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The General Population's Perception of Factors Associated With Positive or Negative Perceptions of Physical Therapy Care in Those With Low Back Pain

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THE GENERAL POPULATION'S PERCEPTION OF FACTORS ASSOCIATED WITH POSITIVE OR NEGATIVE PERCEPTIONS OF PHYSICAL THERAPY CARE IN THOSE WITH LOW BACK PAIN

by

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ABSTRACT

Low back pain (LBP) has a global impact on health and is a substantial contributor to long term disability. The economic burden of LBP is immense and it is advancing annually. Costs attributing to LBP in the United States is about $84.1 to $624.8 billion. Physical therapy is commonly recommended for those with LBP since it is linked to improved clinical outcomes. However, patient perceptions can influence how this treatment approach is perceived. It is unclear if these perceptions can influence outcomes for patients suffering from LBP. Therefore, the purpose of this study is to identify the factors associated with positive or negative perceptions of physical therapy care in those with LBP. This was accomplished by developing and administering a comprehensive Qualtrics survey to participants in the Orlando area. Participants who took the survey were screened for eligibility requirements with exclusion criteria being those from vulnerable populations including pregnant women, minors, prisoners, and any person unable to provide informed consent. Screening, demographic, clinical, and perception questions were embedded within the online survey. Those who participated had to be 18 years or older, located within the Orlando area, able to provide informed consent, and speak English. Results from the data identified the five top key indicators which included clear explanation by the physical therapist on the treatment plan, how clear the physical therapist is in explaining the problem, friendliness of the physical therapist, patients perceive physical therapy is very effective in treatment of knee, and patients perceive physical therapy is very effective in treatment of lower back.

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INTRODUCTION

Low back pain (LBP) is a significant contributor to long-term disability and many different treatment approaches have been reported (Vingard et al., 2002; Hestbaek et al., 2003; Oberg et al., 2003; Enthoven et al 2004). People often seek medical care due to low back pain (Hall et al., 2021) and, it is estimated that between 40% to 85% of individuals with LBP have communicated concerns with their health care provider (Carey et al., 1995) (Carey et al., 1996). Contributing factors of nonspecific LBP often cannot be identified, as a result, it is only a description of symptoms (Cassidy et al., 2005). Frequently, patients do not receive a conclusive diagnosis. Occasionally, inconsistent diagnoses are given which can result in the feeling of discontent (Slade et al., 2014). A specific diagnosis is necessary because it minimizes the risk of completing incorrect exercises (Slade et al., 2014)**.** It also improves treatment outcomes and validates pain experienced despite the fact that diagnoses are uncertain (Slade et al., 2014).

Generally, exercising is beneficial for those with LBP (Slade et al., 2014). Evidence suggests that exercise in those with LBP has positive effects on mood, depression, and anxiety (Hoffman & Hoffman, 2007) (Maroulakis & Zervas, 1993). According to the clinical practice guidelines for the management of nonspecific chronic low back pain (NSCLBP), patient preferences should be evaluated and exercises should be tailored specifically to the patient (Savigny et al., 2009). Exercise programs may be more attractive if the gap between what is being offered and what is expected of participants is analyzed; and as a result of the treatment, it is given as an option (Slade et al., 2014).

Considering factors that facilitate a patient's engagement is highly recommended (Slade et al., 2014). It is appropriate to embed such factors within exercise programs in addition to

identifying and removing barriers that patients may face (Slade et al., 2014). Perceived effectiveness, clinician communication skills, exercise ability and preferences, individualized care, system flexibility, supervision and motivation, fear of pain, and compatibility with daily life are the key themes that were identified within the studies (Slade et al., 2014). Patient-led goal setting was also a factor that was discovered. Goals set by patients in comparison did not link to the therapist measures in the outcome domains (Gardner et al., 2015). Goals established by patients were associated with physical and psycho-social targets (Gardner et al., 2015). Patient-centered goals often do not align with the clinical measures that are utilized in physical therapy care (Gardner et al., 2015).

Further research is necessary to establish patient-centered measures that reliably determine patient preferences (Gardner et al., 2015). Additional research is needed to improve patient experiences in physical therapy care. Therefore, the purpose of this study is to identify the factors associated with positive or negative perceptions of physical therapy care in those with low back pain.

LITERATURE REVIEW

The primary reason individuals seek medical care is due to LBP (Hall et al., 2021). Chronic LBP serves to be the highest-ranked condition there is contributing to years of living with disabilities (Murray et al., 2010). Additionally, it is a global burden socially, and economically (Slade et al., 2014). LBP is a significant issue for health care systems. This results in substantial socioeconomic impacts (Slade et al., 2014). LBP has an all-time high economic impact that serves to be more costly than most other health issues (Maetzel & Li, 2002). Within working populations, LBP is the primary cause of long-term disability (Badley et al., 1994). The lifetime prevalence of LBP is 75% (Mckenzie & May 2003). 1 in 5 adults will discuss their symptoms of LBP (Harreby et al., 1996) (Hillman et al., 1996).

Treatment for Low Back Pain

LBP is still the general cause of long-term disability several years after different approaches of treatment were taken (Vingard et al., 2002; Hestbaek et al., 2003; Oberg et al., 2003; Enthoven et al 2004)**.** Patients in primary care for LBP consistently report disabilities after their first visit (Enthoven et al., 2006). Health care costs can be associated with the actual care provided; however, the majority of the expenses are due to work absences, disablement, and loss of productivity. About 70% of patients have LBP (Report of the Quebec task Force on Spinal Disorders, 1987). When pain becomes chronic, 80% of the costs of LBP becomes highly accounted for (Report of the Quebec task Force on Spinal Disorders, 1987). Exceeding the costs of coronary artery disease and combined costs of respiratory infection, rheumatoid disease, stroke, and diabetes demonstrates that the economic impact of LBP is largely significant

(Mckenzie & May, 2003). Direct costs including medical visits, pharmaceuticals, physiotherapy, and hospitalization are much less expensive than the indirect costs of chronic LBP (Ekman et al., 2005). Since many cases of LBP have been determined to heal by themselves, the "wait- see" approach was obtained by several practitioners. This path can be challenging since 26% of those specific patients are more inclined to develop long-term symptoms. As a result of preventing access of care for a patient with LBP they have prolonged sick leave periods due to their worsened disabilities (Torstensen et al., 1998).

Conservative Management of Low Back Pain

Components of physical therapy such as exercise serve to be beneficial in those with LBP (Slade et al., 2014). Positive effects on mood, depression, and anxiety are the beneficial results of physical activity (Hoffman & Hoffman, 2007) (Maroulakis & Zervas, 1993). Additionally, exercise may reduce pain and disability. In healthy participants, exercise reduces pain levels (Janal et al., 1884). It is a belief that the recurrence of LBP can be prevented through physical fitness (Shelerud, 2006). However, when the treatment of choice is suggested for NSCLBP, exercise is not entirely effective (Slade et al., 2014). It is not determined whether or not physical activity influences LBP. Physical therapists commonly treat LBP utilizing various interventions such as exercise, manual therapy, education, etc. Physical therapy is only moderately effective however, when combined in a multidisciplinary approach it is very efficient (Sahin et al., 2018). Physical therapy methods, exercise, and medical treatment improve pain and functional status of those with NSCLBP (Sahin et al., 2018). Better improvements in patients were reported by clinicians who used the multidisciplinary approach than in clinicians who used single treatment

modalities (Chou et al., 2007) (Negrini et al., 2006) (Poitras et al., 2008). As LBP becomes chronic, costs for physical therapy treatment expand substantially. Expenses can be reduced by limiting the chronicity of LBP (Hanney et al., 2009). Different treatment strategies are needed for LBP.

Inconsistent Outcomes Associated With Conservative Care

Inconsistent presentation of LBP can result in a feeling of discontent by the patient (Slade et al., 2014). An incorrect diagnosis assigned to a patient can result in poor recovery (Slade et al., 2014). Exercise programs and practitioners can not always relieve pain. In many individuals, this leads to dissatisfaction, frustration, and the ability of not being believed for having pain (Slade et al., 2014). Reflection needs to occur on the behalf of clinicians. This will enable therapists to see how diagnostic uncertainty influences treatment decisions (Cook & Hassenkamp, 2000) (Cooper et al., 2008) (Liddle et al., 2007). Additionally, clinicians will also see how diagnostic uncertainty influences communication between the patient and therapist (Morris, 2004) (Slade et al., 2009) (Underwood et al., 2006).

Factors Associated With Positive and Negative Experiences

In reference to the clinical practice guidelines for the management of NSCLBP, individual preferences should be analyzed and exercises should be developed specifically for each patient (Savigny et al., 2009). Patients were more likely to engage in exercise programs that were exciting and also had multiple sessions available in comparison to the other programs that were identified as unchallenging, boring, and not as accessible (Slade et al., 2014). A

participant's engagement in LBP recovery increased by several factors (Kolt et al., 2003). These factors included: clinic attendance, additional printed material, supervision, motivational strategies, positive reinforcements, therapist and participant contracts, and goal setting (Kolt et al., 2003) (Jordan et al., 2010) (McLean et al., 2010). Having supervision, individualized exercises with physical therapists input and self-managing techniques (videotapes and home audio) resulted in positive effects on exercise adherence (Hall et al., 2010) (Carnes et al., 2012). Individualized exercises were highly requested out of the types and formats of exercises which included experience, abilities, physical challenges, mastering exercises, and supervision (Buijis et al., 2009) (Cook et al., 2000) (Cooper et al., 2008) (Cooper et al., 2009) (Keen et al., 1999). When exercises aligned with fitness levels and the skills that were previously acquired, the individual's performance was enhanced (Liddle et al., 2007) (Slade et al., 2009) (Underwood et al., 2006) (Yardley et al., 2010). In correspondence to the National Institute for Health and Care Excellence (NICE) clinical practice guidelines, participants in the programs wanted their physical therapists to demonstrate the exercises, observe them, practice, provide feedback, and make corrections to techniques as needed (Buijis et al., 2009) (Cook et al., 2000) (Cooper et al., 2008) (Cooper et al., 2009) (Keen et al., 1999). Therefore, exercise for NSCLBP should be individualized or tailored to the patient and be supervised (Liddle et al., 2007) (Morris et al., 2004) (Slade et al., 2009) (Underwood et al., 2006) (Yardley et al., 2010).

Content from exercise programs may be more attractive if the gap between what is offered and what patients expect, experience, and prefer is examined and given as an option (Slade et al., 2014). Patient goals are distinctive and do not align with standard clinical outcome measures as studies have shown in previous years. A patient-centered measure needs to be

developed that is comparable, responsive, reliable, and easy to distribute therefore, further research is needed (Gardner et al., 2015). Attributes that contribute to disabling LBP must be identified by practitioners. Practitioners should also recognize interventions that prevent or reduce the extension of chronicity (Hanney et al., 2009). Providing education to the patient for the most appropriate exercises and/ or functional activities serves to promote active self-management. Support also exists for advising the patient to remain active (Dianne Liddle et al., 2007). An extensive educational program may be needed to prevent worsened patient conditions and to avoid future problems and/ or injuries (Hanney et al., 2009).

A way to avoid exacerbation of chronic low back pain is to be proactive in physical therapy treatment. When evaluating therapy outcomes of multidisciplinary treatment for patients with LBP, age does not play a role; therefore it is not a factor (Hildebrandt et al., 1997) (Pfingsten et al., 1997). The 1-year follow-up predictive factors after treatment consist of having chronic LBP and having high pain frequencies (Enthoven et al., 2006). Predictive factors for disability at the 5- year follow-up after treatment consisted of being identified as a woman, having decreased exercise levels before the most recent episode of LBP, not being satisfied with the workplace, and having low expectations of treatment (Enthoven et al., 2006). The factors of age, expectations of treatment, pain radiation, well-being, satisfaction with work, and sick leave were not significant elements for having a disability after 5 years; however, these factors can still be utilized to determine future outcomes of disability (Enthoven et al., 2006).

Positive and Negative Attributes Associated With Care

Considering factors that facilitate participants' engagement is highly suitable. Embedding these factors within an exercise program's design is also appropriate in addition to identifying and removing participation barriers (Slade et al., 2014). Several factors must be taken into account when a patient pursues a practitioner to seek treatment. The patient initially must be cleared of their medical conditions that would be conflicting to physical activity (Hanney et al., 2009). To avoid long-term disability, patients demonstrating characteristics of high fear-avoidance should have their concerns managed aggressively (Hanney et al., 2009). Demonstrating less fear and more confidence about the effects of exercise and different exercise environments were patients who had extensive exercise appearances (Slade et al., 2014). Practitioners are highly encouraged to promote the continuation of physical activity amongst their patients (Hanney et al., 2009).

Perceived effectiveness, clinician communication skills, exercise ability and preferences, individualized care, system flexibility, supervision and motivation, fear of pain, and compatibility with daily life are the key themes that were identified within studies (Slade et al., 2014). In reference to the clinical practice guidelines for the management of nonspecific chronic low back pain (NSCLBP), individual preferences should be analyzed, and exercises should be developed specifically for each patient (Savigny et al., 2009). A questionnaire can be used by clinicians to determine patient exercise preferences and provide information to their physical therapist of that individual's exercise prescription (Slade et al., 2014). To test the effectiveness of a patient's input of their exercise, activity, and rehabilitation programs, research is recommended (Slade et al., 2014). It is also recommended that practitioners analyze factors that promote patient

engagement, embed such factors into exercise programs, and discover/ remove barriers to participation in physical therapy treatment (Slade et al., 2014).

AIM/ HYPOTHESIS

AIM 1: To evaluate factors that predict positive experiences for physical therapy patients with low back pain.

Hypothesis 1 A) Perceptions of physical therapy treatment, will predict positive experiences in physical therapy patients.

Hypothesis 1 B) There is a positive correlation between positive experiences and physical therapy patients with low back pain.

Hypothesis 1 C) Physical therapy treatment participation will predict a positive satisfaction experience in physical therapy patients.

AIM 2: To evaluate the factors that predict negative experiences for physical therapy patients with low back pain.

Hypothesis 2 A) Age will have a positive correlation with negative physical therapy experiences for physical therapy patients with low back pain.

Hypothesis 2 B) There is a negative correlation between physical therapy mood experiences and type of physical therapy treatment.

Hypothesis 2 C) There is a negative correlation between the greatest level of low back pain, and frequency of physical therapy treatment.

Hypothesis 2 D) Physical therapy treatment participation will predict a negative dissatisfaction experience in physical therapy patients.

AIM 3: To evaluate the factors that predict each of the two, a positive and/ or negative experience for physical therapy patients with low back pain.

Hypothesis 3 A) There is a significant difference between those patients that reported a positive or negative satisfaction in physical therapy and a patient's perception of Treatment.

Hypothesis 3 B) There is a significant difference between those patients that reported a positive or negative satisfaction in physical therapy and biological sex factors.

Hypothesis 3 C) In physical therapy sessions, positive explanations given by instructors will predict improved patient outcomes to influence perception of treatment.

Hypothesis 3 D) In physical therapy care, negative outcomes explained by instructor will predict worsened patient outcomes to influence perception of treatment.

METHODS

A Qualtrics survey will be developed, including screening questions, demographic questions, clinical questions (if applicable), and perception questions. The screening section of the survey will include questions pertaining to an individual's eligibility to participate in the survey such as if they are over the age of 18, can provide informed consent, and are able to read in English. The demographics section of the survey will include questions on biological sex, race/ ethnicity, age, height, weight, household income, marital status, and education level. The clinical section of the survey will have questions on physical therapy recommendations by therapists (ex: number of visits a therapist may recommend to a patient), low back pain episodes, physical therapy treatment participation from participants, patient's medical histories, and physical therapy care. The perceptions section of the survey will have questions on how a patient may feel about physical therapy treatment in relation to experience and/ or perception. Please see the Qualtrics survey for specific questions.

Possible participants for the survey will be recruited through the utilization of three methods. First, participants eligible to participate will be recruited through social connections. The target audience for the survey will be all members of or around the Orlando community, all aged 18 years or older. Respondents can have a prior history of low back pain or currently have low back pain but it is not a requirement. Individuals who participate in the survey are encouraged to share it with other eligible participants. The second method of recruitment will be through the utilization of social media accounts. Electronic flyers and posters will be created to recruit participants within the Orlando community. The third method of recruitment will take place via physical therapy practices. Flyers will be dropped off at physical therapy practices to

recruit eligible patients. Regardless of recruitment style (social connections, social media, or physical therapy practices), prospective participants will be provided with a link to the survey. Participants who take the survey will be screened for eligibility requirements in the survey, with exclusion criteria being those from vulnerable populations including pregnant women, minors, prisoners, and any person unable to provide informed consent. All data collected in the survey will be de-identified for participant privacy purposes and therefore, no names or birth dates will be obtained. The elements/ data of the survey will be reviewed by the research team.

RESULTS

A total of 101 participants completed the survey. Following data cleaning, 76 surveys were used for analyzing the data. The mean height of participants who took the survey was 65.349 followed by a standard deviation of 3.167. The mean age of participants who took the survey was 21.763 followed by a standard deviation 3.540. The mean weight of participants who took the survey was 150.039 followed by a standard deviation of 36.847. The frequency for biological sex for female was 62 followed by a percentage of 81.579. The frequency for biological sex for male was 14 followed by a percentage of 18.421. The frequency for race/ ethnicity for Asian was 8 followed by a percentage of 10.526. The frequency for race/ ethnicity for Black or African American was 13 followed by a percentage of 17.105. The frequency for race/ ethnicity for Hispanic or Latino was 21 followed by a percentage of 27.632. The frequency for race/ ethnicity for Multiracial or Biracial was 4 followed by a percentage of 5.263. The frequency for race/ ethnicity for White or Caucasian was 30 followed by a percentage of 39.474. The frequency for household income of $100,000+ was 17 followed by a percentage of 22.368. The frequency for household income of $30,000- $39,999 was 6 followed by a percentage of 7.895. The frequency for household income of $40,000- $49,999 was 9 followed by a percentage of 11.842. The frequency for household income of $50,000- $74,999 was 9 followed by a percentage of 11.842. The frequency for household income of $75,000- $99,999 was 5 followed by a percentage of 6.579. The frequency for household income of less than $30,000 was 30 followed by a percentage of 39.474. The frequency for marital status for co- habiting was 3 followed by a percentage of 3.947. The frequency for marital status for married was 2 followed by a percentage of 2.632. The frequency for marital status for single was 70 followed by a

percentage of 92.105. The frequency for marital status for undisclosed was 1 followed by a percentage of 1.316. The frequency for the highest level of education for an Associate Degree was 24 followed by a percentage 31.579. The frequency for the highest level of education for college/ university (undergraduate) was 38 followed by a percentage of 50.000. The frequency for the highest level of education for high school (graduate) was 12 followed by a percentage of 15.789. The frequency for the highest level of education for post- graduate was 2 followed by a percentage of 2.632.

Descriptive statistics for effective physical therapy treatment of lower back had a mean of 8.026 with a standard deviation of 2.059. Descriptive statistics for effective physical therapy treatment of the neck had a mean of 7.342 with a standard deviation of 2.157. Descriptive statistics for effective physical therapy treatment of shoulder had a mean of 7.776 with a standard deviation of 2.231. Descriptive statistics for effective physical therapy treatment of elbow had a mean of 6.513 with a standard deviation of 3.101. Descriptive statistics for effective physical therapy treatment of wrist/ hand had a mean of 7.263 with a standard deviation of 2.877. Descriptive statistics for effective physical therapy treatment of the hip had a mean of 7.763 with a standard deviation of 2.513. Descriptive statistics for effective physical therapy treatment of the knee had a mean of 8.355 with a standard deviation of 2.158. Descriptive statistics for effective physical therapy treatment of ankle/ foot had a mean of 7.566 with a standard deviation of 2.705.

Most important to report a positive experience for timeliness of appointments had a mean of 8.132 with a standard deviation of 2.229. Most important to report a positive experience for clear understanding of cost had a mean of 8.921 with a standard deviation of 1.623. Most

important to report a positive experience for cleanliness of the facility had a mean of 8.671 with a standard deviation of 1.676. Most important to report a positive experience for location of the facility had a mean of 7.105 with a standard deviation of 2.301. Most important to report a positive experience for friendliness of the physical therapist had a mean of 9.171 with a standard deviation of 1.290. Most important to report a positive experience for how clear the physical therapist is in explaining the problem had a mean of 9.434 with a standard deviation of 1.124. Most important to report a positive experience for clear explanation by the physical therapist on the treatment plan had a mean of 9.513 with a standard deviation of 0.959. Most important to report a positive experience for ease in making appointments had a mean of 7.855 with a standard deviation of 2.077. Most important to report a positive experience for the physical therapist establishing clear goals had a mean of 8.987 with a standard deviation of 1.390.

Five top key indicators were reported which included clear explanation by the physical therapist on the treatment plan, how clear the physical therapist is in explaining the problem, friendliness of the physical therapist, patients perceive physical therapy is very effective in treatment of knee, and patients perceive physical therapy is very effective in treatment of low back pain. Table 13 displays the top five high key factors. Five low key indicators were reported which included timeliness of appointments, ease in making appointments, location of the facility, patients perceive physical therapy is very effective in treatment of the wrist/ hand, and patients perceive physical therapy is very effective in treatment of the elbow. Table 14 displays the top five low key factors.

Table 1: Descriptive statistics for demographics.

	Mean	Standard Deviation
Height	65.349	3.167
Age	21.763	3.540
Weight (lbs)	150.039	36.847

Table 2: Frequencies for biological sex.

Biological Sex	Frequency	Percent
Female	62	81.579
Male	14	18.421
Missing	0	0.000
Total	76	100.000

Table 3: Frequencies for race/ ethnicity.

Race/ Ethnicity	Frequency	Percent
Asian	8	10.526
Black or African American	13	17.105
Hispanic or Latino	21	27.632
Multiracial or Biracial	4	5.263
White or Caucasian	30	39.474
Missing	0	0.000
Total	76	100.000

Table 4: Frequencies for household income.

Household Income	Frequency	Percent
$100,000+	17	22.368
$30,000- $39,999	6	7.895
$40,000- $49,999	9	11.842
$50,000- $74,999	9	11.842
$75,000- $99,999	5	6.579
Less than $30,000	30	39.474
Missing	0	0.000
Total	76	100.000

Table 5: Frequencies for marital status.

Marital Status	Frequency	Percent
Co- habiting	3	3.947
Married	2	2.632
Single	70	92.105
Undisclosed	1	1.316
Missing	0	0.000
Total	76	100.000

Table 6: Frequencies for highest level of education.

Highest Level of Education	Frequency	Percent
Associate Degree	24	31.579
College/ University (undergraduate)	38	50.000
High School (graduate)	12	15.789
Post- graduate	2	2.632
Missing	0	0.000
Total	76	100.000

Table 7: Descriptive statistics for perception questions (1).

	Mean	Standard Deviation
On a scale from 1 to 10, (1 being least effective and 10 being most effective), how effective do you think physical therapy would be for treating the following body parts? - Lower back	8.026	2.059
On a scale from 1 to 10, (1 being least effective and 10 being most effective), how effective do you think physical therapy would be for treating the following body parts? - Neck	7.342	2.157
On a scale from 1 to 10, (1 being least effective and 10 being most effective), how effective do you think physical therapy would be for treating the following body parts? - Shoulder	7.776	2.231

Table 8: Descriptive statistics for perception questions (2).

	Mean	Standard Deviation
On a scale from 1 to 10, (1 being least effective and 10 being most effective), how effective do you think physical therapy would be for treating the following body parts? – Elbow	6.513	3.101
On a scale from 1 to 10, (1 being least effective and 10 being most effective), how effective do you think physical therapy would be for treating the following body parts? – Wrist/ Hand	7.263	2.877
On a scale from 1 to 10, (1 being least effective and 10 being most effective), how effective do you think physical therapy would be for treating the following body parts? - Hip	7.763	2.513

Table 9: Descriptive statistics for perception questions (3).

	Mean	Standard Deviation
On a scale from 1 to 10, (1 being least effective and 10 being most effective), how effective do you think physical therapy would be for treating the following body parts? - Knee	8.355	2.158
On a scale from 1 to 10, (1 being least effective and 10 being most effective), how effective do you think physical therapy would be for treating the following body parts? – Ankle/Foot	7.566	2.705

Table 10: Descriptive statistics for perception questions (4).

	Mean	Standard Deviation
If you were to go to physical therapy for treatment, which of the following would be most important for you to report a positive experience?- Timeliness of appointments	8.132	2.229
If you were to go to physical therapy for treatment, which of the following would be most important for you to report a positive experience?- Clear understanding of cost	8.921	1.623
If you were to go to physical therapy for treatment, which of the following would be most important for you to report a positive experience?- Cleanliness of the facility	8.671	1.676

Table 11: Descriptive statistics for perception questions (5).

	Mean	Standard Deviation
If you were to go to physical therapy for treatment, which of the following would be most important for you to report a positive experience?- Location of the facility	7.105	2.301
If you were to go to physical therapy for treatment, which of the following would be most important for you to report a positive experience?- Friendliness of the physical therapist	9.171	1.290
If you were to go to physical therapy for treatment, which of the following would be most important for you to report a positive experience?- How clear the physical therapist is in explaining the problem	9.434	1.124

Table 12: Descriptive statistics for perception questions (6).

	Mean	Standard Deviation
If you were to go to physical therapy for treatment, which of the following would be most important for you to report a positive experience?- Clear explanation by the physical therapist on the treatment plan	9.513	0.959
If you were to go to physical therapy for treatment, which of the following would be most important for you to report a positive experience?- Ease in making appointments	7.855	2.077
If you were to go to physical therapy for treatment, which of the following would be most important for you to report a positive experience?- The physical therapist establishing clear goals	8.987	1.390

Table 13: Top five high key factors.

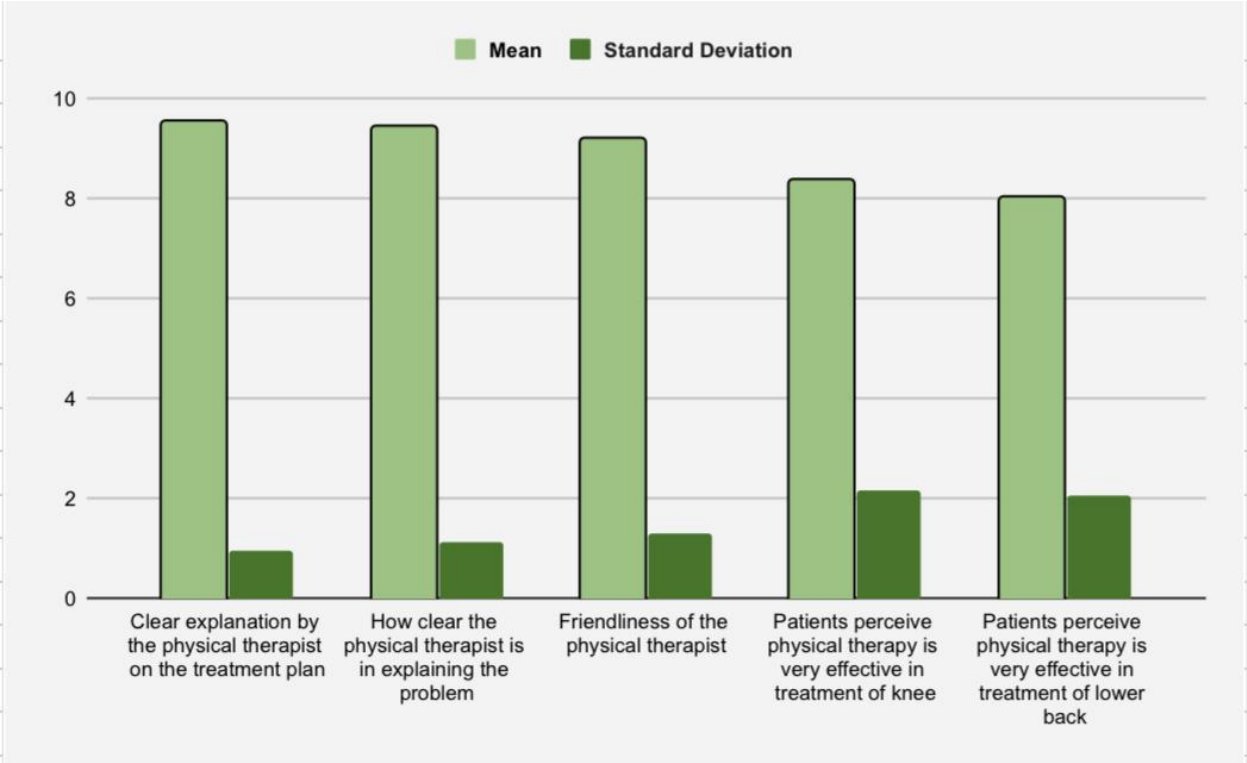
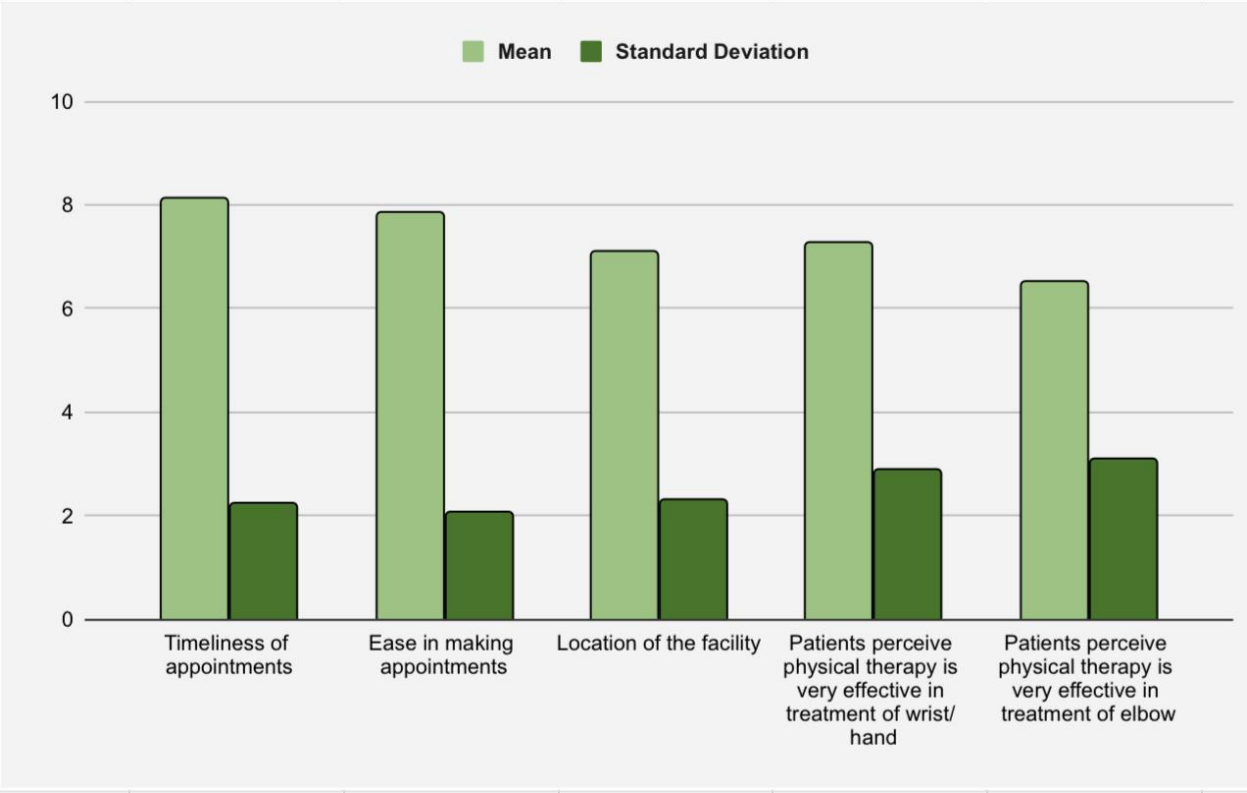


Table 14: Top five low key factors.



DISCUSSION

The purpose of this study was to identify the factors associated with positive or negative perceptions of physical therapy care in those with low back pain. Within the study, a comprehensive Qualtrics survey was developed and administered to participants in the Orlando area. The research team reviewed the survey's data. The findings from this investigation support previous research that reported factors attributing to patients positive perceptions of physical therapy care. The findings from our investigation revealed that patients in physical therapy care are most likely to report a positive experience when their physical therapist has clear explanations on treatment plans, clearly explains the problem, and showcases friendliness. Results have also displayed that patients think physical therapy is very effective in treatment of the knee and lower back.

Data from the study reported that clear explanation by the physical therapist on the treatment plan had a mean of 9.513 and standard deviation of 0.959. This means that if a patient were to go to physical therapy, clear explanations by the physical therapist on the treatment plan is most important for the patient to report a positive experience. According to the article by (Kinney et al., 2018), it was identified that physical therapists should place value in finding barriers and motivators of each individual patient. It is suggested that physical therapists should have dialogue about those elements and their effectiveness in the development of the exercise plans when in the process of developing plans for treatment and exercise. Having discussion would enable the patient to visualize the physical therapist examination of their needs within treatment plans.

Data from the study reported that how clear the physical therapist is in explaining the problem had a mean of 9.434 and a standard deviation of 1.124. This means that if a patient were to go to physical therapy, how clear the physical therapist is in explaining the problem is very important for the patient to report a positive experience. A study by (Potter et al., 2003) examined areas of care that are essential for patients to report a positive satisfaction in physical therapy care. Results reported that the physical therapist clearly explaining the patient's problems, prognosis, treatment process, and the role the patient may play were one of the more important factors identified. According to (O'Keeffe et al., 2016), providing clear and simple explanations enhanced the interactions between the therapist and the patient (Kidd et al., 2011) (Gard, 2007) (Potter et al., 2003) (Gyllensten et al., 1999) (Peiris et al., 2012) (Cooper et al, 2008) (Del Baño-Aledo et al., 2014) (May, 2001) (Escolar-Reina et al., 2010). An uncomplicated explanation of the problem, why the physical therapist was assigning specific exercises, and how the physical therapist could help was highly favored by patients (Kidd et al., 2011) (Gyllensten et al., 1999) (Cooper et al, 2008) (Del Baño-Aledo et al., 2014) (May, 2001) (Escolar-Reina et al., 2010).

Data from the study reported that the friendliness of the physical therapist had a mean of 9.171 and standard deviation of 1.290. This means that if a patient were to go to physical therapy, friendliness of the physical therapist is also important for the patient to report a positive experience. An article by (O'Keeffe et al., 2016) stated that patients talking to their physical therapist in a friendly way was essential and strongly correlated with a positive interaction (Kidd et al., 2011) (Øien et al., 2011) (Gard, 2007) (Potter et al., 2003) (Peiris et al., 2012) (Del Baño-Aledo et al., 2014). Greetings from physical therapists to patients also helped to enhance the

patient-therapist relationship (Kidd et al., 2011) (Potter et al., 2003). Physical therapists that were not friendly made it difficult for patients to interact with them (Hills & Kitchen, 2007) (Del Baño-Aledo et al., 2014).

Data from the study reported that effectiveness of physical therapists treating the knee body part had a mean of 8.355 and a standard deviation of 2.158. This means that patients think physical therapy is very effective in treating the knee. According to the article by (Fitzgerald & Oatis, 2004), standard participation in physical activity has been identified as beneficial for many years in treatment of knee pain (Hochberg et al., 1995) (R. D. Altman et al., 1999) (Hurley, 2003). To help patients overcome barriers physical therapists may present several supplemental treatment approaches that may also strengthen the effectiveness therapy care of the knee (Fitzgerald & Oatis, 2004).

Data from the study reported that effectiveness of physical therapists treating the lower back body part had a mean of 8.026 and standard deviation of 2.059. This means that patients think physical therapy is very effective in treating the lower back. The study from (Lewis et al., 2008) identified that physical therapy prescribed exercises are proven to be effective in treatment of LBP. Although this is true, no specific treatment modality was found to have greater outcomes than others. A previous systematic review from (Liddle et al., 2004) reported similar findings. From this study, it was identified that when completing exercise therapy, patients with chronic low back pain accomplished positive outcomes.

LIMITATIONS

This study was limited by the amount of eligible participants with or previously having LBP that can take the survey. It was of concern that it would be difficult to collect enough data in three months from actual patients currently in physical therapy care or have previously had physical therapy care with LBP. As a result, data was collected based on the general population's perception. Another key limitation included not reaching the intended number of participants to complete the survey. The target goal was 128 however, 101 was reached. Limited research exists on patient perceptions in physical therapy care in those with LBP.

FUTURE RESEARCH

Future research would examine patient perceptions of physical therapy care in those with LBP or have had LBP in the past only. A longer time frame should be executed to collect enough data to reach the target goal of surveys. This would allow for a more extensive analysis and examination of factors of patient perceptions in physical therapy care as a result. Future research is needed to further examine positive and negative factors of physical therapy care in those with LBP currently or in the past.

CONCLUSION

Future clinicians should put into practice the following key takeaways: physical therapists should have clear explanations on treatment plans, physical therapists should clearly explain the problem, and physical therapists should showcase friendliness. Additionally, patients perceive physical therapy is very effective in treatment of knee and lower back. Following these key takeaways would allow patients in physical therapy care more likely to report a positive experience.

APPENDIX: SURVEY QUESTIONS

Screening Questions

1. Have you had low back pain in the past year?

   __Yes

   __No

2. Did you attend physical therapy in treatment for your low back pain?

   __Yes

   __No

Demographics

3. Biological Sex:

   __Male:

   __Female:

4. Race/ Ethnicity:

   __American Indian or Alaska Native

   __Asian

   __Black or African American

   __Native Hawaiian

   __Pacific Islander

   __White or Caucasian

   __Hispanic or Latino

__Multiracial or Biracial

__Race/ ethnicity not noted above

5. Age: _____ Years
6. Height: _____ Feet _____ Inches
7. Weight: _____ Lbs

8. Household income:

__Less than $30,000

__$30,000- $39,999

__$40,000- $49,999

__$50,000- $74,999

__$75,000- $99,999

__$100,000+

9. Marital Status:

__Single

__Married

__Co- habiting

__Divorced

__Undisclosed

10. Education Level:

__Primary

__High School (not completed)

__High School (graduate)

__Associate degree

__College/ University (undergraduate)

__Post- graduate

__Vocational school (completed)

__Undisclosed

Clinical

11. How many visits did your physical therapist recommend?

_____

12. How many visits did you actually complete with the physical therapist?

_____

13. Low back pain often comes and goes; however consider the time when your most recent episode of low back pain started up until now.

_____ Years

_____ Months

14. How often did you participate in physical therapy treatment?

_____Number of times per week

_____Number of weeks

15. When you were attending physical therapy, what is the greatest amount of low back pain you have had that you may recall?

0 1 2 3 4 5 6 7 8 9 10

16. When attending physical therapy what is the least amount of low back pain you have had that you may recall?

0 1 2 3 4 5 6 7 8 9 10

17. What is your level of low back pain at this moment?

0 1 2 3 4 5 6 7 8 9 10

18. Do you take pain medications for your low back pain?

__Yes

__No

a. If yes, how often do you take them?

__one time a day

__twice a day

__ three or more times a day

19. Do you suffer from any disorder of anxiety (including phobias, generalized anxiety, panic, social anxiety etc.)?

__Yes

__No

20. Do you suffer from any disorder of depression (including major depressive disorder, bipolar disorder etc.)?

__Yes

__No

21. When attending physical therapy do you think your therapist explained your diagnosis adequately?

__Yes

__ No

22. In physical therapy care, did your PT explain to you in great detail the importance of your treatment and how it will help you when you are in your physical therapy session?

__Yes

__No

23. In physical therapy care, did your instructor explain to you in great detail the negative outcomes that will follow if treatment guidelines are not complied with when you are in your physical therapy session?

    __Yes

    __No

24. Does your instructor explain to you what your life should look like after your treatment is over when you are in your physical therapy session?

    __Yes

    __No

25. What did your physical therapy treatment activities look like?

    __ Exercise

    __Low intensity __Moderate intensity __High intensity

    __Bridges (Knees bent, feet on floor, lying on back)

    __Pelvic Tilts

    __Wall sits

    __Knee to chest

    __Press-up back extensions

    __Partial Crunches

__ Option not noted above

26. Do you think your treatment was tailored to your needs?

__Yes

__No

27. Were you given a home exercise program by your PT?

__Yes

__No

a. If so, did you do your home exercise program as prescribed?

__Yes

__No

28. Did your therapist share their goals with you?

__Yes

__No

a. If yes, did the therapist establish these goals meaningfully?

__Yes

__No

b. If yes, did your therapist ask you what your goals were?

__Yes

__No

c. If yes, did your therapist incorporate those goals with theirs?

__Yes

__No

29. How satisfied were you with your therapy? (0 being completely dissatisfied and 10 being very satisfied)

0 1 2 3 4 5 6 7 8 9 10

Perception

30. Do you feel that physical therapy is helpful?

__Yes

__No

a. If yes, why do you feel that it is helpful?

__Alleviated low back pain

__Helped to improve physical activity

__Promoted healthy lifestyle habits (weight loss)

__Option not noted above

b. If no, why do you feel that it is not helpful?

__Did not feel challenged by exercises

__Pain still present

__Exercises could have been completed at home

__Option not noted above

31. Do you feel as though physical therapy challenges you?

__Yes

__No

a. If yes, in what ways does physical therapy challenge you?

__Treatment plans keeps me on track (challenging but attainable)

__Treatment exercises were long in duration

__Option not noted above

b. If no, in what ways does physical therapy not challenge you?

__ Treatment exercises too easy

__Treatment exercises were to short

__Option not noted above

32. Do you feel as though physical therapy will worsen your condition or cause you more pain?

__Yes

__No

a. If yes, why do you feel this way?

__Exercise will cause more pain

__Injury will be in worse condition

__Exercises will be too intense

33. What are some factors that you believe can contribute to positive experience in physical therapy?

__Individualized exercises

__Instructor demonstration

__Instructor feedback

__Instructor demonstrating good communication skills

__Instructor informing patients of their situation and giving them explanations

__Option not noted above

34. Please explain the mood you experience when attending physical therapy?

__Really Great

__Great

__Very Good

__Good

__Okay

__Average

__Bad

__Very Bad

__Extremely Bad

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