

# The Importance of Individual Choice and Intention in Exercise Adherence and Weight Management

Yun-A Shin<sup>1\*</sup>, Kyoung-Bae Kim<sup>2</sup>

<sup>1</sup>Department of Exercise Prescription and Rehabilitation, College of Sport Science, Dankook University, Cheonan; <sup>2</sup>Department of Physical Education, Korea Military Academy, Seoul, Korea

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\*Corresponding author  
Yun-A Shin

 <https://orcid.org/0000-0002-8480-3454>

Department of Exercise Prescription and Rehabilitation, College of Sport Science, Dankook University, 119 Dandae-ro, Dongnam-gu, Cheonan 31116, Korea  
Tel: +82-41-550-3830  
Fax: +82-41-440-3831  
E-mail: shinagel3@gmail.com

Physical activity has been described as a wonder drug because it has positive effects on physical and mental well-being and can prevent various chronic diseases. The World Health Organization<sup>1</sup> recommends that all adults should engage in 150–300 minutes of moderate-intensity aerobic physical activity or 75–150 minutes of vigorous-intensity activity a week, or a level of moderate- and vigorous-intensity physical activity that corresponds to the above guidelines, in addition to muscle-strengthening activities on 2 or more days per week. However, a study examining the prevalence of aerobic physical activity among South Korean adults reported that physical activity gradually decreases with age, with the prevalence being 45.3%, 41.4%, 39.3%, and 30.4% among adults in their 40s, 50s, 60s, and 70s, respectively.<sup>2</sup> Moreover, only 23.9% of South Korean adults and 18.3% of the elderly<sup>3</sup> participate in muscle-strengthening activities, which indicates inadequate levels of physical activity for most of the adult and elderly population.

Few adults meet these guidelines, and lack of time has often been cited as a cause.<sup>4</sup> This is especially problematic for adults who are overweight or obese, as these conditions increase the risk of comorbidities. Doing 300 minutes or more of moderate-intensity physical activity a week is recommended as a means of weight loss and control, which is a higher level than recommended for the gen-

eral adult population. However, it can be difficult to achieve this recommended level of physical activity.<sup>5</sup>

In addition, more than half of those who begin to regularly exercise stop within the first 3 to 6 months. In a study on adherence to physical activity in an unsupervised setting, Sperandei et al.<sup>6</sup> reported that the dropout rate reached 47% within 2 months and 86% within 6 months. However, to achieve long-term weight management, it is necessary to continue exercising.

While external factors such as weight loss and changes in physical appearance motivate people to begin exercising, enhancing their intrinsic motivation is a key factor in promoting exercise adherence. It has been suggested that exercise intention is important for exercise adherence and that stronger exercise intention is associated with greater exercise adherence.<sup>7</sup> In other words, having greater psychological needs such as competence, autonomy, and relatedness attached to physical activity leads to higher self-determined motivation (intrinsic control) to engage in physical activity.<sup>8</sup>

Self-determined motivation influences changes in health behavior,<sup>9</sup> and motivated behaviors facilitate long-term participation in sports.<sup>10</sup> The satisfaction of psychological needs promotes autonomous as well as intrinsic motivation; therefore, it affects exercise adherence. In contrast, when participants' behaviors are not auton-

omous and are driven by external forces such as rewards and punishments, long-term changes in health behaviors are difficult to achieve.<sup>11</sup>

Individuals who cite lack of time as a barrier to exercise may show a higher level of adherence to high-intensity training, which leads to improvements in fitness and health in a shorter amount of time. Adults who are overweight or obese and who live a sedentary lifestyle experience greater weight and fat loss and improvements in fitness when they engage in a combination of aerobic and resistance training exercises than when they engage in either type of training alone.<sup>12</sup> However, exercise compliance is affected by exercise intensity, and an increase in intensity may lead to a decrease in exercise enjoyment, thereby reducing the level of physical activity that takes place in addition to the time spent exercising.<sup>13</sup>

Enjoyment and interest are aspects of intrinsic motivation to participate in exercise, and enjoyment is an important motivator that can help sustain exercise participation and compliance in the long term.<sup>14</sup> Therefore, a type of exercise such as group-based high-intensity functional training (HIFT) may increase both intrinsic motivation and compliance. Group-based HIFT improves aerobic capacity and body composition by focusing on functional, multi-joint movements that combine aerobic and resistance training exercises. Furthermore, the ability to select the level of intensity could induce greater tolerance for exercise among inactive individuals. Heinrich et al.<sup>15</sup> reported that when a combination of aerobic and resistance training is completed by individuals at their preferred level of intensity, they maintain their exercise enjoyment and report an intention to continue exercising despite exercising for a short amount of time per week. In addition, a 30-year follow-up study on active and inactive twins reported differences in physical fitness and psychological state according to certain motivation factors.<sup>14</sup>

To lose weight, people who are overweight and obese must be motivated by short-term strategies so that they continue and enjoy exercising. In this regard, exercise is like food and medication. One does not consistently eat a kind of food that they dislike, no matter how healthy the food might be. People are happy when they eat the food they like; there are types of food that suit their constitution, and they are prescribed different medications according to their personal state of health. Similarly, when it comes to exercising, an individual's choice and intention to participate are important, in

addition to their health and fitness levels. Currently, most personalized exercise prescriptions are based on the principle of individuality. However, prescriptions are limited by the fact that they are one-way guidelines from specialists. Rather than recommending high-intensity exercise, specialists could improve people's compliance with and adherence to exercise prescriptions by increasing intrinsic motivation. Specialists could set an appropriate range of type, intensity, and duration of exercise so that subjects can then choose exercises within that set range according to their own preferences.

## CONFLICTS OF INTEREST

Yun-A Shin is an editorial board member of the journal, but she was not involved in peer reviewer selection, evaluation, or decision process for this article. No other potential conflicts of interest relevant to this article were reported.

## AUTHOR CONTRIBUTIONS

Study concept and design: all authors; analysis and interpretation of data: all authors; drafting of the manuscript: YA; critical revision of the manuscript: all authors; administrative, technical, or material support: all authors; and study supervision: all authors.

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