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General

Using expletives to enhance therapeutic outcomes: A case report

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Background

Swearing deserves attention in the physical therapy setting due to its potential positive effects on pain, physical performance, and therapeutic alliance. The purpose of this case report is to describe the strategic use of swearing in the clinical setting.

Case Presentation

A 44-year-old female completed an episode of physical therapy after undergoing patellofemoral arthroplasty. Swearing was formally included into the plan of care, and the patient swore out loud during the most challenging and painful interventions.

Results

The patient reported that repeating a swear word was funny, distracted the patient, and made the patient feel more confident. The patient and physical therapist self-reported a strong therapeutic alliance.

Conclusion

There is evidence repeating a swear word out loud can strengthen the therapeutic alliance, improve physical performance, and decrease pain. This is, to our knowledge, the first report of a patient swearing during an episode of physical therapy care.

INTRODUCTION

Language used in the physical therapy clinical setting can impact symptom presentation and prognosis.[1,2] Swearing, or uttering a word that is considered taboo and has the potential to offend, has become more normalized today, even in formal settings. Evidence suggests that 58% of the population swears “sometimes” or “often”,[3] more than 70% of adults report frequently or occasionally heading individuals swear in public,[4] and 57% of workers swear in the workplace.[5] Swearing has been shown to produce positive physiological, psychological, and social effects that cannot be achieved with other forms of language.[6] Swearing can lead to tighter human bonds and create informal environments where people are more likely to be themselves.[7] In the physical therapy setting, swearing may enhance the therapeutic alliance and, therefore, directly affect treatment outcomes.[8,9] There is a significant body of research demonstrating that swearing has analgesic effects.[10-14] Evidence has also emerged showing that swearing out loud is associated with increased physical performance. Researchers have found that repeating a swear word allows subjects to exert greater levels of power,[15] increases maximal grip force,[15,16] and improves performance during a chair push-up task where subjects support their bodyweight on their hands and arms against the chair seat for as long as possible.[16] The fact that the analgesic effects and improved physical performance when swearing has been consistent across studies suggests that these are reliable effects.[6]

Despite the prevalence of swearing and the evidence for positive effects,[6] there is little research on swearing in the physical therapy setting.[9,17] Therefore, the purpose of this case report is to describe the implementation and subsequent outcomes for a patient using swearing as a therapeutic tool during an episode of physical therapy care.

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Table 1. Summary of Exam Findings.

Exam	Right	Left
Pain		Localized to superior patella and distal quadriceps, ranging from 2-10/10
Knee Extension PROM	0°	-2°
Knee Flexion PROM	138°	74°
Hip Flexion MMT	4+/5	3/5*
Hip Abduction MMT	5/5	4-/5
Hip Adduction MMT	5/5	4+/5
Knee Extension MMT	5/5	3+/5*
Knee Flexion MMT	5/5	5/5
Ankle Dorsiflexion MMT	5/5	4+/5
Ankle Plantarflexion MMT	5/5	4/5
LEFS	7/80	

Abbreviations: lower extremity (LE), manual muscle test (MMT), passive range of motion (PROM), centimeter (cm), painful (*), lower extremity functional scale (LEFS)

CASE PRESENTATION

ETHICAL CONSIDERATIONS

The Samford University Institute Review Board determined that this project is not considered Human Subject Research and therefore not subject to IRB approval, per regulatory definition under 45 CFR 46.102(d). The patient provided verbal informed consent for the clinical information in this case report. Standard Health Insurance Portability and Accountability Act procedures were utilized to protect the patient's data and maintain confidentiality.

CASE PRESENTATION

The patient was a 44-year-old female office worker, referred to physical therapy 3 days status-post left patellofemoral arthroplasty. When asked about her current post-operative condition, the patient stated pain was focused in the superior patella and distal quadriceps region, with pain ranging from 2/10 to 10/10 on the numeric pain rating scale (NPRS). An 11-point NPRS (0=no pain, 10=worst pain imaginable) has been shown to possess strong reliability and validity.[18] Her pain increased with any knee flexion movements or activities requiring quadriceps contraction. On the Lower Extremity Functional Scale (LEFS), the patient scored a 7/80 indicating a 91% disability. The LEFS is a valid and reliable measure for assessing functional impairments resulting from lower extremity (LE) musculoskeletal conditions.[19]

A thorough examination was performed on the patient by a licensed physical therapist (author BM) with notable finding presented in **Table 1**, including significant impairments in knee passive range of motion (PROM) and left LE manual muscle testing (MMT). Knee passive range of motion (PROM) and lower extremity strength measurements were collected in their respected standardized testing positions.[20] Patient's clinical findings were consistent with recent patellofemoral arthroplasty, and physical therapy was indicated to address her impairments and to improve her LE function.

MANAGEMENT

In addition to the standard of care for the management of patellofemoral arthroplasty, it was determined that the inclusion of swearing into the plan of care was warranted due to the impairments in physical strength and pain which have been shown to be improved with swearing.[10-16] Standard post-operative care for patellofemoral arthroplasty includes full weight bearing immediately after surgery, with rehabilitation focusing on active and passive range of motion exercises, progressive resistance exercises, and gait training.[21] The physical therapist followed the standard post-operative care for patellofemoral arthroplasty, with the addition of swearing.

SWEARING STRATEGIES

The effect of swearing is influenced, at least partially, by the relationship between the swearer and the audience.[22] The physical therapist in this case waited until the 4th visit before introducing and implementing swearing into the plan of care, to ensure a baseline level of rapport was established. However, no formal metrics were collected during this 4th visit as evidence of rapport between the physical therapist and patient.

At the beginning of the 4th physical therapy visit, the physical therapist discussed the novel treatment tool of including swearing into their physical therapy sessions. During this discussion, the physical therapist shared some of the evidence suggesting that swearing can modulate pain and improve strength. The patient agreed to using swearing as a novel treatment tool during her physical therapy. The patient was then asked how often she swears, and patient responded, "I swear a lot, probably like 100 times a day." Options for how to incorporate swearing into the physical therapy treatments were discussed. These options included swearing before, during, and/or after each set of an exercise, swearing whenever pain would increase during treatment, and swearing when performing her home exercise program (HEP) independently in the privacy of her own

Table 2. Patient Outcomes.

Exam	Initial Evaluation	Discharge (8 weeks)
Pain	Localized to superior patella and distal quadriceps, ranging from 2-10/10	Vague anterior knee pain, ranging from 0-2/10
Knee Extension PROM	-2°	0°
Knee Flexion PROM	74°	140°
Hip Flexion MMT	3/5*	5/5
Hip Abduction MMT	4-/5	4+/5
Hip Adduction MMT	4+/5	5/5
Knee Extension MMT	3+/5*	5/5
Knee Flexion MMT	5/5	5/5
Ankle Dorsiflexion MMT	4+/5	5/5
Ankle Plantarflexion MMT	4/5	5/5
LEFS	7/80	59/80

Abbreviations: lower extremity (LE), manual muscle test (MMT), passive range of motion (PROM), painful (*), lower extremity functional scale (LEFS)

home. The last part of the discussion involved the patient selecting a swear word to use and the patient chose "fuck".

The patient decided to swear out loud during the most painful and challenging interventions. The swearing dosage involved the patient saying "fuck" during each repetition of the most challenging and painful exercises, and throughout the painful moments of being stretched by the physical therapist.

OUTCOME MEASURES

The LEFS, manual muscle testing (MMT), NPRS, and the Helping Alliance Questionnaire (HAQ) were chosen to use as the metrics to monitor the outcomes of this patient. The HAQ is a self-reported outcome measure for therapeutic alliance that both the patient and the physical therapist complete. An additional swearing survey was developed by the researchers, based on the possible psychological mechanisms by which swearing reliefs pain and improves strength.[16]

OUTCOMES

Patient was seen for 20 visits of physical therapy over an 8-week period. At time of discharge, patient reported minimal dysfunction, and was compliant with a HEP consisting of LE strengthening and knee ROM exercises. Patellofemoral arthroplasty has a good prognosis, and the clinical outcome of this case are consistent with what was expected from this surgical procedure and rehabilitation following the standard of care. See **Table 2** for summary of patient outcomes.

The LEFS score after 8 weeks of physical therapy was 59/80, indicated a 26% disability. This is an improvement from the LEFS score of 7/80 during the initial evaluation, indicating a 91% disability. At discharge, the patient demonstrated full strength at the hip, knee, and ankle, with the exception of hip abduction strength demonstrating an MMT score of 4+/5. Patient denied pain during MMT at discharge, an improvement from initial evaluation where pain was present during MMT of hip flexion and knee extension. Pain ranged from 2-10/10 on the NPRS at time of initial evaluation and improved to 0-2/10 at time of discharge.

SWEARING SURVEY

After implementing swearing into the plan of care for this patient, the swearing survey completed at discharge indicated that the three most noted effects of swearing on this patient were swearing was funny, swearing distracted the patient, and swearing made the patient feel more confident. Specific swearing survey visual analog scores (VAS) are listed in **Table 3**.

HELPING ALLIANCE QUESTIONNAIRE

At discharge, the HAQ indicated that the both the patient and the physical therapist self-reported a great therapeutic alliance, or collaborative bond, with the patient scoring 104/114 on the HAQ and the physical therapist scoring 104/114 (19 = poor therapeutic alliance, 114 = strong therapeutic alliance).

DISCUSSION

This case report describes the clinical reasoning and the physical therapy management of a patient where the novel treatment tool of swearing was implemented. The primary goals of implementing swearing into this patient's plan of care was to 1) strengthen the therapeutic alliance, 2) improve physical performance, and 3) decrease pain.

Table 3. Swearing Survey Results.

Statement	VAS score (0 = no agreement, 10 = full agreement)
Repeating the swear word made me feel a positive emotion along the lines of excitement or happiness.	7.9
Repeating the swear word made me feel a negative emotion along the lines of anger or sadness.	0.6
Repeating the swear word was funny or humorous.	9.5
Repeating the swear word distracted me from thinking about other things.	9.6
Repeating the swear word felt like a new or different experience.	8.3
Repeating the swear word made me feel more confident.	9.1

The therapeutic alliance is complex and subjective and requires an ongoing collaboration between the physiotherapist and the patient for its success.[23] Therapeutic alliance has been shown to influence patient satisfaction, adherence, and treatment outcomes.[24-26] Although there is no gold standard outcome measure for therapeutic alliance, the HAQ was used in this case, which consists of a 19-item questionnaire that both the patient and the physical therapist complete. The HAQ has been shown to be a reliable and valid self-reported measure of the therapeutic alliance[27]; however, a limitation of the HAQ is that it was developed for psychoanalysts,[8] and may lack specificity in the physical therapy field. The physical therapist assessed the therapeutic alliance at only one point in time, at discharge. The therapeutic alliance was not measured at various times during the episode of care. A longitudinal assessment of therapeutic alliance may provide insight on how the therapeutic alliance and swearing evolve over time, making any direct relationship between cause and effect more apparent.

The improvements in pain and physical performance in this case were typical for a patient status-post patellofemoral arthroplasty completing standard rehabilitation. Therefore, swearing may not have impacted the pain and physical performance measures. This may be due to the habituation effect of swearing. Stephens et al.[11] discovered that swearing appears to be most effective at decreasing pain among people who swear less often in their daily lives. The patient in this case reported swearing "a lot, probably like 100 times a day" and may have been habituated to swearing and, therefore, the swearing did not positively impact her pain or physical performance. Nevertheless, this patient's pain did reach 10/10 at its worst during the initial evaluation, suggesting pain modulating interventions were warranted, and the physical therapist decided to utilize swearing to assist with pain control.

LIMITATIONS

Although case reports of single subjects do not infer cause-and-effect relationships, a meaningful change in this patient's function, ROM, strength, and pain, as well as the development of a strong therapeutic alliance during physical therapy did occur with standard of care rehabilitation with the addition of swearing.

This case report has multiple limitations. This patient underwent a surgical intervention that has shown to be successful,[21] without implementing swearing. It may be that these outcomes were a product of standard of care, and swearing did not impact the patient's progress. Nevertheless, the patient reported that swearing was funny, distracted her, and made her feel more confident, and there was a strong therapeutic alliance between the patient and the physical therapist. The patient's outcomes in this case were consistent with the prognosis of her health condition; therefore, implementing swearing likely did not negatively impact outcomes. The physical therapist and patient were not able to be blinded to the swearing implementation or outcomes, which could have biased the results.

As the results of a case report cannot be generalized to other patients, additional research is needed to determine the effectiveness of implementing swearing into physical therapy management in a greater number of patients. Expanding a case series or designing a randomized controlled trial with more robust methodology would be helpful in determining the effectiveness of swearing in physical therapy settings.

CONCLUSION

There is evidence that repeating a swear word out loud can strengthen the therapeutic alliance,[7] improve physical performance,[15,16] and decrease pain.[10-14] The patient in this case presented with significant pain and physical performance impairments, suggesting that patient swearing may be indicated. This is, to our knowledge, the first report of a plan of care including patient swearing during an episode of physical therapy.

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AUTHORS' CONTRIBUTIONS

NBW, RS, and ADM were responsible for idea conceptualization; BM was the treating clinician for this case and worked on acquisition of data; NBW, RS, ADM, BM, CGB, and JD were responsible for writing and approving manuscript prior to submitting; NBW provided study supervision. The authors read and approved the final manuscript.

DECLARATION OF INTEREST

NBW, RS, ADM, BM, CGB, and JD declare no competing interests.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The Samford University Institute Review Board determined that this project is not considered Human Subject Research and therefore not subject to IRB approval, per regulatory definition under 45 CFR 46.102(d). Informed consent was obtained from the patient and the rights of the patient were protected. Consent for publication of identifying material in the case reports has been obtained from the patient.

CONSENT FOR PUBLICATION

We consent to have this work published in *Health Psychology Research*. The work is not submitted elsewhere, and the work is original to the authors.

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