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## Educational Impact on Therapists' Knowledge, Beliefs, and Actions: A Pilot Study

Elena Wong Espiritu

*Belmont University, Elena.espiritu@belmont.edu*

Natalie N. Michaels

*Belmont University, natalie.michaels@belmont.edu*

Steven Busby

*Belmont University, steven.busby@belmont.edu*

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# Educational Impact on Therapists' Knowledge, Beliefs, and Actions: A Pilot Study

## Abstract

### ABSTRACT

**Purpose:** Collaborative goal setting has been shown to be an effective way to promote client engagement leading to improved outcomes; however, healthcare professionals face challenges when implementing collaborative goal setting into their clinical practice. The purpose of this study was to evaluate the effectiveness of educational workshops to 1) increase a therapist's knowledge of motivational interviewing and action planning, 2) promote collaboration between therapists and their patients/clients, 3) promote collaboration between therapists and their interdisciplinary team and 4) increase the ease of implementation of motivational interviewing and action planning skills into a therapist's clinical practice. **Method:** A mixed-methods design was utilized. Occupational therapists and physical therapists were recruited via email to participate. Data were collected via online surveys at three different times (before the first educational workshop, after the second workshop, and three months after the second workshop) consisting of quantitative related survey questions assessing the participants' knowledge, beliefs, actions, and perceived self-efficacy related to motivational interviewing and action planning and qualitative questions focused on typical goal development processes, level of collaboration and challenges associated with developing goals with clients and interdisciplinary team members and anticipated/resultant impact and meaning of participation in the educational workshops. **Results:** The sample included 19 participants. Quantitative data demonstrated a statistically significant increase in self-scoring related to knowledge, beliefs, and actions when comparing all the pre-education to the post-education scores, except for one (collaboration with interdisciplinary team members). A follow-up analysis on this criterion demonstrated no statistically significant changes over the three-month period, potentially indicative of retention of the material covered. The qualitative data provided further insight into the challenges faced by participants and the perceived benefits of participating in the educational workshops. **Conclusion:** The educational workshops appeared to be effective in addressing some of the barriers to collaborative goal setting (e.g. lack of time, knowledge/skills, appropriate patients, concern for duplication of services) found in the literature, most notably providing the participants with the knowledge and skills needed, which is the first step when implementing collaborative goal setting into clinical practice. Further research in this area is recommended.

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## Author Bio(s)

Elena Wong Espiritu, OTD, OTR/L, BCPR, is an Associate Professor in the School of Occupational Therapy at Belmont University. Prior to academia, she worked 10 years in the adult physical disabilities setting providing acute care, inpatient acute rehabilitation and outpatient services as a clinician and team coordinator.

Natalie N. Michaels, PT, EdD, GCS Emeritus, is a Physical Therapist and a Professor in the Occupational Therapy and Physical Therapy Departments at Belmont University, College of Health Sciences. She is a Geriatric Clinical Specialist Emeritus through the American Board of Physical Therapy Specialties.

Steven Busby, PhD, FNP-BC, has delivered healthcare for 34 years. He worked as an EMT/Paramedic, as an RN in CVICU, ER and as a hospital nursing educator teaching critical care. He has been a family nurse practitioner for 21 years and has 15 years of higher education teaching experience.



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Elena Wong Espiritu

Natalie N. Michaels

Steven Busby

Belmont University

United States

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### **ABSTRACT**

**Purpose:** Collaborative goal setting has been shown to be an effective way to promote client engagement leading to improved outcomes; however, healthcare professionals face challenges when implementing collaborative goal setting into their clinical practice. The purpose of this study was to evaluate the effectiveness of educational workshops to 1) increase a therapist's knowledge of motivational interviewing and action planning, 2) promote collaboration between therapists and their patients/clients, 3) promote collaboration between therapists and their interdisciplinary team and 4) increase the ease of implementation of motivational interviewing and action planning skills into a therapist's clinical practice. **Method:** A mixed-methods design was utilized. Occupational therapists and physical therapists were recruited via email to participate. Data were collected via online surveys at three different times (before the first educational workshop, after the second workshop, and three months after the second workshop) consisting of quantitative related survey questions assessing the participants' knowledge, beliefs, actions, and perceived self-efficacy related to motivational interviewing and action planning and qualitative questions focused on typical goal development processes, level of collaboration and challenges associated with developing goals with clients and interdisciplinary team members and anticipated/resultant impact and meaning of participation in the educational workshops. **Results:** The sample included 19 participants. Quantitative data demonstrated a statistically significant increase in self-scoring related to knowledge, beliefs, and actions when comparing all the pre-education to the post-education scores, except for one (collaboration with interdisciplinary team members). A follow-up analysis on this criterion demonstrated no statistically significant changes over the three-month period, potentially indicative of retention of the material covered. The qualitative data provided further insight into the challenges faced by participants and the perceived benefits of participating in the educational workshops. **Conclusion:** The educational workshops appeared to be effective in addressing some of the barriers to collaborative goal setting (e.g. lack of time, knowledge/skills, appropriate patients, concern for duplication of services) found in the literature, most notably providing the participants with the knowledge and skills needed, which is the first step when implementing collaborative goal setting into clinical practice. Further research in this area is recommended.

**Keywords:** collaboration, goal setting, motivational interviewing, educational sessions, therapy

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## INTRODUCTION AND BACKGROUND

For practice to be truly client-centered, both the client and therapist must have a desire and the ability to include clients in the decision-making process.<sup>1</sup> Allowing a client to contribute to his/her treatment plan improves the chances for attaining positive outcomes and increasing self-efficacy.<sup>2</sup> Goal setting is one area in which clients can become involved, enabling them to contribute to their own care. Research has shown that there is a higher likelihood of cooperation and follow through with treatment plans when clients are given the support to develop their own goals.<sup>3</sup> Structured goal setting is particularly effective when improving client motivation, leading to increased satisfaction related to client outcomes. This also gives clients a sense of organization, focus and appreciation for the therapeutic process.<sup>4-6</sup> When there is a structured way of setting goals, not only is there increased collaboration between clients and therapists, but there is also increased collaboration between interdisciplinary team members. Team members have demonstrated improved communication across disciplines, and increased awareness of other disciplines' goals. This can reinforce team goals during discipline specific sessions leading to a more focused plan of care.<sup>4,6</sup>

Action planning is a structured goal setting format by which the clinician and client agree upon specific strategies to achieve desirable outcomes related to specific behavior change.<sup>7</sup> Action planning has been shown to be an effective and efficient way to encourage behavior change as the format is easy for therapists to explain and for clients to understand.<sup>7,8</sup> However, before a client can collaborate in goal setting, therapists must assess the client's readiness for change. Motivational interviewing is a client-centered counseling approach that helps clients explore and resolve ambivalence as a means of influencing clients to consider making behavioral changes.<sup>9,10</sup> This style of directive counseling is not centrally defined by specific techniques but instead by the motivational interviewing goals to facilitate an interpersonal relationship between therapist and client leading to behavioral change.<sup>11</sup> As the therapist collaboratively engages a person in conversation, the client's own motivation and commitment to the plan of care is strengthened.<sup>10,12</sup>

According to the literature, both action planning and motivational interviewing have shown to be effective when promoting client engagement leading to improved outcomes; however, there are a number of challenges to collaborative goal setting which include 1) clients deemed inappropriate for collaboration due to communication, cognitive, and insight deficits, 2) lack of time as collaborative goal setting requires time for explaining the process and feedback, 3) concern for duplication of services and blurring of professional lines across disciplines and 4) therapists' lack of knowledge and skill on how to elicit patient goals.<sup>4</sup> Educational workshops for therapists may help to address these challenges by communicating the benefits of collaborative goal setting and providing therapists with foundational skills in the spirit of motivational interviewing and action planning strategies. As therapists develop these skills, they can more easily incorporate the spirit of motivational interviewing and action planning in their clinical practice with clients.

The purpose of this study was to evaluate the effectiveness of educational workshops related to collaborative goal setting. Findings will determine if the educational workshops were effective to 1) increase the participants' knowledge of motivational interviewing and action planning, 2) promote collaboration between participants and their patients/clients, 3) promote collaboration between participants and their interdisciplinary team and 4) increase the implementation of motivational interviewing and action planning skills in their clinical practice.

## METHODOLOGY

This pilot study focused on the changes in participants' knowledge, beliefs and actions related to motivational interviewing and action planning following participation in the educational workshops. Approval was granted from Belmont University's Institutional Review Board (IRB), and informed consent was received from each participant prior to participation in the first educational workshop.

### Research Design

A mixed-methods study with a one-group pre-test-post-test design and qualitative descriptive design with creation of thematic structure was used in this study to evaluate the impact of participation in educational workshops on participant's knowledge, beliefs and actions related to motivational interviewing, action planning, and collaborative goal setting.<sup>13</sup>

### Recruitment

The researchers developed a recruitment flyer which was sent to the three people responsible for clinical education in the Schools of Occupational and Physical Therapy requesting each forward it to local therapists in their databases. Flyers were also posted in various clinical settings throughout the Nashville area to solicit interest. As a recruitment incentive, participants were given proof of continuing education contact hours, resources, and a meal at each workshop at no cost. A participant met the criteria for

inclusion if he/she was a licensed occupational or physical therapist currently practicing in Tennessee and able to attend both educational workshops. The desired sample size for this project was initially decided to be between 20 to 50 participants. This was determined based upon the aim of testing the acceptance and adherence of collaborative goal setting following the educational workshop, and based upon the space and the desired costs, benefits, and risks of the study as per Moore et al.<sup>14</sup> Although 20 to 50 participants was the desired number, only 19 therapists were available to participate in the study.

## **Data Collection**

### ***Methods and Instrumentation***

Data were collected via online surveys which were sent out through an email link by the principle investigator to participants. Surveys were used to collect both quantitative and qualitative data on multiple variables, including demographics.<sup>15</sup> In order to ensure anonymity of survey responses while correlating participant responses across surveys, each participant was assigned a number which was recorded at the beginning of each survey. The surveys were administered three different times: 1) prior to participation in the first educational workshop, 2) immediately following participation in the second educational workshop and 3) three months post participation in the second educational workshop.

Participant demographic information was collected prior to participation in the first educational workshop along with the pre-education survey. Participants completed the pre-education survey before any educational intervention had taken place and answered the same questions in the post-education survey after they had participated in the two workshops. The 26-quantitative related survey questions assessed the participants' knowledge, beliefs, actions, and perceived self-efficacy related to motivational interviewing and action planning. While not standardized, the questionnaire was developed through a process outlined by Carter, Lubinsky, and Domholdt and consistent with other rehabilitation research studies' methods for survey development, which demonstrated impact despite using a non-validated instrument.<sup>16-18</sup> The questions were adapted from multiple sources: from a survey by Bazyk et al, a questionnaire by Grajo and Candler, and the perceived self-efficacy chapter by Bandura.<sup>19-21</sup> For each survey question, the participants either rated their agreement related to knowledge, beliefs, and actions on a 7- point Likert scale, and they rated their perceived self-efficacy using a slider scale from 0 – 100. The surveys also included eight questions requiring narrative responses that focused on topics such as typical goal development processes, level of collaboration, challenges associated with developing goals with clients and interdisciplinary team members, and anticipated/resultant impact and meaning of participation in the educational workshops. There was a two-week span between the workshop sessions when participants were encouraged to practice the skills presented in the workshops with clients. The questions were asked again at the end of the second workshop, and again three months post participation. However, the final survey added ten qualitative questions related to learning and application of the educational concepts on a more global level. Refer to Appendix A for survey questions.

## **Data Analysis**

The non-parametric quantitative data, including demographics and Likert and slider scale responses, were analyzed using a Wilcoxon Signed-Rank Test through SPSS software.<sup>22</sup> The yes-no answers were analyzed using chi square analysis.

Qualitative data utilized descriptors to focus on why and how things occurred.<sup>23</sup> The qualitative data was analyzed line by line, initially grouped and coded into open codes (555 open codes).<sup>23</sup> Frequent and meaningful pieces of data were then grouped and labeled more abstractly. These codes accounted for and subsumed larger volumes of open codes in a process called focused coding.<sup>24</sup> These focused codes (244 focused codes) were further sifted and sorted resulting in developed themes (110 final themes). These themes or concepts were filled in dimensionally as more data were analyzed. When warranted, the final themes were placed under headings to help categorize the themes. For example, in Tables 7 & 8, "Goal Source" is a theme heading that described the focused codes that lie beneath it (patient, family, therapeutic interviewing, etc.). In cases where participants used phrases that uniquely captured concepts or expressed ideas very succinctly, the phrases were captured verbatim, labeled as in vivo codes and were a form of open codes.<sup>23</sup> A complete audit trail for all codes named and sorted was maintained and memos were used to record decision points during the data analysis process.

Because the data were so voluminous, questions which had similar intention were grouped together for explanatory purposes. For the pre and post-education survey questions, item numbers one, two, and three were grouped as they all dealt specifically with methods for goal development. Items four, five, six, and seven were grouped together because they delved into how and the degree to which participants collaborated with clients and interdisciplinary team members regarding goal development. Item eight from the pre and post-education surveys was not grouped with any other item numbers because it uniquely inquired more globally about the educational workshops' impact on practice. After the initial thematic structure for each area emerged, comparisons were made between pre and post-education surveys to note any patterns, similarities or differences.

The final survey was analyzed separately from the pre and post-education surveys because different questions were used. The final survey items were also analyzed in groupings to make explanation more feasible. Items one, two, three, five, six, and seven asked participants about the impact the educational workshops had on their ability to use motivational interviewing, information sharing, and action planning in the actual care that they provided. Items four and eight were grouped together as the questions focused on how participants had shared the information learned in the educational workshops with their colleagues. Items nine and ten asked about the overall meaning and impact of the educational workshops and gave participants the opportunity to share any additional information that they wanted the researchers to know.

### Educational Workshop Descriptions

The therapists participated in two, two-hour educational workshops consisting of a combination of brief teaching instances and learning activities. The workshops were facilitated by the primary investigator, whose post-professional doctoral work focused on implementing a self-management approach and motivational interviewing into clinical practice and holds a board certification in physical rehabilitation through the national occupational therapy association. Based on adult learning principles, the workshops provided the participants with opportunities for personal reflection, hands-on practice, and interaction with other participants, and encouraged immediate application and implementation in their respective practice settings and with current clients. The participants also received a workshop binder and thumb drive with reference articles and action planning templates to promote increased understanding and implementation. The objectives and content summaries for each workshop are provided in Appendix B.

## RESULTS

### Participant Demographics

The sample included 19 participants consisting of a combination of occupational and physical therapists with a range of years of experience practicing in a variety of practice settings. Refer to Table 1 for participant demographics.

**Table 1.** Participant Demographics (N=19)

	Frequency/Valid %
<b>Discipline</b>	
Occupational therapy	14 (73.7%)
Physical therapy	5 (26.3%)
<b>Age Groups</b>	
22-24	1 (5.3%)
25-34	9 (47.4%)
35-44	5 (26.3%)
45-54	4 (21.1%)
<b>Gender</b>	
Male	3 (15.8%)
Female	16 (84.2%)
<b>Race/Ethnicity</b>	
White	16 (84.2%)
Asian or Pacific Islander	1 (5.3%)
Prefer not to answer	2 (10.5%)
<b>Highest Degree in Field</b>	
OTD	2 (10.5%)
MSOT	7 (36.8%)
BSOT	5 (26.3%)
DPT	4 (21.1%)
MSPT	1 (5.3%)
<b>Years in Practice</b>	
0-1 year	3 (15.8%)
2-3 years	1 (5.3%)
4-5 years	3 (15.8%)
6-10 years	4 (21.1%)
11-15 years	3 (15.8%)

16-20 years	2 (10.5%)
21 years and more	3 (15.8%)
<b>Primary Practice Population</b>	
Pediatrics	3 (15.8%)
Adults	10 (52.6%)
Older adults	6 (31.6%)
<b>Primary Practice Location</b>	
Hospital	13 (68.4%)
Skilled Nursing Facility	2 (10.5%)
Outpatient Clinic	4 (21.1%)
<b>Primary Practice Setting</b>	
Acute care	8 (42.11%)
Acute rehabilitation	3 (15.79%)
Subacute rehabilitation	4 (21.05%)
Outpatient rehabilitation	1 (5.26%)
Outpatient-based pediatrics	3 (15.79%)

### Quantitative Results

The quantitative data for this analysis required the use of non-parametric measures to compare means of the modified Likert scale utilized for most of the pre-education and post-education, and final surveys. Wilcoxon Signed-Rank Testing demonstrated a statistically significant increase in self-scoring related to knowledge, beliefs, and actions when comparing the pre-education to the post-education scores (Table 2) except for one item (*I collaborate with interdisciplinary team members to help clients achieve their goals.*). Cohen's *d* calculations demonstrated a large effect size for each of these differences. A follow-up analysis (Table 3) to determine knowledge, beliefs, and actions retention demonstrated no statistically significant changes over the three-month period, indicative of little change over time. Because these findings were not significant, Cohen's *d* values were not included in Table 3.

**Table 2.** Differences From the Pre-education Scores to Post-education Scores

Criterion	Pre-Education Survey Mean	Post-Education Survey Mean	Significance	Power (Cohen's <i>d</i> )
I am knowledgeable about motivational interviewing	4.84	6.42	$p = .001$	1.836
I am knowledgeable about action planning	4.95	6.47	$p = .001$	1.746
I know ways to collaborate with other interdisciplinary team members to help clients achieve their goals	5.58	6.21	$p = .015$	0.791
I know how to overcome challenges related to collaborative goal setting	5.11	6.16	$p = .001$	1.798
I believe I have strategies that I can use to overcome the challenges related to collaborative goal setting	4.58	6.16	$p = .000$	1.783
I believe I can determine if a client is ready to participate in collaborative goal setting	4.68	5.95	$p = .001$	1.556
I believe I can use motivational interviewing techniques to encourage a client towards becoming more ready for change	4.95	6.21	$p = .001$	1.473
Given my current caseload and practice setting, it is feasible for me to use action planning	4.68	5.84	$p = .003$	1.257
I collaborate with interdisciplinary team members to help clients achieve their goals.	5.58	5.84	$p = .260$	0.264
I can articulate to clients the importance of collaborative goal setting as a way of contributing to their plan of care	4.89	6.11	$p = .002$	1.293
I am able to effectively use motivational interviewing with my clients in my everyday practice	4.58	6.95	$p = .001$	2.431

I am able to effectively use action planning with my clients in my everyday practice	4.53	5.58	$p = .002$	1.140
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**Table 3.** Differences From the Post-education Scores to Final Survey Scores

Criterion	Post-Education Survey Mean	Final Survey Mean	Significance
I am knowledgeable about motivational interviewing	6.42	6.22	$p = .102$
I am knowledgeable about action planning	6.47	6.17	$p = .132$
I know ways to collaborate with other interdisciplinary team members to help clients achieve their goals	6.21	6.39	$p = .257$
I know how to overcome challenges related to collaborative goal setting	6.16	6.11	$p = .763$
I believe I have strategies that I can use to overcome the challenges related to collaborative goal setting	6.16	6.06	$p = .480$
I believe I can determine if a client is ready to participate in collaborative goal setting	5.95	6.00	$p = 1.000$
I believe I can use motivational interviewing techniques to encourage a client towards becoming more ready for change	6.21	6.22	$p = 1.000$
Given my current caseload and practice setting, it is feasible for me to use action planning	5.84	5.67	$p = .477$
I collaborate with interdisciplinary team members to help clients achieve their goals.	5.84	5.94	$p = .852$
I can articulate to clients the importance of collaborative goal setting as a way of contributing to their plan of care	6.11	5.94	$p = .331$
I am able to effectively use motivational interviewing with my clients in my everyday practice	6.95	6.00	$p = .705$
I am able to effectively use action planning with my clients in my everyday practice	5.58	5.72	$p = .763$

Wilcoxon Signed-Rank Tests were also performed for differences of survey items related to perceived self-efficacy (Table 4). Cohen's  $d$  calculations demonstrated very large effect sizes. Statistically significant differences were again seen when comparing the pre-education scores to the post-education scores. There was again no significant change demonstrated when re-tested after three months for all items except one, "I can define action planning." The Cohen's  $d$  for this item was only moderate ( $d = .5015$ ), and the decrease still demonstrated a higher score when compared to the pre-test value (Table 5).

**Table 4.** Differences From the Pre-education Scores to Post-education Scores Related to Perceived Self-efficacy

Criterion	Pre-Education Survey Mean	Post-Education Survey Mean	Significance	Power (Cohen's $d$ )
I can define action planning	55.72	93.00	$p = .000$	3.231
I can explain action planning in detail to a colleague or client	44.94	89.05	$p = .000$	3.009
I can apply action planning to clients on my caseload	49.00	85.89	$p = .001$	2.005
I can analyze the appropriateness of using action planning with a client	54.44	89.68	$p = .000$	2.260
I can incorporate action planning into the intervention for a client	51.33	88.16	$p = .001$	2.090



I can evaluate the actual benefits of action planning for a client	50.89	89.37	$p = .000$	2.134
I can synthesize new ways to utilize action planning for a client	48.50	89.63	$p = .000$	2.642

**Table 5.** Differences From the Post-education Scores to Final Survey Scores Related to Perceived Self-efficacy

Criterion	Post-Education Survey Mean	Final Survey Mean	Significance
I can define action planning	93.00	88.89	$p = .029$ $d = .5015$
I can explain action planning in detail to a colleague or client	89.05	88.06	$p = .139$
I can apply action planning to clients on my caseload	85.89	84.50	$p = .551$
I can analyze the appropriateness of using action planning with a client	89.68	88.17	$p = .372$
I can incorporate action planning into the intervention for a client	88.16	86.67	$p = .619$
I can evaluate the actual benefits of action planning for a client	89.37	90.06	$p = .897$
I can synthesize new ways to utilize action planning for a client	89.63	83.61	$p = .147$

Participants were asked if they knew how to overcome the barriers related to utilizing collaborative goal setting by responding yes or no. The number of "Yes" answers can be seen in Figure 1. Although differences can be seen in these graphs, these differences were only found to be statistically significant on Chi Square Testing for one item, *Lack of knowledge and skill related to collaborative goal setting*, which showed a difference from 7 yes answers in the pre-education survey to 17 yes answers in the final survey ( $p = .005$ ). These statistically significant score differences indicate that participants no longer viewed lack of knowledge and skill as a barrier to utilizing collaborative goal setting with their clients.

### Qualitative Results

In addition to quantitative data collection and analysis, qualitative data was collected in order to further explain the results and provide participants with the opportunity to provide more specific detail regarding the degree to which the educational workshops impacted them, and how.

#### **Pre and post survey results (items 1-3)**

Items one through three asked participants how they typically go about generating goals for a client and whether they use a structured approach (Tables 6 and 7). Comparing the pre-education survey results to those of the post-education survey, participants noted before and after the intervention the patients' and families' views and acknowledged that interviewing was a particularly important piece of goal development. However, after the intervention, which offered participants techniques for developing goals with patients by first achieving buy-in and considering factors such as age and client identified goals, participants cited more specific ways that they developed their goals. Examples included the expansion of possible sources (teachers), using specific methods to create buy-in (giving kids choices) and viewing goals as more flexible. Rather than using the typical standard set of goals or going through the routine of making goals for patients, participants suggested that by having a mindset open to more flexible goals, their goals were more realistic, specific to a client's diagnosis, age-appropriate, and considered specific environmental needs. The educational intervention provided the participants with additional tools and methods, including templates for establishing goals.

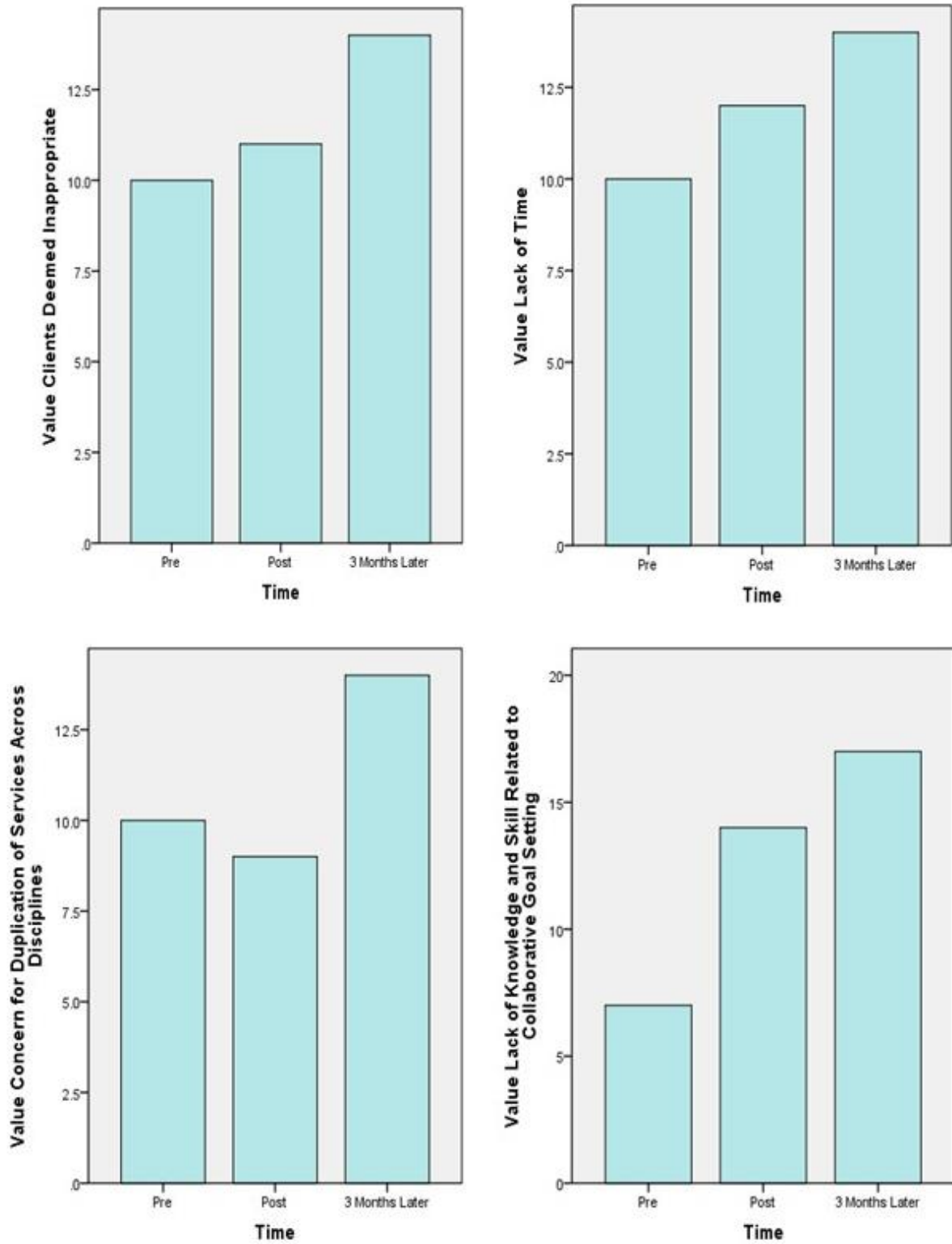


Figure 1. Comparison of Ability to Overcome Barriers Between Pre and Post-Education and Final Surveys

**Table 6.** How to Typically Generate Goals and Whether to use a Structured Approach - Pre-education Survey (items 1-3)

Pre-Education Survey Goal Development (goal development, elicit client input, structured approach)		
Goal Source		When/Where/How
Interviewing/Inquiring	Functional Assessment	<ul style="list-style-type: none"> <li>• Environmental needs</li> <li>• Time of assessment</li> </ul>
<ul style="list-style-type: none"> <li>• Patient</li> <li>• Family</li> <li>• “therapeutic interviewing”</li> <li>• “Unstructured interviewing”</li> </ul>	<ul style="list-style-type: none"> <li>• Tool assessment</li> <li>• Mobility</li> <li>• Functional assessment comparison</li> </ul>	

**Table 7.** How to Typically Generate Goals and Whether to use a Structured Approach - Post-education Survey (items 1-3)

Post-Education Survey Goal Development (goal development, elicit client input, structured approach)		
Goal Source		Goal Characteristics
Interviewing/Inquiring	Functional Assessment	<ul style="list-style-type: none"> <li>• Measurable</li> <li>• Realistic</li> <li>• Diagnosis</li> <li>• Age-appropriate</li> <li>• Environmental needs</li> </ul>
<ul style="list-style-type: none"> <li>• Collaboration                             <ul style="list-style-type: none"> <li>○ Patient</li> <li>○ Family</li> <li>○ Teacher</li> </ul> </li> <li>• “give kids choices”</li> </ul>	<ul style="list-style-type: none"> <li>• Tool assessment</li> </ul>	

**Pre and post survey results (items 4-7)**

Items four through seven (Tables 8 and 9) asked participants specifically about their collaboration in goal setting with clients and the interdisciplinary team. As would be expected, the degree of collaboration used by each provider varied tremendously in both the pre and post-education surveys, ranging from “never” to “always” within the data. These variations were helpful in fully describing the participant’s experiences; however, it is notable that some of the variations could be attributed to constraints beyond the participants’ control such as patient disability or motivation, care setting, limited time, exposure to other professionals, and the availability of other professionals for collaboration.

Some responses that assisted in determining why and how participants were increasingly willing to collaborate with clients and families were participants learned 1) techniques for using open-ended questions, 2) to ask clients’ permission before providing intervention to create buy-in, 3) to include family members in the process when warranted and allowed, and, 4) participants were challenged to consider their own mindset about their clients’ ability to collaborate through the spirit of motivational interviewing. Participants expressed that good collaboration required interdisciplinary team members to avoid tunnel vision and to avoid attitudes of superiority. According to participants, action planning was best implemented when reinforced by several team members, which required collaboration.

**Table 8.** Collaboration in Goal Setting with Clients and Interdisciplinary Team - Pre-education Survey (items 4-7)

Pre-Education Survey Collaboration – goal setting/achieving (how, challenges)			
How Collaborative		Collaboration Challenges	
Patient	Interdisciplinary Team	Patient	Interdisciplinary Team
<ul style="list-style-type: none"> <li>• Degree                             <ul style="list-style-type: none"> <li>○ Varies                                     <ul style="list-style-type: none"> <li>- “Always”</li> <li>- “Never”</li> <li>- “not well”</li> <li>- lack of</li> <li>- “rarely”</li> </ul> </li> <li>○ Desire for more</li> </ul> </li> <li>• Methods                             <ul style="list-style-type: none"> <li>○ Patient inclusion</li> <li>○ In team discussions</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Degree                             <ul style="list-style-type: none"> <li>○ Varies                                     <ul style="list-style-type: none"> <li>- “Always”</li> <li>- “close”</li> <li>- “minimal”</li> <li>- lack of</li> </ul> </li> <li>○ Depends on availability</li> </ul> </li> <li>• Methods                             <ul style="list-style-type: none"> <li>○ Conferencing</li> <li>○ Others’ views</li> <li>○ Seeking commonality</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Patient disability</li> <li>• Provider/patient goal mismatch                             <ul style="list-style-type: none"> <li>○ Devalued opinion</li> </ul> </li> <li>• Limited time                             <ul style="list-style-type: none"> <li>○ LOS</li> </ul> </li> <li>• Institutional constraints</li> </ul>	<ul style="list-style-type: none"> <li>• Time</li> <li>• Resources                             <ul style="list-style-type: none"> <li>○ Technology</li> <li>○ Documentation</li> <li>○ Space</li> </ul> </li> <li>• Team availability</li> <li>• Difference in opinion</li> <li>• Professional roles knowledge deficit</li> <li>• Including nurse</li> </ul>

**Table 9.** Collaboration in Goal Setting with Clients and Interdisciplinary Team - Post-education Survey (items 4-7)

Post-Education Survey Collaboration – goal setting/achieving (how, challenges)			
How Collaborative		Collaboration Challenges	
Patient	Interdisciplinary Team	Patient	Interdisciplinary Team
<ul style="list-style-type: none"> <li>• Degree                             <ul style="list-style-type: none"> <li>○ Varies                                     <ul style="list-style-type: none"> <li>- Always</li> <li>- Initially</li> <li>- Ongoing</li> <li>- Close</li> <li>- Minimal</li> </ul> </li> <li>○ Desire for greater</li> <li>○ Improving</li> </ul> </li> <li>• Methods                             <ul style="list-style-type: none"> <li>○ Patient inclusion</li> <li>○ Family inclusion</li> <li>○ Interdisciplinary inclusion</li> </ul> </li> <li>• Skill acquisition and implementation</li> </ul>	<ul style="list-style-type: none"> <li>• Degree                             <ul style="list-style-type: none"> <li>○ Varies                                     <ul style="list-style-type: none"> <li>- Minimal</li> <li>- Close</li> <li>- Lack of</li> <li>- Frequent</li> <li>- As time allows</li> </ul> </li> <li>○ Desire for greater</li> </ul> </li> <li>• Methods                             <ul style="list-style-type: none"> <li>○ Interdisciplinary</li> <li>○ Conferencing</li> <li>○ Common goal</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Patient disability</li> <li>• Patient motivation</li> <li>• Time                             <ul style="list-style-type: none"> <li>○ LOS</li> </ul> </li> <li>• Setting</li> <li>• Accuracy of assessment</li> </ul>	<ul style="list-style-type: none"> <li>• Time</li> <li>• Team availability</li> <li>• Patient motivation</li> <li>• Difference of opinion                             <ul style="list-style-type: none"> <li>○ Tunnel vision</li> <li>○ “Superiority”</li> </ul> </li> </ul>

**Pre and post survey results (item 8)**

Participant responses to item number eight (see Tables 10 and 11) were analyzed in isolation as researchers sought to gain insight on the overall meaning and impact of the educational workshops on the participants’ practice. The comparison of the pre and post-education survey responses for this item revealed that participants wanted to improve overall care for their clients and learned new ways to do that. In the post-education survey, some additional themes emerged presumably as a result of the therapists’ participation in the educational sessions. Participants were compelled to increase their advocacy for their patients regarding goal setting and action planning, but they also wanted to advocate for their own discipline. This can be considered a positive outcome

as the desire to advocate implies a need to balance input from all disciplines rather than a sense of superiority of one discipline over another, as suggested in the previous item numbers.

Additionally, participants commented that the educational workshops positively impacted their patient care. One participant had a greater "respect of my patient needs." Another said she was using an "enhanced interviewing process" and another suggested he used it to "practice and train staff."

**Table 10.** Overall Meaning and Impact of Workshops on Practice - Pre-education Survey (item 8)

Pre-Education Survey Meaning/Impact of Workshop
<ul style="list-style-type: none"> <li>• Best practice</li> <li>• Improved goal setting                             <ul style="list-style-type: none"> <li>○ Realistic</li> <li>○ Daily</li> <li>○ Expansion</li> <li>○ Communication with patients</li> </ul> </li> <li>• Family                             <ul style="list-style-type: none"> <li>○ "improved family collaboration"</li> <li>○ "meaningful outcomes for my families"</li> </ul> </li> <li>• Others                             <ul style="list-style-type: none"> <li>○ Client-centeredness</li> <li>○ Ability to serve</li> </ul> </li> <li>• "improve my goal writing, setting and collaboration skills"</li> </ul>

**Table 11.** Overall Meaning and Impact of Workshops on Practice - Post-education Survey (item 8)

Post-Education Survey Meaning/Impact of Workshop
<ul style="list-style-type: none"> <li>• Increased collaboration                             <ul style="list-style-type: none"> <li>○ Asking permission</li> <li>○ With patients</li> <li>○ With parents</li> </ul> </li> <li>• Improved goal setting                             <ul style="list-style-type: none"> <li>○ Communication with patients</li> </ul> </li> <li>• Advocacy                             <ul style="list-style-type: none"> <li>○ Patient</li> <li>○ Discipline</li> </ul> </li> <li>• Increased awareness of interviewing</li> <li>• Improvement of care</li> <li>• Educate co-workers</li> <li>• "Enhanced interviewing process"</li> <li>• "I have a better respect of my patient needs"</li> <li>• "Want to integrate into my or (SIC) practice and train staff"</li> </ul>

**Final survey results (items 1,2,3,5,6,7)**

While the quantitative questions were the same between all three surveys, the qualitative data related questions in the final survey differed from the pre and post-education surveys; therefore, the qualitative data cannot be directly compared and was meant to stand alone.

Items one, two, and three (see Table 12) asked participants to comment on how and the degree to which the motivational interviewing and collaborative information sharing skills learned in the educational workshops impacted their clinical practice and interactions with clients and interdisciplinary team members. Final survey items five, six, and seven asked questions about the impact action planning had in the same areas.

For motivational interviewing and collaborative information sharing, participants suggested that by incorporating these skills into their clinical practice, they were better able to motivate clients, offer clients more control related to decision making, and experienced improved communication during their client-therapist interactions. Ultimately, this shift in mindset led to more client buy-in and follow-through in the therapy process. Additionally, participants suggested that by considering the clients' specific goals when establishing the plan of care, therapists were able to make connections for clients between larger long-term goals and the smaller, incremental goals needed to achieve outcomes. For example, if a client identified "going home" as his/her goal, the therapist could communicate how a treatment activity focused on toilet transfers or ambulation was contributing to the person being able to return home. Pertaining to exchanges with interdisciplinary team members, participants commented that they experienced increased collaboration related to goal setting and achieving outcomes and improving patient satisfaction when using motivational interviewing and collaborative information sharing skills. They also acknowledged that these new-found skills helped to foster respect and appreciation for other professionals' opinions and input related to effective patient care.

Items five, six and seven (see Table 12) followed the same format as items one, two and three, asking participants to comment on how the educational workshop information related to action planning impacted their clinical practice and interactions with clients and other interdisciplinary team members. Despite finding the action planning templates to be helpful, participants reported difficulty in incorporating action planning into their clinical practice, particularly due to the limitations of their practice setting. Regarding the impact with their clients, participants found the action planning process aided in increasing rapport and trust between themselves and their clients and helped to focus care provided. Overall, the positive impact was summed up best by three in vivo codes. One participant said she had an "increased number of positive encounters." Another said simply, "I am more confident." Another participant reported "My patients are driven to achieve goals" suggesting that the action planning content provided motivation for clients. Participants noted that they had improved communication and collaboration among team members related to patient goals and discharge planning. A participant commented that "Action planning helped me improve my communication with my interdisciplinary team" and another said, "Goal setting is easier, and client centered."

In order to fully represent the variation and dimension found within the data, it should be noted that one participant reported that the content covered during the educational workshops related to motivational interviewing, collaborative information sharing, and action planning was "not at all" helpful related to interdisciplinary collaboration.

#### ***Final survey results (items 4 & 8)***

Items four and eight (see Table 13) sought information about how participants shared with colleagues about motivational interviewing, collaborative information sharing, and action planning. Participants noted that their colleagues demonstrated curiosity leading to explanations about the educational workshop content through a variety of methods including discussions, demonstrations, handouts, and written communication. Beyond just current colleagues, participants also recognized the benefits of sharing what they learned with students

**Table 12.** How and Degree that Motivational Interviewing and Collaborative Information Sharing Impacted Clinical Practice and Interactions with Clients and Interdisciplinary Team - Final Survey (items 1, 2, 3, 5, 6, 7)

Final Survey		
	Motivation Interviewing/ Collaborative Information Sharing	Action Planning
Clinical Practice	<ul style="list-style-type: none"> <li>• Incorporating patient views into goals and care</li> <li>• Improve patient motivation</li> <li>• Increasing frequency of motivational interviewing</li> <li>• "Giving patient more control"</li> <li>• "More relevant and meaningful plan of cares"</li> <li>• "It has helped me develop more open-ended questions"</li> </ul>	<ul style="list-style-type: none"> <li>• Action planning use                             <ul style="list-style-type: none"> <li>○ Difficult but helpful</li> <li>○ Difficult with setting</li> <li>○ Minimal</li> <li>○ Meaningful and effective</li> </ul> </li> <li>• Satisfaction and outcomes                             <ul style="list-style-type: none"> <li>○ Improved satisfaction</li> <li>○ Patient centered interventions</li> <li>○ Clear and improved outcomes</li> <li>○ Clear goals</li> </ul> </li> <li>• Other                             <ul style="list-style-type: none"> <li>○ Open-ended questions</li> <li>○ Visual handouts</li> <li>○ Decreased refusals</li> <li>○ More thorough interview</li> </ul> </li> <li>• "Action planning helps patients become less overwhelmed by choosing a specific goal to focus on"</li> </ul>
Clients	<ul style="list-style-type: none"> <li>• Improvement                             <ul style="list-style-type: none"> <li>○ Communication</li> <li>○ Rapport</li> <li>○ Awareness of motivational interviewing techniques</li> <li>○ Asking permission</li> <li>○ Efficiency</li> <li>○ Patient/family feedback</li> <li>○ Knowledge of patient desires</li> </ul> </li> <li>• Incorporating patient/family views to achieve buy-in                             <ul style="list-style-type: none"> <li>○ Offering parental option</li> <li>○ Cooperative goal setting</li> </ul> </li> <li>• "breaking down pt.'s goals into small steps"</li> <li>• "It's allowed me to direct my POC with increased emphasis on the pts goals"</li> </ul>	<ul style="list-style-type: none"> <li>• Action planning use                             <ul style="list-style-type: none"> <li>○ Collaboration</li> <li>○ Minimal</li> </ul> </li> <li>• Improvement                             <ul style="list-style-type: none"> <li>○ Rapport</li> <li>○ Trust</li> <li>○ Patient awareness</li> <li>○ Discharge planning</li> <li>○ Focused care</li> </ul> </li> <li>• Earlier planning</li> <li>• "Increased number of positive encounters"</li> <li>• "I am more confident"</li> <li>• "My patients are driven to achieve goals"</li> </ul>
Interdisciplinary Team	<ul style="list-style-type: none"> <li>• Improved collaboration                             <ul style="list-style-type: none"> <li>○ Goal setting</li> <li>○ Commitment to improved outcomes</li> <li>○ Patient centered goals</li> <li>○ Communication</li> <li>○ Respect</li> <li>○ Acknowledgement of multiple professional views</li> <li>○ Effective care and patient satisfaction</li> </ul> </li> <li>• "Not at all"</li> </ul>	<ul style="list-style-type: none"> <li>• Improvement                             <ul style="list-style-type: none"> <li>○ Communication of patient goals                                     <ul style="list-style-type: none"> <li>- Frequently</li> <li>- Action plan steps</li> </ul> </li> <li>○ Collaboration</li> <li>○ Discharge planning</li> </ul> </li> <li>• Lack of</li> <li>• "Not at all"</li> <li>• "Goal setting is easier, and client centered"</li> <li>• "Action planning helped me improved my communication with my interdisciplinary team"</li> </ul>

**Table 13.** How Information About Motivational Interviewing, Collaborative Information Sharing and Action Planning was Shared with Colleagues - Final Survey (items 4, 8)

Final Survey Collegial Sharing	
Motivation Interviewing/ Collaborative Information Sharing	Action Planning
<ul style="list-style-type: none"> <li>• Increased</li> <li>• Discussion and demonstration</li> <li>• Short conversations</li> <li>• Resource use                             <ul style="list-style-type: none"> <li>○ Workbook explanation</li> <li>○ Handouts</li> <li>○ Written</li> </ul> </li> <li>• Increased collaboration                             <ul style="list-style-type: none"> <li>○ Discharge planning</li> <li>○ Learning</li> <li>○ Collegial curiosity</li> <li>○ Benefit to students</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Increased</li> <li>• Explanation</li> <li>• Specific strategies</li> <li>• Discussion and demonstrations</li> <li>• At discharge planning</li> <li>• Benefits of action planning</li> <li>• Resource use                             <ul style="list-style-type: none"> <li>○ Written</li> <li>○ Handouts</li> </ul> </li> <li>• Lack of</li> <li>• "I have used it with students to direct goal setting while focusing on client centered care"</li> </ul>

**Final survey results (items 9 & 10)**

Finally, in items nine and ten (see Table 14), participants had the opportunity to share information on the “meaning and impact” of the educational workshops and any additional information that they would like to provide the presenters. Comments in this area were overwhelmingly positive regarding the educational intervention, as therapists succinctly stated the perceived benefits of participating. They felt that the educational workshops improved patient and family involvement in the goal setting process, improved patient motivation and collaboration, and provided them with tools and a deeper understanding of goal setting. Participants also provided more global comments about the meaning and impact of the workshops. One pointedly said, “I’ve gained the respect of my colleagues.” Another suggested that it had given her a “new perspective on interactive goal setting.” And finally, one participant said, “It’s allowed me to look at my work from a different lens...to improve my patient care.”

**Table 14.** Overall Meaning and Impact of Workshops on Practice and any Additional Information Provided - Final Survey (items 9, 10)

Final Survey Meaning/Impact of Workshop
<ul style="list-style-type: none"> <li>• Improved goal setting                             <ul style="list-style-type: none"> <li>○ Incorporating patient views</li> <li>○ Patient and family involvement</li> <li>○ Understanding of goal setting</li> <li>○ Tools</li> </ul> </li> <li>• Improved patient motivation</li> <li>• Improved collaboration with patient</li> <li>• Improved discharge planning</li> <li>• “I gained the respect of my colleagues”</li> <li>• “strengthened relationships with clients”</li> <li>• “importance of patient specific goal setting”</li> <li>• “Increased confidence”</li> <li>• “It’s allowed me to look at my work from a different lens...to improve my patient care”</li> <li>• “Gave me new perspective on interactive goal setting”</li> </ul>



## DISCUSSION

According to the literature, the key challenges to implementing collaborative goal setting are lack of client appropriateness due to deficits, lack of time, concern for duplication of services and lack of knowledge and skills on how to create client-centered goals.<sup>4</sup> While participation in the educational workshops did not fully eliminate all the challenges, results appear to indicate that participation in the workshops did have an impact on the barriers which helped to facilitate collaboration between therapists and clients in developing client-centered goals.

Overall, participants demonstrated a statistically significant increase in self-scoring related to motivational interviewing and action planning knowledge when comparing the pre-education to the post-education scores and maintained that increase over time when resurveyed after three months. Because this interactive workshop required the participants to collaboratively engage in conversation both with the instructor and other participants, it is possible that these exchanges strengthened their motivation and commitment to try to implement these newly learned skills in their own clinical practice. This supports the contention of Miller and Rollnick who described how conversations between therapists and clients can lead to behavior change.<sup>12</sup> Following the educational workshops, rather than using a standard set of typical goals or going through the routine of making goals for clients, participants reported their goals were more realistic, specific to a client's diagnosis, age-appropriate, and considered specific environmental needs. To further support learning and understanding, throughout the sessions, participants were given opportunities for immediate practice of the skills discussed, encouraged to practice between workshop sessions, and provided with multiple templates for establishing goals. Participants demonstrated a significant enough increase in knowledge and understanding that they shared this new knowledge with colleagues and students through discussions, demonstrations, and explanations of the written handouts and other resources. When asked if they knew how to overcome the barrier of lack of knowledge and skill, the participants' responses between the pre-education and final surveys demonstrated a statistically significant difference ( $p=.005$ ), indicating that they no longer viewed lack of knowledge or skill as a barrier to utilizing collaborative goal setting with their clients.

Collaboration, both with clients and the interdisciplinary team, was another area that was measured before and after participation in the educational workshops. The item "*I collaborate with interdisciplinary team members to help clients achieve their goals*" was the only survey item that did not show a statistically significant increase in pre to post-education scoring. Unfortunately, these results do not reflect the literature which states that therapists who use structured goal setting formats experience increased collaboration between interdisciplinary team members related to communication and awareness and reinforcement of another discipline's goals.<sup>4,6</sup> For most of the participants (42.1%), their primary practice setting was acute care, which may have impacted the results. As opposed to an inpatient rehabilitation setting where the interdisciplinary team discusses patients at planned weekly conferences and where therapists are teamed together with the same patients on their caseloads and where there is typically a central area where therapists treat and office allowing for regular, close communication and collaboration, typically the nature of the acute care setting is more disjointed. Members of the acute care interdisciplinary team generally evaluate the patient individually and communicate information to others via the electronic medical record, often not having any face-to-face interactions with each other. Any verbal interactions would be brief and most likely focused on conveying information such as immediate discharge needs rather than on collaborative goal setting. Both in the pre and post-education survey, participants identified team availability as a challenge to interdisciplinary team member collaboration. Another factor that may have impacted the participants' ability to collaborate with their interdisciplinary team members is collaboration requires reciprocation. Therefore, despite a desire to increase collaboration, it may have been out of their control.

While participant ratings did not indicate a statistically significant difference in collaboration with their interdisciplinary team, participants did report a shift in outlook. In the pre and post-education surveys, participants reported a knowledge deficit of professional roles and differences in opinions, specifically "tunnel vision" and "superiority" as challenges to collaboration with interdisciplinary team members. However, in the final survey, therapists remarked that they gained respect from colleagues and there was an acknowledgement of multiple professional views. The participants also reported an impact of participating in the educational workshops was having a newfound desire to advocate for their profession. This reported shift in acknowledging multiple professional views and the need to advocate for their discipline may have helped to address the barrier to collaborative goal setting related to concern for duplication of services.<sup>4</sup> As the members of the interdisciplinary team develop a deeper understanding and respect for the various disciplines that contribute to the team, there may no longer be a concern for duplication of services but instead an awareness and desire to support and reinforce goals across the team.

In contrast to the lack of change related to interdisciplinary team collaboration, participants indicated that they experienced an increased collaboration with clients. Provider/patient goal mismatch, meaning a disconnect between therapist and patient desires and focus for treatment, was identified in the pre-education survey as a challenge to client collaboration. However, with the

knowledge gained from the educational workshops, participants used motivational interviewing and collaborative information sharing skills to include others' views in the goal development process to achieve buy-in (e.g. families, teachers), to give parents and children choices, to build rapport and enhance communication to gain knowledge about patient desires leading to improved patient motivation to achieve goals and more relevant and meaningful care plans. This is consistent with the literature that suggests when a therapist allows a client to contribute to his/her treatment plan by developing their own goals, it improves the chances for attaining positive outcomes, increases self-efficacy and there is a higher likelihood of cooperation and follow through.<sup>2,3</sup>

Despite possessing the knowledge of how to use collaborative goal setting with clients and the desire to be more collaborative with clients and their interdisciplinary team, participants reported some difficulties with actual implementation of action planning. In anticipation of this difficulty, the educational workshops included activities where the participants anticipated barriers to implementation and brainstormed potential solutions to overcome the constraints in order to integrate skills at their facilities; however, this continued to be a challenge. Consistent with the literature, participants reported lack of time and lack of patient appropriateness due to level of disabilities as being barriers to implementation.<sup>4</sup> Despite providing action planning templates that minimized the time required and provided options depending on the client's cognitive status, solutions for these two barriers may require more systematic changes related to productivity expectations and may be a result of the ever-changing nature of patient care rather than something that can be fully resolved through an educational endeavor. Practice setting may also have been a factor as most of the participants' primary practice setting was acute care which does not typically lend itself to many subsequent treatment sessions following initial evaluation as traditionally the focus of care is on discharge related needs. Also, participants described their action planning use as difficult but helpful; therefore, suggesting that while currently their caseloads do not allow for regular, consistent implementation, perhaps when opportunities arise to use these skills learned during the educational workshops, they will have the knowledge and tools to do so.

## **STUDY LIMITATIONS AND FUTURE RESEARCH DIRECTIONS**

### **Limitations**

While the overall results of the study demonstrate statistically significant differences from pre-education surveys to the final surveys, which is promising, the study has several limitations. The sample size of 19, while appropriate for a pilot study, is not enough to make broad generalizations about the effectiveness of the educational sessions on a larger scale. Also, the results of the study could have been impacted by a large percentage of participants being from the same primary practice setting, acute care, which inherently provides less opportunities for interdisciplinary collaboration, rapport building with clients and ongoing treatment sessions. Another potential limitation related to the participants is selection bias as the participants self-selected themselves into the study because they were looking for ways to increase collaboration and learn new skills. Another limitation to the study were the surveys. While the surveys were based on studies found in the literature, the surveys were developed by the researchers; and therefore, lack established validity and reliability. The participants provided self-reported answers which may have resulted in bias and the final survey varied from the pre and post-survey formats, albeit by design.

### **Future Research**

This pilot study provides a variety of opportunities for future research related to further assessing the effectiveness of the educational workshops. In order to fully understand the impact and meaning of the sessions on the participants' clinical practice, goal development and interactions with clients and interdisciplinary team members, in future studies, it may be more advantageous to provide participants with fewer pointed qualitative questions directed at specific aspects of the workshops and instead ask more broad, open-ended questions, allowing the participants to more freely disclose their thoughts and experiences. Also, in order to provide the most conducive environment for implementation and interdisciplinary collaboration, this study could be replicated at a single facility; therefore, if therapists are educated together and are all working from a similar foundation and skill set, then potentially the outcomes may be improved. Finally, recognizing that finding multiple evening times that are convenient for therapists, especially after working a full day may have impacted recruitment, future research opportunities may explore different avenues to present the workshop information (e.g. virtual, weekends, lunch hours), while not sacrificing opportunities for repeated practice and small and large group discussions.

## **CONCLUSION**

The purpose of this study was to evaluate the effectiveness of educational workshops related to collaborative goal setting, specifically in the areas of increasing knowledge, promoting collaboration between participants and their clients and interdisciplinary team and to measure the participants' actual implementation of the skills learned. Quantitative data demonstrated statistically significant increases in all areas with the exception of increased interdisciplinary collaboration. The qualitative data provided further explanation to the challenges and perceived benefits of participating in the educational workshops. The

educational workshops appeared to be effective in addressing some of the barriers to collaborative goal setting (e.g. lack of time, knowledge/skills, appropriate patients, concern for duplication of services) found in the literature, most notably providing the participants with the knowledge and skills needed, which is the first step in implementing collaborative goal setting into clinical practice.

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**Appendix A: Demographic, Pre-education, Post-education and Final Survey Questions**  
**Demographic survey questions**

Enter your participant number: \_\_\_\_\_

Inclusion criteria screening:

1. Are you currently licensed as an occupational therapist (OTR) or physical therapist (PT) in the US?
  - Yes
  - No(If no, then will end the survey. This is a way to double check exclusion criteria)
  
2. Are you able to attend both educational sessions and willing to complete all surveys?
  - Yes
  - No(If no, then will end the survey. This is a way to double check exclusion criteria)

Demographic information:

This information is being collected in order to help the researchers to best describe those surveyed.

1. What is your discipline?
  - Occupational therapy
  - Physical therapy
  
2. What is your age?
  - 22-24
  - 25-34
  - 35-44
  - 45-54
  - 55-64
  - 65 and older
  - Prefer not to answer
  
3. What is your gender?
  - Male
  - Female
  - Prefer not to answer
  
4. Please specify your race/ethnicity.
  - White
  - Hispanic or Latino
  - Black or African American
  - Native American or American Indian
  - Asian or Pacific Islander
  - Other (please specify): \_\_\_\_\_
  - Prefer not to answer
  
5. What is the highest degree you have received specific to your field?
  - OTD
  - MSOT
  - BSOT
  - DPT
  - MSPT
  - BSPT
  - Other (please specify): \_\_\_\_\_

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6. What is the highest degree or level of education that you have completed?
- Associate degree
  - Bachelor's degree
  - Master's degree
  - Doctoral degree (entry-level)
  - Doctoral degree (post-professional)
  - EdD
  - PhD
7. How many years have you been practicing?
- 0-1 years
  - 2-3 years
  - 4-5 years
  - 6-10 years
  - 11-15 years
  - 16-20 years
  - 21 years and more
8. Which of the following best describes your primary practice population?
- Pediatrics
  - Adolescents
  - Adults
  - Older Adults
9. In which locations do you spend the most time during your typical day? Check all that apply and add an estimated percentage of time (to total 100%) of your day.
- Hospital \_\_\_\_\_
  - Skilled nursing facility \_\_\_\_\_
  - Outpatient clinic \_\_\_\_\_
  - Home health \_\_\_\_\_
  - Community-based clinic \_\_\_\_\_
  - School system \_\_\_\_\_
  - Academia \_\_\_\_\_
  - Other (please specify): \_\_\_\_\_
10. In which arenas do you spend the most time during your typical day? Check all that apply and add an estimated percentage of time (to total 100%) of your day.
- Acute care \_\_\_\_\_
  - Acute rehabilitation \_\_\_\_\_
  - Subacute rehabilitation \_\_\_\_\_
  - Outpatient rehabilitation \_\_\_\_\_
  - Outpatient hand clinic \_\_\_\_\_
  - Home health \_\_\_\_\_
  - School-based pediatrics \_\_\_\_\_
  - Hospital-based pediatrics \_\_\_\_\_
  - Outpatient- based pediatrics \_\_\_\_\_
  - Hospital-based mental health \_\_\_\_\_
  - Outpatient-based mental health \_\_\_\_\_
  - Community-based mental health \_\_\_\_\_
  - Other (please specify): \_\_\_\_\_

Pre-education, Post-education and Final survey questions

Enter your participant number: \_\_\_\_\_

Note: *Client* is used as a global term. Depending on a therapist's practice setting, for all statements/questions, client could be substituted for patient or student.

Part I:

Survey on Knowledge, Beliefs and Actions

Scale:

- 1 – Strongly disagree
- 2 – Disagree
- 3 – Somewhat disagree
- 4 – Neither agree or disagree
- 5 – Somewhat agree
- 6 – Agree
- 7 – Strongly agree

Knowledge:

1. I am knowledgeable about motivational interviewing.
2. I am knowledgeable about action planning.
3. I know how to collaboratively set goals with *clients*.
4. I know ways to collaborate with other interdisciplinary team members to help *clients* achieve their goals.
5. I know how to overcome challenges related to collaborative goal setting.
6. I know how to overcome the following challenges related to collaborative goal setting (check all that apply):
  - Patients/clients/students deemed to be inappropriate
  - Lack of time
  - Concern for duplication of services (blurring of professional lines across disciplines)
  - Lack of knowledge and skill related to collaborative goal setting
  - Other (please specify): \_\_\_\_\_

Beliefs:

1. Given my current caseload and practice setting, I believe I have the time to collaborate with my *clients* in setting goals.
2. Given my current caseload and practice setting, I believe I have the ability to collaborate with my *clients* in setting goals.
3. Given my current caseload and practice setting, I have the time to collaborate with interdisciplinary team members to help our *clients* achieve their goals.
4. Given my current caseload and practice setting, I have the ability to collaborate with interdisciplinary team members to help our *clients* achieve their goals.
5. I believe I have strategies that I can use to overcome the challenges related to collaborative goal setting.
6. I believe I can determine if a *client* is ready to participate in collaborative goal setting.
7. I believe I can use motivational interviewing techniques to encourage a *client* towards becoming more ready for change.
8. Given my current caseload and practice setting, it is feasible for me to use action planning.

Actions:

1. I collaborate with interdisciplinary team members to help *clients* achieve their goals.
2. I can articulate to *clients* the importance of collaborative goal setting as a way of contributing to their plan of care.
3. I am able to effectively use motivational interviewing with my *clients* in my everyday practice.
4. I am able to effectively use action planning with my *clients* in my everyday practice.

Part II:

Perceived Self-Efficacy Scale for Action Planning  
Espiritu & Michaels

Please rate your ability to perform each of the following activities using the scale below where "100" means that you believe you are 100% capable, and "0" means you believe that you are not capable at all.

1. I can define Action Planning. \_\_\_\_\_
2. I can explain Action Planning in detail to a colleague or *client*. \_\_\_\_\_
3. I can apply Action Planning to *clients* on my case load. \_\_\_\_\_
4. I can analyze the appropriateness of using Action Planning with a *client*. \_\_\_\_\_
5. I can incorporate Action Planning into the intervention for a *client*. \_\_\_\_\_
6. I can evaluate the actual benefits of Action Planning for a *client*. \_\_\_\_\_
7. I can synthesize new ways to utilize Action Planning for a *client*. \_\_\_\_\_

This scale was developed with the guidance from the following:

Bandura, A (2006). Guide for Constructing Self-Efficacy Scales. In F. Pajares & T. Urdan. *Self-Efficacy Beliefs of Adolescents*. Charlotte, NC: Information Age Publishing. 307-337. Retrieved. <https://www.uky.edu/~eushe2/Bandura/BanduraGuide2006.pdf>

Bloom, B.S. (1984). *Taxonomy of Educational Objectives, Book 1: Cognitive Domain*. New York: Longman.

Part III:

Pre-Education and Post-Education Survey Qualitative Questions

1. How do you typically develop goals for your *clients*?
2. How do you typically elicit your *client's* input for goal development?
3. Do you use a structured approach to goal setting with your *clients*?  
If so, please describe.
4. How collaborative are you when working with your *clients* to develop goals. Please describe.
5. What are some of the greatest challenges you face when collaborating with your *clients* in setting goals?
6. How collaborative are you when working with your interdisciplinary team to achieve your *clients'* goals. Please describe.
7. What are some of the greatest challenges you face when collaborating with your interdisciplinary team to achieve your *clients'* goals?
8. What meaning or impact on your practice are you hoping to achieve by participating in these educational workshops? (pre-education survey)

What meaning or impact on your practice have you achieved by participating in these educational workshops? (post-education survey)

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Final Survey Qualitative Questions

While reflecting on your learning about the spirit of motivational interviewing and collaborative information sharing skills, please answer the following questions:

1. How has your learning contributed to your clinical practice?
2. How has your learning impacted your interactions with patients?
3. How has your learning impacted your interactions with your interdisciplinary team?
4. How have you shared this information with your colleagues or within your workplace?

While reflecting on your learning about action planning, please answer the following questions:

1. How has your learning contributed to your clinical practice?
2. How has your learning impacted your interactions with patients?
3. How has your learning impacted your interactions with your interdisciplinary team?
4. How have you shared this information with your colleagues or within your workplace?

What meaning or impact on your practice have you achieved by participating in these educational workshops?



Please share any additional comments regarding the educational workshops that you think would be helpful for the researchers to know.

### Appendix B: Content of Educational Workshops

<b>Workshop 1</b>	<b>Introduction to the Spirit of Motivational Interviewing, Collaborative Information Sharing Skills and Action Planning</b>
<b>Objectives</b>	By the end of Workshop 1, participants will be able to: <ol style="list-style-type: none"> <li>1. Summarize the spirit of Motivational Interviewing</li> <li>2. Generate questions which are consistent with collaborative information sharing</li> <li>3. Facilitate the development of an action plan, including modifying as needed</li> <li>4. Describe how they could potentially incorporate principles and skills of motivational interviewing and action planning into their clinical practice</li> </ol>
<b>Educational Workshop Overview</b>	<ul style="list-style-type: none"> <li>• <u>Introduction</u> – welcome and introduction of presenter, background to research study, timeframe for workshops/assessment (5 minutes)</li> <li>• <u>Opening activity</u> – recall of recent patient interaction that did not go well (frustrated, lack of motivation/engagement, poor follow-through), individual and large group discussion (10 minutes)</li> <li>• <u>Introduction to the spirit of Motivational Interviewing/collaborative partnerships</u> – brief teaching with PowerPoint slide, discussion on what partnerships can look like in clinical practice in pairs and large group, sound clip contrast (10 minutes)</li> <li>• <u>Collaborative information sharing skill practice</u> – brief teaching with PowerPoint slide, example generation (15 minutes)</li> <li>• <u>Spirit of MI self-assessment and debriefing</u> – complete self-assessment and identification of areas for focused implementation/mindset change, individual and large group discussion (15 minutes)</li> <li>• <u>Reflection on current practice</u> – actions to promote engagement and follow-through during/outside of therapy sessions, individual and large group discussion (10 minutes)</li> <li>• <u>Action planning introduction and practice</u> – briefing teaching with PowerPoint slide, video clip example, facilitating action plan development practice by making a personal action plan (25 minutes)</li> <li>• <u>Refining action plans</u> – identification of subpar action plan components and example of how to facilitate modification (10 minutes)</li> <li>• <u>Implementation in clinical practice</u> – brainstorm ideas on how to integrate into practice setting (10 minutes)</li> <li>• <u>Conclusion</u> – content summary, encouragement for practice between workshops (5 minutes)</li> </ul>
<b>Workshop 2</b>	<b>Review of Spirit and Skill Implementation and Knowledge Translation</b>
<b>Objectives</b>	By the end of Workshop 2, participants will be able to: <ol style="list-style-type: none"> <li>1. Debrief an action plan with a client</li> <li>2. Describe how they potentially could incorporate knowledge and skills gained in their own clinical practice and share this knowledge with others on the interdisciplinary team</li> </ol>
<b>Educational Workshop Overview</b>	<ul style="list-style-type: none"> <li>• <u>Introduction</u> – welcome back and review of timeframe for workshops/assessment (5 minutes)</li> <li>• <u>Reflection on incorporation of spirit of Motivational Interviewing and collaborative information sharing skills into clinical practice</u> – individual, pairs and large group discussion, follow-up clarifications/questions (35 minutes)</li> <li>• <u>Personal action plan reflection</u> – follow up clarification/questions (10 minutes)</li> <li>• <u>Action plan debriefing process and practice</u> – demonstration of debriefing process, practice (25 minutes)</li> </ul>

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	<ul style="list-style-type: none"><li>• <u>Development of new personal action plan</u> (5 minutes)</li><li>• <u>Reflection on incorporation of all skills into clinical practice &amp; knowledge translation</u> – use implementation brainstorming worksheet, in groups based on facility or practice setting and large group discussion (10 minutes)</li><li>• <u>Conclusion</u> – content summary, completion of post-education survey (5 minutes)</li></ul>
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