

Good example of literature review on purpose of the study

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Article review: Creatine supplementation with specific view to exercise/sports performance: an update Robert Cooper, Fernando Naclerio, Judith Allgrove, and Alfonso Jimenez

Currently, a lot of research exists on creatine supplementation, the protocols involved administering it, forms in which it exists and its potential side effects. In spite of these, there is uncertainty concerning the mechanisms through which creatine acts while in the human body to improve cognitive and physical performance. This review had a main objective of analyzing some of the more recent findings on the various effects and the mechanisms applied in creatine supplementation in health and sports. A secondary purpose was to analyze some of the most recommended protocols to apply in creatine ingestion and any potential side effects it may have. The research problem may read as “ to review existing literature in order to further understand creatine and supplementation.”

The hypothesis

The hypothesis created is that creatine's safety cannot be guaranteed when administered for a long period to different populations. Creatine has side effects that clinical officers need to understand. It was during these tests that their hypothesis that the supplementation protocol should be so attentive. Just another one, I almost saw people dealing with a lost child. Another hypothesis the authors come with is that excessive use of the drug results in an increased dependency level. The authors in the paper also speculate that ingesting creatine prior to any exercises, enhances the muscle's calcium buffering capacity of the muscle reducing calcium-activated proteases that in turn minimize sarcolemma and further calcium influxes to the muscle.

Participants

Creatine is a supplement whose is majorly for sportsmen and athlete who maintain high training levels. The authors fail to specify the methods used in sample selection. Rather, from the writing, one can draw that the participants were active sportsmen, who have used creatine or who will begin to use creatine. The sample proves to be a very heterogeneous group as there is not mention of any disparities on the lines of gender, race, or culture. The only requirement is adequate training levels. The group comprised of two subgroups dubbed responders and non-responders.

The study design

The study on creatine metabolism reviewed quantitative data that other authors have pre-documented. As such, the study is majorly a qualitative

study. It took to analysis a variety of tests that other scientists and nutritionists had come up with and documented. The authors sought to understand by providing a review of different tests, compiling them in one piece of writing where the authors back it up with a bank of information. The authors seek to make a hypothesis, evaluate the existing data, and consequently provide conclusions that are of benefit to the reader. The study brings together information from different tests on creatine's behavior. The circumstance is such as the conclusion that, creatine demonstrates a neuromuscular performance and enhancing properties on short durations. The study, therefore, is a qualitative approach seeking to answer selected questions on creatine's behavior.

Findings

On the study of creatine supplementation on predominantly aerobic exercise, the authors document the result that creatine supplementation has a very pronounced effect on short duration and high-intensity intermittent exercises. On the review of the effect of creatine supplementation on skeletal muscle hypertrophy, the authors concluded that it is possible that adding creatine and a subsequent increase in the total creatine and phosphocreatine storage will directly or indirectly stimulate the production of muscle IGF-I and muscle protein synthesis and this leads to increased muscle hypertrophy. On the study on the effect of creatine ingestion to improve muscle damage, injury, and oxidative stress induced by exercise, the authors found creatine supplementation to be a suitable and effective strategy to maintain a creatine pool during the rehabilitation process after injury and to attenuate muscle damage induced by the prolonged endurance training

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session. It would seem that creatine serves as an antioxidant agent after intense resistance training sessions.

Did the findings match the hypothesis?

In the majority of the study topics, the findings matched the hypothesis the authors had since they had done a thorough research on the matter, research that they provide in the writing. In the concluding segment of each study, they explain the findings in relation to previous documentation on the matter and provide a brief analysis on the matter. The comparison is effective, and that which is merely the author's opinion is branded an opinion. The study on the documented effects on creatine supplementation effect on physical performance revealed some controversial results, but the authors were quick to match it with the previously conducted studies and come up with a conclusion.

Limitations and strengths

There are limited limitations evident from the study. Other than achieving some controversial results, a phenomenon that is not strange in any form of research, the study appears to have run smoothly encountering little or negligible limitations. The strengths of the study lie in the cooperation of the different authors. Combining different scientists may often leave the group with a variety of conclusions. It would seem in this study that the scientists cooperated with each other and had a successful study program. It should be worth noting that the respondents or participants were cooperative with the study. It is important to give them the credit deserved since any issue or discourse from the plan may lead to incorrect or improper results. The strength in the information bank available on studies in the discipline is

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impossible to ignore. The information has served well to guide the study when compiling both qualitative and quantitative studies. These strengths have led the scholars to achieve a high success rate in the study and the data they provide. It is worth noting that all the authors read and approved the manuscript indicating their acknowledgement that indeed that is their work.

Conclusions and recommendation