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**Perceived Risk, Risk Taking,
Estimation of Ability and Injury
Among Military Sport Participants**

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Introduction

Unintentional injuries represent a major health concern among military athletes.

Unintentional injury peaks in youth, when youth are susceptible to engaging in risk taking.

Risk taking in sport involves activities such as diving to head the ball in soccer.

The proportion of serious injuries resulting in long-term or permanent disability or disfigurement that occur as a result of sports participation among athletes aged 18 to 21 years is significantly higher than that for any other age group of youth athletes.

The need to examine the underlying factors influencing the injury process among military athletes in sport is evident.

Given the review of literature, we proposed the following correlational hypotheses:
perceived risk and risk taking would be inversely related to each other

Risk taking would be positively related to injury

perceived risk would be inversely related to injury

Estimation of ability and overestimation of ability would be positively related to risk taking

Overestimation of ability would be positively related to previous injuries

Previous injuries would be positively related to injury.

Method

Participants

The participants were 260 youth male soccer players between the ages of 18 to 21 years with a mean age of 19.68 years ($SD = .92$).

All of the soccer players in this study participated on same-age teams against same-age competition. Participants were recruited, on a voluntary basis, from 18 soccer teams representing Premier Army League.

The 260 participants in this study represented approximately 93% of the original players who were eligible and who were contacted for inclusion in this study.

Measures

Risk of Injury in Sport Scale (RISSc)

The RISSc asked participants to indicate, on a scale of 1 (*very unlikely*) to 6 (*very likely*)

The 24 items of the RISSc represent a variety of injury-related events.

The scale items comprise six factors:

uncontrollable (U),
controllable (C),
overuse (O),
upper body (UB),
surface related (SR)
reinjury (R).

Using Cronbach's alpha, the internal consistency for the six factors in the current study ranged from .64 (R) to .82 (C).

Risk-Taking Behaviors

The nine-item Risk-Taking Behaviors Scale (RTB)

scale of 1 (*never*) to 4 (*frequently*)

physical risk-taking (PRT), which includes physical contact-related behaviors (e.g., hard tackles)

skill risk-taking (SRT), which includes behaviors involving the performance of difficult soccer skills (e.g., diving headers).

Using Cronbach's alpha, the internal consistency of the two risk-taking factors for the current study was .71 (SRT) and .77 (PRT).

Estimation of Ability and Overestimation of Ability

Participants' estimation of ability in soccer was assessed using a single question that asked participants to rate, on a 5-point Likert-type scale (1 = *very low*, 2 = *low*, 3 = *average*, 4 = *high*, 5 = *very high*), their "overall skill level in soccer compared to other players in their league of the same age."

Coaches were also asked to rate, using the same scale and question, each subject's skill level at the beginning of the competitive season. Coaches conducted ratings of players' skill levels after observing each player in at least three practices and one scrimmage.

Overestimators (OE; positive score)

Accurately estimators (AE; score of zero)

Underestimators (UE; negative score).

Previous Injuries

Before the start of the season, each athlete completed a personal history form to assess injuries that occurred in sport activities and in nonsport, play-related activities during the past 12 months.

Procedures

Separate meetings

Initial data-collection sessions 1 week before the beginning of season

Participants' soccer skills obtained from coaches

Injury data collected during the 8-week spring soccer season from the coaches contacted by phone three times per week

Results

Injury Data

A total of 21 participants sustained injuries during the study. The most severe injury in the study was a fractured ankle. No participants incurred multiple injuries during the course of this study.

Injury exposures were determined by summing the number of practices and matches, in which each participant took part. A total of 2,686 exposures were recorded: 1,552 match and 1,134 practice.

The overall injury incidence rate was 7.8 per 1,000 exposures. The injury incidence rate for matches (12.9/1,000) was considerably higher than the rate for practices (0.88/1,000).

Correlational Analyses

Perceived risk and risk taking were not inversely related to each other.

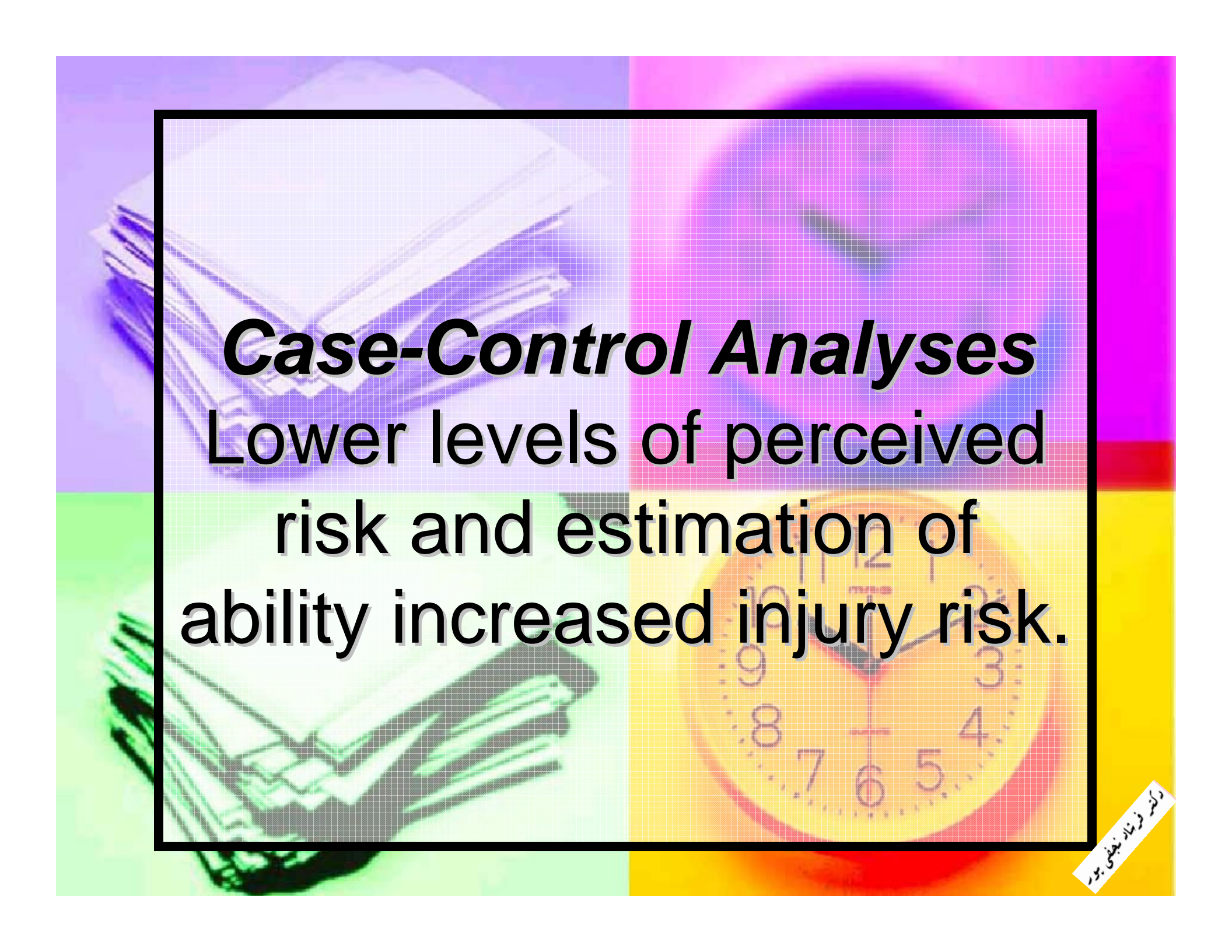
Positive relationship between perceived risk and injury and an inverse relationship between risk taking and injury were not supported.

Estimation of ability was positively correlated to risk taking.

Overestimation of ability was not related to risk taking. Estimation of ability and overestimation of ability were positively related to previous injuries.

There was no relationship between previous injuries and risk taking.

Previous injuries were not positively related to injury.



Case-Control Analyses
Lower levels of perceived
risk and estimation of
ability increased injury risk.

Discussion

This study revealed that low levels of perceived risk and estimation of ability resulted in a significant increase in injury risk.

This finding suggests that behavioral interventions designed to educate youth sport participants, and coaches about the risks associated with sport participation (e.g., playing without proper protective equipment) and about the environmental manipulations that promote the development of self-confidence in sport (e.g., success-focused learning environment) may lead to a reduction in injury risk.



References

22 ISI Articles from 1990
to 2001.

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