

Journal of Sports Medicine and Allied Health Sciences: Official Journal of the Ohio Athletic Trainers Association

Volume 6
Issue 2 *JSMahS Fall Issue 2020*

Article 2

October 2020

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Recommended Citation

West, Jordan J.; Winkelmann, Zachary K.; Edler, Jessica; Jackson, Bradley C.; and Eberman, Lindsey E. (2020) "Adolescent Perceptions of Injury and Pressures of Returning to Sport: A Retrospective Qualitative Analysis," *Journal of Sports Medicine and Allied Health Sciences: Official Journal of the Ohio Athletic Trainers Association*: Vol. 6 : Iss. 2 , Article 2.

DOI: [10.25035/jsmahs.06.02.02](https://doi.org/10.25035/jsmahs.06.02.02)

Available at: <https://scholarworks.bgsu.edu/jsmahs/vol6/iss2/2>

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Adolescent Perceptions of Injury and Pressures of Returning to Sport: A Retrospective Qualitative Analysis

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The increase in sport participation among adolescents has led to the rise in sport-related injuries, many of which have unique characteristics based on the patient, their perceptions, and the pressures faced when returning to sport. The purpose of this study was to identify the underlying factors that contributed to adolescents' perceptions of injury and the various pressures they experienced when returning to sport. Two themes emerged from the study: support and fear. Support was provided to participants through development, care, and the environment. Fear was the factor that affected the participant in their return to sport, which came in the form of worry and doubt. **Keywords:** *Factors, Support, Fear, Team, Environment*

INTRODUCTION

Approximately 23-30 million adolescents participated in school sports over the ten year span of 2001 to 2011.^{1,2} The number of active adolescents increases the overall odds of sustaining an injury. Injury surveillance suggests there have been 4,468 adolescent injuries in a 10 year period with a projected 3-11% injury rate among adolescents each year.¹ Participation in single or multiple sports increases the injury rate of adolescents.³ Perception of injury and pressures of returning to sport have been evaluated in college-aged adults, but little is known with adolescents.⁴⁻⁸ Mental, emotional, and socioeconomic health is impacted by injury, specifically during a time when adolescents are at a prime age of development.^{8,9}

Sport specialization also has a profound effect on injury rates among adolescents as well.^{3,4,15} Knowing the relationships between participation, specialization, and injury rates, it can be implied that an adolescent may not be the driving force involved in their contribution in sports. Therefore, the purpose of this research project was to identify the underlying factors that contribute to adolescent perceptions of injury and the pressures they experience when returning to sport, while showing the necessity of taking a more patient-centered approach to every patient.

METHODS

A phenomenological qualitative inquiry design was used because it allowed for emphasis on personal perspective and interpretation of the lived experience. This study was approved by the

Indiana State University Institutional Review Board.

Participants

Recruitment consisted of recent high school graduates (college aged freshman) that sustained an injury while playing a high school sport in the last 12 months that required them to miss practices or games. The recruitment occurred through posts on various social media platforms and through word of mouth. Ten participants (age=18.4±0.5y) were identified as eligible for the study and completed the interview. All ten participants were from rural communities in the Midwest. Table 1 provides full demographics and pseudonyms for the participants.

Instrumentation

The research team used a semi-structured interview protocol (16 questions) that was developed by three members of the research team (JJW, BCJ, LEE). This interview protocol included demographic questions pertaining to household, school, and community size in order to establish a sense of location among participants. The interview protocol was sent to an internal review by a fourth member (JEN) of the research team and an external review with expertise in youth sport specialization. After IRB approval, a pilot test of the protocol was used, but this data were not included in the final analysis.

Participant	Household Number	Community	School Size*	School Type	Closest Hospital (Miles)	Insurance
Dan	6	Rural	Small	Public	20	None
Daryl	3	Rural	Small	Public	18	Parent/Guardian Employer
Wayne	2	Rural	Small	Public	20	Unknown
Stuart	3	Rural	Small	Public	20	Medicare
Glen	3	Rural	Small	Public	30	Parent/Guardian Employer
Jim	4	Rural	Small	Public	30	Medicare
Gail	2	Rural	Small	Public	30	Parent/Guardian Employer
Bonnie	4	Rural	Small	Public	20	Unknown
Reilly	3	Rural	Moderate	Public	30	Parent/Guardian Employer
Katy	5	Rural	Small	Public	15	Parent/Guardian Employer
	Average 3.5				Average 23.3	

Table 1. Participant Demographic Information

*School Size: Small (<500); Moderate (500-1000); Large (>1000)

Procedures

Interested individuals were identified and sent an introductory email containing a digital informed consent and URL link for the web-based conferencing platform (Zoom Video Communications, Inc., San Jose, CA). The participant provided verbal consent and the principal investigator digitally recorded the audio during the interview. Interviews lasted approximately 30-45 minutes. Following completion of the interview, the audio files were transcribed precisely by a transcription service (Rev™) and checked for accuracy by the principle investigator. Member-checking was conducted by having participants read their transcripts for accuracy and validity of their responses.

Data Analysis

The phenomenological tradition was used to analyze the data by using a systematic, inductive process to identify themes by first reading three transcripts and developing a preliminary codebook. The primary investigator applied the codebook to the remaining seven transcripts making no changes to the codebook. The research team confirmed the codes (JJW, BCJ, LEE) with an internal audit conducted by a member of the research team who was not part of the coding process (JEN). The pilot, multi-analyst data analysis, member-checking, and auditing established trustworthiness.

RESULTS

Two themes emerged from the data analysis that explained the participants' perceptions of injury and pressures of returning to play; (1) *support* and (2) *fear*, which had several subthemes that helped

to describe the experiences of the participant. Pseudonyms were used in place of the participants' real name and were represented with quotation marks.

Support

The *support* theme represented the factors that led to the individual's participation in sports as well as their return to sport following injury. Table 2 provides supporting quotes from the participants. The participants' support system facilitated either a positive or negative experience in regard to sport participation and return to activity. The participants perceived their support system as the largest contributor to their interest in sport participation. From the *support* theme, four subthemes emerged, which included 1) *development*, 2) *care*, 3) *unsupportive*, and 4) *environmental*. The subthemes within the *support* category explain the factors relating to the participants' perception of their injury.

Development

The subtheme of *development* reflected the interest that participants had in playing sports. Participants mentioned those involved in their decision to participate in sports at a young age, which included family, friends, and coaches. The development of interest in sport as a child lead to participation in high school sports. "Daryl" and "Dan" discussed how family and friends in the community led to their participation in sports. "Reilly" had a similar experience when it came to participating in multiple sports during their time in high school.

Participant Pseudonym	Quote
Daryl	<i>"Everyone around town played soccer just because we were all trying out sports, and then they talked me into it. Then for football, my friends just... We have always loved football ever since we were little. All our parents grew up watching football, so they talked me into it just out of that, out of love for the game."</i>
Dan	<i>"Whenever I would watch football games when I was younger, especially the high school players, I just saw when they walked, they had a lot of pride and self-confidence, but they were also very respectful of those around them. And so it was just something that I wanted to be because playing football is much bigger than yourself, and so I wanted to be a part of that and everything that football gave to me in that."</i>
Reilly	<i>"I've always just had a passion for baseball, and I played that ever since I was little, and it's by far my favorite sport. And then cross country. I quit football in eighth grade and my best friend's dad talked me into running cross country because he was the coach at the time, and I just kind of stuck with it."</i>
Glen	<i>"The athletic trainer, he is from [redacted] and he is an amazing guy. He was only there as an internship type thing, but he's an amazing athletic trainer and he helped me a lot with exercises and stuff like that to help with my knee and everything like that."</i>
Daryl	<i>"My athletic trainers, and just the exercise they made me do to make sure that I efficiently got back in a decent amount of time."</i>
Bonnie	<i>"I'd say the, I don't know, the surgeon who did it, Dr. (XXX). He definitely helped me out, just with the rehabs he was giving me. And it was just... It was pretty intense rehabs and it was just right. They had... It started the day of the... That I got my surgery. So, the day that I got my surgery, I was like already gotten started in rehab. But I mean, obviously, it was just rehabs that I could do while I was laying in bed."</i>
Wayne	<i>"And I wish I would have had an athletic trainer there that day when I did that, because they probably would have held me out, probably sent me to an actual doctor or physician and said, hey, you might want to get this checked out a little bit more than just icing it for two days, and wrapping it up for the Friday night game, and go out and play on it some more and probably hurt it worse. And I probably did. And now I'm living with that."</i>
Jim	<i>"I'd pretty much go out during practice and kind of stand around, watch them, talk to a couple of my friends and stuff, but really I didn't have too much contact with anybody. I kind of just sat to the side, and did not really talk that much, kind of just helped out if I needed to. But like I said, mostly just stood to the side."</i>
Gail	<i>"My parents just told me to suck it up and, I mean, they weren't really too concerned about it because they're like, you're fine."</i>
Reilly	<i>"I always had family or my coaches checking up on me and seeing how my progress was doing and just supporting me and making me feel like still part of the team and stuff."</i>
Dan	<i>"When it came to playing football, they (my parents) were always very helpful to me. And they would always, whenever I was feeling down or something, they would be like, "Well, you're doing this. Might as well give it 100%," but they were always supportive of my decisions, whether it was contemplating playing football. They were just saying do what is best for myself. But they were always very supportive of me and really gave me the world when it came to football."</i>
Bonnie	<i>"No, for sure. So, I was lifting when football was happening. And then after that, I got started... I'd have to lift again because of surgery. Or because after my surgery, I had to get my knee stronger again. And at first, for the rest of my junior year, I don't think my knee was that strong, at all. But then my senior year, I was still lifting, I wasn't lifting as much, though. I kind of fell off the lifting. But then during basketball season, I had to lift until my knee was all the way back, 100%."</i>

Table 2. "Support" Quotes

Care

Care was provided from several outlets according to the participants. This came in the form of physical care, such as rehabilitation and treatment, as well as emotional care and encouragement from family members to continue care. “Glen” and “Daryl” discussed the impact that their athletic trainer had on their injury and the care following. “Bonnie” reported similar impacts that other healthcare providers had on their care. The participants reported that the care they received led to a positive experience in returning to sport. The level of care provided to the participants played a pivotal role in creating a positive experience and outcome. The participants’ care team (family, friends, coaches, and team) led to an optimistic perception of their injury, as those within their care circle (healthcare providers) gave them the encouragement and tools needed to overcome their injury.

Unsupportive

Although infrequent, some participants described unsupportive experiences ranging from feeling left out from the team to lack of healthcare access. These unsupportive characteristics shaped the participant’s desire to return to sport, as well as their outlook on their respected time-loss injury. “Wayne” addressed the lack of access to care among their high school and the negative impact that it had on their health and well-being. “Wayne” further explained that the outcome and severity of their injury would have potentially differed if they had appropriate access to care within their high school. Along with the lack of resources and care available, “Jim” had a similar experience of feeling alienated from their team during their injury. It was due to these unsupportive experiences that led to the negative perceptions that participants had on their injuries. While “Wayne” and “Jim” had negative experiences regarding their team and school, “Gail” had a negative experience from their family. It was this lack of care and concern by their peers, teams, and families that resulted in such lackluster experiences.

Environmental

The participant’s environment played a crucial role in relation to how they perceived their injury and their return to sport. Environmental support

came from the participant’s community and how those around them provided support. “Reilly” stated that the consistent health check-ins and the feeling of being a part of the team were significant factors that supported them in their return to sport process, while “Bonnie” reported the support that the team offered during their rest period. These beliefs were complimented through “Dan’s” experience with support from their family. The environmental support, whether it be from family, friends, or teammates, was a common expression among participants. Much like the subtheme of *care*, it was these experiences that led to a positive outcome when returning to sport from an injury.

Fear

The second emergent recognized that recent high school graduates expressed *fear* relative to their experiences from the time of initial injury to their return to sport. Fear was experienced by not only the participant, but their support system as well. The feeling of fear was a common theme among all participants, where many experienced fears of reinjury, anxiety related to their condition, and doubt in the recovery process. Table 3 provides supporting quotes to describe the three subthemes.

Reinjury

Specifically, the fear of *reinjury* was a common occurrence described by most participants. This fear led to several cases of worry and doubt among these individuals following their injury. “Dan” expressed a concern for reinjury and how a reinjury would set him back further and keep him from the team for a longer period of time. “Wayne” mentioned having a sense of fear of reinjury within his experience, even when playing a completely different sport. “Reilly” felt that they would completely lose all progress throughout the span of their return to sport protocol. Fear of reinjury was expressed as not wanting to experience the same feelings and perceptions of their previous injury. It was this existing fear that led to complications with a confident full return to sport following their injuries.

Participant Pseudonym	Quote
Dan	<i>"I had worried about my kneecap sliding back out of place or making the wrong move when it's weak down there. And so I felt it was just a recurring fear that I would twist my knee the wrong way or do something silly with it and the same injury would happen again and that'd be an additional two to three weeks to what I had already had."</i>
Wayne	<i>"I was kind of worried about how much the shoulder was going to affect me, because I was an offensive lineman, so on offense I was afraid I was going to get a block for a running back, or I was going to get held up in my shoulder and someone just, you know, knock it out of place. I kind of felt like "Don't let the team down" or I was going to get hurt even worse. But nothing ever happened, obviously. I just felt like I should have seen probably a doctor about it, but I just did not because it was my senior year. And when you are a senior, you just want to play every game because it is probably, you know, what you have left."</i>
Reilly	<i>"As far as physically, I just couldn't quite shake the numbness and stuff 100%, or it would go away for a week and I would instantly try to go lift or go throw baseball or go hit or something and the pain would come right back. And it would kind of send me back to square one again after all the work I put in to get to where I was."</i>
Stuart	<i>"Well, the day that it happened, I kind of thought I was having a heart attack on the practice field, which scared me, scared my coach. My mom was beyond worried. It was a very crazy time. And then after being told, "Hey, you can't do anything," for me it was just like "But it's my senior year season. What do you mean I cannot do anything? I have been doing this for three years. What do you mean?""</i>
Bonnie	<i>"I don't want to say they (my family) were scared or anything like that. They wanted to make sure everything was okay with me. So, they took me to a hospital, not a hospital but a surgeon, a knee surgeon/ACL specialist to check and see what was wrong. That is when we found out. So, I don't want to say they were scared, but they were worried about it."</i>
Jim	<i>"Oh yeah. I definitely saw it as something worse that kind of happened to my shoulder. I didn't know if it ever really came out of place, or hopped out of place, or something just truly broke inside my shoulder when it happened. It really was very painful. I couldn't really move my arm until it kind of popped back into place, I would say. I pretty much just sat out the rest of that practice. The next day I had a lot of soreness and everything, but it wasn't too bad. That's why I was able to kind of get back kind of quick."</i>
Daryl	<i>"It definitely made me feel a lot worse because I couldn't perform in my sport as good as I usually could, so it definitely made me feel a lot worse. I doubted myself thinking if I would really get back to that spot I was in before that throughout the season."</i>
Katy	<i>"I was kind of [expletive] because I don't know why it happened to me. It was just bad timing because we were getting right into the middle of the season."</i>
Reilly	<i>"I could say definitely now and the last half of the process, it's definitely taking a toll on me just because I haven't been able to play it all this fall season for my college."</i>

Table 3. "Fear" Quotes

Worry

The feeling of *worry* troubled many of the participants as well as family, coaches, and friends. Much of this worry was attributed to the severity of injury and was expressed most notably by the individuals themselves and their families. "Stuart" mentioned the impact that their condition had on his family. Stuart continued to state that the entire family's worry led to extra precautions when he attempted to return to sport. "Bonnie" on the other hand, had a similar experience that evoked

the same sense of worry, while "Jim" had the sense of worry at the time of injury. The sense of worry was a direct result of the next steps following the injury. It was a matter of what to do next and what will happen next that caused this worried feeling for both participants and their social support system.

Doubt

The *doubt* experienced by the participants ranged from not being able to fully return to sport to not

fully recovering from their injury. Revisiting “Daryl’s” experience, he was able to explain how he felt with regard to his situation. This feeling of self-doubt negatively altered the experience and outcome of the participant, as later stated in the interview. Along with these feelings, “Katy” expressed her anger as to why it happened to her. The feeling of not being able to fully return to sport and even the negative experiences of sustaining an injury have shown an effect on the participants months after the initial incident. For some, such as “Reilly”, these fears have followed them to college, where they continued to express struggles relative to mental and physical healing from their injuries. For others, their injury was the reason for their limited participation in physical activity following high school.

DISCUSSION

This phenomenological study was used to identify the adolescent’s perception of injury and the pressures that they experienced when returning to sport. Our findings indicate that adolescents perceived their injury as an inconvenience that kept them from sport participation for a limited amount of time and even all together. The findings identified the wide array of emotions that the adolescent experienced during the return to sport process, most notably within the emotional, social, and physical realm. It can be inferred that this had an effect on the adolescent’s health-related quality of life. The injuries that adolescents sustain may impact their entire being in a manner that could affect them later on in adulthood. From the findings reported by the participants, taking a patient-centered approach to their history and using a fear avoidance belief questionnaire (FABQ) could provide more context around their overall feelings of injury and return to sport process. Focusing more on the subjective aspect of an adolescent evaluation, with high regards to using a FABQ, could yield valuable information even for the most thorough clinician.

Although the feelings of doubt and worry were pervasive throughout the participants, a supportive environment with access to care was critical in a positive return to sport experience. Adolescents tend to show a greater amount of avoidance behaviors following a recent injury.¹¹ As opposed to taking a leadership role, many adolescents reported poor stress management skills following an injury, as well as the relationships with other adolescents as stressors

and outcomes following their injury.¹² From an access to care perspective, adolescents identify school personnel as primary resources for health and well-being needs.^{13,14} Reports have shown that more severe injuries among adolescents had a negative effect on their health, both from a physical and emotional standpoint.^{3,5,8-10} Since doubt and worry are common occurrences in many adolescent injuries, the importance of identifying those feelings in the initial stages of injury to ensure that they are properly mitigated is crucial. Having adequate emotional support and environmental involvement from family and friends would lead to an early identification of these feelings during injury and lead to more positive outcomes among adolescents. Attaining a leadership role while in the return to sport process allows the adolescent the opportunity to integrate themselves into the team dynamic, despite being able to physically participate in practice and games.^{8,9,12} From a patient-centered standpoint, keeping the adolescent involved with the team could have benefits when looking at their psychosocial health and well-being.

The demographic data suggested that participants within rural communities did not experience the external pressures from outside sources to return to sport at a faster rate. There is no available evidence that specifically pertains to adolescent pressures of returning to sport, but literature suggests that sport specialization and community size play a role in adolescent sport participation.^{15,16} Those within urban and suburban communities have more likelihood to specialize in a particular sport compared to those within the rural communities, thus increasing their risk of injury.^{3,4,15,16} Likewise, it was shown that the development of physical fitness and participation in club sports was attributed to living in an urban area.¹⁶ Based off this information, one can infer that there might be higher expectations and likelihood of adolescents facing pressures when specializing in a sport while living in an urban or suburban community. This study indicated that those within rural communities seem to lack these pressures and want to return to sport to help their team rather than seeking opportunities to play their sport following high school.

Limitations and Future Research

The main limitations of the study included the small sample size of participants and their ability to recall pertinent information given the time between their injury and the present. The small sample size limited the ability to make broad generalizations from the results. The decision to include participants that were injured within a year may have altered their answers by making it difficult to fully recall their experience. It is possible that some participants could not recall certain aspects of their return to play, but we were able to confirm their answers via member checking. Future research should attempt to gather responses from the social support systems perspective relative to the injury and return to play process to compare the findings relative to the experience.

CONCLUSION

Adolescents perceive their injuries to hinder their ability to help their teams. This perception lead to feelings of fear and doubt. During the process of returning to sport, support was a common factor regarding any injury or illness that was discussed in the interviews. When appropriate access to care was provided, the outcome for the participant was positive, and less fear, worry, or doubt existed. Using an outcome measure such as the Fear Avoidance Beliefs Questionnaire (FABQ) would help assess the non-physical mechanisms associated with their injury and return to sport process. The use of an outcome measure such as this would gather insight on the support system and overall motivation of the adolescent. Early detection of the factors associated with the adolescent's behavior and perspective immediately following injury could lead to a more encompassing and patient-centered approach to care.

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