

Nurse Practitioner Confidence and Attitudes towards Brief Motivational Interventions to Improve Compliance with Health and Wellness Recommendations

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Abstract

Background: Health behavior risks prevail in older patients and can include unhealthy diet and nutrition, sedentary lifestyle and physical inactivity, alcohol use and abuse and poor oral hygiene. According to the Centers for Disease Control (CDC), most of the sickness, dependency, disability, use of resources, institutionalization and premature morbidity and mortality associated with chronic disease can be avoided through preventive measures and risk reduction. Preventive care is more effective in improving health than routine health care, yet research indicates that many patients do not seem to receive preventive strategies due to provider barriers. Evidence supports that training and education significantly improve practitioner knowledge, their decision to use strategies for behavior change and increases confidence.

The emerging body of evidence supports brief motivational interventions as effective strategies that can help patients change health behaviors and affect outcomes. The purpose of this study was to assess nurse practitioner student confidence and attitudes in using a brief motivational intervention. A secondary aim was to assess the degree of completion of each patient's selected behavioral plan.

Methods: This investigator-initiated pilot study examined relationships among 15 nurse practitioner student confidence and attitudes toward delivery and implementation of a Brief Action Planning (BAP) intervention to 104 older adults. Nurse practitioner students received a BAP educational program and delivered BAP to older adults in an inter-professional collaborative practice that addresses the oral health, health promotion, clinical prevention and social services needs of community-dwelling older adults.

Results: Findings showed a significant change ($p < 0.05$) in NP effectiveness, confidence, belief in and the ease of learning and incorporating BAP and the value of adding BAP to care. Forty two percent of patients fully completed, 35% partially completed and 23% did not complete their selected plan to change a health behavior.

Conclusion: An educational program increased NP confidence, effectiveness and belief in value and use of a brief motivational technique to change a health behavior. Provider training helps decrease barriers to implementing motivational techniques and prevention strategies. BAP shifts thinking about how to help motivate patients toward change, is easy to learn and feasible.

Keywords: Health behavior risk; Health behavior; Behavior change; Brief motivational interventions; Brief action planning; Motivational interviewing; Older adult

Introduction

Community based, brief motivational interventions presents an innovative approach for vulnerable older adult communities where prevention of healthcare risks is critical. Health behavior risks among older adults can include unhealthy diet and nutrition [1-5], sedentary lifestyle and physical inactivity [1,6-9], alcohol use and abuse [6,10,11] and poor oral hygiene [1,12]. These risks can compromise patient outcomes increasing the likelihood of developing or worsening chronic disease [2-4,7,8,13]. At least 75% of health care dollars are expended on chronic disease [14,15]. According to the Centers for Disease Control (CDC), most of the sickness, dependency, disability, use of resources, institutionalization and premature morbidity and mortality associated with chronic disease can be avoided through preventive measures [16]. Significant correlations have been noted between strategies that promote health behavior change and improvements in chronic disease prevention and self-management [17-21]. Various individual-level factors have been identified as determinants of health behavior change including knowledge; skills [22,23]; perceived: barriers; benefits; self-efficacy; health status; locus of control; and, interpersonal and situational influences [24-26]. Health behavior risk factors pose a significant problem to the elderly patient, especially those that are community-

dwelling. Efforts that promote health behavior change have the potential to improve outcomes. Brief motivational techniques have demonstrated efficacy in several conditions. The extent to which nurse practitioners engage in an are confident in brief motivational interventions is not known nor how confidence and attitudes towards BAP influence patient uptake of this intervention.

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Langer et al. [27] reported that patients with COPD found motivational interventions very empowering and described them as having “enduring motivational benefits” in helping patients engage in self-management. In busy clinical practices, brief interventions can be effective “in less than 10 min” for encouraging women to exercise which exceeded those of traditional methods [28]. Dermen et al. [12] reported improvements in patient dental care and indicated that delivery is feasible by providers and implementation may encourage improved dental maintenance. In fact, addressing one health risk behavior may prompt other positive health behaviors [3]. Motivational coaching programs for behavior change are feasible and acceptable in a variety of healthcare settings [29].

An essential role of nurse practitioners is utilizing effective approaches to help individuals modify health behaviors. However, many nurses report minimal effectiveness and expertise in their ability to prevent and treat health risk behaviors. Preventive care is more effective in improving health than routine health care, yet research indicates that many patients do not seem to receive preventive strategies due to provider barriers [16,30]. Previously established approaches for motivating patients relied on advice, encouragement, education and persuasion, but these methods may not be effective as many patients do not heed recommendations or are not motivated to change [15,31,32]. Among older adults, education is less effective than counseling and counseling interventions are not generally employed [33,34]. This can result in frustration for professionals and patients alike.

Barriers to Implementation of Brief Motivational Techniques

Several barriers interfere with provider, which includes NP's, implementation of prevention and risk reduction strategies. Practitioners do not generally engage in prevention and risk reduction and they cite that barriers such as provider lack of time [11,35-40], inadequate and /or ineffective training and education [11,36-41], viewing patients as being opposed to change or resistant [35,37,38], lack of a sense of effectiveness [37,38,40,42], lack of confidence [40], the impact on provider-patient relationships/relationship anxiety [11,37,40] and provider discomfort, avoidance and frustration [38], contributed to decreased use of motivational interventions. Katz (2016), found that nurses reported resistance from patients, inadequate time, lack of knowledge, perceived lack of skill in their effectiveness in behavioral counseling, skepticism regarding the effectiveness of counseling interventions and that lack of understanding of the most effective intervention determined whether or not they provided behavioral change counseling. Some nurses expressed a sense of futility with regard to behavioral counseling [38].

Behavioral strategies may not be employed because providers are more comfortable with their role as educators [35]. But education and persuasion have not been very effective. In fact, communicating in a controlling way elicits opposition and evasion and is ineffectual, whereas the patient-centered approach elicits a positive reaction [40]. BAP discourages providers from giving advice or being confrontational with patients. In this way, BAP can be more effective in that it is less likely to create resistance and anger.

Training and education

Providers can benefit from education and training in the use of brief motivational techniques. Evidence supports that with training, there were significant improvements in practitioner knowledge, their decision to use strategies for behavior change and increased confidence

[38,42,43]. A Web-based e-learning program for brief motivational techniques demonstrated that training was rated as highly acceptable, feasible and knowledge, skills and use in practice increased [36,44]. Nurses' perception of power, or their ability to help change patient health outcomes, is directed by their values and knowledge and is an important part of clinical practice [45]. Approaches to increase nurses' perception of power and confidence may contribute to changes in patient health status.

It is important to understand the influence of nurses' confidence and attitudes in the implementation of a behavioral intervention, but to our knowledge, there are no studies assessing the relationship of provider factors to the delivery of this brief technique. There is a gap regarding the influence of provider confidence and attitudes on patient behavior change.

Motivational interviewing

Motivational Interviewing (MI), a client-centered counseling method, elicits and strengthens patient motivation to develop plans for positive behavior change [23,30,46]. Developed by Miller and Rollnick in 1983, MI helped alcoholics change their behavior [47] and has been studied for prevention and management of other diseases [17,23,32] and among older adults [32,48,49].

MI is not just a specific motivational technique but a counseling style and formal training and practice is essential for proficiency in the method, which can be very time consuming [30,50]. Delivery of MI may be time consuming as well, in fact, a systemic review showed that MI may take an extended period to deliver, sometimes 90-104 min per session [50].

Brief action planning

Brief adaptations of MI, founded on motivational techniques, have been developed. One specific brief motivational technique is Brief Action Planning (BAP) [22,50]. BAP, based on the foundation and spirit of MI, is a structured, patient self-management support tool providing the basis for behavioral change techniques within Comprehensive Motivational Interventions [5,51].

This evidence-based step-by-step approach facilitates goal-setting and behavioral action planning [52]. Developed by Cole in 2002, it integrates principles from MI regarding self-management, behavior change, action planning theory, psychology and self-efficacy [15]. The spirit of MI is collaboration, acceptance, evocation and compassion. Demonstrating the spirit of MI through patient-provider partnership is an essential component of BAP [15].

BAP includes three questions and three skills that are used during every BAP interaction and easily used in practice settings [52] (Figure 1). The overarching goal of BAP is to help the individual make a plan for health behavior change that they feel confident they can achieve [52]. The challenge for providers is to take time to learn the brief process and practice the strategies to help patients change unhealthy behaviors. BAP has the potential to impact many barriers and integrate evidence-based behavioral strategies into practice. Practitioners who wish to deliver BAP are encouraged to engage in on-line training at CMI <http://www.comprehensivemi.com/about/brief-action-planning>.

The purpose of this study is to determine relationships among nurse practitioner (NP) student confidence and attitudes towards delivering a BAP intervention to community-dwelling older adults presenting to an outpatient health and wellness center. A secondary aim is to assess the degree of completion of each patient's selected behavioral plan.

Question 1: Elicit ideas for change:

“Is there anything you would like to do for your health in the next week or two?”

Skill 1: Behavioral Menu: Offer a ‘behavioral menu’ if requested or needed.

Skill 2: SMART Behavioral Plan

Skill 3: Elicit commitment statement:

“Just to make sure we understand each other; would you please tell me back what you’ve decided to do?”

Question 2: Scale for confidence:

“How confident do you feel that you can carry out your plan?”

Skill 4: Problem Solving for low confidence

Question 3: Arrange accountability:

“Would you like to set a time to check in about your plan to see how things have been going?”

Skill 5: Follow Up

Figure 1: Brief action planning guide consisting of three questions and three skills; with two additional skills used as needed. Adapted from: Creating partnerships, motivating individuals, facilitating change, 2012, CCMI.

Results from this study may have the potential to increase compliance of patients as a result of the increased confidence and attitudes of the nurses who have practiced BAP. And, because of the increase in confidence and attitudes, the patient may be more likely to complete a plan to change health behavior.

Methods

This pilot study examined relationships among nurse practitioner student confidence and attitudes toward delivery and implementation of a BAP intervention. The study was reviewed and approved by the institutional review board (IRB).

A BAP intervention was incorporated into the standard of care and implemented in a suburban health and wellness screening clinic of a large medical center with community-dwelling older adults identified as having modifiable health behaviors. Prior to the roll out of the BAP intervention, a comprehensive education program focusing on health behavior theory, the use of motivational techniques to change health behavior and protocol for the use of BAP was required of all NP students and faculty.

Setting

The study took place at an academic collaborative educational Senior Health and Wellness Center. This is an inter-professional collaborative practice that addresses oral health, health promotion, clinical prevention and social services needs of older adults.

Participants

The participants included a convenience sample of 15 Adult-Geriatric Nurse Practitioner (AGNP) students clinically training in the health and wellness center. Students were asked to volunteer for the research component of the study, which examined their confidence and attitudes toward delivering a BAP intervention to older adults. They completed an informed consent and the research component was explained.

Every older adult presenting to the health and wellness center was asked to participate in the study. The 104 participants were 60 years and older, English-speaking and mentally alert.

Intervention

In 2016-2017, after approval by the IRB, 15 NP students and

104 patients were recruited into the study over 28 weeks. The main identified modifiable health behaviors from the screening included exercise, dietary change, smoking and primary care provider and dental follow-up.

A comprehensive education program, preparing nurse practitioner students to deliver the new BAP protocol, was conducted. The baseline survey, *A Survey of Confidence and Attitudes*, a seven-item evaluative tool developed for this study, was administered to all NP students before the education program (Timepoint 1), immediately after the education program (Timepoint 2) and at the end of the students’ seven-week clinical rotation/practice (Timepoint 3). Role play and practice was done during the educational program and mid-semester to encourage and help ensure appropriate delivery of BAP.

Patients scheduled for their initial visit to the health and wellness center were screened, their health risks determined, and they were given a list of behaviors identified as contributing to overall health. As part of the routine visit social determinants of health and comorbidities, including hypertension, dyslipidemia, arthritis and diabetes, were assessed and identified. For this study, patients selected risk factors and developed a behavioral plan to help them initiate change as directed in the BAP protocol which was administered by the AGNP students. For the BAP intervention, all patients were asked “Is there anything you would like to do for your health in the next week or two?” The nurses then encouraged the patient to come up with a very specific plan of their own to change a health behavior. Patients were asked to measure their confidence that they will be able to carry out their plan, on a scale of 0 to 10. Then the patient might create a SMART plan to change a behavior. A SMART plan is specific, measurable, achievable, relevant and time-based. All patients received a two-week follow-up phone call to assess the degree of completion of their selected behavioral plan. Visit <http://www.comprehensivemi.com/about/brief-action-planning> for a comprehensive explanation of the BAP protocol.

Outcome measures

Data were collected on NP confidence and attitudes that may influence a patient’s propensity to make a plan to change a behavior. Confidence in ability was measured using two items, “How confident are you in your ability to help patients change a health behavior?” and “How confident are you in your ability to implement BAP with patients at the health and wellness center?” This item had a 10-point Likert-type response, from *not at all confident*, to *extremely confident*. Attitudes were

measured using two items, “How easy do you think it is to learn BAP?” and “How easy do you think it will be to incorporate BAP into patient visits at the health and wellness center?” This also had a 10-point Likert response, from *not at all easy* to *extremely easy*. NPs’ health beliefs were assessed using three measures, “How valuable is helping patients change a health behavior to their overall health?” “How valuable do you think BAP will be to the plan of care for patients at the health and wellness center?” and “How effective have you been in your ability to help patients change a health behavior?” This 10-point Likert response ranged from *not at all valuable/effective* to *extremely valuable/effective*.

Data analysis

Outcomes were analyzed to evaluate if NP confidence and attitudes changed after Timepoints 1, 2 and 3. Due to limited sample sizes, Friedman’s ANOVA and Wilcoxon Signed Rank Test explored the trend in changes.

Results

AGNP confidence and attitudes with BAP

Table 1 lists the means and SD of the survey questions. Friedman’s Rank ANOVA tested the overall difference among the three-time points and indicated that changes were significant at $p < 0.05$ regarding NP effectiveness in helping patients change a behavior, NP confidence in helping patients change a health behavior and implementing BAP, NP belief in the ease of learning and incorporating BAP and NP belief in the value of adding BAP to the plan of care.

Completion of BAP

The two-week follow-up period indicated the degree of completion of a newly developed behavioral plan. Figure 2 shows 82% of patients

created a SMART behavioral plan during their visit, 42% totally completed their plan (i.e., 50% complete or more), 35% partially completed their plan (up to 50% complete) and 23% did not complete or did very little of their plan.

Discussion

This small study concludes that, when patients are approached with a brief motivational intervention in the spirit of MI (collaboration, evocation, acceptance and compassion), they create a plan to change a health behavior. The literature supports that motivational techniques are emerging as effective strategies to promote behavior change, resulting in positive health outcomes [3,12,27,29]. By encouraging self-efficacy, patients become empowered to self-manage risk factors of chronic illnesses [15,52,53].

Previous studies indicate providers cite that barriers including inadequate and /or ineffective training and education, lack of a sense of effectiveness, lack of confidence and frustration affected their implementation of behavioral strategies [11,35-41]. The literature also indicates that training and education can empower providers, alleviate anxiety and can lead to use of motivational techniques [35,38,42,44-46].

We found that, after the NP education, participation in role playing and practice, there were significant changes in their confidence and belief in the value of the technique. Therefore, training and education are important.

The feasibility, practicability and value of Brief Action Planning was assessed via NP questionnaires. There were changes in NP’s sense of effectiveness and confidence. In clinical practice, provider confidence and power are related to participation and involvement in patients’ health outcomes [46].

Survey Questions (n=15)	Timepoint 1		Timepoint 2		Timepoint 3		p-value
	M	SD	M	SD	M	SD	
Valuable helping pts change	9.53	0.743	9.87	0.352	10	0	-
Effective helping pts change	6.4	1.502	7.2	1.935	8.45	0.82	0.014
Confident helping pts change	7.07	1.751	8.2	1.474	8.55	0.934	0.009
Confident implementing BAP	5.67	2.582	8.47	0.99	8.45	1.214	0.002
Easy to learn BAP	6.4	2.354	8.53	1.685	8.91	1.3	0.002
Easy to incorporate BAP	6.13	2.264	8.4	1.549	7.91	2.166	0.002
Valuable adding BAP	8.67	1.543	9.67	0.724	7.82	2.136	0.009
Confident implementing after graduation	-	-	-	-	8.73	1.104	-
Likely to use in practice	-	-	-	-	8.64	0.924	-

Items and ratings of participants on a 10-point Likert scale. Category 1=not at all to Category 10=extremely Significant at $p < 0.05$ level based on Friedman’s ANOVA

Table 1: A survey of NP confidence and attitudes.

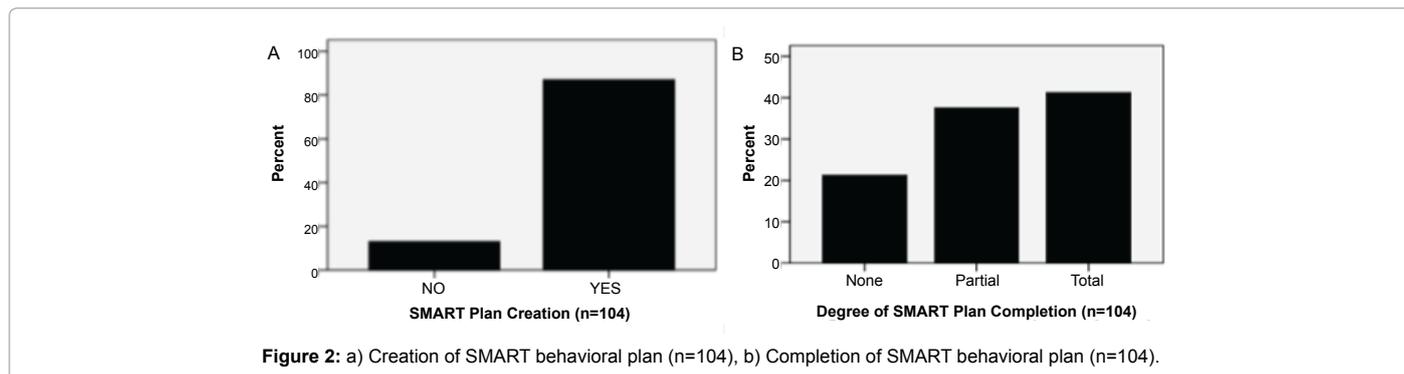


Figure 2: a) Creation of SMART behavioral plan (n=104), b) Completion of SMART behavioral plan (n=104).

Motivating and assisting patients to change their unfavorable health behavior is a major challenge for health professionals [29]. Strategies to increase providers' involvement in change includes education and training, which can contribute to their perception of confidence, empowerment and efficacy. Results of this study show that BAP was a successful method for delivering evidence-based behavioral strategies to help patients change a health behavior in a general medical setting.

Limitations

There were several limitations to this study, including the small number of NPs, which may have led to sampling bias. The sample of older adults was a cross-section of those presenting to a health and wellness center in a socially homogenous area. There may have been overrepresentation of higher-functioning older adults because the study examined only those who are independent and presenting to a community health setting. Therefore, the results have limited generalizability. Selection bias might result in a low external validity of the study.

Although the NP sample size was small, limited to 15, the Friedman test and Wilcoxon signed ranks tests were utilized in analyses to strengthen the interpretation of the findings.

Completion of plan outcomes was based on self-reports rather than clinical outcomes. This may be subject to social desirability bias. A randomized controlled trial to measure clinical effects of the intervention would give more accurate results.

Conclusion

Although the sample was small, the results allude to the practicality of a theoretical, evidence-based client-centered behavioral intervention. In addition, the study showed the effectiveness of the comprehensive training of the practitioners delivering the intervention.

Anecdotal responses from the nurse practitioner participants support that they found this intervention useful, they will incorporate it into their practice and it offered them a way to assist patients toward behavior change.

BAP is cost-effective [15] and we also found it to be highly feasible in a busy health and wellness center. Delivery takes several min and patients can come up with a plan to change in 3 to 5 min. Adding it to a 20-minute office visit by utilizing other healthcare members to assist, is practical and can be easily incorporated into busy clinical offices [15]. BAP may have potential as an application across different disciplines and may be delivered in different medical settings.

This study may have contributed to initial steps in behavior change. Compliance with the intervention was high and we were encouraged by the patients' high degree of self-reporting. BAP appeared to be well-accepted by the patients and NP students.

The emerging body of evidence supports the effectiveness of brief motivational techniques for behavioral change. Beneficial outcomes include prevention and control of the serious negative consequences that problematic behaviors have on the health and functioning of older adults.

A high research priority should be given to BAP interventions because these evidence-based behavioral strategies can help patients change health behaviors and affect outcomes. BAP is a practical, effective technique requiring minimal time. The knowledge gained from this pilot study should lead to the development of a randomized controlled design, a larger sample and a longer follow-up period to establish objective, clinically relevant outcomes.

BAP embedded in a health and wellness center provides evidence that it can help advocate for improved, quality care. Community based brief motivational interventions offer a new strategy for improving quality and containing costs while addressing social determinants of health. The effectiveness of community healthcare is related to the collaboration between providers and the community they serve. Improving health behaviors of communities and in particular, vulnerable populations, at a public health level will help mitigate the widespread challenge of the burden of chronic disease.

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