Oral Communication

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The Benefits of Scuba Diving for Disabled Patients

Topic: Integrative Medicine

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BACKGROUND

Scuba diving has gained attention as a rehabilitation tool for individuals with disabilities due to its physical, psychological, and social benefits. The underwater environment promotes physiological adaptations that improve respiratory, cardiovascular, and nervous system function while reducing the effects of gravity. These factors make diving particularly beneficial for individuals with neurological, cognitive, orthopedic, and psychological disabilities.

This study evaluates the integration of scuba diving into the "Progetto/Programma Riabilitativo Individuale (PRI/pri)", the Individual Rehabilitation Plan/Program used by Physical Medicine and Rehabilitation specialists within the Italian National Healthcare System (Sistema Sanitario Nazionale, SSN). Through a narrative review of scientific literature from the last decade, this study aims to support diving as a complementary rehabilitation tool and encourage further clinical research.

METHODS

A narrative review of scientific literature from the last decade (2014-2024) assessed the therapeutic benefits of scuba diving for people with disabilities. To ensure the quality and relevance of the selected studies, the following inclusion and exclusion criteria were defined:

Inclusion Criteria

1. Articles published in peer-reviewed scientific journals between 2014 and 2024.
2. Studies written in English.
3. Articles structured according to the IMRAD format (Introduction, Methods, Results, Discussion).

Exclusion Criteria

1. Articles that do not follow the IMRAD format.
2. Studies classified as narrative or systematic reviews.
3. Studies approved with reservations.
4. Articles published in languages other than English.

Research was conducted using multiple databases, selecting relevant studies based on these predefined eligibility criteria. The collected data were analyzed to identify key benefits, risks, and rehabilitation applications.

RESULTS

Scuba diving provides significant benefits for individuals with disabilities. Physically, it enhances cardiovascular efficiency, respiratory capacity, and muscular development through buoyancy. Psychologically, it reduces stress, anxiety, and depression while promoting relaxation and self-confidence. Socially, diving fosters integration, interpersonal skills, and autonomy. These benefits align with those observed in hydrotherapy, reinforcing its therapeutic value.

Despite these advantages, challenges include the need for specialized training, safety concerns, and contraindications for certain conditions. However, evidence supports incorporating diving into rehabilitation programs, emphasizing the need for clinical trials to establish standardized protocols and improve accessibility.

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CONCLUSION

This review highlights scuba diving as a valuable rehabilitation tool, offering physical, psychological, and social benefits. Its effects align with hydrotherapy, enhancing mobility, confidence, and social inclusion. Future research should focus on standardized protocols to safely integrate diving into rehabilitation, particularly within the Italian NHS for use by PM&R specialists.

Statement of Disclosures

None