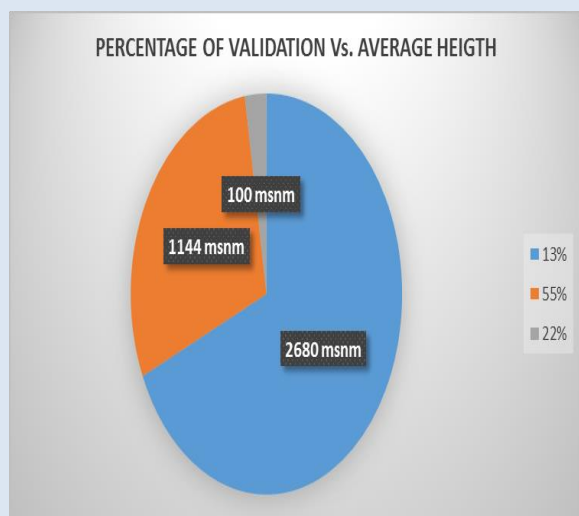


Introduction

Levels above 2000 m, leads to generate systemic adaptation responses ranging from the hematological to the cardiovascular, and in some situations may not favor the results obtained by the evaluated individual, without actually having a low level of Aerobic or resistance condition; Considering the above, it is of vital importance to establish if there are validations of this test that have been adjusted to the population that trains at heights, in order to recognize them and adjust them or, on the contrary, if not, that this is the framework that invites To the standardization of these values and to make them available to the academic and sports community.

Materials and Methods

The methodology adopted for this review is exploratory systemic type of document review using databases such as: Deporte.data Base, Dialnet, GSE, Pubmed, Scielo. Country, year, city application height of the city in relation to the meters on the level of: to collect information matrix data collection where the following variables for each of the surveyed items were established was used sea (msnm), type of study, level of evidence according to the USPSTF, variables of each type of study, thrown findings and conclusions of the author scale. As inclusion criteria items selected, taken into account: experimental studies type randomized, articles cutting systematic review and literature of second and third order that had a time of no more than 10 years counted publication from 2016.



Results

Of the total information collected, 21 scientific articles were analyzed, corresponding to (67%) and 10 second and third order literary referents covering (33%) of the total information collected. According to the geographical distribution of the information, the total of articles reviewed were: Argentina, Brazil and Colombia each have 3 articles validating the cooper test in their population groups; Cuba has 2 articles, USA with 4 publications, being one of the countries, with the greatest application of this test, Spain, Finland, Holland and Peru have a publication each. From the total of articles consulted only 4 publications validated the test at heights superior to 2000 msnm, using the same reference scales. Regarding the type of study and degrees of recommendation, 5 quasi-experimental studies, 1 experimental study, 5 randomized experimental studies, 4 non-randomized experimental studies, 4 subject review publications and a single systematic review type publication were found, For a total of 20 reviewed and selected articles.

None of the referents consulted (0%), makes known whether the test is applied in people who are adapted or that take some time of permanence within these environments. This is important because if the test is applied in people with a stay time of more than 3 months or are resident there would not be a significant detriment in their physical performance and the results obtained could be compared with the pre-established scales since the creation of the Test ; However, if the participants of the test are individuals with shorter periods of stay, they will not have the systemic adaptation processes that favor an adequate physical performance, which is why their results would be at a disadvantage when compared to these scales.

Conclusions

The Cooper Test is recognized as one of the field tests that allows to establish the level of aerobic condition of an individual either trained or not trained in a simple way. Its application has been transversal to different populations without considering the height in which it is and the physiological changes that it is present; There are currently no publications seeking to adjust scales according to height and atmospheric pressure levels in populations not adapted to heights above 2000 msnm.

References

1. Asociación Médica Mundial (2008). Declaración de Helsinki: principios éticos para las investigaciones médicas en seres humanos.
2. Álvarez, C. (1987). *La preparación física del fútbol basada en el atletismo*. Editorial Gymnos.
3. Belly, K. (2012). Cardiorespiratory Fitness of a Brazilian Regional Sample Distributed in Different Tables. *Rev. Arq Bras Cardiol.* (3) 811-817
4. Bustamante, A. (2012). Valoración de la aptitud física en niños y adolescentes: Construcción de cartas percentílicas para la región central de Perú. *Rev. Perú Med Exp Salud Pública.* (2), 188- 197.
5. Campos, A. (2008). Comportamiento de las variables de condición física posterior al acondicionamiento en estudiantes de la Universidad Manuela Beltrán. *Rev. Umbral Científico.* (13). 27 – 38