Research Article

Awareness of Proper Weight-Lifting Techniques Among Self-Trained Individuals

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Abstract

Background: Because of the advantages it offers for improving muscular strength, endurance, body composition, physical performance, and general health, weight training is becoming more and more popular with recreational gym goers. A lot of people now do resistance training without a pro supervisor. They learn how to work out from social media, videos online, friends, or their own experience. These materials may not always offer accurate or evidence-based advice on correct weight-lifting methods even if they are readily available. Therefore, self-trained people may accidentally use improper lifting techniques, hence raising their risk of musculoskeletal damage, lower training efficacy, and long-term physical problems.

Good weight-lifting technique consists of keeping proper posture, regulating movement patterns, appropriate breathing, and choosing suitable weights based on a person's capacity. Adherence to these rules minimizes too much stress on the spine, muscles, ligaments, and joints, therefore maximizing exercise performance and safety. Still, the degree of awareness of these ideas among self-taught people is unknown, especially in areas where there aren't many certified fitness specialists available.

Identifying knowledge gaps and encouraging injury prevention plans depends on evaluation of awareness of right weight-lifting methods. The results of such studies can help create focused educational campaigns, physical therapy-led awareness campaigns, and evidence-based activity recommendations. Better knowledge could motivate safer training techniques, help to lower avoidable gym-related injuries, and improve general resistance training efficacy among self-trained people.

Methods: This cross-sectional descriptive study sought to evaluate self-trained people's knowledge of correct weight-lifting methods. Following Krishna Vishwa Vidyapeeth, Karad's Institutional Ethics Committee approval, the investigation was done over six months. Using a convenience sampling method, 207 self-trained people were found from different Satara district gyms. Participants comprised both men and women between the ages of 16 and 30 with at least one month of unsupervised weight-training experience ready to take part. The study excluded anyone with recent musculoskeletal problems, neurological, cardiovascular, or systemic problems, recent surgery, or involvement as competitive athletes.

All subjects submitted written informed permission prior to data gathering. A self-structured questionnaire was used to evaluate knowledge of appropriate posture, biomechanics, breathing techniques, load selection, warm-up, injury prevention, and safety guidelines for weightlifting. Using descriptive statistics including frequencies, percentages, and means, the gathered data were inputted into Microsoft Excel and examined.

Result: A total of 207 self-trained people took part in the study; males made up 66.7% and females comprised 33.3%. All told, 45.9% of the participants showed moderate awareness, 40.6% had good awareness, and 13.5% showed poor awareness of correct weight-lifting techniques. While awareness about spotting techniques (56.5%) and progressive overload (64.7%) was somewhat lower, the highest awareness was seen for the need of warm-up (88.4%), then correct lifting posture (81.2%) and rest and recovery (83.1%). Most often sought information came from social media (44.4%), and no major link was discovered between sex and level of awareness ($p = 0.287$).

Conclusion: Most self-trained people, according to the current study, had reasonable awareness (45.9%) of correct weight-lifting techniques; 40.6% had excellent awareness; and 13.5% had poor awareness. Though awareness of warm-up, good posture, and recovery techniques was acceptable, understanding of progressive overload and spotting approaches remained lacking. These results underline the importance of focused teaching materials and physiotherapy-led awareness campaigns to encourage safe and efficient weight-lifting techniques among self-trained people.

Keywords: Weight lifting, Self trained Individuals, Awareness.

INTRODUCTION

A popular type of physical activity that builds muscle strength, endurance, bone health, body composition, and general physical fitness is resistance training, sometimes referred to as weight training or weight lifting. The American College of Sports Medicine (ACSM) suggests it as a crucial part of exercise regimens for healthy adults as it offers great advantages in improving functional capacity and warding off chronic illnesses. 1 Regular strength exercise has also been demonstrated to enhance metabolic health, balance, and quality of life across many age ranges. [2]

Gym-based activity has grown significantly in popularity in recent years, especially among youngsters and young adults. Along with this trend, more and more people do resistance training on their own without the direction of skilled fitness professionals. These self-taught people usually pick up weight-lifting techniques from social media, online videos, peer groups, or personal experience. [3] Though these materials offer simple access to exercise knowledge, the correctness and scientific validity of the advice are sometimes contradictory, therefore increasing the possibility of adopting incorrect lifting techniques. [4]

Good weight-lifting technique consists in keeping right body posture, suitable spinal alignment, regulated movement patterns, suitable breathing, correct exercise progression, and appropriate load selection depending on personal capacity. [5] Following these rules helps to reduce unnecessary strain on muscles, tendons, ligaments, and joints and hence maximizes training effectiveness. On the other hand, bad lifting technique, too much load, not enough warm-up, and not enough recovery all raise the risk of musculoskeletal injuries like muscle strains, ligament sprains, shoulder injuries, low back pain, and tendon problems. [6, 7]

Studies have regularly shown that one of the main causes of injuries related to resistance training is wrong exercise technique. Common causes are bad deadlift and squat form, uncontrolled movement, too much training volume, sloppy spotting, and lifting over one's physical ability. [6, 8] Through correct instruction, progressive training intensity, and application of science-based exercise concepts most of these wounds may be avoided. 8

Physiotherapists help to encourage safe exercise by teaching people correct posture, biomechanics, injury prevention techniques, and recommended activities. Early knowledge of proper weight-lifting technique not only lowers the risk of injury but also boosts long-term consistency in resistance training and exercise performance. [9] Among recreational exercisers, educational programs given by healthcare professionals have been proven to enhance movement quality, exercise knowledge, and injury prevention. [10]

Rising involvement in resistance exercise notwithstanding, there is little data on how well self-taught people know correct weight-lifting techniques—especially in the Indian population.

Identifying current knowledge gaps and creating focused educational initiatives meant to encourage safe training techniques depends on awareness of them. The current study therefore seeks to evaluate self-trained people's knowledge of correct weight-lifting techniques and to underline the need of physiotherapy-based education in avoiding exercise-related injuries and improving the efficacy of resistance training. [11–13]

Methods: To evaluate self-trained people's knowledge of correct weight-lifting techniques, a descriptive cross-sectional survey was done. After getting permission from Krishna Vishwa Vidyapeeth, Karad's Institutional Ethics Committee, the survey was conducted in chosen Satara district gyms. Using a convenience sampling method, 207 self-trained people were recruited in all. The study comprised participants of both sexes aged 16–30 years who were doing resistance training on their own without expert supervision for at least one month and ready to take part.

Those with recent musculoskeletal traumas, neurological or cardiovascular diseases, past upper or lower limb operations, or those under guided instruction by certified fitness professionals were excluded. After getting written informed permission, demographic data were noted and subjects finished a self-structured questionnaire meant to evaluate awareness of proper weight-lifting techniques including posture, biomechanics, breathing pattern, warm-up and cool-down, load development, spotting, and injury prevention. Using SPSS version 26.0, Microsoft Excel imported the gathered material and examined it. To help to explain the results, descriptive statistics including frequency, percentage, mean, and standard deviation were applied. Where appropriate, statistical significance was set at $p < 0.05$ and results were displayed as tables and graphs.

After the survey statistical analysis will be done.

Result:

Table: 1 Demographic Data

		Frequency
GENDER	Males	138
	Females	69
	Total	207

Interpretation-

With an average age of 23.84 years and an average weight-training experience of 2.9 years, most of the participants were men (66.7%)..

Table 2- Awareness of individual components.

Variable	Yes n (%)	No n (%)
Correct lifting posture	168 (81.2)	39 (18.8)

Importance of warm-up	183 (88.4)	24 (11.6)
Proper breathing technique	151 (72.9)	56 (27.1)
Progressive overload	134 (64.7)	73 (35.3)
Injury prevention measures	145 (70.0)	62 (30.0)
Correct spotting technique	117 (56.5)	90 (43.5)
Need for rest and recovery	172 (83.1)	35 (16.9)

Interpretation –
Warm-up was most important (88.4%), while knowledge on spotting techniques (56.5%) and progressive overload (64.7%) was somewhat less.

Table 3- Source of information

Source	Frequency	Percentage (%)
Social media	92	44.4
Friends	43	20.8
Fitness trainer	21	10.1
Physiotherapist	13	6.3

Interpretation-
Social media (44.4%) was the most often cited source of knowledge, then came friends.

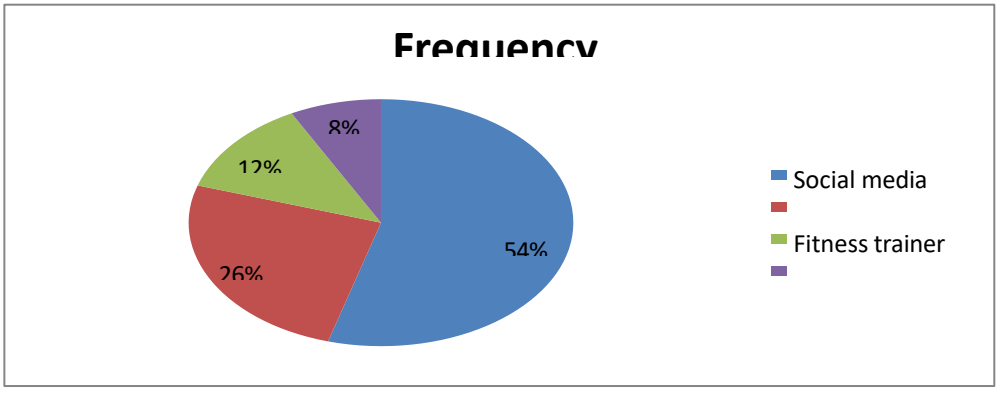
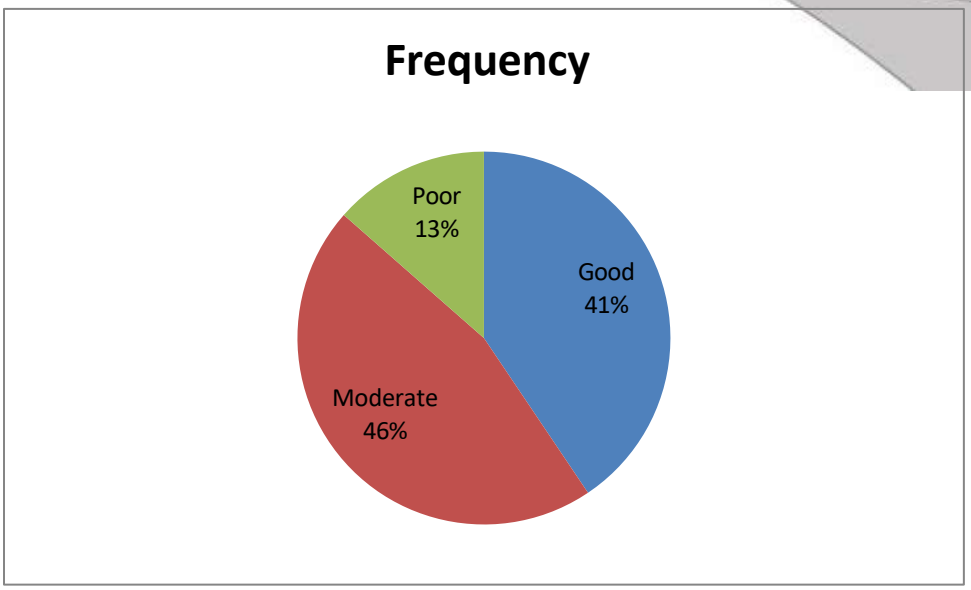


Table 4: Overall awareness level.

	Frequency	Percentage (%)
Good	84	40.6
Moderate	95	45.9
Poor	28	13.5
Total	**207**	**100**

Interpretation-
Most participants showed modest knowledge (45.9%), while 40.6% had decent awareness and 13.5% had poor awareness of correct weight-lifting technique.



Discussion:

The current study sought to evaluate self-trained people's knowledge of correct weight-lifting techniques. Including 207 people total, the majority—66.7%—were men, which shows that more men take part in recreational strength training. The results showed that 45.9% of participants had moderate knowledge, 40.6% showed good awareness, and 13.5% showed poor awareness about correct weight-lifting techniques. These findings show that while many self-taught people have rudimentary understanding of safe lifting techniques, significant awareness gaps still exist.

The study showed that awareness of the need of warm-up (88.4%), rest and recovery (83.1%), and appropriate lifting technique (81.2%) was highest. Commonly touted features of resistance training are well known to consumers of gyms—maybe because of the ubiquitous availability of fitness-related material via social media, fitness applications, and internet learning resources. But knowledge of progressive overload (64.7%) and spotting techniques (56.5%) was rather less. These results indicate that while respondents know the basic components of exercise preparation, they lack awareness of more technical ideas needed for safe and effective resistance training.

Furthermore, showing was social media (44.4%) as the main means of knowledge about weight-lifting techniques. This result shows how much self-taught people rely on digital tools for fitness instruction. Though online tools help people access fitness information better, they could also expose them to false or non-evidence-based information, which could cause wrong lifting technique and raise their risk of musculoskeletal injuries. This underlines the need of urging people to consult qualified physiotherapists, certified strength and conditioning experts, or trained fitness instructors for advise.

Moreover, there was no statistically significant link between gender and knowledge level ($p = 0.287$), therefore suggesting that both male and female participants had similar awareness of correct weight-lifting techniques. This implies that, rather than concentrating on one sex, educational initiatives ought to be aimed equally at both.

The results generally highlight the importance of organized educational initiatives to raise self-trained people's knowledge of correct lifting biomechanics, progressive overload ideas, spotting techniques, and injury prevention methods. By organizing awareness courses, pre-participation education sessions, and workout demonstrations in gym environments, physiotherapists can greatly help. Improving knowledge with scientific education could help to lower avoidable gym-related injuries, improve workout performance, and inspire safer resistance training methods. To better assess knowledge levels and determine elements affecting safe weight-lifting activity, future studies with more varied and bigger samples are advised.

Conclusion:

Among 207 self-trained people, the study showed that 45.9% had moderate awareness, 40.6% had excellent awareness, and 13.5% had low awareness on correct weight-lifting techniques.

From 207 participants, 88.4% knew the value of warm-up, 83.1% understood the need of enough rest and recuperation, and 81.2% knew how to keep their lifting posture correct during resistance training.

Among the 207 participants, 64.7% knew about progressive overload, but only 56.5% knew about right spotting techniques, which shows they lacked understanding of advanced weight-lifting ideas.

The study also found that 44.4% of participants obtained information about weight-lifting techniques via social media and that there was no statistically significant link between gender and awareness level ($p = 0.287$). These results underline the necessity of physical therapy-led educational initiatives and evidence-based advice to raise safe weight-lifting standards among self-trained people.

Conflict of interest: Nil

Ethical clearance: Ethical clearance by institutional ethical committee of Krishna Vishwa Vidyapeeth, Karad.

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