

# ICSC09\_Cultury Diversity The Biopsychosocial Model in Sports

## The Chiropractors Role



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 October 2022



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## *Health* - “in sports its all about being ready to compete”

### General Population:

A state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity. (World Health Organization 1946)

### Biopsychosocial Model:

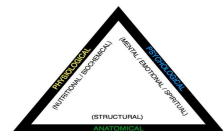
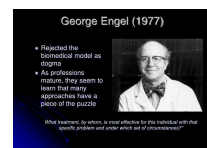
“...all elements of human function can be characterized by a confluence of biological, psychological, behavioral, and social connections”. (George Engle, MD 1977)

### Chiropractic View:

Triune of Health-highlights the interdependent nature of the physical, mental/emotional, biochemical, and structural influences on health ... (The biopsychosocial model and chiropractic: a commentary and recommendations for the chiropractic profession, Gliedt, Schneider <https://chiromt.biomedcentral.com/articles/10.1186/s12998-017-0147-x>)

### Sports Community:

Health for the athlete is “the ability to compete”. (Health in Elite Sports – a “Bio-Psycho-Social” Perspective Thiel A1 , et.al ([germanjournalsportsmedicine.com](http://germanjournalsportsmedicine.com)))



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- **DEGREE GRANTING INSTITUTIONS**
- NEW YORK CHIROPRACTIC COLLEGE – 1980
- AMERICAN COLLEGE OF CHIROPRACTORS – 1999

**PROFESSIONAL ACTIVITY**

**PROFESSIONAL EDUCATION**  
 New York Chiropractic College - *Class of 1980*

**PRIVATE PRACTICE**  
 Queens, NY - 1980 to 2019

**DEAN**  
 New York Chiropractic College  
 Department of Postgraduate and Continuing Education  
 2004 to 2019

**MEMBER**  
 American Public Health Association-Chiropractic Health Section- *current*  
 Federation of International Chiropractic Sports - *current*  
 Speakers Bureau-National Chiropractic Mutual Insurance Company – *current*



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**Biopsychosocial Considerations When Treating the Athlete**

*“In (elite sports)...., health problems don’t have anything to do with the psyche or the environment.*

*All health problems in our sport can be traced back to either traumatic or orthopedic causes”.*



*Strongly Agree* \_\_\_ *Agree* \_\_\_ *Neutral* \_\_\_  
*Disagree* \_\_\_ *Strongly Disagree* \_\_\_



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### The Biopsychosocial Model in Sports - The Chiropractors Role

The purpose of this lecture is to introduce the doctor to the biopsychosocial elements that are unique to the professional/elite athlete and discuss a self-reflective technique, critical consciousness. The doctor can apply this knowledge and can create an empathic, supportive patient encounter that guides the patient athlete toward a greater sense of health and wellbeing.

#### **Learning Objectives:**

- Discuss the biopsychosocial model and how it influences the professional-elite athlete's health.
- Understand the cultural influencers that impact the patient-provider relationship.
- The doctor will become familiar with the concept "critical consciousness" and how it impacts the care of the patient.

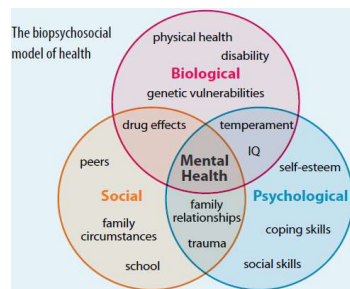


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*Health is the Ability*

*to*

*Compete!*

### **The Biopsychosocial Model of Health**

“Engel’s model led to a broader understanding of the factors that cause (particularly non-communicable) diseases. It also influenced the clinical practice by paving the way for the assignment of integrated disciplinary teams in health care”

Health in Elite Sports – a “Bio-Psycho-Social” Perspective  
Thiel A1 , Schubring A2 , Schneider S 3 , Zipfel S 4 , Mayer  
J 1 Gesundheit im Spitzensport – eine „biopsychosoziale“  
Sichtweis [Thiel HealthinEliteSports 2015-09.pdf](#)  
([germanjournalsportsmedicine.com](http://germanjournalsportsmedicine.com))



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## The Biopsychosocial (BPS) Model

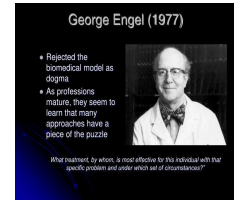
The biopsychosocial model of wellness and medicine examines how the three aspects – biological, psychological and social – occupy roles in relative health or disease. The BPS model stresses the interconnectedness of these factors.

Washington School of Medicine

<https://surgery.wustl.edu/three-aspects-of-health-and-healing-the-biopsychosocial-model>

A simple breakdown of this application may be as follows:

- *The Biological* (bio-) – often associated with the relationship of disease and bodily health. ... Acute and severe health problems, like an aortic dissection, require immediate medical treatment and have a much more disruptive effect on daily life. In sports, the biological refers to traumatic injury and chronic pain/dysfunction.
- *The Psychological* (-psycho-) – the aspects of mental and emotional wellness that also relate to behavior. ... mental illness conditions like anxiety or depression and health behaviors that lead to disease and illness.
- *The Social* (-social) – these are interpersonal factors such as social interactions and community activities. Seclusion, whether intentional or not (as in a result of activity-limiting illness), ... Such deficiencies in social life can lead to feelings of isolation and an imbalanced lifestyle.
- *Social Determinates of Health* (SDOH)-family, education, economic level, access to health care, food insecurity. [social Determinants of Health | CDC](https://www.cdc.gov/socialdeterminants/)



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## Biopsychosocial Considerations When Treating the Athlete

Health in Elite Sports – a “Bio-Psycho-Social” Perspective Thiel A1 , Schubring A2 , Schneider S 3 , Zipfel S 4 , Mayer J 1 Gesundheit im Spitzensport – eine „biopsychosoziale“ Sichtweis [Thiel HealthinEliteSports 2015-09.pdf \(germanjournalsportsmedicine.com\)](https://www.germanjournalsportsmedicine.com/2015-09.pdf)

Health, injury, and illness in elite sports are closely connected with social factors.

**Firstly**, the term “health” in the context of elite sports is directly linked to the ability to perform in a competition.

**Secondly**, the ability to perform on a top level has the highest priority with regard to health related decisions.

**Thirdly**, the individual perception of health related complaints, such as pain or sickness, is strongly influenced by the so called “Culture of Risk”.

**Fourthly**, athletes are willing to take great health risks in order to succeed in important competitions.

**Fifthly**, athletes find themselves caught in a permanent action dilemma, namely between the necessity of risking and securing their health at the same time.

This “culture of risk” is characterized by normalizing the occurrence of injuries and accepting the inherent health risks in sports.



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### **Biopsychosocial Considerations When Treating the Athlete**

*Physicians and coaches often focus on biomedical aspects of injuries and complaints and rarely try to integrate different understandings of health. The consequence is that relevant factors in the genesis of injuries and complaints are ignored.*



*Strongly Agree* \_\_\_\_,      *Agree* \_\_\_\_,      *Neutral* \_\_\_\_,  
*Disagree* \_\_\_\_,      *Strongly Disagree* \_\_\_\_

*Does this cause a disconnect between the doctor and athlete patient?*



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### **“BPS” in Elite Sport**

In elite sport, health problems are usually handled on the basis of medical findings. ...how medical findings are treated depends on two aspects: ...the athlete's subjective experience of the severity of this finding; ...the social functioning of the athlete, i.e. whether he/she is able to practice/ compete or not.

### **Study Methodology:**

- First, we conducted a survey with 1138 young elite athletes from all Olympic sport disciplines...(overall response rate: 61,75%).
- These questions covered the athletes' health status, health-related behavior, lay health representations including subjective concepts toward nutrition as well as their health-related social networks, socio-demographics,...
- Second, we did case studies in four Olympic disciplines: artistic gymnastics, biathlon, handball and wrestling. ...50 biographical interviews with young elite athletes, coaches, and physicians.
- Third, ...systematically observed the health-related behavior of athletes, coaches, and medical staff for more than 50 days during training and competition.
- Fourth, ... we analyzed health management systems in Olympic Training Centers



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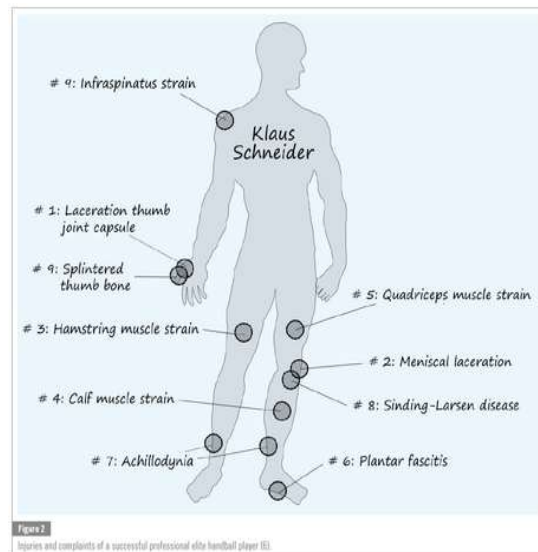


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## Biological considerations Injuries and complaints of a successful professional elite handball player

Health in Elite Sports – a “Bio-Psycho-Social” Perspective Thiel A1 , Schubring A2 , Schneider S 3 , Zipfel S 4 , Mayer J 1  
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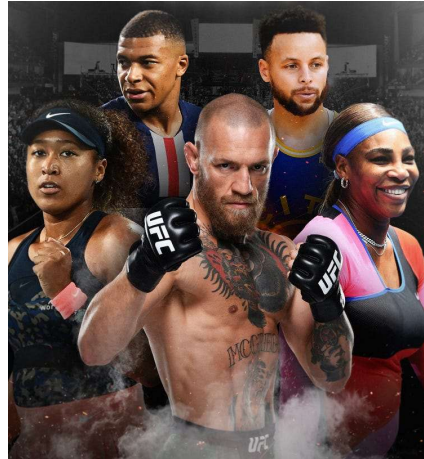
### Results

- The athlete’s subjective complaint does not necessary correspond with the injury and time off.
- The subjective complaints decrease with reduced competition and increased physical therapy.
- Most complaints have a history of being ignored, trivialized, and masked with pain medicine.
- Social function for the athlete is the ability to compete.
- Most athletes maintain their social functionality despite being diagnosed ....which may lead to greater or more severe injuries and complaints.
- The athlete, in an effort to be sorted out as lacking stamina and endurance, become socialized into the culture of risk.
- Athletes transfer health related responsibility to their coach and health care provider.





## Who Do We Serve ?



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## The Mental Health of Elite Athletes: A Narrative Systematic Review

[Simon M. Rice](#),<sup>1,2,3</sup> [Rosemary Purcell](#),<sup>1,2</sup> [Stefanie De Silva](#),<sup>1,2</sup> [Daveena Mawren](#),<sup>1</sup> [Patrick D. McGorry](#),<sup>1,2,3</sup> and [Alexandra G. Parker](#)<sup>1,2</sup>  
[Sports Med.](#) 2016; 46(9): 1333–1353.



### Background

The physical impacts of elite sport participation have been well documented; however, there is comparatively less research on the mental health and psychological wellbeing of elite athletes.

The evidence base regarding the mental health and wellbeing of elite athletes is limited by a paucity of high-quality, systematic studies, including intervention trials.

On the basis of current evidence, elite athletes appear to experience a broadly comparable risk of high-prevalence mental disorders relative to the general population.

A greater risk of disorder may be experienced by elite athletes who are injured, approaching/in retirement or experiencing performance difficulty.



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## The Mental Health of Elite Athletes: A Narrative Systematic Review

- The intense mental and physical demands placed on elite athletes are a unique aspect of a sporting career, and these may increase their susceptibility to certain mental health problems and risk-taking behaviors.
- Athletes tend not to seek support for mental health problems, for reasons such as stigma, lack of understanding about mental health and its potential influence on performance, and the perception of help seeking as a sign of weakness.
- While it is well established that physical activity has a positive effect on mental health, a review has found that intense physical activity performed at the elite athlete level might instead *compromise* mental wellbeing, increasing symptoms of anxiety and depression through overtraining, injury, and burnout.



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Rugby Italy




Players experienced a moderate frequency of anger symptoms, interpreting these as facilitative rather than debilitating.

Anxiety was a significant predictor of anger, while self-confidence was a significant predictor of control of anger.

High-and low-level competitors did not differ in their frequency and interpretation of anger symptoms.


Various - Norway




Females reported greater performance worry, concentration disruption, and somatic anxiety than males.

Perceptions of a performance climate predicted performance worry for both sexes and concentration disruption for females.

Perceived ability predicted less performance worry for females and males.




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Swimming; Greece




Facilitative perceptions of anxiety symptoms were related to more adaptive cognitive and behavioral outcomes. Swimmers perceiving their anxiety states as facilitative reported more approach- and less avoidance-coping strategies than swimmers perceiving their anxiety states as debilitating.

Various; Sweden




Self-esteem based on respect for self was associated with more positive patterns of perfectionism, while self-esteem dependent on competence aspects showed more negative perfectionism.

Negative patterns of perfectionism were related to higher levels of cognitive anxiety and lower levels of self-confidence.



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## Addressing Social Determinants of Health *continued*

- Often, when young people feel that the healthcare provider cares about their well-being, they are more willing to talk about the issues that concern them. Care encompassing the entire well-being of an individual will translate into success on and off the playing field (NCAA, 2014).
- Therefore, this physical examination represents a prime opportunity to establish a good rapport with student-athletes and set the stage for the culture of healthcare encounters that will follow at an institution.
- ...the team physician needs to have the knowledge, skills, and ability to screen for and address the basic social, emotional, and behavioral needs of the athlete. Unfortunately, many sports medicine physicians do not feel competent in this area.
- Many sports medicine physicians often believe they represent the only people aware of emotional problems among athletes, yet they do not always address these issues with their patients. Sports medicine physicians report feeling comfortable and competent discussing non-injury-related psychological issues, compared to injury- and rehabilitation-related issues



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Human Dignity

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## *...Preparticipation Examination consensus monograph recommends screening for psychosocial factors,*

- Unfortunately, physicians often miss opportunities to establish supportive relationships to address issues ... during a pre-participation physical examination, as the only things they discuss involve medical conditions and injuries.
- While time constraints often remain an issue during the pre-participation examination, the Preparticipation Examination consensus monograph recommends screening for psychosocial factors, and clinicians do not require much time to convey to an athlete that the healthcare team cares about all aspects of the athlete's life and well-being.
- This message remains especially important in the collegiate setting, as the physician and other sports medicine providers may stop athletes from participating in their sport for medical reasons. Such power can create a barrier between the healthcare team and athlete, resulting in the athlete withholding pertinent health information to ensure he/she can continue to play.
- To maximize the impact of this relationship, healthcare providers must possess the knowledge, skills, and abilities to address the developmental and social needs of adolescents and young adults.



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### Addressing the Psychosocial elements of health care

**I feel confident discussing psychosocial issues with my athlete patients.**

*Strongly Agree* \_\_\_\_, *Agree* \_\_\_\_, *Neutral* \_\_\_\_,  
*Disagree* \_\_\_\_, *Strongly Disagree* \_\_\_\_



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## **FICS PURPOSE**

*International Federation of Sports Chiropractic*

**To Empower Athletes so they can Achieve Optimal Performance Naturally**

**...to provide equitable access to sports chiropractic care, education, mentoring, and research to all athletes...regionally, nationally, and internationally**

**To Promote Equitable Access to Healthcare For All Athletes**



*"We do not see things as they are, we see things as we are." - Anais Nin*



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## Cultural Humility

### Addressing Inequities and Disparities

*a professional perspective and provider behavior*

*How do you effectively and respectfully deliver healthcare to an increasingly diverse population of elite and professional athletes?*

*It starts with a self reflection and humility.*

**Humility is not thinking less of yourself, but thinking of yourself less.**

CS Lewis

MemLok Bible Memory System  
www.MemLok.com



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## Critical Consciousness

- Overcoming bias, stereotyping and prejudice isn't easy.
- It requires lifelong time and attention.
- We need to incorporate a more person-centered approach to communication and listen to the individual without judgment—
- Inequality can lead to false assumptions and adverse outcomes.



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## Definitions

*equitable access... to all athletes*

### Bias

the action of supporting or opposing a particular person or thing in an unfair way,  
... allowing personal opinions to influence your judgment

Implicit Bias: unconscious favoritism toward or prejudice against people of a particular ethnicity, gender, or social group that influences one's actions or perceptions.

Explicit Bias: the attitudes and beliefs we have about a person or group on a conscious level



Cambridge University Press <https://dictionary.cambridge.org/us/dictionary/english/bias>

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## Definitions

*equitable access... to all athletes*

- Health equity is a broad term; in short, it is the goal that every person is equally able to live a healthy life regardless of their background or circumstance.
- According to the CDC, health equity is when each person has the chance to reach “his or her full health potential,” without facing obstacles from “social position or other socially determined circumstances.”
- This includes equitable (fair) access to healthcare professionals, healthy food, a safe living environment, and the ability to be well across all aspects of life, from work to home life to medical care.

What is Health Equity in Sport Medicine?  
How Can We Address Health Equity ?

Health Equity:  
What It Means, Why We Care, and What You Can Do  
([diatribe.org](http://diatribe.org))



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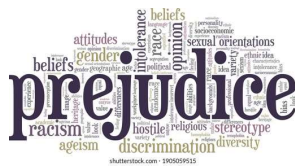


## Stereotyping

cognitive process in that it involves associating a characteristic with a group preconceived ideas or judgments about people based on their characteristics.

a generalized belief about a particular category of people. It is an expectation that people might have about every person of a particular group

- Allport, 1954; Link and Phelan, 2001



## Prejudice

preconceived opinion that is not based on reason or actual experience:

an unfair and unreasonable opinion or feeling, especially when formed without enough thought or knowledge:



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## Addressing Provider Bias in Sport Medicine

These findings suggest that individuals with at least some medical training hold and may use false beliefs about biological differences between blacks and whites to inform medical judgments, which may contribute to racial disparities in pain assessment and treatment. (Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between blacks and whites

Kelly M. Hoffman [khoffman@virginia.edu](mailto:khoffman@virginia.edu), et.al. April 4, 2016 | 113 (16) 4296-4301 | <https://doi.org/10.1073/pnas.1516047113>)

Unequal treatment based on race is well documented in higher education and healthcare settings. In the present work, we examine racial bias at the intersection of these domains: racial bias in pain-related perceptions among National Collegiate Athletic Association (NCAA) Division 1 sport medical staff. ... we find, like prior work, that respondents perceived Black (vs. White) targets as having higher initial pain tolerance. Moreover, this bias was mediated by perceptions of social class. (Racial bias in sport medical staff's perceptions of others' pain

James N Druckman et.al [The Journal of Social Psychology](#) Volume 158, 2018 - Issue 6)



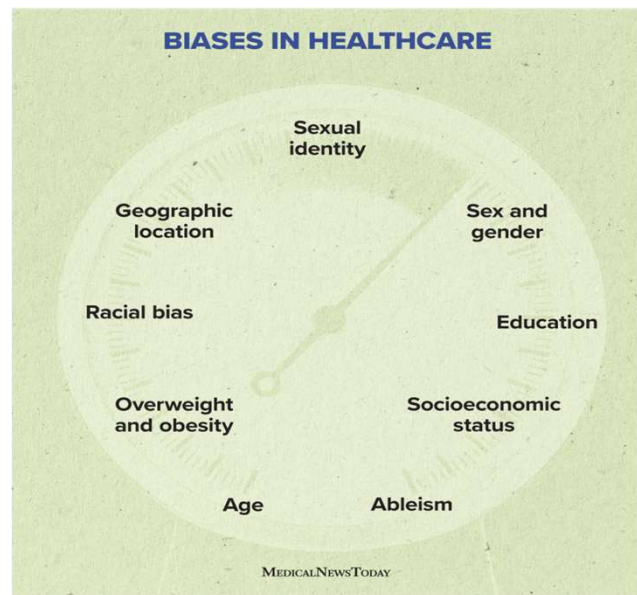
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## Biases in Healthcare



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- Clinicians who treat patients from a lower socioeconomic level (SEL) had less conversations about alcohol and drug addictions than those from higher SEL's.
- Doctor's are more verbally dominant with African American patients and engaged in less conversation than with white patients.
- Nonverbal unconscious biases are observed where the healthcare professional makes less eye contact with a minority patient ( e.g. weight status, sexual orientation) or maintains greater physical distance during the encounter.
- Latinos were half as likely to receive analgesia for the same usually painful long bone fractures as non-Latinos.



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## Cognitive biases cloud our clinical decisions and patient expectations: A narrative review to help bridge the gap between evidence-based and personalized medicine

Boris Gojanovic<sup>ab</sup> François Fourchet<sup>c</sup> Vincent Gremeaux<sup>cd</sup>  
 Annals of Physical and Rehabilitation Medicine  
 Volume 65, Issue 4, June 2022, 101551

### Highlights

- Cognitive biases are prevalent in sports medicine and cloud our decisions.
- Patients and athletes can have magical expectations of quick fixes.
- Clinicians must learn about cognitive biases and mitigation strategies in schools.
- Slowing down decision-making and considering alternative diagnoses can be effective.
- Know your own cognitive biases and use checklists to limit the impact on decisions.



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## Top 5 Unconscious Biases in Healthcare

**Race and Ethnicity Bias:** Placing a prejudgment of a person based on race and ethnicity stereotypes, for example, people in X group are not as capable as people from Y group or X people are untrustworthy. You can easily fall into the trap of categorizing people based on specific characteristics or ideas about the group. Therefore, your judgment will impact your actions and decisions.

**Age Bias:** ... nearly 20% of Americans ages 50 and older say they have experienced discrimination in healthcare, which can result in improper or inadequate care. Ageism is age-related discrimination that leads to access or denial of healthcare services and treatments. An age-friendly system will help everyone, including our future selves.

**Gender Bias:** Gender bias is a set of beliefs that favors one gender over another. For example, there may be skepticism surrounding female-reported pain and emotional distress, assuming women exaggerate their symptoms. Gender bias affects diagnosis, treatment, and health outcomes. It is important to understand that specific health issues can differ based on gender.

**Overweight and Obesity:** Often overweight people are labeled as lazy, weak, and lacking self-control. The way we treat overweight people can attribute to a person's symptoms of their obesity. Healthcare professionals may blame serious health issues on weight, therefore, unintentionally ignoring other possible causes.

**Socioeconomic Status:** Patient status is contingent on economic factors such as income and employment. Research shows some physicians assume someone of low socioeconomic status is not as rational and may not comply with medical advice or return for necessary treatment. Communication will increase your familiarity with the challenges a patient faces and can help combat socioeconomic biases.

[MTI America – Workers' Compensation Ancillary Healthcare Solutions](#)



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## Addressing Provider Bias in Sport Medicine

**Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between blacks and whites** [Hoffman K, et. al](#) April 4, 2016 <https://doi.org/10.1073/pnas.1516047113>

These findings suggest that individuals with at least some medical training hold and may use false beliefs about biological differences between blacks and whites to inform medical judgments, which may contribute to racial disparities in pain assessment and treatment

**Racial bias in sport medical staff's perceptions of others' pain**

[Druckman et.al](#) [The Journal of Social Psychology](#) Volume 158, 2018 - Issue 6

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## Cultural Consciousness: *"We Are All the Same But Different"*

### Women/Gender Bias

- Researchers have found that in some counties it can take significantly longer for emergency medical personnel to get women to the hospital with heart attacks compared to men .
- Doctors are more likely to believe that the heart problems of women who reported stress were due to psychological causes, whereas men who talked about stress were more likely to have organic heart disease.
- Women of color are especially subject to inferior care (e.g., heart medication, EMS travel time, psychological default diagnosis for heart problems). Some of this discordance may be due to bias or underuse of aggressive therapy.
- Women endure high levels of intimate partner violence and accessing mental and family health services.
- Clinicians underestimate pain in women which prevent women from receiving appropriate care.
- It is likely that given the complexities in gender differences, biology also plays a role.




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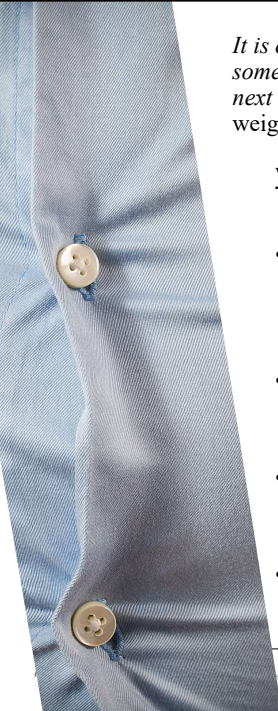
**“Do I have any bisexuals in my practice?”**

**Sexual Orientation**

- “...one can not be sure of the answer unless one has asked their patient. Just as one would ask the patient their age, gender, and race. Rather than asking a patient “ARE YOU MARRIED?” or “DO YOU HAVE A BOY/ GIRLFRIEND?”, consider asking “DO YOU HAVE A PARTNER?” or “ARE YOU IN A RELATIONSHIP?”, and “WHAT DO YOU CALL YOUR PARTNER?”
- Members of the **LGBTQ** community are more likely than their heterosexual counterparts to experience difficulty accessing health care. Individuals in same-sex relationships are significantly less likely than others to have health insurance, are more likely to report unmet health needs, and, for women, are less likely to have had a recent mammogram or Pap test.
- These differences result, at least in part, from decreased access to employer-sponsored health insurance benefits for same-sex partners and spouses.
- We can make changes within the clinical encounter that can enable us to improve the health and wellbeing of transgender individuals and communities:
  - Soliciting and use the patients preferred name and pronoun, including sexual orientation.
  - Include gender identity questions on intake forms and including assessment of known risk factors among transgender populations.
  - In addition, include special considerations about hormone therapy, postural alteration to conceal secondary sex characteristics, and binding practices, all of which impact the musculoskeletal system.



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*It is estimated that 20 million women and 10 million men will experience an eating disorder at some point in their lives with 44% of adults predicted to be obese in the United States within the next decade....it is highly likely healthcare professionals will be working with patients that have a weight status challenge.*

**Weight Status /Eating Disorders (e.g., Obesity, Bulimia Nervosa, Anorexia Nervosa)**

- Provider bias (e.g., negative attitude, perception of patient laziness, antiquated understanding of etiology/calorie intake- energy use) has a highly detrimental effect on patient care and outcomes. Patients are at an increased risk of psychological distress, depression, anxiety, and binge-eating behaviors.
- Patients presenting with an eating disorders such as anorexia nervosa, and bulimia experience high provider bias. A stereotype exists that anorexia nervosa (AN) is a "female" disorder. As a result, men with AN may face harsher stigmatization from their peers or go undiagnosed.
- The general belief that individuals should be able to just “pull myself together” and “take personally responsible for my condition“ experienced the belief that they had "no self-control" and male participants more commonly experienced the belief that they were "less of a man."
- This provider approach promotes higher levels of eating disorder psychopathology, a longer duration of disorder, lower self-esteem, and more self-stigma of seeking psychological help.

ES ACHIEVE THEIR OPTIMAL PERFORMANCE NATURALLY

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***“Automatically Activate Egalitarian Goals”***

*equality of concern, equality of care, and equal access to our nation's health care resources*

***“Seek Common Identities”***

*family traditions, values, and beliefs*

***“Take the Perspective of the Patient”***

*fears, expectations, illness centered communication*



WE HELP ATHLETES ACHIEVE THEIR OPTIMAL PERFORMANCE NATURALLY

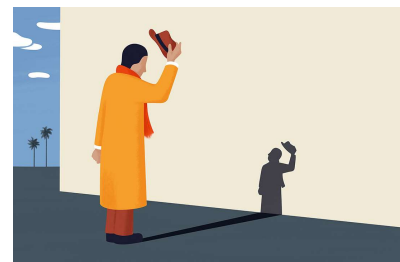
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**Cultural Humility - Addressing Inequities and Disparities  
*a professional perspective and provider behavior***

- A lifelong commitment to self-evaluation and self critique.
  - Understanding our implicit and explicit biases
- Revisit and place “in check” the power imbalance inherent within the provider-patient relationship.
- Developing mutually beneficial and non-paternalistic partnerships with patients and communities.
- Make a personal and professional commitment to gaining knowledge about the patient's health beliefs, and life experience, socioeconomic level, dominant language, race, ethnicity, sexual orientation, age, gender and other characteristics that do not match yours.
- Cloak the clinician patient relationship in humility: in so doing we ensure the patient feels safe-safe enough to tell his or her story of illness and wellness.



WE HELP ATHLETES ACHIEVE THEIR OPTIMAL PERFORMANCE NATURALLY

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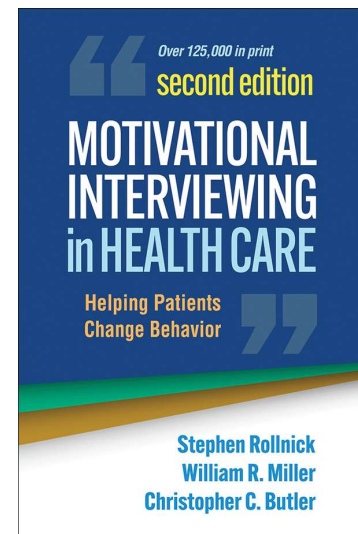
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## The Biopsychosocial Model in Sports

### The Chiropractors Role

- *Final Thoughts!*
- *Gain a better understanding of the biopsychosocial model,*
- *Incorporate the psychosocial assessment into your patient encounter,*
- *Take time to reflect on your personal bias (implicit and explicit),*
- *Develop communication skills that will enable you to contribute to the athletes' journey.*



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