The Links Between Motivational Techniques, Successful Physical Therapists, and Successful Rehab Clinics

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Abstract

There is a strong positive correlation between a successful physical therapist (PT), their clinic, and the motivational techniques used during therapy. The PT should be prepared to sit down with each patient and set short- and long-term goals to help them accomplish what they desire through therapy. Effective communication skills, practical skills and technique, individualized care, and organizational and environmental factors are the four major aspects that define patient-therapist relationships. Patient adherence to their home exercise program (HEP) is vital to a successful rehabilitation, and therefore the PT's goal should be to help the patient understand the importance of the prescribed protocol. To do this, the PT should be able to creatively find ways to relate to each patient, regardless of their age, gender or demographic.

As part of this thesis, a research study was also conducted to investigate best motivational practices in PT. Data were collected through a ten-question survey distributed at a well-known, successful clinic to identify what is the most important to patients during the rehabilitation process. One of the questions, "rate how well the physical therapist's personality meshes with the patient's" had the highest rating, which supported the prediction that in rehabilitation it is most important that the PT be able to relate to the patient on a personal level. Based on the results of the survey, it was concluded that the most important motivational factor to patients was the personality of the PT. Therefore, for a clinic to be successful, it is recommended to hire staff that are not only well educated but have a warm and caring personality.

The Link Between Motivational Techniques and Successful Physical Therapists and Clinics

Introduction

There are many things a physical therapist (PT) can do to set themselves apart from other therapists. There are four major aspects that define patient-therapist relationships (O'Keeffe et al., 2016). The first aspect is effective communication skills. The PT must be gifted at interacting with a diverse group of patients, specifically different types of personalities, as this plays a large role. The second aspect is practical skills and technique, which is developed through an eagerness to learn and the type of training the PT receives. Individualized care is the third aspect, which stems from the first two aspects. Because each patient is different, the road to successful rehabilitation is different. This aspect of individualized care will be discussed in greater detail in this thesis.

Patient goals must be incorporated into their treatment. The best way to individualize care is effective communication skills and practical ability of the PT to use the right protocol for each patient. This means the PT should make the patient feel as if they are in control of their care and involved in the decisions made about their treatment, but not to a point where quality of care is being compromised.

Finally, organizational and environmental factors can also play a role. If the therapy clinic is well-run, is easy to make appointments with, and is easy to get in touch with the therapists through phone or email, the patient will feel that their treatment is more accessible (O'Keeffe et al., 2016). Many environmental factors can impact the patient's outlook on rehabilitation, such as the aesthetics of the therapy gym and waiting room. While this may seem trivial, a more up-to-date clinic encourages the patient to have positive attitude while at therapy, which ultimately results in higher rehabilitation success rates.

Home Exercise Program Compliance

A patient's adherence to a home exercise program (HEP) is extremely important to rehabilitation success. "Non-compliance is traditionally defined as a failure by patients to follow advice" (Campbell et al., 2001). Non-compliance can result in a loss of progress made during therapy. The PT must recognize the difference between initial compliance and continued compliance, because the approach to each type of compliance is unique.

Initial compliance.

Initial compliance is often determined by the first impression the patient has of the physical therapist, reinforcing the need for good people skills. Campbell et al. observe that patients are usually the most compliant in the first nine weeks of therapy (Campbell et al., 2001). Therapeutic intervention not only consists of a standardized protocol for specific injuries or disabilities, but also an individualized aspect that does not compromise overall effective care. The PT should recognize that the first nine weeks of therapy are crucial to patient rehabilitation due to higher adherence levels and plan accordingly (Campbell et al., 2001).

Continued compliance.

Continued compliance in therapy can be challenging to achieve because therapy often causes some degree of pain or discomfort. In addition, depending on the patient, treatment may take longer than expected. If the patient believes the prescribed interventions are not effective, they may lose motivation to adhere to the protocol (Campbell et al., 2001). The PT should explain the long-term rewards of the treatment protocol to the patient so they understand that improvement may not immediately be evident after a few visits. When the patient understands this concept, they should be able to view difficult exercises prescribed in therapy as stepping stones to an overall goal.

Motivation Types

Both intrinsic and extrinsic motivation can be used to motivate the patient to have a positive outlook on their treatment outcome. Most patients tend to respond more positively to one type of motivation, but it is important to use both types in patient treatment because the less dominant type of motivation can also be helpful. Extrinsic incentives, such as rewards for completing certain levels of treatment, combined with the presence of intrinsic motivation, or motivation that comes from within the patient, produce positive results in patient therapy treatment. It has been demonstrated that extrinsic motivators impact the quantity of performance, while intrinsic motivation directly influences the quality of performance. (Cerasoli, Nicklin, & Ford, 2014). Cerasoli et al. (2001), observes:

> Extrinsically motivated behaviors are governed by the prospect of instrumental gain and loss (e.g., incentives), whereas intrinsically motivated behaviors are engaged for their very own sake (e.g., task enjoyment), not being instrumental toward some other outcome.

These two behaviors are equally important, and the correlation has not yet been examined. The goal was to determine the relationship between the impact of extrinsic incentives and intrinsic motivation in performance. This information can be applied to the topic of effective physical therapists and clinics, as motivation is a central theme of therapy (Cerasoli et al., 2001).

Motivational techniques must be specific to the population receiving the treatment. Patients can be broken up into several groups, such as neonatal intensive care unit (NICU) patients, in-patient, out-patient, pediatrics, geriatrics, and athletes. All of these groups receive physical therapy, and some patients from different groups may even have the same end goal, however the path to that goal is different. One example is recovery from a broken leg in an adult athlete versus a pediatric patient. Motivational techniques will most likely be different based on the

patient's age. An athlete will be more motivated to get back on the field and will progress quickly in therapy. A child may need a little more motivation and prompting from the PT, such as therapy based around games the child enjoys and rewards such as candy or toys at the end of the session (Majnemer, 2011). Both patients have the same end goal of rehabilitating the broken leg, but the therapy may look different from this aspect.

Barriers to Prescribed Exercise Adherence

There are several common barriers to adherence with prescribed exercise. The first is pain, which is often the result of prescribed treatment. Worsening pain often deters patients from complying with prescribed treatments. Low baseline physical activity levels and exercise also create a barrier to exercise adherence. The PT should consider the patient's initial exercise level when they first evaluate a patient so as to create a protocol with realistic expectations. Low self-efficacy is a barrier that should be easily overcome by a PT who is passionate about relating to patients. Anxiety, depression and helplessness are also barriers, and the presence of any of these three barriers should not be ignored. Patients can be referred to relevant healthcare services for treatment, specifically therapy for mental disorders. This can be a supplement to therapeutic treatment that will assist with increasing the possibility of treatment adherence and success. Social or family support present during therapy can assist the patient in completing activities during therapy (Jack et al., 2010).

Optimism and Self-Efficacy: A Supplemental Treatment

Optimism.

Optimism and a high level of self-efficacy, or confidence, generally makes a person feel better both mentally and physically. The therapist should view optimism and self-efficacy as a tool at their disposal which they can supplement physical rehabilitation treatment sessions with.

If the PT can encourage the patient throughout their rehabilitation process and the patient has a positive outlook on their situation, they are more apt to adhere to their HEP and come ready to work during therapy sessions at the clinic (Conversano et al., 2010).

In general, optimism appears to have a great impact on physical health. If patients have a more optimistic view of their situation and rehabilitation process, they are typically able to progress through their rehabilitation faster. If the patient has low outcome expectancies and value beliefs, these can serve as demotivating factors which can prolong the rehabilitation process (Hardcastle et al., 2015). It is also important for the PT and patient to honestly evaluate how he or she is progressing in therapy, because false optimism can cause a patient to ignore the problem, which slows down patient success (Conversano et al., 2010). Creating specific short-term and long-term goals is extremely vital to providing quality treatment (McGrane et al., 2015). Reaching the goals encourages the patient to have a more optimistic view of their treatment progress and also can motivate them to pursue higher goals. Goals are also helpful in providing an honest view of progress. If goals are not being achieved, this indicates that the goals need modification and a portion of the care may need to be adjusted to increase success.

Self-efficacy.

Self-efficacy is the personal judgement of how well one can progress through therapy and deal with any obstacles that may occur (Rhodes & Fiala, 2009). Types of efficacy include task efficacy and coping or scheduling efficacy. These are subdivisions of self-efficacy that focus specifically on the ability of the patient to complete the task and to be organized while doing so, respectively (Rhodes & Fiala, 2009). Task efficacy is defined as “the level of personal agency and mastery that an individual perceives over the enactment of a specific behaviour, which

includes the physical task itself". Coping or scheduling efficacy is defined as "the organization and regulation of enactment" (Rhodes & Fiala, 2009).

A high level of task efficacy shows that the patient believes in his or her ability to complete a task. This relates to therapy in the sense that if the patient can view the task at hand as achievable, they are more likely to complete the task. Coping and scheduling efficacy involves the ability to formulate a plan of action to achieve the task at hand. These two types of efficacy should be considered when first evaluating the patient. The therapist can then come up with methods to improve areas in which the patient is lacking.

The principle of self-efficacy is one of the most important principles to be applied in health care today. Health care workers must place emphasis on maintaining high self-efficacy with clients in order to promote a speedy and efficient recovery. The path to increasing a patient's self-efficacy is not a clear-cut path involving the exact same plan for each patient. General guidelines can be followed that should be adapted to fit the patient's needs and personality.

In order to improve self-efficacy, therapists can provide personalized treatment, feedback and assess patient progress to meet the patient's needs (Rhodes & Fiala, 2009). All health care providers should place the utmost importance on reading the patient's personality to determine the best way to motivate and encourage the patient to adhere to the rehab protocol and to pursue a healthy lifestyle after physical therapy is completed to prevent reinjury (Rhodes & Fiala, 2009).

Rhodes and Fiala also make the astute observation that self-efficacy levels directly correlate to therapy protocol adherence. A high level of self-efficacy directly relates to adherence to physical therapy treatment protocols. Physical therapists must not simply follow the protocol pertaining to the injury given by the doctor with no intention of possible change in the protocol

or timeline (Rhodes & Fiala, 2009). Physical therapy requires a certain level of flexibility on the therapist's part in order to maintain a balance of keeping the patient happy while simultaneously pushing them to do the best they can in therapy.

The ability of a therapist to instill positive self-efficacy values benefits the patient far more than just providing a speedy recovery. Improvement of the patient's self-efficacy as a whole can influence all aspects of the patient's lifestyle. An effective clinic is a clinic where a patient graduates from therapy with increased physical and mental abilities which allow them to accomplish their personal goals, such as a patient with carpal tunnel that is eager to get back to playing guitar or piano. This will also make them feel more valued as an important contributing member of society. Increasing a patient's self-efficacy during rehabilitation can teach them an important principle that can be applied to other aspects of life. Extra confidence in one's ability to perform well can positively performance outcome. The learned self-efficacy during treatment can be influence the patient's everyday life, as they are more confident in their ability to complete difficult or new tasks, some which may not even be directly related to PT, such as learning a new instrument or playing a new sport. This also helps the clinic, as pleased patients recommend the clinic to other potential clients.

Self-efficacy and pain.

Michael K. Nicholas analyzed the relationship between self-efficacy levels and pain in people with chronic pain (Nicholas, 2007). Nicholas quotes Bandura, "efficacy expectations determine how much effort people will expend and how long they will persist in the face of obstacles and aversive experiences" (Nicholas, 2007). He goes on to state that people can hold self-efficacy beliefs that allow them to face obstacles in life confidently and overcome adversity.

There is a correlation between self-efficacy and the way one handles chronic pain. The Pain Self-Efficacy Questionnaire (PSEQ) is a self-efficacy scale developed by Nicholas that asks pain to be taken into account when rating an individual's personal self-efficacy. A significant positive correlation is seen in Nicholas' research between the PSEQ and active coping strategies such as the ability to ignore the pain, usage of coping self-statements and increased behavior and control pain subscales of the Coping Strategies Questionnaire (Nicholas, 2007).

In a study investigating the relationship between pain intensity, self-efficacy and physical performance in patients with chronic low back pain, it was observed that a positive self-efficacy was directly related to positive physical performance. A person who believes in their ability to successfully complete a task or activity is called known self-efficacy (Adegoke, Ezeukwu, Frih, & Costa, 2010). When the patient is aware of their thinking style and can increase their confidence in what they are capable of, the health care provider or therapist's job becomes much more efficient since the patient is coming into treatment with a positive outlook on the possible outcomes of therapy. A positive mental outlook can often bridge the gap between physical capability and the patient's problem.

Different patients react differently to pain. Some individuals have low pain tolerance, while others may have a high pain tolerance. If a patient has a low pain tolerance, they will often have to work harder mentally to overcome a sense of low self-efficacy and perform well in rehabilitation. The goal of health care is to improve the patient's quality of life and minimize their pain. There is only so much the health care provider can do for a patient if they do not want to improve their health. For patients who lack self-motivation and confidence, implementation of short-term goals is helpful because long-term goals can take weeks or months to complete, which

can be discouraging for these individuals. The PT can do little things such as making a big deal over small milestones which show the patient that they are one step closer to the overall goal.

A simple example of this is providing praise for a child who does something good in therapy, such as getting up from the floor from a half-kneel position without use of anything to balance themselves, such as a handrail or the therapist's hand. Excessive praise, such as clapping and cheering, provides positive reinforcement, especially with children. Once a child sees that they are receiving attention for something they are doing, they tend to continue the action to receive more attention. When the patient does not do what they are supposed to do, the lack of praise provides negative reinforcement that encourages the patient to try harder during the next repetition, activity, or session.

In conclusion, considering the patient's level of self-efficacy plays an important role in the approach to therapy as well as motivating patients during rehabilitation. A motivated patient who has a positive outlook on their situation and high self-efficacy will be more determined to "push through the pain" to reach their end goal. It is important to complete an initial evaluation of the patient's personality and have an honest discussion about the patient's and therapist's goals for therapy. A practical consideration that a therapist can do for their patients is to provide them with several options of exercises to perform which stay within the prescribed rehabilitation protocol. This will increase self-efficacy by giving patients the opportunity to take charge of part of their care. This also increases their sense of independence, which contributes to increased confidence and success in therapy.

It is essential to avoid the effects of negative self-efficacy. In order to do this, the specific causes of negative efficacy must be identified for each patient and preliminary action must be taken in order to avoid wasted time in negative views of oneself. Each patient is unique. In

physical therapy, some patients progress quickly, whereas others may take longer to return to full capacity (Bandura & Locke, 2003).

Stressors and environmental demands.

There are two key factors that a health care provider can watch for: stressors and environmental demands. Stressors and environmental demands include the patient's pain tolerance, personality, current workplace and family members, as well as environmental upbringing. Parents can model a motivated work ethic, which will usually spill over into the way a patient perceives the world, or the patient may emulate a lazy work ethic due to parents who did not place importance on hard work during their childhood. The goal of the physical therapist should be to help the patient locate the main causes preventing the patient from an efficient recovery and help them deal with these immediately. Once these factors are removed from the equation and self-efficacy is increased, the patient should be more motivated to accomplish therapy goals and follow their home exercise program.

After extensive literature review, Rhodes and Fiala noted that more research must be done to uncover "predictor variables" by conducting longer follow-up assessments to evaluate how long patients adhere to protocol (Rhodes & Fiala, 2009). A more diverse demographic should be surveyed because different variables influence different people groups in the way they react to them. Different "predictor variables" are present for different age groups, ethnicities, cultures and geographic areas. Isolating predictor variables for specific people groups will increase treatment success.

Patient experience.

Positive or negative patient experience can affect self-efficacy as well. To be a successful clinic, it should be noted that what the patient feels and thinks during his or her time at the clinic

can play a large role in their rehabilitation, other patients' rehabilitation, and the number of potential patients that may be referred to the clinic. If a patient has a negative attitude as a result of an issue they have with the clinic, it should be addressed immediately.

There are several topics that are important to patient experience: aesthetics of the exercise facility, hassle of the experience and opportunity for distraction, such as the use of music, television or social interaction to distract the patient from the task at hand since therapy can be painful as well as keep the therapy interesting (Rhodes & Fiala, 2009). Therapists must be able to take the patient's pain that occurs as a result of therapy and turn it into a positive thing to keep the patient viewing the therapy as helpful and needed.

Bandura and Locke ask, "Do beliefs of personal efficacy contribute to human functioning?" (Bandura & Locke, 2003). It has been observed that the level of self-efficacy is directly correlated with motivation and performance across many fields, such as athletics, academic achievement, psychosocial functioning in children, and more. The more confident one is in their ability to complete the task at hand, the better chance one has at succeeding.

The state of the facility and other organizational factors influence patient experience and have a large impact on the efficiency of rehabilitation (Rhodes & Fiala, 2009). From the moment the patient enters the waiting room, to the completion of rehabilitation, it is important to make the patient feel comfortable, safe and happy. Poor customer service can cause patients to lose motivation during therapy sessions and can even cause the loss of patients to other practices. If it is clear to the patient that all staff members care about their health and progression of therapy, they will be more motivated to adhere to the prescribed program.

Humility

Emphasis on humility and a caring attitude is an important aspect of health care. This is a simple observation that is even overlooked by health care professionals who have been practicing for many years. Professionals can fall into a routine where patients may just become names on a page, which deindividualizes treatment. Simply put, therapists need to be reminded of the importance of excellent customer service just as much as the importance of providing quality care. A PT that has a passion for helping their patients and is willing to be flexible in the mode of treatment will have no problem relating to their patients once they find the best way to connect with them. If the PT can facilitate a supportive environment for patients that encourages cooperation and adherence to protocol, high quality health care will be provided (Mosadeghrad, 2014).

Facility Aesthetics

Facility aesthetics are also an important part of building motivation and enhancing compliance as well (Maclean et al., 2002). Although subjective, it is important to address. It may seem trivial to put a fresh coat of paint on the walls or decorate the bathrooms, but this can make the patient feel more at ease during his or her visit. Small items such as complimentary toiletries are a small cost to make the patient feel more welcome. Cleanliness is an important part of this. Dirty and dingy patient examination tables and equipment can give a negative impression. When it is within the clinic's budget, updates can be made to the interior of the building to keep the therapy rooms and equipment looking sharp and professional. The exterior is important as well, and a visible sign and well-manicured landscaping provides a positive first impression as one walks through the door, especially for first time patients (Schierhorn, 2015).

Schierhorn (2015) references the work of Al Turner who practiced medicine in Oregon. He is very sensitive to the importance of this topic, specifically concerning the waiting room. He worked to make the waiting room in his practice open and inviting to the patients by putting thought into every little aspect of the waiting room. For example, he consulted a colorist who gave him advice on what color scheme to use for the room. He hung calming nature scenes on the walls, bought several fountains with cascading waterfalls, and switched out magazines with possible trashy articles for books. Schierhorn states that planning the aesthetics of the waiting room should be done with the typical patient demographic in mind. Pay attention to cultural differences and age of patients seen at the practice. For example, children should not be exposed to adult movies and television shows (Schierhorn, 2015).

Individualized Therapy for Different Age Groups

Neonatal intensive care unit.

Therapy in the neonatal intensive care unit (NICU) mainly consists of early mobilization, which is a technique that is fairly specific to NICU patients since babies are not mobile. Extended bedrest in the NICU can decrease muscular development, neurological development, and quality of life and can increase persistent weakness (Adler & Malone, 2012). Early mobilization includes “specific handling, positioning, and stimulation techniques based on neurodevelopmental treatment principles and patterns of movement in order that the infant experience normal positions and movements” (Piper et al., 1986). Nonverbal motivation such as touch stimulation and massage in order to facilitate a response from the child is crucial. Early mobilization is simple and easy to teach to parents, so therapy can continue after the patient is released from the NICU. Motivating and educating the parent or primary caregiver on correct PT protocol is important to NICU care.

According to Sweeney (2010), there are three dynamic system components that must be examined for effective NICU care. The first is the infant's biological makeup, which involves psychologic, behavior, physical, social and psychological elements. The second dynamic component is the sociocultural component, such as health care providers and family members, and physical environments. These two components specifically contribute to physical movement and postural control of the infant.

The third dynamic component involves the goal of treatment of each individual NICU patient, which includes a variety of contributing factors such as self-regulation of physiologic processes, behavioral state, posture and movement, and attention to and interaction with caregivers (Sweeney et al., 2010). These components should be used to individualize treatment protocol of the neonate as each situation is different. NICU and pediatric patients are often more complex cases because a primary caregiver is involved in and makes important decisions about the care of the patient.

Pediatrics.

Pediatric therapy patients are similar to NICU patients in the sense that a large portion of therapy progress is due to the parent's adherence to protocol. The level of adherence is often determined by the caregiver's facilitation of the HEP and regular attendance at therapy sessions. Parent or primary caregiver education is a large part of a pediatric therapist's job, so the PT must be able to relate to both adults and children. The parents must know how to take care of their child, as each child's care and therapy is specific to the type of disability. There are many types of therapy programs, such as upper extremity focused treatments, strength training programs, cardiovascular fitness and aerobic programs, constraint induced therapy with casting, sensorimotor training programs, balance training and animal therapy (Anttila, Autti-Rämö,

Suoranta, Mäkelä & Malmivaara, 2008). Protocols are selected based on the child's diagnosis. The delivery of therapy is specific to each child as well. An effective pediatric therapist should choose activities the child is interested in to encourage participation in therapy. These aspects of pediatric therapy help increase patient and parent motivation to adhere to protocol. When the child is having fun and enjoying therapy, the parent is more likely to have the child do exercises at home.

The importance of rewards is an additional and unique aspect to pediatric therapy. Most therapy clinics have a treasure box of some sort with toys, stickers, or candy the child can choose to take home with them after the session if the patient stayed on task and did well during the therapy session. This provides an incentive to listen to the therapist, and when the child does not listen and misses out on a reward at the end, negative reinforcement also encourages the child to behave better at the next session.

In a study by Reedman et al., a protocol was developed in order to improve the quality of motivation and behavior to increase physical activity in children with cerebral palsy (Reedman et al., 2017). This study is a prime example of individualized care in physical therapy. The protocol was family-centered, ecological, goal-directed, collaborative, context-focused, individualized, multimodal, behavior-oriented, and self-determined. The family-centered aspect aims to involve both the child and primary caregiver equally in the prescribed interventions. Ecologically, the treatment will take place at the patient's home and community, which assists in bridging the gap between cultural differences as the therapist works with them at locations that are most comfortable for the child and caregiver (Reedman et al., 2017).

Goal-directed, collaborative and context-focused treatment all relate the patient, caregiver, and PT working together to set firm goals that are very specific to the patient, or context-focused.

Individualized care, which is the central theme of this literature review and study, was also applied in this study. Multimodal care involves targeting possible barriers to treatment success that can be modified through different intervention options. The behavior-oriented and self-determined aspects of the study include rewarding the patient with free time during treatment based on good or bad behavior, which will be self-determined by the child and caregiver (Reedman et al., 2017).

Older Adults and Geriatrics

In the older adult and geriatrics population, the level of motivation can greatly influence recovery after a traumatic event such as a fall. It is helpful for therapists to evaluate the level of motivation of an elderly patient at the beginning of therapy after a traumatic event. Several scales can be used to evaluate this, such as the 18-item Apathy Evaluation Scale (AES), the Mini-Mental State Examination (MMSE), the Barthel Index (BI), the Participation Index (PI) and the Geriatric Depression Scale (GDS) (Resnick, Zimmerman, Magaziner & Adelman, 1998). These scales help the PT obtain a baseline idea of the patient's outlook on their situation and therapy program.

In a randomized controlled trial using accelerometry, Peel et al. (2016) researched the effectiveness of increasing activity levels using monitored activity data in the non-therapy setting in addition to goal setting for geriatrics. The reasoning for this is the need for promoting activity in elderly patients who have been hospitalized for long periods of time.

Peel et al. (2016) observes:

> Barriers to mobility during hospitalization of older patients that need to be taken into account in planning successful strategies include health problems, especially weakness, pain, and fatigue; being attached to a medical device such as intravenous drip or catheter;

being concerned about falls; and lack of staff to assist with out-of-bed activity. Low mobility among hospitalized older adults has also been attributed to lack of patient motivation and environmental factors such as hospital traffic, noise and clutter that present physical barriers to ambulation and lack of places to go in hospital environs (i.e. patients are not motivated to move).

Overcoming these barriers to mobility will increase the self-efficacy of the patient, thus giving them a better outlook on their current situation. When an elderly person has a more optimistic view that they will get better, they will be more motivated to adhere to prescribed treatment, ultimately reaching their goal of returning to full functionality and being able to complete activities of daily living (ADLs).

In the trial, there were two groups, an intervention group and control group. Each group was given accelerometers to measure daily walking time. The intervention group and their therapists were given updates on their exercise daily, while neither the control group or their therapists were given information on their daily walking times. “The primary outcome measure was walking time per day in minutes” (Peel et al., 2016). This is a simple measure that is easily understood by the subjects in the study. The results showed that the intervention group achieved significantly higher non-therapy walking time by 7.6 min/day on average than the control group (Peel et al., 2016).

These results show that daily accountability is beneficial for the elderly and could be applied to other age groups as well. Objective physical activity data obtained through accelerometry will help clinicians formulate specific goals by applying mobility-related activities to geriatric rehabilitation (Peel et al., 2016). This study shows that accelerometry is an effective motivation technique to increase activity, specifically walking times. For geriatrics, physical therapy is often

about increasing strength and endurance of the patient to help them become more active and healthier, thus allowing them to successfully do regular ADLs. Therefore, accelerometry is a possible supplement to geriatric physical therapy that will motivate the patient to adhere to their HEP as they receive feedback on how active they are being throughout the day.

Athletes

Athletes are often dedicated to prescribed therapy protocol in order to return to play as quickly as possible. Rehabilitation adherence is influenced by the athlete's self-motivation, the rehabilitation setting, and the relationship between the certified athletic trainer (ATC) and athlete. Making improvements in these three areas will lead to more successful rehabilitation results. Most athletes recognize the importance of an optimistic view during the therapy process and value encouraging feedback from the therapist. If anything, it is important for the PT to help the athlete realize that a return to play too quickly could result in a season- or career-ending injury.

The ability of the athlete to complete therapy workouts with no outside support (such as prescribed HEP) is influenced by the athlete's characteristics, personality, and self-motivation. Improvements to the rehabilitation environment can increase patient progress as well. Crowded and disorganized training rooms cause inefficient therapy sessions as the athlete has to wait on equipment or to be seen by the ATC or PT. Therapy session times that are inconvenient for the athlete, such as during class, can lead to missed sessions due to busy schedules (Fisher & Hoisington, 1993).

A survey will be given to patients from each population group previously discussed at a specific clinic, and parents or primary caregivers will complete the survey if the patient is not intellectually able or is classified as a pediatric patient. The survey will consist of a ten-point

rating scale and six questions concerning the ease of contact with a local clinic, satisfaction with progress, protocol adherence, facility aesthetics, therapist interactions, and therapist personality preferences. The patient will also have the opportunity to list any specific activities he or she enjoyed while in therapy.

Methods

Participants

A survey was conducted at Mountain States Rehabilitation Outpatient clinic in Johnson City, a health rehabilitation center in Tennessee. This site was chosen because it is evident that this clinic is one of the most successful clinics in the area. This made the data collected from this clinic relevant to the study of effective motivators in therapy. The participants were patients at the clinic, ranging from children to the elderly.

Data Collection

The patients were recruited on-site by being asked to take a few minutes to fill out the survey before or after their therapy session. The reason for the survey was clearly defined, and the patient was given an informed consent document. Per the clinic's request, the informed consent forms were not signed to provide complete anonymity. The surveys were also anonymous.

Completed surveys were immediately collected and kept in a secure folder. The results were evaluated using the Statistical Package for Social Sciences (SPSS) program to compare the mean answer for each question on the survey. The data were analyzed as a whole and then broken down by age groups. The mean was calculated for all of the surveys, and then the same values were calculated specifically for pediatrics, young adults, and the adult 50+ group.

The goal of evaluating the statistical data is to pinpoint what is most important to patients in different age groups. For example, pediatric therapy obviously involves fun toys and games, so that would be an expectation held by parents and children. This aspect was present in the pediatric side of the clinic and represented by a variety of games and toys, colorful walls, a jungle gym, rock-climbing wall and swing. By evaluating the mean answer value on the 1-10 scale, it can be shown what specific aspect of care is most important to each age group.

Exclusion Criteria

Patients must have attended at least ten therapy visits on-site or be close to discharge, since some patients may not need as many as ten or more visits. This minimum of ten visits or being close to discharge allows for the patient to have time to form a relevant opinion of the effectiveness of the clinic and therapists, since they are either well along in or finishing their therapy. Patients who do not have the mental capacity to understand the survey will also be excluded in order to get reliable, valid data. An example of this is a post-stroke patient who has mental impairment. One survey was excluded because the patient seemed to not understand the survey and circled the wrong age group. She was clearly not in the young adult group, and thus this survey was excluded.

A main caretaker was permitted to fill out the survey in place of the patient. This only occurred in pediatrics, however, because some of the children were either too young or did not have the mental capacity to understand the survey's purpose. It was helpful for parents to fill out the child's survey for them because they were able to communicate thoughts they have had about the clinic that maybe they were not comfortable saying out loud. This also gave them the opportunity to suggest improvements needed at the clinic.

Survey Data

Both subjective and objective data was used in this survey to allow for firm evidence while also allowing the patient to give an opinion on their therapy experience. It is important to consider both, because just like patients, the data is not a black and white picture with only right and wrong answers. The reasoning behind the answers given should be considered, not just the raw numbers themselves.

Objective data.

The objective data used were the mean value rankings for each question. First the entire group was analyzed and then each subgroup mean rankings were analyzed. This process of analysis pinpoints the aspects listed that is most important to the entire survey group as a whole and what matters most to each age group specifically by defining which questions have a higher mean ranking.

Subjective data.

While objective data is extremely helpful to research and is more clearly identifiable and applied, subjective data is essential for this topic due to the goal of individualized treatment. In order to effectively motivate, health care professionals need to be willing to look past objective data. Subjective data were collected at the end of each survey by giving the patients the opportunity to comment on whatever they wish, specifically the activities enjoyed during therapy or comments on their experience. These comments varied based on the age group.

In pediatrics, the parent or primary caregiver focused on the fun the child had during therapy, specifically what activities they enjoyed the most. An underlying theme for pediatric comments included an extremely positive review of the pediatric therapist on staff at the clinic. Specific activities such as riding the bike outside at the end of the session were listed as

enjoyable. There is no clear-cut protocol or a specific list of activities to make therapy enjoyable for children, but the concept of a rewards system is crucial for an effective therapy session. Riding the bike outside around the building and getting a treasure from the "treasure box" are standard rewards at this facility used for positive reinforcement. Another example of positive reinforcement includes a few minutes of free time scattered throughout the session that can be taken away if the child does not listen. Negative reinforcement in the form of no reward is helpful because the child will remember to be more obedient at the next session.

Other pediatric additional survey comments showed that there could be some improvements to the facility. The waiting room is very small and easily becomes overcrowded during busier times, since often parents have to bring siblings along as well. Multiple families with siblings in addition to children in large wheelchairs can cause the room to get louder and more congested. This can become a problem for the therapists because the children are confined in a small room waiting for their therapy session and get very fidgety and do not want to do work when they come into the gym. There was also a recommendation for aquatic therapy, which was previously used before the clinic moved to their current location.

For young adults, two patients commented on the importance of home exercise programs. This was surprising, because the main problem seen in therapy is that patients do not want to put the time in to get better. Once the idea of the importance of a HEP "clicks", patients improve much more quickly than patients who do not adhere to their HEP. The ease of their therapy sessions increases, as they are already used to the therapy they are doing at home and have increased relative strength and endurance in respect to their injury. This encourages the patient to continue in their program, resulting in an efficient and long-lasting recovery.

Results

Prediction

As shown above, the most important aspect of providing a high quality of effective health care is rooted in the ability of the provider to relate to the patient, motivate them and help them believe in their ability to return to full functionality. The survey should reflect this by having high mean rankings in questions 6-8 (Appendix I), which all relate to the ability of the therapist.

Mean Results

Below are graphs showing the mean answer rating for each question. *Figure 1* compares the mean answer for all age groups, and each successive graph compares the mean answer ratings specific to pediatrics, young adults, and adults 50+ years of age, respectively. All of the groups, when analyzed together and apart, had the highest ranking for question 7, which was "Rate how well the physical therapist's personality meshes with the patient's". The fact that every group agreed that their therapist did an excellent job relating to the patient shows that the clinic is as effective as predicted in the sense that the therapists really focus on individualized care.

The two questions with the lowest rankings were questions 4 and 5, which discussed the level of adherence to a HEP and the importance of the aesthetics of the facility, respectively. It was not surprising that question 4 had a low ranking since the main problem that prevents patients from getting better in physical therapy is the lack of the patient's effort in doing prescribed exercises at home. *Table 1* displays all mean values for each question, starting with all groups. The mean results for each question in each age group is also shown.

Table 1

Mean Values for each survey question

Question #	All Groups	Pediatrics	Young Adults	Adults (50+)
2	9.79	9.70	9.83	10.00
3	9.47	9.60	9.50	9.00
4	9.00	8.90	9.50	8.33
5	9.05	8.70	9.33	9.67
6	9.89	9.80	10.00	10.00
7	10.00	10.00	10.00	10.00
8	9.89	9.90	9.83	10.00

Table 1. *Mean values for each survey question*

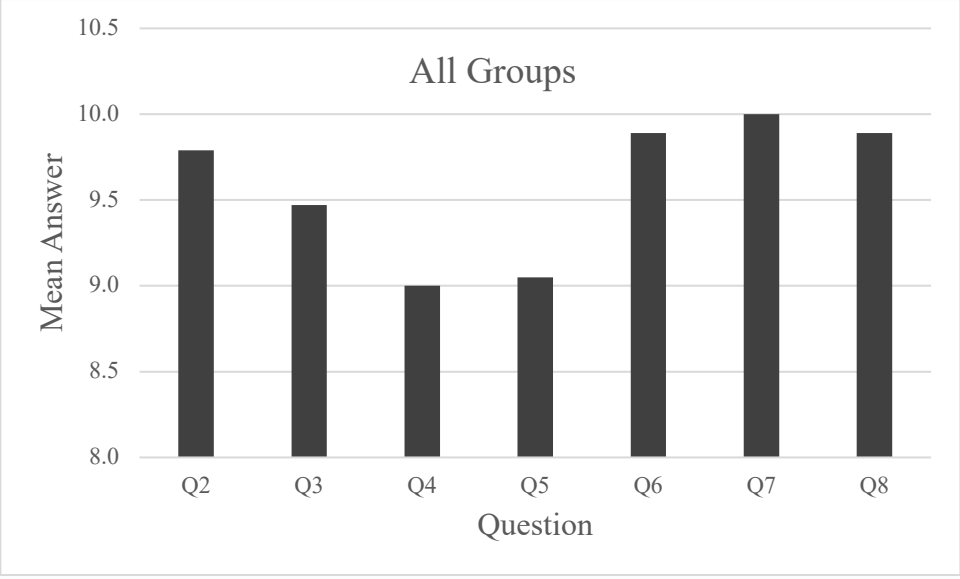

Figure 1. Mean answer ratings for all groups

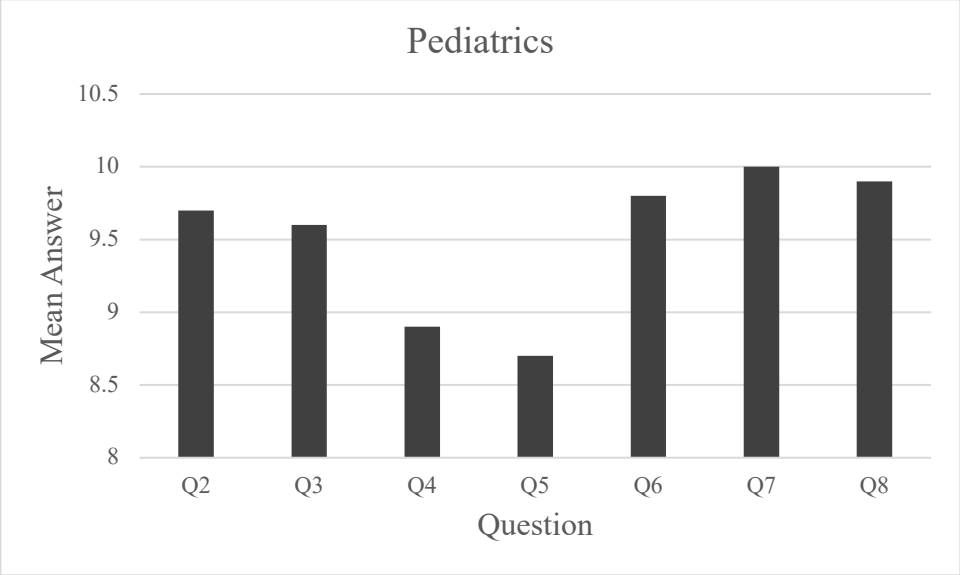

Figure 2. Mean answer ratings for pediatrics

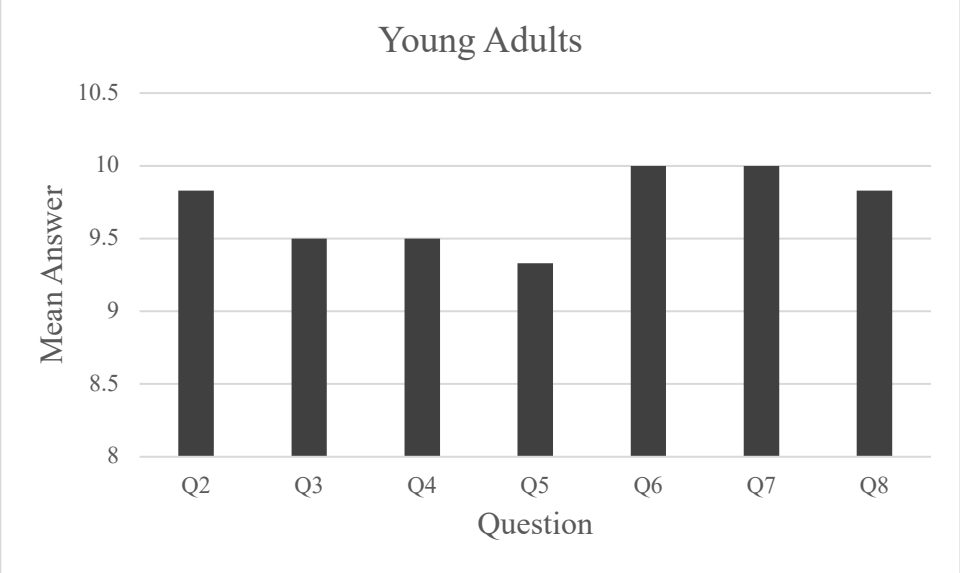

Figure 3. Mean answer ratings for young adults

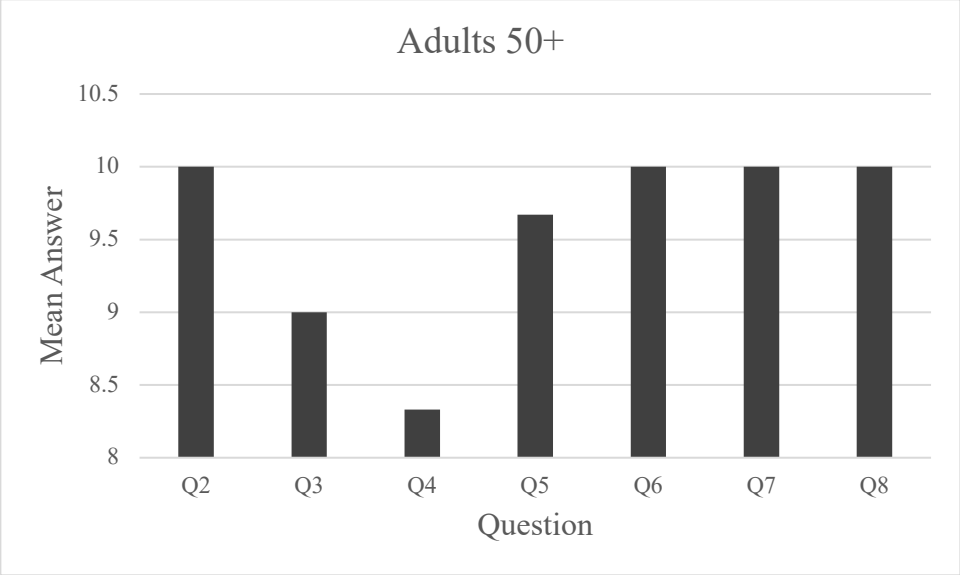

Figure 4. Mean answer ratings for adults 50+ years of age

Discussion

The survey results were mainly positive, as this clinic is very successful in effective and timely patient rehabilitation. This positive feedback was confirmation of what I have personally observed during over 100 hours at this clinic. The secret to motivating patients is not a complex one. Effective motivation requires the appropriate knowledge, training and desire to learn more, as well as a passion for helping and relating to others. This survey is a supplement to that, and it can be used to objectively evaluate a clinic's effectiveness.

Strengths

One significant strength of this survey was that I have shadowed at this clinic for four years, and I know the therapists and office staff well. This allowed the survey results to be applied in a more personal way, meaning that it could be understood why patients answered survey questions the way they did depending on the therapist they were being treated by. While this point cannot necessarily be represented in the objective evaluation of survey ratings, it is useful to me as I pursue a career in physical therapy by giving me a foundation of knowledge in

knowing what does and does not work for different types of patient age and population groups, as seen by how each therapist operates.

Another strength that was previously mentioned is that the clinic surveyed is a respectable and successful clinic, which gives a good representation of what an effective rehabilitation clinic should look like. This has been observed over the four years of shadowing the therapists and the way that the clinic is run. All of the interactions with the staff have been positive, and it is evident that they truly care about treating the patient as a whole instead of viewing them as a name on a chart with one specific injury needing treatment.

The biggest strength of the survey was that the therapists at the clinic plan to take the results of this research and implement them in their treatment process. The results will immediately be applied to at least one clinic and may be shared to other clinics as the PTs discuss the main strengths that make their clinic a success.

Improvements

The subject of motivational techniques should be further pursued with a wider range of therapists and clinics to gain more insight on effective techniques outside of the specific ones used by the therapists at Mountain States Rehabilitation. The study was conducted in the summer, which made it difficult to get a large amount of surveys due to patients canceling therapy sessions for summer travel. Originally, the survey targeted four patient age groups: pediatrics, young adults, older adults 50+ years of age, and athletes, but no surveys from the athletic population were obtained since summer is typically an off-season recovery period for most sports. Further studies pursuing the athletic population would be desireable, and an extensive study on each specific age group at multiple clinics will provide more specific modes of effect ways to motivate each age group.

It was discovered that the wording of question 5, “How important are the aesthetics and accessibility of the facility to you/the patient? (state of equipment, decorations, parking, cleanliness of the facility)?” (Appendix), should have been worded differently. The mean rating for the total group was the lowest for this question. Better wording would have been to say, “Rate the aesthetics and state of this facility”. This is better wording because when the topic of aesthetics is compared to the personality of the therapist, it was always more important to the patient to have a good therapist working with them. Asking the patient to rate the aesthetics accomplishes a direct evaluation of this clinic, and this particular wording will be more beneficial when using the survey in other clinics.

Implications for future research

It would be beneficial to conduct this survey at clinics that are struggling. This would provide valid constructive criticism for the office staff and therapists so they can pinpoint what needs to be fixed in order to be effective health care providers. Sometimes learning “what not to do” is just as useful as knowing “what to do”. The survey can be used as a method of quality control in physical therapy clinics and can also be manipulated and applied to different areas of health care. While high quality medical training and schooling is important for providing successful health care, finding what works for the population being treated is important for clinic effectiveness.

Another topic that was only generally investigated was the topic of HEP adherence, as seen in question 4 of the survey. For each age group the answers revealed that many patients do not adhere to their HEP as much as they should. In the future, research should be conducted on the main reasons for low adherence. It would also be beneficial to research the best way to design a HEP that is enjoyable and convenient for the patient to work into their busy schedule.

The PT should ask the patient about their everyday schedule and provide practical applications to help the patient work their HEP into their day.

I would also like to develop a training program for therapists concerning motivational techniques specific to each specialty, such as NICU patients, pediatrics, athletes, the general population, and geriatrics. Ideally, this program could be used in many clinics and adapted for different health care fields such as occupational therapy and speech therapy. This survey is the foundation for the development of more effective motivational techniques that can be applied by therapists and their clinics.

Conclusions

In conclusion, a passion for helping others and the ability to know patients on a personal level is an invaluable trait needed if one desires to be a successful physical therapist. Intentionality can go a long way with a patient who is struggling if they see that their PT truly cares about their situation, instead of being treating as just a name on a piece of paper in an endless pile of paperwork. Getting the patient to believe in themselves and giving them the confidence in their ability to get better is a characteristic of a therapist who knows what they are doing.

The majority of the questions that had the highest ranking were questions related to the therapist, the therapist's personality and the therapist's ability to effectively motivate the patient. This shows the prediction to be true that the quality of care provided by the PT is the most important aspect. This idea can be applied to all areas of healthcare and other fields as well. The survey can simply be manipulated to fit the type of business being analyzed.

My goal as a future physical therapist is to provide the best care possible. I enjoy the challenge of finding ways to relate to different patients and walking with them through their

rehabilitation. My personality is suited for this, but it is important to be aware of the possibility of becoming complacent after working as a PT for many years.

I know I am called by God to be a physical therapist because I enjoy working seeing patient's hard work pay off. Specifically, I am called to work with children with disabilities. It is one of the most rewarding experiences to see a child who was told they would never be able to walk take their first steps. My passion is to inspire children with disabilities to overcome the odds and to help them to be confident in who they are. I also desire to bond with my patient's parents or primary caregivers in order to be an encouragement for them, as having a special needs child can be difficult. I want to leave a lasting impact on all the patients I treat, and effective motivational techniques are the key to achieving this.

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Appendix

1. What therapy group do you/the patient fall into? (circle one- if you are here for a sport-related injury, circle "athlete". If not, choose a different classification)

Pediatrics Young adult (18-50 years of age) Adult (50+ years of age) Athlete

For questions 2 through 8, circle the number that best indicates your agreement with the question. 1 is the lowest, 10 is the highest.

2. How happy are you/the patient with the ease of contact with the clinic (therapist, front-desk, etc.)?

1 2 3 4 5 6 7 8 9 10

3. How pleased are you with the progress you/the patient has made during rehabilitation?

1 2 3 4 5 6 7 8 9 10

4. How often do you/does the patient adhere to the prescribed protocol and home exercise program given?

1 2 3 4 5 6 7 8 9 10

5. How important are the aesthetics and accessibility of the facility to you/the patient? (state of equipment, decorations, parking, cleanliness of the facility)?

1 2 3 4 5 6 7 8 9 10

6. Overall, have therapist interactions been helpful and contributed to rehabilitation?

1 2 3 4 5 6 7 8 9 10

7. Rate how well the physical therapist's personality meshes with the patient's.

1 2 3 4 5 6 7 8 9 10

8. Rate how well the therapist motivates the patient to excel in his or her therapy.

1 2 3 4 5 6 7 8 9 10

Additional comments (i.e. specific activities you/the patient enjoyed in therapy):