**Evaluation and Self Assessment**

**Evaluation**

At midterm, I submitted a draft of the Educational Brochure and Coaches Survey to my adviser and committee members. Minor changes were suggested, mainly related to removing a few technical/medical terms, and adding in a few more directions/”tips” for the exercises. The brochure was revised and all suggestions were incorporated into the final version before it was distributed to a larger group of basketball coaches.

The Coaches Survey and Educational Brochure were distributed to coaches of youth, female basketball teams in the Greensboro, NC area. A brief overview of my project and the intended objectives of the brochure were sent to all coaches, along with a simple set of directions. Coaches were to fill out the preliminary survey, read through the brochure, and then fill out the secondary survey.

After collating all feedback from coaches, I performed a data analysis of the survey responses and reviewed all commentary from the coaches. Overall, 6 coaches returned a completed survey form to me, while an additional 2 coaches submitted written feedback via email (but did not fill out the survey). All of the coaches were either currently coaching or had previously coached a female, youth basketball team, and their players varied in age from 10 years old to 18 years old. The majority of the coaches had greater than 4 years of coaching experience with their teams. Only 1 coach reported current implementation of some sort of strengthening exercises for his athletes. Others reported using different types of injury prevention, such as individual pre- and post-practice stretching; warming up with jogging, high knees, etc.; and organized team stretching.

The goals of the brochure were to enable the reader (coach) to:

* + Identify common causes of PFPS
    - Explain risk factors for PFPS, and identify at-risk populations
    - Learn how to identify signs and symptoms for PFPS, and when to seek medical attention
    - Learn about basic strengthening exercises that can be used to prevent and treat PFPS
    - Demonstrate the knowledge to effectively teach these strengthening exercises to athletes

*Evaluation of Learning and Materials*

Looking at the data analysis, it is clear that the brochure achieved the first 3 goals related to educating the coaches about the basics of PFPS. Prior to reading the brochure, the average score related to all questions regarding current knowledge of PFPS was 1.9 on the 5 point Likert scale—indicating that the coaches were not familiar with the condition of PFPS. However, after reading the brochure, the average score for each question related to knowledge of PFPS increased by at least 2.2 on the Likert Scale, with an overall average response of 4.6—indicating the coaches were able to identify risk factors, signs and symptoms, and prevention strategies (by way of hip strengthening) for PFPS.

The feedback regarding the communication and assessment of the material was also very positive. The average responses related to this section (Survey #2, Part C) were scored at a 4.5 or higher. The coaches felt the information was communicated in a way that was easily understood. Further, the information was presented in a way that clearly portrayed *why* this information was important for them and their athletes. I felt I was able to effectively communicate the need for this strengthening program, and gained “buy-in” from the coaches.

The coaches shared overwhelmingly positive feedback regarding the educational information. One coach wrote, “This tells me exactly what PFPS is, without confusing me with a bunch of medical/technical jargon”. The coaches seemed to agree on the positive benefit of describing PFPS in a short, concise manner, and also appreciated the flow of the information. Another coach wrote, “The brochure is orderly, concise, brief and informative. The headings do a good job of introducing content that follows, and the headings are presented in a logical order.”

*Evaluation of Hip Strengthening Program*

In regards to the strengthening program, the coaches were receptive to the presented information. For all survey questions that pertained to the implementation of the suggested hip strengthening program (Survey #2, Part B), the average responses were scored at a 4 or above. These scores demonstrate that the coaches thought the strengthening exercises were relevant for their athletes and would help to prevent injury. Perhaps most importantly, the coaches felt confident in using the brochure’s instructions to teach the exercises, and felt they would implement the exercises with their team.

The coaches seemed to really benefit from the pictures that helped to explain the positioning for each exercise. One coach responded, “I like that the exercises were well described and thorough, emphasizing proper technique. Another said, “It used easy to follow instructions, and it seems to be something that can be taught easily. The pictures of WHAT NOT TO DO are just as effective as the pictures of how to properly do the exercises.  Good idea to incorporate both sets of pictures demonstrating how to do it correctly and how not to do it.” Overall, the bulleted directions along with the pictures effectively delivered the message of how to perform each exercise.

Coaches were also invited to share perceived barriers to the implementation of the hip strengthening program. After reviewing the comments, the overwhelming response was *limited time*. Especially for coaches who were only allotted 2 practice sessions per week, and limited gym time during those 2 sessions, several coaches expressed that they already had a very demanding practice schedule as it is. Most already required the players to arrive early/stay late after practice in order to stretch and warm-up/cool-down. They were concerned as how they could consistently fit the strengthening exercises into each and every practice.

With that said, several of the coaches hoped they could teach the exercises during pre-season practice sessions, but then shift to having the athletes complete the exercises at home. “This would help to initially build a good habit of our student-athletes, but then allow them to perform the tasks on their own and outside of practice time, to avoid that practice time constraint,” explained one respondent. Others suggested that after initially teaching the exercises, consistent completion at home could be emphasized; however, the exercises could be periodically included during practice, as to check in on where everyone was with them, observe the players’ techniques, etc. It seemed there was a general consensus that the exercises could be included as part of practice every now and then—just not consistently at every practice.

*Moving Forward*

The survey respondents provided valuable feedback that will allow for meaningful updates to the educational brochure. Based on their feedback, I would change the brochure so that it emphasizes initially teaching the exercises at practice, but maintaining the strengthening routine at home (or on the players own time). With that said, I may also suggest an exercise log, which would hopefully promote adherence if players were responsible for keeping up with the exercise on their own. Further, it would be a good idea to get the parents involved as well, especially for the younger players. The information about PFPS is written in a way so that it can also appeal to parents, and would hopefully get them on board with helping to maintain a consistent strengthening schedule for their daughters. The more people that will help to hold the player accountable for her actions, the more likely the player is to follow through with the strength program.

There were also several suggestions from the coaches that could help as this project is moved forward. In the future, one coach suggested using Twitter or Instagram to generate “buzz” about the strength program, and to better reach out to the players. The coach suggested, “Maybe a Twitter or Instagram page would be better for this generation to communicate information and share research or exercises.” Another suggested creating a website to share the PFPS information, and possibly posting videos of the exercises. One coach thought a website would allow me to provide more in depth information about PFPS, as a brochure could only portray so much information. I agree that these are all excellent suggestions that could help me reach out to a larger audience, and would encourage greater participation in the hip strengthening program.

Given the very positive feedback from the coaches, I believe this brochure has the capability to impact many young, female basketball players. Further, it could even be expanded to target other athletes, such as runners and soccer players, who are also susceptible to PFPS. Once I get settled in my career, I would love to *really* implement this program. Farther down the road, I’d hope to hold a short teaching session for coaches where I could teach about PFPS and the strengthening exercises. This would allow for a hands-on lab where the coaches could practice before going back to teach the exercises to their athletes. But with or without this face to face session, the educational brochure is able to quickly and efficiently portray the most important information and exercises, and is a simple injury prevention tool that any coach can utilize.

**Self Assessment**

After completion of this capstone project, I have fulfilled all of my personal learning objectives and outcomes that I originally established in my Capstone Proposal. I truly feel confident in my knowledge of PFPS after completing extensive research in this area. By focusing my research on hip strengthening interventions, I have gained insight into prevention and intervention strategies that I can use with my own patients in the clinic. Further, I found a way to share this information with a population outside the medical community that can benefit from it—that is, coaches and their athletes who can benefit from a PFPS educational brochure. I did end up altering the focus of my project after submitting my original proposal (I chose to focus on solely hip strengthening, rather than this and outcome measures), since I was able to find so much research in this one area.

This project gave me ample opportunities to improve on my writing skills, health literacy skills, and communication skills. Through my various products—evidence tables, capstone paper, brochure, survey, personal interviews, and various evaluations—I have improved in my ability to communicate with professionals and peers both in and outside of the medical community. I felt I effectively communicated the purpose of my project, the reasoning behind it, and the educational material in a way that can be understood by anyone reading it. This was validated by the overwhelmingly positive feedback I received from coaches. Further, I was able to share my goals and project progress with my adviser and committee members, and was open to criticism and suggestions. These open conversations allowed me to create a more effective and functional educational brochure. One thing I have learned in regards to my communication with others—and will continue to work on—is conciseness. It is truly an art to be able to clearly communicate your message/goals while providing just enough details to get the point across.