Original article

Predictors of health-related quality of life among Brazilian former athletes

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ABSTRACT

Objective: To identify predictors of health-related quality of life (HRQoL) among former athletes.
Method: This cross-sectional study included 186 subjects (64% male, aged 40–64 years), representing 51.4% of former athletes from the *Jogos Abertos de Santa Catarina* (1960–2006). The Short Form Health Survey (SF-36) was used to assess HRQoL (Physical Health and Mental Health summary scores). Sociodemographic variables (gender, age, education, occupation, marital status and income), health status (body mass index, medication use, chronic problems, sports injuries that affect current daily living and health guidance from their coaches), time since they stopped competing and leisure-time physical activity were exploratory variables. Multivariate linear regression models were used.
Results: Sports injuries that affect current daily living (standardised score [β] = −0.430 and −0.133), body mass index (β = −0.226 and −0.238) and chronic problems (β = −0.138 and −0.144) were predictors of both *Physical Health and Mental Health*. Prescription medicine (β = −0.177) and occupation (β = 0.095) predicted only *Physical Health* scores, and income (β = 0.224) predicted only *Mental Health* scores (all $p < 0.05$).
Conclusion: These variables can be focused on HRQoL promotion strategies among former athletes.

Predictores de la calidad de vida relacionada con la salud entre los ex atletas brasileños

RESUMEN

Objetivo: Identificar predictores de calidad de vida relacionada con la salud (CVRS) en exatletas.
Método: Este estudio transversal incluyó 186 sujetos (64% hombres, con edades entre 40-64 años), lo que representa el 51.4% de los exatletas de los *Jogos Abertos de Santa Catarina* (1960-2006). El *Short Form Health Survey* (SF-36) se utilizó para evaluar la CVRS. Las variables sociodemográficas (sexo, edad, educación, ocupación, estado civil e ingresos económicos), el estado de salud (índice de masa corporal, uso de medicamentos, problemas crónicos, lesiones deportivas que afectan a la vida diaria actual y la orientación hacia la de salud de sus entrenadores), el tiempo desde que dejaron de competir y la actividad física en el tiempo libre fueron las variables exploratorias. Se utilizaron modelos de regresión lineal multivariante.
Resultados: Las lesiones deportivas que afectan a la vida diaria actual (*standardised score* [β] = −0.430 y −0.133), el Índice de Masa Corporal (β = −0.226 y −0.238) y los problemas crónicos (β = −0.138 y −0.144)

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fueron predictores tanto de la salud física como de la salud mental. El uso de medicamentos ($\beta = -0.177$) y la ocupación ($\beta = 0.095$) predijeron sólo las puntuaciones de salud física, y los ingresos ($\beta = 0.224$) predijeron sólo las puntuaciones de salud mental (todas las p < 0.05).

Conclusión: Estas variables pueden ser focos importantes para las estrategias de promoción de la CVRS en los exatletas.

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Preditores da qualidade de vida relacionada à saúde em ex-atletas brasileiros

R E S U M O

Palavras-chave:
Psicologia do esporte
Doença crônica
Comportamento em saúde
Determinantes em saúde
Gestão de lesões
Saúde mental

Objetivo: Identificar os preditores da qualidade de vida relacionada à saúde (QVRS) em ex-atletas.

Método: Estudo transversal que incluiu 186 indivíduos (64% de homens, idades de 40-64 anos), representando 51.4% dos ex-atletas medalhistas do atletismo nos Jogos Abertos de Santa Catarina (1960-2006). O *instrumento Short Form Health Survey* (SF-36) foi utilizado para mensurar a QVRS (sumários *saúde física* e *saúde mental*). Variáveis sociodemográficas (sexo, idade, educação, ocupação, estado civil e renda), estado de saúde (índice de massa corporal [IMC], uso de medicamentos, doenças crônicas, lesões esportivas que atrapalham o cotidiano atual e orientações de saúde pelos treinadores), o tempo aposentado de competições e atividade física no lazer foram variáveis exploratórias. A regressão linear multivariada foi utilizada.

Resultados: Lesões esportivas que atrapalham o cotidiano (escore padronizado [β] = –0.430 e –0.133), índice de massa corporal (β = –0.226 e –0.238) e doenças crônicas (β = –0.138 e –0.144) foram preditores da *saúde física* e *saúde mental*. Medicamentos prescritos (β = –0.177) e ocupação (β = 0.095) predisseram a *saúde física*, enquanto que renda (β = 0.224) foi preditor da *saúde mental* (*p* < 0.05).

Conclusão: Essas variáveis podem ser focadas na promoção de QVRS em ex-atletas.

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Introduction

Research in Sport Science has been focused on former athletes, especially to understand how these individuals are affected (i.e., their metabolic health, fitness and quality of life [QoL]) when the sports career is or has come to an end.[1,2] In general, former athletes tend to partake harmful health process more than active athletes, including having increased fat-mass,[3] reduced performance,[3,4] risky behaviours (e.g., unhealthy eating)[7] and poor mental health (e.g., risk of anxiety/depression).[5,6] Economic and social problems have also been found in former athletes including their difficulty in finding work and maintaining income,[6] low social support and low social activities.[5] However, in comparison to the general population, former athletes have shown better health factors (e.g., health behaviours and cardiovascular health),[2,7–9] lower risk of depression/anxiety[8,9] and better health-related QoL (HRQoL).[10]

HRQoL involves evaluating the behavioural functioning, subjective well-being, and perceptions of overall health to determine the physical and mental status of each person: it is usually measured by instruments such as the Short Form Health Survey (SF-36).[11,12] Measuring HRQoL can help determine the burden of preventable diseases, injuries and disabilities, especially in middle and old ages.[11] In particular, HRQoL assessment among former athletes may be important in order to measure the health benefits of sports participation and whether these outweigh the risks.[1] Additionally, it is important to identify whether post-sports life conditions (e.g., chronic injuries, lifestyle and socioeconomic conditions) have an impact on physical and mental aspects.[1,13]

Studies were conducted with former athletes in order to identify psychological aspects such as depression/anxiety,[5,9,14] self-rated health,[8] perception of physical limitations[15,16] and life satisfaction.[13] However, the specific aspects of HRQoL (i.e., *Physical Health* and *Mental Health* measured with the SF-36) in a sample of former athletes are still unknown.

Studies on predictors (i.e., factors that can explain the outcome) of the psychological aspects among former athletes included sociodemographic factors (e.g., age, income, education)[8,9,13] and health conditions (e.g., chronic problems, physical activity).[5,8,9,15] Among the clinical conditions, injuries during the sporting career have been shown to be negatively associated with QoL[17] and HRQoL[18] among adult active athletes, and the symptoms of depression/anxiety[5] and aggression[14] among former athletes. However, the predictive power of former athletes' HRQoL from demographic, economic and health conditions is something that needs clarification. A study that fills these gaps can indicate the main variables (at different levels, from the demographic to behavioural aspects) to be focused in health and QoL promotion among former athletes. This will contribute to more effective interventions among professionals (i.e., coaches, Performance and Health professionals, Physiotherapists) and people involved with athletes who are close to or already done with their sports careers.

Thus, this study aimed to verify whether sociodemographic factors (gender, age, education, occupation, marital status and income), medical and health conditions (body mass index [BMI], medicine use, chronic problems, sports injuries that affect current daily living, time since they stopped competing and health guidance from their coaches) and leisure-time physical activity (LTPA) are predictors of HRQoL (*Physical Health* and *Mental Health* summary scores) among middle-aged former athletes.

Method

Subjects

This was a cross-sectional study. The process of defining the study population and sample selection is detailed in Fig. 1. The study population involved former athletes who participated