



# Motivation of Marathon and Ultra-Marathon Runners. A Narrative Review

Alicja Partyka <sup>1</sup>, Zbigniew Waśkiewicz <sup>2</sup>

<sup>1</sup>Department of Cardiology, Cardiac Intensive Care Division, Bielsko Biął Hospital, Bielsko-Biała, 43-316, Poland; <sup>2</sup>Institute of Sport Science, Jerzy Kukuczka Academy of Physical Education, Katowice, Poland

Correspondence: Zbigniew Waśkiewicz, Institute of Sport Science, Jerzy Kukuczka Academy of Physical Education, Mikołowska 72a, Katowice, 40-778, Poland, Email [z.waskiewicz@awf.katowice.pl](mailto:z.waskiewicz@awf.katowice.pl)

**Abstract:** This narrative review study seeks to consolidate the existing knowledge on motivational factors that influence marathon and ultramarathon runners. The primary aim is to collect and summarize the understanding of the factors that drive both marathon and ultramarathon runners. Furthermore the review seeks to explore how variables like gender, age and experience impact motivational drivers within these running communities to highlight the intricate nature of factors, in endurance running and stress the significance of tailored training approaches and community backing to enhance participation and achievement. The study aimed to thoroughly review research papers using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework. After the evaluation of 302 publications that could potentially be relevant, 61 papers were selected for inclusion in the review. The investigation uncovers unique motivating patterns within these endurance sports communities. The desire for good health, physical fitness, and social interaction drives marathon runners. Their motivations develop as they train and become more involved in the running community. On the other hand, ultramarathon runners are motivated by internal psychological variables like self-esteem and personal exploration, which are significantly shaped by the ultramarathon community's impact on their identity and running approach. Additional research indicates that gender, age, and experience affect the motivational elements in both groups differently. Specifically, experienced ultramarathon runners prioritize personal achievements and health more than time. This review underscores the intricacy of motivating elements in endurance running, highlighting the necessity for tailored methodologies in training and communal assistance to cultivate involvement and achievement.

**Plain Language Summary:** This organized study aims to add to what is already known about what motivates marathon and ultramarathon runners. The study aimed to use the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) structure to review research papers carefully. Following a review of 302 publications that might be relevant, 61 papers were chosen to be included in the study. The study finds unique patterns of what drives people in these endurance sports communities. People who run marathons do it because they want to be healthy, fit, and socialize. Their motivation grows as they train and get more active in the running community. Ultramarathon runners, on the other hand, are driven by things like self-esteem and personal discovery that are inside of them. The ultramarathon community dramatically affects who they are and how they run. More studies show that gender, age, and experience have different effects on what motivates each group. In particular, experienced ultramarathon runners care more about their goals and health than time. This review shows how complicated it is to find things that motivate people to do endurance running. It shows how important it is to use customized training methods and community support to encourage participation and success.

**Keywords:** running, motivation, mental health, intentions

## Introduction

Motivation is an important, intricate, and diverse idea in numerous facets of life. Individual and societal elements shape the phenomenon and encompass aspirations, anticipations, and contextual characteristics.<sup>1</sup> Motivated people are more inclined to be productive and creative in a professional setting.<sup>2</sup> Several methods can be applied to improve their performances, including monetary and non-monetary incentives.<sup>3</sup> Motivation can stem from specific objectives and personal encounters,<sup>4</sup> and it plays

a crucial role in continuous learning endeavors, such as acquiring a new language.<sup>5</sup> Within companies, motivation has a significant role in shaping behaviors, goals, and performances.<sup>6</sup> Motivation is vital for effectively managing human resources.<sup>7</sup>

Motivation plays a role, in sports serving as the driving force behind an athletes actions, conduct and results. It inspires athletes to set goals work hard and persist in the face of challenges. A thorough understanding of motivation in sports is vital, for coaches, athletes and sports psychologists as it significantly influences training, competition and overall athletic success. Various studies have examined the concept of motivation in sports by investigating individual (ie personal goals or incentives, expectations of personal efficacy, movement-related perceptual and affective experiences) and social and physical environmental influences.<sup>1,8</sup> Weiss's study (2015) emphasized how important it is for people to see themselves as competent and to consider interactions within exercise settings. These factors play a role in shaping individuals motivation levels, which are tied to their reasons and objectives for engaging in activities as well as their behaviors in specific scenarios. This understanding underscores the interplay of viewpoints societal pressures and motivational elements when it comes to physical activity and participation, in sports.<sup>9</sup> The Achievement Goal Theory (AGT) and Self Determination Theory (SDT) are commonly classified as theories, not frameworks. These theories present principles and ideas to elucidate motivation and behavior, in various settings like sports. Although they serve as guides, for comprehending and shaping interventions in these environments they essentially function as frameworks that influence research and applications in psychology and associated fields.<sup>10</sup> The significance of accomplishment and affiliation motivation in professional and recreational sports has previously been highlighted.<sup>11</sup> The relationship between motivation profiles and outcomes in sports has also been examined, specifically with an emphasis on self-determination.<sup>12</sup> Boys tend to be more motivated by competition, while girls are more motivated by social and recreational factors when participating in sports events.<sup>13</sup> The authors of this research describe the idea of motivation as the internal mechanisms that not only kickstart but also guide behavior towards accomplishing a particular goal or meeting an immediate need. This differs from motivation which involve the motivations or goals that individuals actively strive for. The study seeks to comprehend the variations, in the factors that fuel motivation among athletes, across race distances. Through this exploration it aims to shed light on the dynamics that impact athletes resolve and determination in competitive scenarios.

Masters et al (1993) created the Motivations of Marathoners Scales (MOMS) to evaluate individuals' motivations in marathons. It became the most often used questionnaire in research related to marathons in the future.<sup>14</sup> Studying motivation in marathon and ultramarathon runners is essential for comprehending the intricate interaction of psychological elements in endurance sports. The authors likely want to understand the challenges faced by marathoners and ultramarathoners which could be why they are studying them. Participating in these endurance events is often associated with improving health, mental well-being, and building social connections within the running community. Exploring the motivations behind these activities can provide insights into how people cope with challenges and derive satisfaction from their participation. Understanding these reasons is crucial for enhancing performance and fostering continued engagement, in distance running through tailored training and coaching methods.

This study provides valuable insights into athletes' psychology by examining the motivations that compel individuals to engage in physically and psychologically challenging activities. Reading these motivating variables may create more efficient training programs for improving athletes' performances and mental fortitude. These programs are essential for preventing injuries and ensuring sustained engagement over time. Moreover, this study significantly contributes to the broader domain of sports science by offering valuable insights into sports' mental health advantages and community development aspects. Gaining insight into various motivational stimuli enables the development of customized coaching techniques, thus enhancing an athlete's overall satisfaction and promoting a more cohesive and interconnected athletic community.

A deeper, in-depth analysis of research papers addressed the topic areas. It prompted the authors of this work to undertake a narrative review and attempt to synthesize the achievements to date. Therefore, the main goal of this work was to perform a detailed analysis of the achievements of researchers from various areas of science that cover psychology through medicine to sports sciences and that are related to motivation in marathons and ultramarathons.

## Objective

The primary aim is to collect and summarize the understanding of the factors that drive both marathon and ultramarathon runners. This includes exploring trends among those involved in endurance sports with a specific emphasis, on exploring how motivations evolve and differ among these runners. Important aspects of interest encompass health, athletic skills,

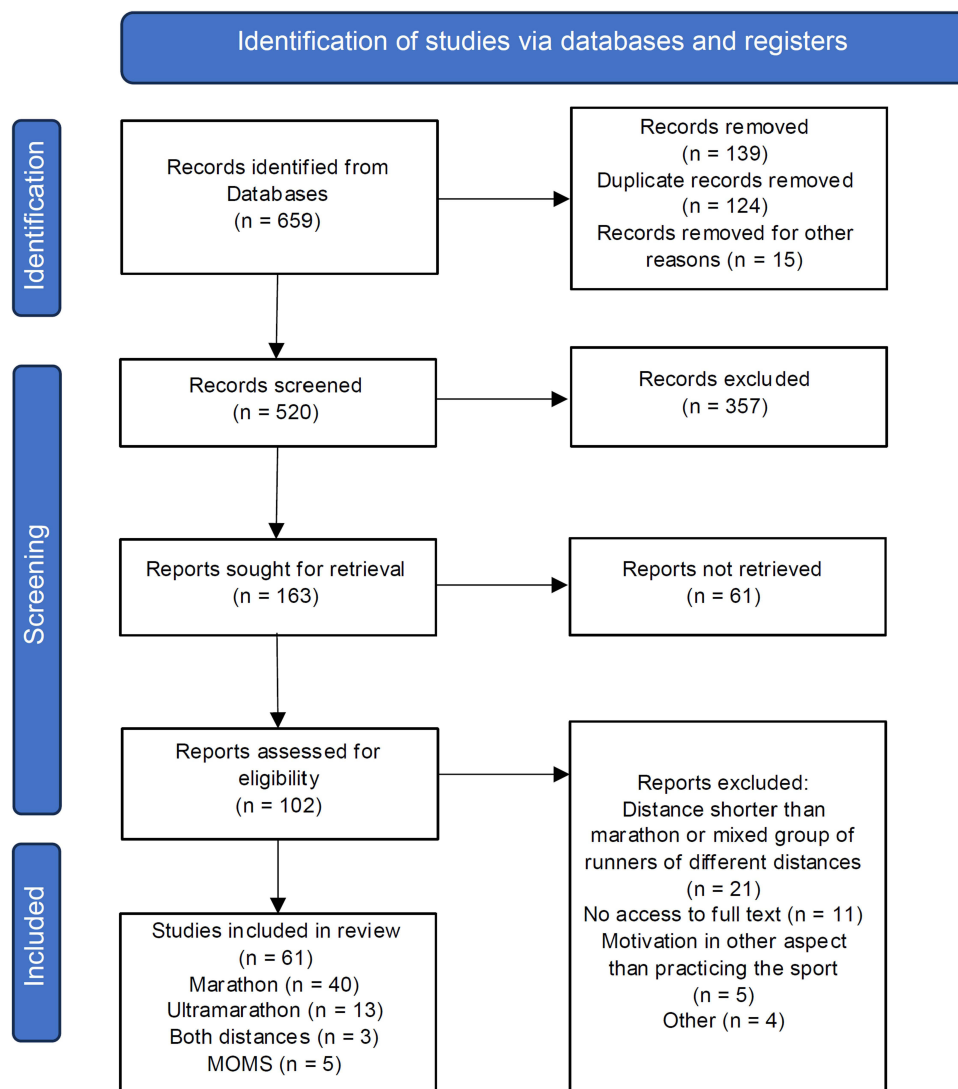
social connections, self-value, and personal growth. Furthermore the review seeks to explore how variables like gender, age and experience impact motivational drivers within these running communities. Lastly the review aims to highlight the intricate nature of factors, in endurance running and stress the significance of tailored training approaches and community backing to enhance participation and achievement.

## Methodology

This systematic review aligned with the guidelines stipulated by the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) framework.<sup>15</sup>

## Eligibility Criteria

The review focused on studies up to December 2023 that explored the motivational characteristics of marathon and ultramarathon runners and excluded those athletes participating in races less than the marathon distance (42,195 km). Studies that exclusively examine ultrarunners or marathoners and those encompassing ultrarunners and non-ultrarunners were deemed eligible. The review further excludes study protocols, reviews, and commentaries. Lastly, the search was confined to articles published in English. All numerical data are presented in Figure 1.



**Figure 1** Selection of studies.

**Abbreviation:** MOMS, Motivation of Marathoners Scale.

## Search Strategy and Study Selection

A comprehensive literature search was conducted using the Mendeley, PubMed and Google Scholar databases. The search string employed was “motivation AND marathon”. Two key terms were used as the inclusion criteria: those related to (1) the sporting discipline, specifically ultramarathon or marathon running behavior, and (2) aspects linked with motivation. The study manually scrutinized the bibliographies of the selected articles for additional eligible articles.

## Motivation of Marathon Runners

The search strategy yielded 659 potentially relevant references. Two independent researchers (AP and ZW) conducted the screening process by reviewing the title and abstract of each identified reference to determine compliance with the established review criteria. Any discrepancies between the reviewers were resolved through discussion and consensus on the inclusion or exclusion of the article. Fifteen articles were excluded as the literature was not in English. We identified 124 records as duplicates. Title and abstract screening considered 520 articles, resulting in 163 articles. Following this reconciliation process, the full texts of 102 articles were obtained. A consensus was eventually reached, which included 61 papers for review.

Studies have identified challenges, fitness/health benefits, and improved well-being as the primary motivators for running participation. Notably, only a few marathoner runners claimed that they began running with the expectation of achieving these outcomes.<sup>16</sup> Meanwhile, status and social reasons were the least cited reasons.<sup>17</sup> However, marathon runners are less motivated by physical fitness than runners of shorter distances.<sup>18</sup> Nonetheless, the usual motivation to start running include previous experience with running, the invitation from a family member or friend, and the desire to improve health.<sup>16</sup> Apart from physical and psychological health and social motivation, the fourth reason is participation in a marathon with friends and family.<sup>19</sup> Marital status seemingly does not influence one’s motivation to participate in a marathon.<sup>20</sup> Motivations for continuing to run are related to family structure, but they do not influence people’s running trajectory before they start running.<sup>16</sup> After gaining running experience, the running community frequently influences the decision to train for a marathon.<sup>16</sup>

Marathon runners are diverse because motivation profiles vary; they have different needs and can gain many physical, psychological, and social benefits from marathon running. Therefore, their motivation for running a marathon can be categorized into clusters.<sup>21,22</sup> These motivations also change over time.<sup>23,24</sup> According to Maggon’s study on newbie marathon runners, two main groups can be distinguished: fitness seekers and personal accomplishees. The former mainly consists of single male runners aged in their 20s with high levels of education, while the latter mainly includes married women in their late 20s.<sup>25</sup> Another influencing factor is the Objective of runners, such as aiming to help raise funds for charity.<sup>22</sup> Experiencing flow, an experience of being completely involved in something, during a marathon can also influence future high levels of running motivation.<sup>26</sup>

Participation in a cause-based marathon training program can enhance a runner’s motivation by strengthening connections.<sup>27</sup> This connection between the participants of a training program helps maintain their motivation.<sup>27</sup> During marathon training, runners’ motivation constantly grows, which reaches its peak at the end of the regimen.<sup>28</sup> Among the group, health or fitness is the most critical motivation to run.<sup>29–32</sup> Alternatively, among runners training for a marathon, those focused on weight concerns and social aspects were less likely to finish the training program.<sup>33</sup> They also want to “become a marathon runner” and are more likely to consider the social aspects of running. However, experienced runners are more focused on the ability to finish the marathon.<sup>29</sup> During the training program, the highest significant increase in motivation occurs during the last four weeks before the race. Moreover, during the 16-week training, no statistically significant changes are observed. Nevertheless, the level of motivation remains high and consistent when distinguished between internal and external sources of motivation for running.<sup>34</sup>

According to a study, the well-being rates of participants significantly diminished during the marathon training program. Satisfaction with needs, autonomy, and competence decreased, while vitality, burnout, and the need for relatedness increased toward the end of the program.<sup>35</sup> For marathon runners in the training program, changes in self-efficacy are substantial predictors of changes in motivation. A slightly less potent but statistically significant factor is a change in perceived physical condition.<sup>34</sup> The importance of the life meaning variable in the motivation profile is negatively correlated with age.<sup>36</sup>

General health and general health orientation are the most important motivation for running.<sup>31,32,37,38</sup> Among newbie marathon runners, health reasons are reported as meaningful motivation.<sup>19,24,25</sup> At the same time, health concerns become more important for runners as they age.<sup>20,32,36,38–40</sup> Marathon runners who care more about psychological coping, life meaning, and health orientation are more likely to possess high levels of perceived control.<sup>41</sup> Running is occasionally the most convenient means of meeting a given amount of exercise requirement.<sup>16</sup> Unavailability of facilities and limited accessibility are not associated with external motivation or motivation. This could be explained by the fact that training for a marathon does not require any specific conditions because it can be practiced nearly anywhere.<sup>42</sup>

Meanwhile, weight concerns are significant but the least concerning health aspect.<sup>30,43</sup> Female runners are more likely motivated by weight concerns than male runners.<sup>37,38,41</sup> Novice marathon runners are more likely to be driven by weight concerns, but their importance decreases over time.<sup>19,36,44</sup> In a group of Estonian marathon runners, the authors noted that weight concern motivation has a deeper meaning and that the athletic body represents their ambitions, values, and even a source of self-confidence.<sup>30</sup> Runners who intend to lose weight and hold a personal goal to improve their general health are more likely to overtrain and represent a dedicated attitude towards running, even if it becomes detrimental to health.<sup>38,43</sup> These runners are less likely to be interested in achieving the specific outcomes of the marathon.<sup>41</sup> Simultaneously, weight-related motivation is a poor predictor of running and physical health benefits.<sup>45</sup>

Motivation and attitude are critical in completing a marathon.<sup>28</sup> Marathon runners face physical challenges during the race as well as mental challenges such as the need for support and mood disruption, and mixed ones, called by many runners as hitting the wall.<sup>46</sup> Running helps people face everyday problems and balance their psychological state.<sup>30</sup>

Personal goals (achievement group of purposes) and self-esteem are also significant for runners, typically reported as the second and third most important variables.<sup>31,32,37,43,44</sup> They are also considered the most important for newbie marathon runners.<sup>19,24,25,44</sup> However, these variables are less likely to motivate marathon runners than runners of shorter distances.<sup>18</sup> In addition, the importance of these motivation decreases with the increase in experience in running marathons.<sup>36,38</sup> Moreover, personal goal achievement and self-esteem are less important reasons to run a marathon for older runners than younger ones.<sup>36,38,44</sup> Runners who focus more on goal achievement and feel a sense of obligation or commitment to run are likelier to become injured.<sup>47</sup> However, one study reported life meaning and personal goal achievement as the first and second most important motivation.<sup>48</sup> Self-esteem is correlated with health-perceived benefits from the physical and psychological aspects.<sup>45</sup> However, this motive becomes less critical with age,<sup>36</sup> experience, and years of training.<sup>49</sup> A sense of accomplishment is highly motivational for single runners, unmarried and without children. They begin running for various reasons and eventually realize the physical and mental health benefits.<sup>16,50</sup>

Runners build their self-efficacy beliefs while training for a marathon using different sources, which change over time. The most frequently reported sources were physiological states, verbal persuasion, and past performances. Specifically, the influence of past performances increases over time.<sup>50,51</sup> Scholars demonstrated that self-beliefs of efficacy significantly influenced one's self-regulation of motivation. An increase of approximately 50% in self-efficacy or perceived physical condition leads to a 10-percent increase in motivation.<sup>34</sup> Mid-experienced marathon runners are motivated by performance reasons and psychological coping. Thus, their focus is internal.<sup>24,50</sup>

The review found that elite runners mainly focused on competitive aspects and achieving personal goals compared to non-elite runners.<sup>39,40,43</sup> These marathon runners tend to dissociate less frequently while running.<sup>52</sup> Runners with high scores in competition and goal achievement scales tend to exhibit high levels of perceived control.<sup>41</sup> According to several studies, male runners below 30 years old are more competitive compared to the group of older ones;<sup>36,38,40,44</sup> for others, the level of competitiveness does not change with age.<sup>24,39</sup> However, one study reported that younger runners with high scores in competitive motivation tend to start in marathon competitions less frequently. At the same time, highly competitive older runners were more often likely to participate in marathons.<sup>39</sup> What is connected to the previous statement is that competitiveness and goal orientation are related to the importance of time goals.<sup>39,53</sup> In addition, runners motivated by competitive and personal goal achievement are more likely to train more intensively.<sup>36,39,49</sup>

The socially connected motivations of runners are strongly associated with perceived benefits from completing a marathon and not only physical well-being.<sup>45</sup> Empty nesters appreciate the aspect of socializing.<sup>16</sup> These runners seek recognition based on marathon training.<sup>24</sup> Moreover, the lack of partners for the activity could positively influence external regulation or motivation.<sup>42</sup> Relationships drive marathon runners, but not health; benefits are more frequently

motivated by life-meaning factors.<sup>45</sup> However, according to several studies, the importance of recognition as a motivation for running decreases with an increase in age. It is higher among marathon runners compared with short- or long-distance runners.<sup>32,36,44</sup> Therefore, running a marathon merely for recognition may be an unsatisfying experience.<sup>45</sup>

Affiliation and recognition as reasons for running a marathon are among the least important for runners.<sup>31,37,38,43,44,48</sup> At the same time, marathon runners appreciate affiliation aspects more with age.<sup>20,24,32,36,39,44</sup> Affiliation improves relationships with others and is connected with psychological health gains.<sup>45</sup> Runners who value affiliation are more likely to belong to running clubs.<sup>38</sup> Female runners are highly focused on well-being, which may be why they reported higher levels of affiliation as a motive than did male marathon runners.<sup>37</sup> Marathon runners who run for self-esteem, recognition, and affiliation tend to score higher on the Perceived Control Scale. At the same time, they display low levels of mental toughness.<sup>41</sup>

Motivation changes as a race draws near. Runners focus on health, psychological coping, self-esteem, and life meaning three months before a marathon. One month prior, their motivation changed significantly, and they focused on competition and personal goal achievement.<sup>54</sup> Marathon runners expect running to relieve stress and improve their temperament, physical fitness, and social skills.<sup>55</sup>

Typically, no differences exist between men and women regarding motivation profile.<sup>37,56</sup> Runners exhibit nearly the same motivation profile to run a marathon, but it slightly and significantly differs in certain variables.<sup>40</sup> According to the MOMS dimensions, male marathon runners are more likely to be motivated by competition and goal achievement. They obtain higher scores in self-esteem, life meaning, recognition, and competition and exhibit an even pace.<sup>57</sup> Conversely, psychological coping is a more important reason for women to participate in a marathon.<sup>19,20,36,37,41,57</sup> In a group of novice marathon runners, female runners reported affiliation, self-esteem, life meaning, and recognition as motivating to compete.<sup>19</sup> Married women with children consider running an escape from everyday responsibilities and value its positive side effects.<sup>16</sup>

Marital status can also influence motivation. Runners in different stages of their lives have various priorities. For married runners without children, the need to achieve a better result is an excellent source of motivation. For others, it is a valuable tool for mental health care. Married and childless runners socialize less during marathon competitions and frequently train alone.<sup>16</sup> Meanwhile, married runners with children socialize with other runners more frequently. They prioritize health reasons. That is, running is more likely a lifestyle than a hobby.<sup>16</sup> Further research that focuses on the motivation of single parents could be helpful.<sup>22</sup>

Autonomous motivation, which typically manifests with allegiance (when the activity is fully integrated into the self-schema of the individual), leads to greater participation.<sup>58</sup> Autonomous motivation is non-significantly correlated with perceived susceptibility to injury.<sup>59</sup> Autonomous motivation increases with the increased psychological connection between a person and the activity.<sup>58</sup> The greater the motivation, the greater the likelihood of getting injured.<sup>47</sup> External regulation and motivation are significantly correlated with perceived susceptibility to injury.<sup>59</sup> Tumati et al distinguish socio-cultural and socio-psychological dimensions of motivation. According to their study marathon runners score very high in case of both aspects comparing to triathlon and obstacle course race participants.<sup>60</sup>

The self-determination rate is negatively correlated with susceptibility to injury. That is, the more robust the self-motivation for marathon running, the less the runners perceive themselves as susceptible to obtaining injury during the race. A study pointed out the correlation between self-determination and perceived susceptibility to continue running despite pain during the race. Adopting such motivation could decrease the number of risky behaviors and, in turn, the likelihood of injuries.<sup>59</sup> Experiencing good pain, exhaustion, and suffering for other runners becomes part of this satisfaction.<sup>30</sup>

## Motivation of Ultramarathon Runners

Ultramarathon runners report psychological goals, self-esteem, and meaning of life as their primary motivations.<sup>61,62</sup> Other authors claim that health orientation and personal goal achievement are the most important motivation for ultrarunners.<sup>63</sup> At the same time, health motivation is less critical for ultrarunners than those who run short distances. Still, it is simultaneously rated as the most or one of the most essential components of motivation.<sup>32,44,62,64,65</sup> Even

among ultramarathon runners, it differs because 80.5-km runners value health orientation more than 50-km runners.<sup>64</sup> Compared with half-marathon runners, ultramarathon runners are less motivated by the mental and physical health aspects of running. Ultrarunners exhibit high levels of involvement with running compared with other runners.<sup>66</sup> Several studies demonstrated that the importance of health orientation, weight concern, and physical motivation increases with age.<sup>32,63</sup> Other studies reported a significant connection with gaining more experience in ultrarunning.<sup>49</sup> Ultramarathon runners recall that practicing the sport helps them face stress and challenges in running, work, and life, making them more mentally robust.<sup>67</sup> Moreover, health orientation and physical motivation negatively correlate with mean running speed.<sup>63</sup>

Highly experienced ultramarathon runners (with ten or more Comrades Marathon completions) feel a strong bond and social identity. Three-fourths of the respondents acknowledged that running is integral to their identity. It aids in self-fulfillment and contentment with individuality. They view running as a lifestyle that fulfills their achievement, affiliation, and exhibition needs.<sup>68</sup> Affiliation, linked to age, demonstrates that unmarried people over 35 are more motivated by affiliation than their younger counterparts.<sup>65,69</sup> It is also related to mean running speed.<sup>63</sup> These findings align with those of Rozmiarek et al in which ultramarathon runners rated life satisfaction as their top motivation, which is higher than those running shorter distances.<sup>32,70</sup> Ultrarunners demonstrate high commitment to the sport.<sup>67</sup>

In contrast to marathon runners, ultramarathon runners value life meaning, self-esteem, and affiliation as motivators.<sup>62</sup> Waśkiewicz et al found that ultrarunners provide higher ratings for affiliation and life meaning than those running shorter distances.<sup>49</sup> Ultrarunning provides an escape from daily life and entertainment and fulfills the need for affiliation. Ultramarathon runners are deeply committed to the running community, which fosters strong bonds with fellow athletes. Additionally, ultrarunners are frequently motivated by helping others.<sup>67</sup>

Personal goal achievement is crucial for ultramarathon runners but less for marathon runners.<sup>49,64</sup> Its importance diminishes with the increase in marathons completed and in age,<sup>44</sup> especially for runners in relationships, and increases with training frequency.<sup>49,65</sup> Ultrarunners are goal-oriented and, thus, focus more on finishing than winning. They seek to test their limits, occasionally to dangerous extents.<sup>67</sup>

Recognition and weight concerns are less critical for ultrarunners than marathon runners, who find these factors more significant.<sup>32,44,49,61,62</sup> Competition is less motivating for ultramarathon runners and is positively linked to training frequency and young age, especially for athletes in a relationship.<sup>44,49,65</sup> Compared to marathoners, ultrarunners are less motivated by competitive factors.<sup>70</sup> Runners focused on the competing aspects of running are more likely to experience positive emotions with high levels of perceived exertion.<sup>71</sup>

Motivational profiles differ significantly between male and female ultrarunners. Specifically, men are more driven by personal goals, health orientation, and self-esteem, while weight concerns, recognition, and competition are less motivating.<sup>64</sup> Female runners are mainly motivated by individual achievement and health orientation. Psychological motivation, specifically self-esteem, life coping, and meaning, are slightly less substantial. The least meaningful sources of motivation for feminine ultrarunners are recognition and competition.<sup>63,72</sup> At the same time, Rozmiarek et al found no significant differences in any disciplines based on gender or marital status.<sup>32</sup> The findings of Malchrowicz-Moško et al are in contrast with the results of the authors that demonstrate that passion for ultrarunning can pose a threat to relationships, especially in the case of athletes who value psychological coping, health orientation, and life meaning more than average.<sup>65</sup>

The origin of motivation plays a fundamental role among ultrarunners. In general, ultramarathon runners are highly self-motivated. They enjoy the experience of ultrarunning, which is a path through self-growth and personal exploration.<sup>67</sup> The findings illustrate that high levels of motivation and controlled motivation are related to higher anxiety symptomology than runners who present autonomous motivation. In athletes who offer controlled forms of motivation, a probability of dysfunctional behaviors and anxiety symptoms exists. The case of autonomous motivation, however, demonstrates the opposite correlation.<sup>73</sup> Hashimoto et al categorized the motivations of each subject into achievement, social, and psychological reasons. The main reason runners engage in ultrarunning is their interest in long-distance running and the influence of others.<sup>61</sup>

Functional imaginary training can strengthen commitment through multisensory elaboration, which helps novice ultramarathon participants get to the starting line and successfully finish the race. It can be effective by activating self-talk and triggering emotional cues, thus helping racers address potentially challenging moments.<sup>74</sup>

## Discussion on Studies on Marathon

The article provides a detailed analysis of the motivation of marathon runners, which offers a complex understanding of the factors that compel individuals to engage in marathon running. The main drivers are challenge, fitness/health, and well-being. Notably, a mere fraction of marathon participants commence their journey to attain such results. Conversely, motivations related to status and social factors are the least frequently reported. Marathon runners typically emphasize physical fitness less than individuals participating in short-distance races. The typical catalysts for initiating a jogging routine typically include prior running experience, a familial or friendly invitation, or an aspiration to enhance health. The primary advantages of participating in marathons include improving physical and psychological well-being and the fulfillment of social aspirations.

Additionally, the involvement of friends and family in these events holds considerable importance. Marital status does not influence the motivation to participate in marathons; however, family structure influences the motive to continue running. The influence of the running community frequently becomes a determining element in marathon preparation as one gains expertise.

Marathon runners exhibit various motivations, which can be categorized into clusters and may evolve. Novice marathon runners can be broadly classified under two categories: those motivated by the pursuit of physical health and those driven by personal goals and achievements. These groups exhibit distinct demographic variations. Additional factors, such as participating in a marathon for charitable purposes or enjoying a state of flow during the race, can also impact motivation. Moreover, engaging in cause-oriented marathon training programs can boost motivation by reinforcing participant bonds. The motivation of runners in training programs typically grows progressively and reaches its highest point after the regimen. The primary drivers for participation in training programs are health and fitness, while weight-related issues and social factors can contribute to high attrition rates. Experienced runners frequently prioritize the capacity to complete the marathon.

The rates of well-being and need satisfaction may decrease during marathon training, and alterations in self-efficacy and perceived physical condition are substantial indicators of changes in motivation. The primary driving force is the general inclination toward health, which becomes increasingly significant with age. Weight consciousness is a notable yet less substantial motivation for running, particularly among women and individuals new to the activity. Personal aspirations, self-worth, and existential purpose are significant drivers. However, their significance diminishes with accumulated experience and advancing age. For senior runners, the importance of personal objectives and self-esteem may be decreased compared with that of younger ones. Self-efficacy beliefs derived from physiological conditions, verbal persuasion, and past performances are vital in influencing motivation.

Elite runners prioritize competitive characteristics and personal goal attainment more than non-elite runners. High degrees of perceived control are linked to competition and goal achievement, while motivation profiles differ according to age, gender, and marital status. Female runners frequently place high importance on psychological coping, and their marital status may impact several aspects of motivation, such as the desire for achievement or socializing tendencies. Autonomous motivation, which is strongly connected to the extent of identification of a person with a particular behavior, results in high levels of engagement and lacks a substantial relationship with the perception of being prone to damage. Elevated motivation can enhance the probability of sustaining an injury because external regulation and motivation are associated with the perception of being prone to damage. The reasons underlying participation in marathons are complex and diverse and are shaped by various elements such as physical well-being, social bonds, personal accomplishments, and mental welfare. The motivation for individuals to engage in marathon running significantly vary across demographic groups and change over time, which reflects the wide range of reasons that underlie their participation.

## Discussion on Studies on Ultramarathon

The scholarly discourse on the motivations of ultramarathon runners reveals complex and diverse findings, which incorporate several studies and research discoveries. The critical motivations encompass psychological aspirations, self-worth, and the quest for existential significance. These characteristics, commonly considered the significant reasons for participation, frequently influence ultramarathon runners. These variables tend to overwhelm more conventional motivation, such as focusing on health and personal goal attainment. Although necessary, they receive less emphasis from runners participating in short-distance running. Significantly, ultramarathon runners exhibit varying degrees of focus on health orientation according to race distance, in which individuals participating in longer distances (80.5 km) assign greater significance to it than those engaging in short distances (50 km).



Research shows that ultramarathon athletes exhibit a distinct motivation pattern compared with marathon runners. Ultramarathon runners prioritize life meaning, self-esteem, and connection to a similar extent as others. However, they are less motivated by competitive motivation; instead, they place greater emphasis on personal accomplishments and the enjoyment of running instead of solely aiming to win. This dedication to running is typically related to self-discovery and pushing boundaries, frequently to extraordinary extents.

Experience and age are critical factors in the formation of these motivation. As one grows older and gains more experience in ultrarunning, the significance of prioritizing health, weight mindfulness, and maintaining physical drive tends to increase. Ultrarunners also attest to the utilization of the sport as a mechanism for managing stress and overcoming difficulties in life, which enhances mental fortitude. Highly experienced ultramarathon runners, particularly those who have completed famous races multiple times, such as the Comrades Marathon, have a pronounced sense of camaraderie and social identity. These runners frequently perceive running as a fundamental aspect of identity and way of life, characterized by a strong dedication and desire for accomplishment, social connection, and public display. Interestingly, older individuals who are single and aged more than 35 years exhibit a stronger inclination toward social connections through running.

Gender disparities in motivation are equally notable. Male ultramarathon runners exhibit higher motivation levels toward personal goal attainment, health orientation, and self-esteem. In contrast, female runners prioritize personal success and health orientation and place less emphasis on psychological factors such as self-esteem, life coping, and life meaning (Table 1).

Essentially, the ultramarathon text focuses on internal psychological factors and the role of community in long-distance running motivation. In contrast, the marathon text covers a broad range of motivations, such as health and social factors, and gives more attention to the training process and its influence on motivation.

**Table 1** The Comparison of the Content of the Two Summaries Regarding Ultramarathon and Marathon Runners Reveals Several Significant Distinctions

	<b>Marathon Runners</b>	<b>Ultramarathon Runners</b>
Primary Motivations	The main drivers for marathon runners are the desire for a challenge, the pursuit of fitness and health, and the promotion of overall well-being. However, physical fitness is a less significant motivator for marathon runners than for short-distance runners.	The primary motivations are psychological objectives, self-worth, and the pursuit of existential significance. While health orientation and personal goal achievement are acknowledged, they receive less emphasis than those given to shorter-distance runners.
Social and Community Influence	Social factors are given less priority. Training programs and cause-based marathons exert a substantial impact on increasing motivation by fostering social bonds. This discussion explores the correlation among marital status, family structure, and motivation.	Seasoned runners emphasize a robust feeling of community and identity. The impact of the running community on the engagement and drive of experienced runners is acknowledged.
Gender Disparity in Motivation	Weight worries and psychological coping strategies motivated female runners. Moreover, male and female marathon runners exhibit significant variations in their motivation profiles.	Men exhibit greater motivation toward personal goal attainment, health orientation, and self-esteem, whereas women prioritize personal success and health orientation.
Impact of Experience and Age	The significance of individual objectives and self-worth diminishes with the increase in experience and age. Motivation differs across individuals in different life phases and marital conditions.	The significance of health orientation, weight concern, and physical drive is dependent on age and running experience.
Training Dynamics and Involvement	The content is on the dynamics of marathon training programs, the significance of self-efficacy, and the dynamic nature of motivation throughout training.	This section explores the influence of the running community on involvement and improvement in mental resilience.
General Strategy for Running	Individuals participating in marathon races: The text explores several factors that influence individuals, including physical well-being, social interaction, and personal success, and the evolution of these motivations as the race day approaches.	The text highlights the importance of self-motivation, that is, finding pleasure in one's ultrarunning journey and distinguishing between intrinsic and controlled motivation.

## Limitation of the Study

1. **Bias in Selection.** By focusing on studies published in English there is a risk of introducing bias that may lead to the exclusion of research published in other languages and regions. This could limit the scope of the review.
2. **Differences in Methods.** The use of study procedures such as varying data collection methods and measurement tools across the included studies can make it challenging to compare and synthesize findings. This may weaken the coherence of the review.
3. **Publishing Bias.** Publication bias involves a tendency to publish studies with significant results. This bias could lead to an overemphasis on factors or findings potentially distorting the broader understanding of motivations, among marathon and ultramarathon runners.
4. **Limited Applicability.** Many studies analyzed here may primarily reflect the perspectives and experiences of runners from groups or regions. Consequently applying these findings to general populations of marathon and ultramarathon runners may be restricted.

## Conclusions

From this analysis, the review derives three succinct Conclusions.

1. **Distinct motivational factors:** Internal psychological factors, such as self-esteem and personal discovery, predominantly motivate ultramarathon runners, whereas marathon runners are driven by a combination of health, fitness, and social factors, with motivation evolving as they engage in training and community participation.
2. **Impact of Community and Experience:** The ultramarathon running community profoundly influences runners, particularly those with extensive experience, which affects their identity and running approach. Conversely, the incentives of marathon runners are mainly shaped by the organization and communal elements of training programs.
3. **Diverse Influence of Personal Factors:** Gender, age, and experience impact both groups' motivation. As ultramarathon runners gain more experience, they prioritize personal goals and health. In contrast, marathon runners adjust their motivation from self-centered objectives to encompass larger dimensions, such as health and community, as they gain more experience.

## Practical Application

1. **Tailored Training Programs.** Utilizing the insights gathered from the study we can craft personalized training regimes that cater to the needs of marathon and ultramarathon enthusiasts thereby boosting their performance and endurance.
2. **Community Support Initiatives.** Understanding the underlying drivers identified in the analysis enables us to establish environments within the running community that foster a sense of camaraderie and provide encouragement, for engagement and active participation.
3. **Mental Wellness Interventions.** Recognizing the impact of motivations in marathon and ultramarathon running allows for the development of health interventions aimed at promoting well being and building resilience through tailored strategies tailored to meet runners individual needs.
4. **Promotion of Endurance Events.** Leveraging the insights gleaned from the review can be instrumental, in promoting marathon and ultramarathon events by highlighting the benefits and incentives associated with participation. This approach can attract a spectrum of participants while boosting event engagement.

## Disclosure

The authors report no conflicts of interest in this work.

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