Objective: Studies indicate needed improvement in clinician communication and patient satisfaction. Motivational interviewing (MI) helps promote patient behavior change and improves satisfaction. In this pilot study, we tested a coaching intervention to teach MI to all clinic staff to improve clinician and patient satisfaction.

Methods: We included four clinics ($n = 29$ staff members). In the intervention clinics (one primary care and one pediatric obesity-focused), we trained all clinic staff in MI through meetings as a group seven times, directly observing clinicians in practice 4–10 times, and providing real-time feedback on MI techniques. In all clinics, we assessed patient satisfaction via anonymous surveys and also assessed clinician burnout and self-rated MI skills.

Results: Clinicians in the intervention clinics reported improvements in burnout scores, self-rated MI skills, and perceived cohesion whereas clinicians in the control clinic reported worse scores. Patient satisfaction improved in the intervention clinics more than in the control clinics.

Conclusion: This is the first study to find some benefit of training an entire clinic staff in MI via a coaching model.

Practice implications: It might help to train staff in MI to improve clinician satisfaction, team cohesion, perceived skills, and patient satisfaction.

© 2015 Elsevier Ireland Ltd. All rights reserved.

1. Introduction

Motivational interviewing (MI) has 30 years of evidence showing its positive effect on patient health and satisfaction [1]. MI has only recently been introduced into health care encounters and has much less evidence of its efficacy. Some studies suggest its promise however [2,3]. It is suggested that when clinicians use MI and their patients make more changes, clinicians will find their career more satisfying and feel less burnout. This has not been studied yet, though. MI includes understanding patients' perspectives, recognizing and accepting desire for change, facilitating collaborative solutions, motivation via "change talk," affirming autonomy, and mobilizing commitment to action.

Despite the promise of MI, teaching physicians MI using in-person trainings or online modules is challenging: curricula lack standardization, teaching is difficult to disseminate, and few include real-world feedback [3–9]. Our previous online interventions included audio recording and coding of encounters, and were

costly and time consuming. The long-term effect of these online interventions is unknown.

A promising adult-learning strategy for teaching interpersonal skills is *communication coaching*: the shadowing of participants and giving immediate feedback. This pilot's aim was to test an MI communication coaching model in primary care and pediatric obesity-focused clinics. We hypothesized that in the intervention clinics (1) patients would report greater provider satisfaction and (2) clinicians would report less burnout and greater mastery of MI skills.

2. Methods

2.1. Recruitment

This protocol was approved by the Duke University School of Medicine IRB. Two primary care and two pediatric obesity-focused clinics participated in the study. The primary care clinics were randomized to control or intervention; the pediatric clinics were assigned, given the proximity of one of the clinics to the MI preceptors. Clinicians in all four clinics gave written consent and completed baseline and post-intervention surveys.

2.2. Intervention

Coaches trained intervention staff using a comprehensive approach. (1) Coaches provided a one-hour overview of MI to the group and repeated group coaching sessions monthly. (2) Coaches shadowed staff and clinicians in actual encounters, and provided feedback on up to 10 encounters. Using MI techniques, coaches affirmed and labeled effective behaviors and had clinicians and staff problem-solve on how to handle the harder parts of the encounters. Coaches provided feedback to clinicians on opportunities to use MI techniques. (3) Coaches provided written and timely feedback on each observed encounter, including "MI Spirit" (collaboration, acceptance, evocation, and compassion), the OARS (open-ended questions, affirmations, reflections, and summaries), and the four processes (engaging, focusing, evoking, planning). Staff and clinicians in the control group provided standard care.

2.3. Baseline measures

We assessed clinician and staff age, gender, race, ethnicity, years since medical/physician assistant/nursing school (for clinicians only), and prior MI training (including behavioral change counseling and MI techniques training).

We assessed patient satisfaction in all clinics two days pre- and eight days post-intervention. We used the Session Rating Scale (SRS) to anonymously rate patient satisfaction in the primary care clinics [10]. This scale has 4 items on a 10 cm visual analog scale with a possible score of 40; a score of at least 36 indicates adequate satisfaction. In the pediatric clinics, we learned from our work in the primary care clinic and changed our patient survey to assess patient-perceived clinician empathy via anonymous surveys with a summed 10-item scale ($\alpha = 0.95$; e.g., "Thinking about your visit

with your doctor, how was your doctor at fully understanding your concerns?" (1 = Not at all good to 5 = Extremely good)) [11].

We assessed clinician satisfaction in the pediatric clinics pre and post-intervention using the Maslach Burnout Inventory, $r = 0.82$ [12] that has three subscales: emotional exhaustion, depersonalization, and personal accomplishment. We also assessed how much clinicians felt they were working together as a team, "How cohesive do you feel the entire clinic staff is," (1 = Not at all cohesive, 5 = Extremely cohesive) and "How much do you feel entire clinic staff has a common goal?" (1 = Does not have a common goal, 5 = Totally has a common goal). We assessed clinician and staff uptake of MI methods using the 12-item Motivational Interviewing Assessment: Supervisory Tools for Enhancing Performance [13].

We assessed four barriers to discussing behavior change [14], and assessed confidence in using 6 MI techniques. Finally, we assessed clinicians' perceptions: have they changed clinical practice as a result of coaching, was coaching worth their time, and would they recommend coaching to a colleague.

2.4. Analyses

We used SAS (Version 9.2: SAS Institute, Cary, NC) to examine differences in outcomes. We used multilevel mixed models (GLM) to include treatment arm, time and baseline covariate for each primary and secondary outcome.

3. Results

Table 1 shows demographic characteristics of the 29 clinicians included in the study.

3.1. Patient satisfaction

In the primary care clinics, we collected 264 anonymous patient satisfaction surveys over 18 days, including 2 days prior to the intervention. We found increases in satisfaction among patients surveyed post-intervention compared to pre-intervention in the intervention arm but not in the control arm. Patients in the control clinic started with high satisfaction scores that did not change over time ($M = 37.4$, SD = 4.4, vs. $M = 37.4$, SD = 6.0). In the intervention clinic, patients' ratings were lower pre-intervention ($M = 36.5$, SD = 5.9), and improved post-intervention to exceed the 36 score threshold ($M = 37.8$, SD = 2.8).

In the pediatric clinics, we surveyed 114 patients over 10 days, including 2 days prior to the intervention starting. Patients in both the control and intervention clinics showed slight increases in perceived empathy from pre- to post-intervention: (control: $M = 46.3$, SD = 4.4, vs. $M = 47.7$, SD = 3.5; intervention: $M = 44.2$, SD = 5.3, vs. $M = 45.9$, SD = 6.5).

3.2. Physician satisfaction, team cohesiveness, and self-rated skills

We found differences in pre- and post-intervention burnout scores for all three subscales, clinician self-rated MI skills, and

Table 1
Clinician characteristics.

Characteristic	Overall (N = 29) M (SD)/%	Intervention (N = 14) M (SD)/%	Control (N = 15) M (SD)/%
Age (M, SD)[a]	43 (11.3)	44 (9.0)	41 (13.5)
White/Asian race (%)	97	93	100
Female (%)	90	93	87
Specialty pediatrics (%)	48	50	47
Prior MITI training (%)[b]	74	64	85

[a] Three clinicians did not report age (intervention: n = 1 and control: n = 2).
[b] Two clinicians in control arm did not report prior MITI training.

Table 2

Physician burnout, teamwork, MI assessments and barriers pre and post intervention.

	Control				Intervention			
	Before		After		Before		After	
	M	95% CI	M	95% CI	M	95% CI	M	95% CI
Burnout								
Depersonalization[a]	2.0	1.0–3.1	2.8	1.8–3.9	2.4	1.5–3.3	0.9	−0.0–1.8
Emotional burnout[a]	17.4	13.4–21.7	18.1	14.0–22.3	19.4	15.8–23.0	12.3	8.6–16.1
Personal accomplishment[b]	38.4	34.5–42.3	35.7	31.8–39.7	37.4	34.0–40.7	42.5	39.0–46.0
Teamwork								
Working as a team	4.5	4.2–4.9	4.6	4.3–5.0	4.4	4.2–4.7	4.9	4.6–5.2
Cohesive team	4.3	3.9–4.5	4.3	3.9–4.7	4.2	3.9–4.5	4.9	4.5–5.2
MI assessments								
Self-rated MI skills	64.6	60.4–68.9	60.7	56.5–65.0	63.8	59.8–67.8	71.2	67.0–75.4
Confidence to use MI	21.3	19.3–23.2	22.6	20.6–24.6	21.4	19.6–23.2	24.8	22.9–26.7
Barriers to discussing. behavior change								
No time	2.1	1.6–2.5	1.8	1.4–2.3	2.1	1.7–2.5	1.9	1.5–2.3
Not trained	1.5	1.2–1.8	1.3	1.0–1.6	1.6	1.3–1.8	1.2	0.9–1.5
Not provider's job	1.0	0.9–1.2	1.0	0.9–1.2	1.0	0.9–1.2	1.2	1.0–1.3
Patient does not want to talk	2.4	1.9–2.9	1.8	1.3–2.3	2.3	1.8–2.8	2.4	1.8–2.9

[a] A higher score indicates more burnout. [b] A higher score indicates less burnout.

group cohesiveness (Table 2). Clinicians and staff in the intervention arm had increased depersonalization scores (less burnout); clinicians in the control clinic had decreased scores (more burnout). Clinicians in the intervention arm also self-reported less burnout and higher personal accomplishment; no change was reported by the control group.

Clinicians in the intervention arm felt their team was more cohesive at follow-up whereas clinicians in the control group showed no improvement. Intervention clinicians showed improvement in self-rated MI skills whereas control clinicians showed declines. We found no differences for barriers or confidence in using MI.

Clinicians and staff in the intervention arm rated coaching very highly. Every member (100%) reported that they had made changes in their clinical practice as a result of coaching. They reported that they would increase their use of MI after coaching ($M = 4.6$, SD = 0.5 on a 5-point scale), that coaching was worth their time ($M = 4.6$, SD = 0.5 on a 5-point scale), and that they would recommend it to a colleague ($M = 5.0$, SD = 0.0 on a 5-point scale).

4. Discussion and conclusion

4.1. Discussion

This is the first study to teach MI to both staff and clinicians in a shared clinical environment. Coaching reduced clinician burnout, barriers for discussing behavior change, and improved self-rated MI skills. There were slight increases in patient satisfaction as well.

The results are promising as the intervention was delivered within the clinic, different from previous face-to-face formats that did not include feedback on actual encounters [3–8]. These findings are pertinent given the shortage of primary care clinicians and staff and the increased burnout experienced by all health care workers. Given the coaches focused on the positive aspects of their communication, praising clinicians who might feel ineffective might have increased their sense of personal accomplishment and their ability to empathize with patients rather than depersonalize them.

These findings also are encouraging given the shift in primary care to team-based care. Clinicians who received the coaching felt more cohesive with their colleagues, including their nurses, and front staff. The team-building facet of the pilots was an unforeseen benefit of the program; this aspect of the intervention is relatively easy to implement during monthly staff or lunch meetings.

This intervention can be quickly disseminated. The time burden on clinicians minimal—just a few minutes after encounters to debrief and monthly meetings. Clinicians mentioned that after that study they thought about "what would the coach suggest?" indicating the effect was maintained even after the coaching was concluded.

There were limitations to these findings; it was impossible to blind clinicians to the coaching. Thus, clinicians might have reported socially desirable responses and a Hawthorne effect. There was at least six months between the pre and post-intervention surveys; it is unlikely that clinicians remembered responses provided at baseline. Shadowing may have affected how patients interacted with clinicians; there is no way to assess this potential Hawthorne effect. Teaching physicians other patient-centered communication techniques might also have had positive effects, but we cannot ascertain this from this pilot. Finally, we did not assess patient behavior change.

4.2. Conclusion

Coaching is a promising approach to improving clinician and patient satisfaction as well as staff cohesiveness. Clinicians feel more skilled and more connected after a brief intervention.

4.3. Practice implications

Given clinicians' busy schedules, the growing shortage of primary care clinicians, and increased burnout level, simple interventions to teach MI via a coaching model could re-energize and improve clinicians and their teams.

Conflicts of interest

The authors have no conflicts of interest to disclose.

I confirm all patient/personal identifiers have been removed or disguised so the patient/person(s) described are not identifiable and cannot be identified through the details of the story.

All authors take responsibility for the integrity of the conclusions drawn in the paper. They have all added significantly to the science of the project and the writing of this manuscript. We have not published this paper elsewhere and no intent to do so while it is under consideration at *Patient Education and Counseling.*

The lead author affirms that this manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.

Kathryn I. Pollak: conceptualized study, conducted study, led manuscript preparation.

Paul Nagy: conceptualized study, conducted study, assisted manuscript preparation.

John Bigger: conceptualized study, assisted in manuscript preparation.

Alicia Bilheimer: assisted in conducting study, assisted in manuscript preparation.

Pauline Lyna: assisted in analyzing data, assisted in manuscript preparation.

Xiaomei Gao: assisted in analyzing data, assisted in manuscript preparation.

Michael Lancaster: conceptualized study, assisted manuscript preparation.

R. Chip Watkins: assisted in conducting study, assisted in manuscript preparation.

Fred Johnson: conceptualized study, assisted manuscript preparation.

Sanjay Batish: assisted in conducting study, assisted in manuscript preparation.

Joseph A. Skelton: assisted in conducting study, assisted in manuscript preparation.

Sarah Armstrong: assisted in conducting study, assisted in manuscript preparation.

Role of the funding source

References

[1] M.R. Miller, S. Rollnick, Motivational Interviewing: Helping People Change, 3rd ed., Guilford Press, New York City, 2013.

[2] L. Copeland, R. McNamara, M. Kelson, S. Simpson, Mechanisms of change within motivational interviewing in relation to health behaviors outcomes: a systematic review, Patient Educ. Couns. 98 (2015) 401–411.

[3] L.L. Soderlund, M.B. Madson, S. Rubak, P. Nilsen, A systematic review of motivational interviewing training for general health care practitioners, Patient Educ. Couns. 84 (2011) 16–26.

[4] M. Shershneva, J.H. Kim, C. Kear, R. Heyden, N. Heyden, J. Lee, et al., Motivational interviewing workshop in a virtual world: learning as avatars, Fam. Med. 46 (2014) 251–258.

[5] A.M. Burton, A.A. Agne, S.M. Lehr, N.J. Davis, L.L. Willett, A.L. Cherrington, Training residents in obesity counseling: incorporating principles of motivational interviewing to enhance patient centeredness, J. Grad. Med. Educ. 3 (2011) 408–411.

[6] K.M. Carpenter, W.Y. Cheng, J.L. Smith, A.C. Brooks, P.C. Amrhein, R.M. Wain, et al., Old dogs' and new skills: how clinician characteristics relate to motivational interviewing skills before, during, and after training, J. Consult. Clin. Psychol. 80 (2012) 560–573.

[7] F. Haeseler, Fortin AHt, C. Pfeiffer, C. Walters, S. Martino, Assessment of a motivational interviewing curriculum for year 3 medical students using a standardized patient case, Patient Educ. Couns. 84 (2011) 27–30.

[8] Y.J. van Eijk-Hustings, L. Daemen, N.C. Schaper, H.J. Vrijhoef, Implementation of motivational interviewing in a diabetes care management initiative in The Netherlands, Patient Educ. Couns. 84 (2011) 10–15.

[9] J.A. Tulsky, R.M. Arnold, S.C. Alexander, M.K. Olsen, A.S. Jeffreys, K.L. Rodriguez, et al., Enhancing communication between oncologists and patients with a computer-based training program: a randomized trial, Ann. Intern. Med. 155 (2011) 593–601.

[10] B.L. Duncan, S.D. Miller, J.A. Sparks, L.R. Reynolds, J. Brown, L.D. Johnson, The session rating scale: preliminary psychometric properties of a "working alliance" inventory, J. Brief Ther. 3 (2003) 3–11.

[11] S.W. Mercer, W.J. Reynolds, Empathy and quality of care, Br. J. Gen. Pract. 52 (Suppl) (2002) S9–S12.

[12] C. Maslach, S.E. Jackson, The measurement of experienced burnout, J. Organ. Behav. 2 (1981) 99–113.

[13] Motivational Interviewing Rating Guide: A manual for Rating Clinician Adherence and Competence: Section G: Supervisor Interview Rating Guide and Forms. NIDA/SAMHSA Blending Initiative.

[14] K.I. Pollak, E.M. Arredondo, K.S.H. Yarnall, I. Lipkus, E. Myers, M. McNeilly, et al., How do residents prioritize smoking cessation for young 'high-risk' women? Factors associated with addressing smoking cessation, Prev. Med. 33 (2001) 292–299.