Barriers to concussion reporting

Qualitative Study of Barriers to Concussive Symptom Reporting in High School Athletics
Education?

- Male soccer player: “Well, like if you get a concussion. you bruised your brain and if you stay in you could possibly make it worse.”
- Female soccer player: “one of my friends has had eight concussions. sometimes during tests she doesn’t remember. She is genuinely more stupid now because of her concussions.”
- Football player: “If you have a concussion and you know it’s a concussion, you should tell the coach because. if you injure yourself, you’ve messed up your life.”
- Football player: “that’s life or death out there. most people don’t realize that you can die from a concussion.”

<table>
<thead>
<tr>
<th>Mental status</th>
<th>Not with it, glazed over, talking nonsense, can't focus, disoriented, blacking out, unresponsive, seizure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes</td>
<td>Eyes dilated, glassy eyed, eyes rolling back in head, eyes looking nowhere, loss of vision, squinting a lot</td>
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<tr>
<td>Pain</td>
<td>Headache, sensitive to lights and sounds, throbbing, ringing in ears</td>
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<tr>
<td>Balance</td>
<td>Loss of balance, stumbling, dizziness, not able to walk straight</td>
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<tr>
<td>Memory</td>
<td>Forgetting things, don't remember what happened, memory loss</td>
</tr>
<tr>
<td>Nausea/vomiting</td>
<td>Vomits, nauseous</td>
</tr>
<tr>
<td>Motor</td>
<td>Down on their knees, trouble getting up, can't stand up straight, slurred words</td>
</tr>
<tr>
<td>Emotional</td>
<td>Changes in mood</td>
</tr>
</tbody>
</table>

Table 3: Concussion signs and symptoms mentioned by high school varsity athlete participating in a focus group study (Seattle, WA, 2010–2011)
Scenarios

• Scenario #1: Collided with another player and developed symptoms (balance problems, light sensitivity, headache, felt “dazed”)

• Scenario #2: Collision happened the day before, but still experiencing symptoms the next day (difficulty concentrating, feeling “slowed down,” nauseated)

• Scenario #3: Experienced a collision, but in addition to being symptomatic (seeing “stars,” dazed and confused), the coach noticed they were playing badly and called in a substitute

• Scenario #4: Teammate collided with another player and was exhibiting signs and symptoms (seeming “out of it,” forgetting the play)
Most athletes would still play with concussive symptoms

- Even though athletes could list many signs and symptoms of concussion and seemed to know that concussions could be dangerous, **nearly every group came to the conclusion that they would keep playing when faced with a hypothetical scenario in which they were experiencing concussive symptoms** (balance difficulties, headache, light sensitivity, feeling in a “daze”) after a collision.
Athletes want to keep playing

• Most athletes did not want to stop playing.
• They played their sport because they enjoyed it, and they trained hard.
• If they reported symptoms, they might be pulled from the game.
It’s hard to tell if you’re injured

• Concussive symptoms are nonspecific, and when contemplating the scenarios, athletes questioned whether the symptoms could have been caused by something other than a concussion.
  – Football player: “I’d just think I’m not drinking enough water or something or like a migraine.”
  – Female soccer player: “The first thing I think is, ‘I just got hit so something is wrong,’ but then, ‘Nothing is wrong I’m just imagining it. I’m fine. I’ll keep playing.’”
You’re supposed to play injured

• Athletes also described times when they thought they were concussed, but didn’t report symptoms. They felt it was not acceptable to leave the game for nonspecific symptoms of a concussion (like a headache), because it made them look weak.

  – Female soccer player: “I’d probably be like, ‘I’m going to keep playing because I need to suck it up and show that I’m not a wuss.’”
Don’t want to let the team down

• The worst possible scenario for them was that they came out of a game because of concussive symptoms, and the team lost.
• They worried their teammates would blame them for the loss.
The coach matters

• The Bad:
  – Football player: “The coaches call you bad words if you come out they say ‘when you’re hurt, come out,’ but they don’t mean it. If you say anything they just call you a wuss and tell you you’re overreacting and that you can play through it.”
  – Female soccer player: “My coach doesn’t want us to play when injured, but I kind of feel pressured because they will say, ‘Well are you sure, do you have to sit out, can you not push through it?’”
The coach matters (cont.)

• The Good:
  – Football player: “They always give us a little practice and we have to spend a whole day just learning concussions learning how to hit right and stuff. That is why earlier we were saying that if we feel dizzy we are supposed to tell them.”
  – Female soccer player: “I think that from previous incidents that I’ve known what our coach expects of us. I’d tell him right away because I know what he wants us to do with injuries, because I’ve been out for a long time.”
Conclusions

• Despite knowing these risks, nearly all athletes said they would continue to play when given a hypothetical example of a collision that caused concussive symptoms.
• We believed that difficulty recognizing concussive symptoms was the primary explanation for athletes’ lack of reporting.
• Athletes did not want to be wrong about being concussed and suffer negative consequences.
• The coach could punish them for reporting concussive symptoms by removing them from a starting position, reducing future play time, or inferring that reporting concussive symptoms made them “weak.”
Theory of Planned Behavior

• This model hypothesizes that behavior is determined by three things:
  — “attitudes” (beliefs regarding what will happen if you perform a behavior)
  — “subjective norms” (beliefs regarding what others expect you to do)
  — “perceived behavioral control” (beliefs regarding your own ability to perform a behavior, often called “self-efficacy”).

• Although athletes understood the risk of playing with concussive symptoms (“attitudes”), they believed that others did not want them to report symptoms (“subjective norms”), and norms had a greater influence on their behavior.
Interventions - The Coach

• Differences in coach approachability appeared to affect concussive symptom reporting more than individual variation in self-efficacy.

• New coach education might address communication with athletes regarding when and how to report symptoms, protocols for athlete assessment, and general approachability.

• Future studies could explore the impact of interventions to improve approachability on the prevalence of athletes reporting concussive symptoms.
Barriers

• Concussive symptoms are nonspecific, and athletes have difficulty determining if they are serious enough to report.
• Concussions may not cause pain or impair play.
• Unless coaches have made it clear that athletes need to report concussive symptoms, athletes may not feel such reporting is acceptable.