COMMENTARY

Comparing a Marathon Attempt to a Personal-Best Deadlift as They Relate to Their Respective World Records

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Abstract

The author and principal investigator attempted to run a marathon in the Spring of 2024 without any prior running training. Unsurprisingly, they did not compete the marathon. This prompted the question of how much closer the author was to matching the world record in marathon or the deadlift. Measured at the same time, the author completed 15 miles of a marathon in 3 hours and 9 minutes. In the same week the author performed a one-rep max of 455 pounds deadlift. This article continues to theoretically explore the gap between the authors' personal best in these two events with their respective world records. Three potential methodological approaches are described to explore measuring this gap and answering the question, "Is the author closer to completing a marathon at the current World Record pace or matching the current World Record for the deadlift?.

Keywords: quantitative design, resistance training, cardiorespiratory training, marathon, Powerlifting.

Introduction

In Spring 2024, I decided (without any prior training) to attempt running a marathon [26.2 miles] – almost solely to prove my wife wrong who expressed with certainty, "I could not succeed". Spoiler: she was correct. At the time, I was 35.5 years old, six feet tall, 200 pounds, with a 12% body fat. I have always been a physically active person who has done my fair share of walking appreciable distance – as one does living in New York City – and I am an almost a daily weight trainer, but not a distance runner whatsoever. In fact, my entire running career is as follows:

- 2017 in Birmingham, Alabama I jogged a 1-mile 'mutt-strut' with my wife and dog.
- 2018 we did the same mutt-strut.
- 2022 we ran a 1-mile mutt-strut in Queens, New York.
- 2023, we ran a 5K through The Bronx Zoo sans dogs — this was by far the furthest distance I had ever run without stopping.

I am not an overly healthy eater, but I occasionally make healthier choices. For instance, I get brown rice instead of white rice with my order at Chipotle purely for health reasons; rarely do I eat fast food; I have opted for skim milk since college; I eat a lot of dessert foods, but I also mix in an occasional salad. Basically, I am a healthier eater than most, but I am not a bona fide health nut. And again, I am more physically active than the average person. I achieve 10,000 steps a day simply from my typical physical activity, and my powerlifting background and recreational weight training has protected me against my diet. So, in my heart I knew completing a marathon probably was not possible for me with no training, but I was curious to see what I could do.

Reality. Beginning at 7 a.m. at my college campus outdoor track, I ran the first 10 miles at a 10 min/mile pace without stopping – I made sure to reverse my running direction after each mile to reduce discomfort on my joints [didn't work]. I then plopped down for a 5-minute break to hydrate and eat a few ounces of mixed nuts and beef jerky. Any veteran runner [or person with common sense] would have recommended against stopping. Nevertheless, I stopped to refuel. I resumed running with additional tendon and ligament soreness and inflammation that was not present in the previous 10 miles. I jogged/'power-walked' the next six miles at a 15 minute/mile pace – bringing my total time to complete 16 miles in just over 3 hours and 9 minutes, or a pace just under 12 minutes/mile. I then had to take an unplanned break to respond to a minor work emergency with took roughly 2.5 hours. After 2.5 hours of swelling and stiffening, I knew there would be no returning to the track. My running day was complete at 16 miles. Table 1 indicates the split times for each mile completed as well as the pace run over the course of 16 completed miles.

MILE #	TIME [MIN:SEC]
1	08:55.5
2	10:19.0
3	**08:53.6**
4	10:07.2
5	09:49.6

6	10:02.6		
7	10:03.0		
8	10:37.2		
9	10:40.3	100 MIN 18.7 SEC	
10	**10:50.7**	1 HOUR: 40 MIN: 18.7 SEC	**10 MIN/MILE for mile 1-10**
5 MIN break			
11	13:59.3		
12	**12:15.7**		
13	15:00.2		
14	14:12.8		
15	16:25.0	89 MIN 7.5 SEC	
16	**17:14.5**	1 HOUR; 29 MIN; 7.5 SEC	**15 MIN/MILE for mile 11-16**
2 HR break			
17			
18			
19			
20			

Table 1. Mile Splits and Running Pace

I am a more frequent weight trainer than a runner, so I was rather pleased with what I accomplished. This got me questioning, "Am I closer to completing a marathon at the current World Record pace or matching the current World Record for the deadlift?". For reference, the official Powerlifting men's World Record for a deadlift is 1,074.8 pounds held by 270-pound American Danny Grigsby – equipped with nothing but a weight belt, by the way – at the 2022 American Pro in Manasses, Virgina (Lockridge, 2023). The official men's World Record time for completing a marathon is 2 hours: 35 seconds set in the 2023 Chicago Marathon by Kelvin Kiptum of Kenya (worldathletics.org, 2023). Mr. Kiptum sadly passed away in February of 2024 in a traffic accident.

Attempting to answer my question, I originally used my best performances in each of the events at the time of the study in

Spring 2024. My deadlift 1-rep max was 455 pounds; I completed 16 miles of 26.2 miles in 3 hours 9 minutes at a pace of a 12-minute/mile. Instantly I recognized there are significant challenges determining a method for comparing these two performances. This got me to contemplate a new question, "What is the best way to compare a person's performance against the deadlift World Record and marathon World Record?". This question is even trickier to answer when the performance of the marathon is incomplete (i.e., the subject did not finish).

Purpose & Method

Proposed in this article are three imperfect methodological approaches to quantitatively answer this question based on the limited and flawed (i.e., incomplete) single-subject results we have. The purpose of such an exercise [no pun intended] is to compare how the results are differently interpreted based on the selection of method.

Beyond that, this article concludes with the results of a survey of three of kinesiology researchers simply asked to indicate their methodological preference to answering the question, "What is the best way to compare a person's performance against the deadlift World Record and marathon World Record using the incomplete single-subject results?".

1. Percentage-Achieved Approach

I determined one reasonable way of answering this question is to calculate a "percentage achieved" of each World Record. This means I performed a 1-rep max of a deadlift and compared my max to the 1,075 -pound World Record. Also, I ran as far as I could in a 2-hour, 35 second timeframe (the marathon World Record) and compared that distance covered to 26.2 miles. My 455lb deadlift 1-rep max is 42.3% of 1,075 pounds. My (roughly) 11 miles complete in 2 hours is 41.9% of 26.2 miles.

Returning to my original question, "Am I closer to completing a marathon at World Record pace or matching the World Record for the deadlift?". Using the above methodological approach for comparing myself against the World Records for these two events, technically, I achieved a greater percentage of the deadlift record I could 1-rep max than the percentage of running distance I covered within a 2-hour timeframe. This is not personally surprising, because I actually train deadlift numerous times a year and I do not run practically at all.

2. Pace-Based Approach

Another reasonable way of answering the question, "What is the best way to compare a person's performance against the deadlift and marathon World Record using the incomplete single-subject results?" is to compare the subject's total distance traveled while maintaining a 4 minute, 34 second/mile pace [the pace of the marathon World Record holder]. The subject maintained a running pace of 4 minute, 34 second/mile for an underwhelming distance of 0.5 miles before falling off pace. Dividing 26.2 miles by 0.5 miles covered reveals the subject 'accomplished' only 0.53% of marathon distance at World Record pace.

Pace is more difficult to measure in Powerlifting and is rather referred to as "tempo". The slower the tempo (e.g. higher number), the more time-under-tension muscles endure, thus the more challenging the physical feat. In competition, the tempo for a deadlift typically requires competitors (a) pull the weight from the floor to standing extended position in an explosive movement at a one-second tempo, (b) maintain extension for one second, and (c) lower the bar with control back to the floor at a one-second tempo – this is reflected as a 1:1:1 tempo (prioritystrength, 2023). The Powerlifter Danny Grigsby achieved his World Record deadlift at a 1:1:1 tempo – as did I when performing my mortal achievement of 455 pounds. Therefore, the pace [or tempo] bore no comparable effect, thus no advantage/disadvantage could be determined when comparing for tempo. Using a pace-based approach, again, the subject is much closer to matching the deadlift World Record.

3. Anthropomorphic-Based Approach

A third way of answering the question, "What is the best way to compare a person's performance against the deadlift and marathon World Record?" is to compare anthropomorphic variables of the event performers (Pennington et al., 2023). Danny Grigsby achieved his World Record deadlift at a height of 6'1'' and a body weight of 270 pounds, whereas my 455-pound effort came at a height of 6'0'' and a bodyweight of 200 pounds. So, I lifted only 42.3% of what he lifted, but at 74.1% of his bodyweight. Ergo, when controlling for body mass, the gap between my performance and his narrows.

Applying the same principle of anthropomorphic variables as an asset or hindrance for distance running, I compare my own to Kelvin Kiptum, the marathon World Record holder. Mr. Kiptum is 5'11'' and 143 pounds - one inch shorter and 57 pounds lighter. While my extra inch of length in stride would have been an asset if my running form was anywhere near decent, the extra 57 pounds of mass I carried was certainly disadvantageous, as I was propelling 128.5% of Mr. Kiptum's mass. Using a purely anthropomorphic variable-approach to answer the question, "Am I closer to completing a marathon at World Record pace or matching the World Record for the deadlift?", even with the nearly extra 60 pounds, I am closer in ability to matching the marathon World Record.

Survey Results

Three kinesiology researchers were asked to complete a two-item survey. Item one asked participants to consider the approaches outlined in this study, and indicate their methodological preference to answering the question, "What is the best way to compare a person's performance against the deadlift World Record and marathon World Record using the incomplete single-subject results?". Furthermore, an open-ended item asked scholars to provide their own idea of answering the above question.

Of the approaches outlined in this study, two chose approach 1 (percentage-achieved), one chose approach 2 (pace-based), and none chose approach 3 (anthropomorphic). The results of this survey are presented in Table 2.

Table 2. The Frequency of Methodological Approach Selection Among Scholars

Methodological Preference	Percentage-Achieved Approach	Pace-Based Approach	Anthropomorphic-Based Approach
Scholar's Choice	2	1	0

Fortunately, as we inquired with thoughtful and talented scholars, some expressed valuable opinions and insights on their research process and the challenge to the question at-hand. Their thoughts are summarized in the discussion section.

Discussion

It is worth pointing out, obviously it is not lost on me none of the aforementioned approaches are the way one should go about answering a research question (Hoffman, 1974). An airtight method should first be selected and then applied to interpret the results in accordance with the thoughtfully chosen method (Baumgartner et al., 2015; Baumgartner et al., 2019). What is proposed in this article is more of a think-piece exercise; I find it interesting to explore the thought process of each scholar surveyed to inform my research process. Further, this exercise has potential value replicated or adapted to use as a case study or workshop activity for a research methods class (Hoffman, 2009).

The question, "Am I closer to completing a marathon at World Record pace or matching the World Record for the deadlift?" may be impossible to definitively answer as the outcomes of each performance are measured by different units. A deadlift is an assessment of muscular strength recorded as work against mass. Whereas a marathon is assessment of cardiorespiratory endurance and mechanical resistance recorded as work against distance and/or time. Therefore, the outcomes are truly apples and oranges.

Conclusion

The importance of resistance training (Conley & Pennington, 2022; Pennington, 2020), cardiovascular fitness (Esser, Pennington, 2018; Pennington, 2015; 2016), and anaerobic power (Pennington, 2014; Kelly & Pennington, 2021) cannot be overstated for individuals pursing healthy lifestyles into adulthood and old age (Buske & Pennington, 2022). Almost certainly, the only reason I was able to safely perform a 1-rep max deadlift of 455 pounds was because of consistent weight training with strength-based objectives. The strength in my lower body joints, limbs, and core is also almost certainly to be credited for my ability to complete 16 miles running without injury – albeit I was very sore later that day and for the following 48 hours. To that end, I echo the recommendations made by countless health and kinesiology scholars recommending frequent and intense resistance training coupled with a lifestyle that incorporates a high step count and cardiovascular physical activity.

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