

What are Effective Self-Care Strategies?

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ABSTRACT

In this paper we looked for the best methods and practices to improve self-care with the goal of creating good mental and physical well-being. Previous research has shown effective methods of self-care include daily exercise, quality sleep, self-compassion and spending time outdoors in nature. In our correlational study, we tested the value of these practices for quality of self-care by examining naturalistic daily changes in their variables longitudinally over a two-week period. We measured exercise intensity, level of self-compassion, sleep quality, and daily ratings of self-care all on subjective scales, and we measured time spent outdoors in nature each day in minutes. Data pooled across participants in our correlational study showed significant correlations of quality of self-care with intensity of exercise, time spent walking outdoors in nature and feelings of self-compassion, but not with quality of sleep. While causal conclusions cannot be drawn from correlational research, our work does provide support for claims that the addition of moderate exercise, time spent walking outdoors in nature and attention to self-compassion can greatly benefit an individual's quality of self-care.

1. Introduction

1.1 Research Problem

There are several potential benefits of finding good methods of self-care: remaining grounded and clear of mind, staying afloat when tough situations arise, and feeling healthy and alive throughout the day. Good self-care can make the difference between moving through the day with ease and becoming anxious or discouraged. Remaining grounded is important not only for our own well-being, but for showing up well for our friends, coworkers and loved ones. Finding out what practices one can do from the moment they wake up to the

moment they fall asleep to help improve self-care can provide keys to a healthy and happy life. We are researching this topic because we believe having good methods of self-care is essential to moving through daily challenges such as school, work, relationships and personal experience and maintaining a good quality of mental health.

1.2 Literature Review

One factor previously found to improve self-care is exercise. A study by Bartholomew et al. (2005) randomly assigned a group of 40 participants (15 male and 25 female) who were all receiving treatment for Major Depressive Disorder to

either 30 minutes of moderate-intensity aerobic exercise or 30 minutes of quiet rest. Each participant in the exercise condition was instructed to walk on a treadmill for 30 minutes (at 60-70% age predicted maximal heart rate) and then answered questions from the Profile of Mood States scale and the Subjective Exercise Experiences Scale 5 minutes before and 5, 30, 60 minutes after starting to walk on the treadmill. It was determined that the participants who walked on the treadmill experienced both positive impacts to their well-being and psychological vigor. Based on these results, Bartholomew et al. (2005) concluded that exercise provides a positive boost in daily self-care for people diagnosed with Major Depressive Disorder.

An additional factor previously found to improve self-care is quality of sleep. In a survey of volunteers solicited from an upper division psychology class at a midwestern university, Pilcher et al. (1997) measured the sleep quality of each subject by using the Pittsburgh Sleep Quality Index), which contains 10 questions relating to sleep habits. Quality of self-care (defined in the cited study by four major components: general satisfaction with life, positive affect balance, negative affect balance and general mood) was assessed using three independent scales. The Satisfaction with Life Scale contains five statements regarding subjective opinions of life and subjects agreed (7) or disagreed (1) with each statement using a seven-point scale. The Bradburn Affect Balance Scale contains ten yes/no questions, five of which indicate a positive affect and five a negative affect. General mood was measured using the Profile of Mood States scale, which provides a list of words related to six mood states: tension/anxiety, depression/dejection, anger/hostility, vigor, fatigue, and confusion/bewilderment. Subjects determined their mood levels using

a five-point scale from “not at all” (0) to “extremely” (4). Highly significant relationships (from $p > 0.01$ to $p > 0.0001$) were found between sleep quality and the above-mentioned measures of general satisfaction with life, affect balance and general mood, making quality of sleep an essential element in the development of healthy self-care.

Another factor found to increase self-care is walking outdoors in nature. In a study completed by Breitenbecher and Fuegen (2018), 181 students from a psychology class (108 women & 73 men) were randomly assigned to one of four manipulated groups: resting indoors, exercise indoors, resting outdoors, and exercise outdoors. All groups initially completed a scale on how they were presently felt (with a possible negative to positive range of 1 to 5). The exercise outdoors group completed a 15-minute walk outdoors being exposed to trees, a lake and plants before filling out a posttest survey. The data revealed that the group assigned to exercise outdoors showed a slight increase in positive mood and increased energy. This study shows that if you have 15 minutes to spare, walking in nature outside can increase your energy and mood.

Another possible strategy to improve self-care is self-compassion. In an online survey of 306 university students by Fong & Loi (2016), participants were asked to answer 123 questions on a numbered scale from one (almost never) to five (almost always). The self-compassion questions were divided into six subcategories: self-kindness, self-judgment, common humanity, isolation, and mindfulness. The higher participants scored on the scale, the higher their self-compassion levels were considered to be. Researchers also tested levels of stress in participants over the previous month on a numbered scale (e.g., in the last month how

often have you felt nervous and stressed?) from zero (never) to four (very often) to find the relation between practicing self-compassion and having lower levels of stress. The survey found that individuals who scored lower on the stress scale also scored higher on the self-compassion scale, thus finding that practicing self-compassion may lead to lower levels of stress and a higher quality of self-care.

1.3 Hypotheses

Based on the above literature review, we predicted the following hypotheses:

- Hypothesis #1: If the intensity of exercise increases, the quality of self-care will improve.
- Hypothesis #2: If the quality of sleep improves, the quality of self-care will improve.
- Hypothesis #3: If time spent walking outdoors increases, the quality of self-care will improve.
- Hypothesis #4: If self-compassion increases, the quality of self-care will improve.

2. Methods

2.1 Participants

The four authors of this paper served as the participants in its studies. The participants ranged in age from 22 - 33 years old, with an average age of 25.75 years, and included three females and one male. The participants were all undergraduate students at Camosun College who completed the current studies as an assignment for Psyc 110 ("Experimental Psychology") and were grouped together due to their mutual interest in self-care. At the time of this study, one of the participants was a full-time student while the other three participants were part-time

students, and all of the participants also had other occupations/duties: a wife, mother with three children, and employed full-time Legal Assistant; a community support worker; a full time server; and a part-time pharmacy worker. All of the participants were born and raised in British Columbia and currently resided in Victoria, BC.

2.2 Materials and Procedure

We performed a correlational study to test concurrently all of our hypotheses by examining naturalistic daily changes in their variables longitudinally. Each participant kept a study journal with them at all times over this study's two-week period in order to record self-observations of the following five variables: (1) intensity of exercise, (2) quality of sleep, (3) time spent walking outdoors in nature, (4) feelings of self-compassion, and (5) quality of self-care.

The intensity of exercise conducted each day was measured by the participants on a scale of 0 to 10, with 0 being no exercise, 5 being moderate intensity (e.g., a light sweat), and 10 being maximum intensity (e.g., elevated heart rate, sweating, heavy breathing).

Participants measured their quality of sleep with a rating from 1 (poorest quality of sleep) to 7 (best quality of sleep). On each of the 14 days in the study, participants rated the quality of their sleep within the first half hour after waking.

Participants measured their time spent walking outdoors in nature for each of the 14 days of this study. Participants logged daily in a journal how much time was spent outside walking in nature, if at all. All time spent outside walking was logged throughout the day and recorded daily.

Participants recorded at the end of each day how self-compassionate they felt that day using a scale from one (poorest

quality) to seven (best quality). Self-compassion in this study was defined on the basis of gratitude (being thankful for what they have), self-forgiveness (being kind to themselves), and mindfulness (being aware of the present moment and accepting their thoughts).

Participants in the study measured their daily rating of self-care with a rating of 1 (poorest quality) to 7 (best quality) at the end of each day.

To assess the strength and statistical significance of associations between variables predicted by our 4 hypotheses, we performed Pearson product moment correlations of their predictor variables (time spent exercising, quality of sleep, time spent walking outdoors in nature and levels of self-compassion) with their outcome variable (quality of self-care). For testing Hypothesis #1, we correlated the level of intensity of exercise of each participant during the day with their rating of quality of self-care each evening. For testing Hypothesis #2, we correlated the daily ratings of quality of sleep for each participant to that participant's rating of quality of self-care for the upcoming day. For testing Hypothesis #3, we correlated the length of time spent walking outdoors in nature for each participant during the day with that participant's overall quality of their self-care for the same day. For testing Hypothesis #4, we correlated each participant's daily rating of self-compassion at the end of each day with that participant's daily rating of quality of self-care for the same day. We performed all of the above correlations separately for each participant as well as using data pooled across all of the participants. For the correlations using pooled data, in addition to using the raw data, we also performed correlations after we had first transformed the data from each participant into z-scores in order to

standardize differences in averages and variability seen between the participants in their data and thus make them more comparable. A correlation coefficient was considered statistically significant if the probability of its random occurrence (p) was $< .05$ (i.e., less than 5% of the time expected by chance alone).

3. Results

As shown in Table 1, self-care was significantly correlated with intensity of exercise, time spent walking outdoors, and feelings of self-compassion, but not with quality of sleep. A significant correlation between time spent walking outdoors and quality of self-care was seen for one of the participants ($r = 0.61, p = 0.01$), and when using both pooled raw data ($r = 0.50, p = 0.00061$; see Figure 1A) and pooled standardized data ($r = 0.47, p = 0.0001$; see Figure 1B). No significant correlation between quality of sleep and quality of self-care was found for any participant, nor when using either pooled raw data ($r = 0.19, p = 0.153$; see Figure 2A) or pooled standardized data ($r = 0.00, p = 0.980$; see Figure 2B). Significant correlations between intensity of exercise and quality of self-care were seen for all of the participants except for one participant ($r = 0.20, p = 0.49$), and were significant when using both pooled raw data ($r = 0.54, p < 0.001$; see Figure 3A) and pooled standardized data ($r = 0.56, p < 0.001$; see Figure 3B). Significant correlations between feelings of self-compassion and quality of self-care were seen for half of the participants (with the insignificant correlations being $r = 0.28$ & $0.48, p = 0.33$ & 0.08), and were significant when using both pooled raw data ($r = 0.71, p < 0.001$; see Figure 4A), and pooled standardized data ($r = 0.55, p < 0.001$; see Figure 4B). Based on our pooled

standardized data, intensity of exercise showed the strongest correlation with quality of self-care.

4. Discussion

4.1 Summary of Results

Based on previous research, we hypothesized that increases in four variables would be followed by a higher quality of self-care: the intensity of exercise (Hypothesis #1), the quality of sleep (Hypothesis #2), time spent walking outdoors in nature (Hypothesis #3), and feelings of self-compassion (Hypothesis #4). Data pooled across participants in our correlational study supported the predicted relationship of high self-care with intensity of exercise, time spent walking outdoors in nature, and feelings of self-compassion (Hypotheses #1, 3 & 4) but not with quality of sleep (Hypothesis #2).

4.2 Relation of Results to Past Research

The strong relationship found between quality of self-care based on intensity of exercise is in line with previous research. Bartholomew et al. (2005) found intensity of exercise to have a significant impact on the overall well-being of participants. While the Bartholomew et al. (2005) study had participants with Major Depressive Disorder answer questions from the Profile of Mood States scale and the Subjective Exercise Experiences Scale 5 minutes before and 5, 30, 60 minutes after starting to walk on the treadmill, our correlational study had non-depressed participants report their quality of self-care on a scale of 1-7 once each day. The similarity of both our conclusions despite using different research designs suggests a generalized relationship exists

between increased intensity of exercise and quality of self-care.

Our correlational study failed to confirm the relationship between quality of sleep and quality of self-care reported by previous research. Differences between the methods of measuring quality of self-care in the study by Pilcher et al. (1997) and the methods used in our study could have affected these results. The study by Pilcher et al. (1997) assessed quality of self-care using three independent scales: the Satisfaction with Life Scale, the Bradburn Affect Balance Scale and the Profile of Mood States scale. In contrast, our study relied only upon a single item measurement of quality of self-care. Future studies could determine quality of self-care more accurately by measuring varied aspects of self-care in greater depth.

Our correlational study, showing that increasing time spent walking outdoors is associated with increased self-care, also is in line with previous research. Even though the Breitenbecher and Fuegen (2018) study had participants in their main experimental condition exercise outdoors for 15 minutes while our present correlational study measured the amount of time naturally spent walking outdoors, both studies came to the same conclusion that more time spent walking outdoors improves the overall quality of self-care.

The relationship we found between higher levels of self-compassion and higher quality of self-care is consistent with past research. Fong & Loi (2016) found that higher levels of self-compassion correlated with lower levels of stress and higher levels of self-care. While the Fong & Loi (2016) study conducted a one-time survey to measure each participant's level of self-compassion, our correlational study repeatedly measured self-compassion levels within-subjects across days. The similarities in outcomes between the previous research

and our longitudinal study finds that despite differences in methodology, the outcome remains the same.

4.3 Implications of Results

While causal conclusions cannot be drawn from correlational research, our study does provide support for a number of claims about how to improve daily self-care routines. We found daily moderate exercise to be very predictive of self-care activity. We found that attention to self-compassion and walking outdoors in nature were significantly associated with self-care as well. Future studies could experimentally test whether incorporating fifteen minutes of moderate activity into your daily routine such as hiking, jogging, and cycling could improve self-care. Practical ways of incorporating self-compassion in your daily routine could include mindfulness and meditation, expressing gratitude, practicing self-forgiveness, using daily affirmations and journaling of feelings, thoughts and experiences. Taking time each day to walk outdoors in nature, such as at the beach, at the park or on a hike in the forest, are expected to provide an excellent addition to the self-care routine.

We set out to find the most effective strategies for improving self-care. Our study found that daily moderate exercise, attention to self-compassion and spending time outdoors in nature were most significantly

associated with improvements in the quality of self-care. We encourage anyone looking to improve their quality of self-care to try adopting these strategies into their daily routines.

References

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Table 1

Correlation coefficient (r) values, with number of daily trials (n) per correlation in brackets.

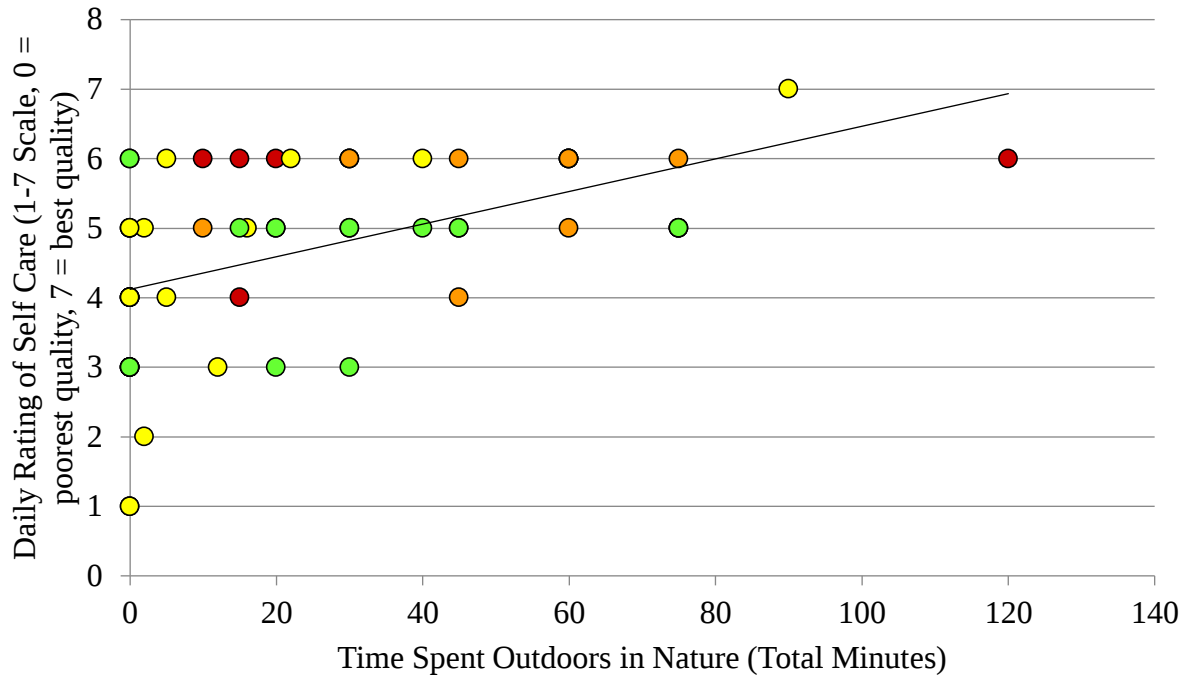
Variables correlated	Participant #1	Participant #2	Participant #3	Participant #4	Pooled raw data	Pooled standardized data
Intensity of Exercise & Self-care	0.9 (14)*	0.2 (14)	0.54 (14)*	0.60 (14)*	0.54 (56)*	0.56 (56)*
Quality of sleep & Self-care	0.08 (14)	-0.29 (14)	0.15 (14)	0.08 (14)	0.19 (56)	0.00 (56)
Time spent walking outdoors in nature & Self-care	0.40 (14)	0.50 (14)	0.61 (14)*	0.38 (14)	0.50 (56)*	0.47 (56)*
Feelings of self-compassion & Self-care	0.61 (14)*	0.28 (14)	0.83 (14)*	0.48 (14)	0.71 (56)*	0.55 (56)*

* $p < .05$.*

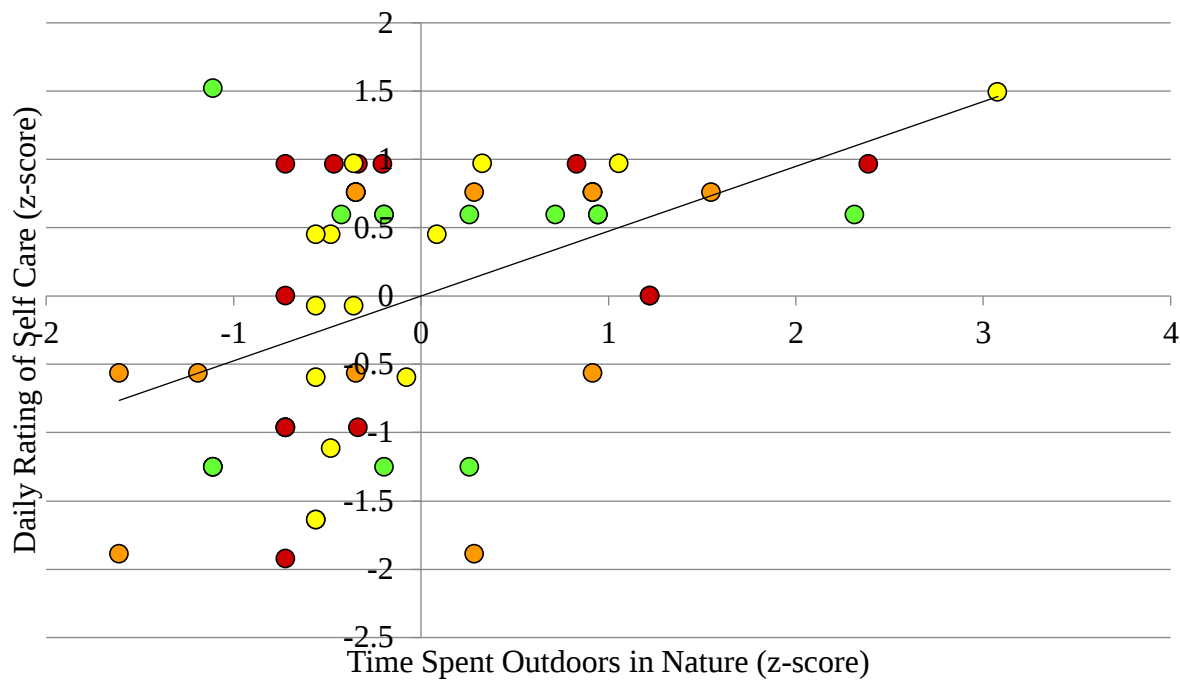
Figure 1

Scatterplot of time spent outdoors in nature and quality of self-care using pooled (A) raw and (B) standardized data across participants.

A.



B.

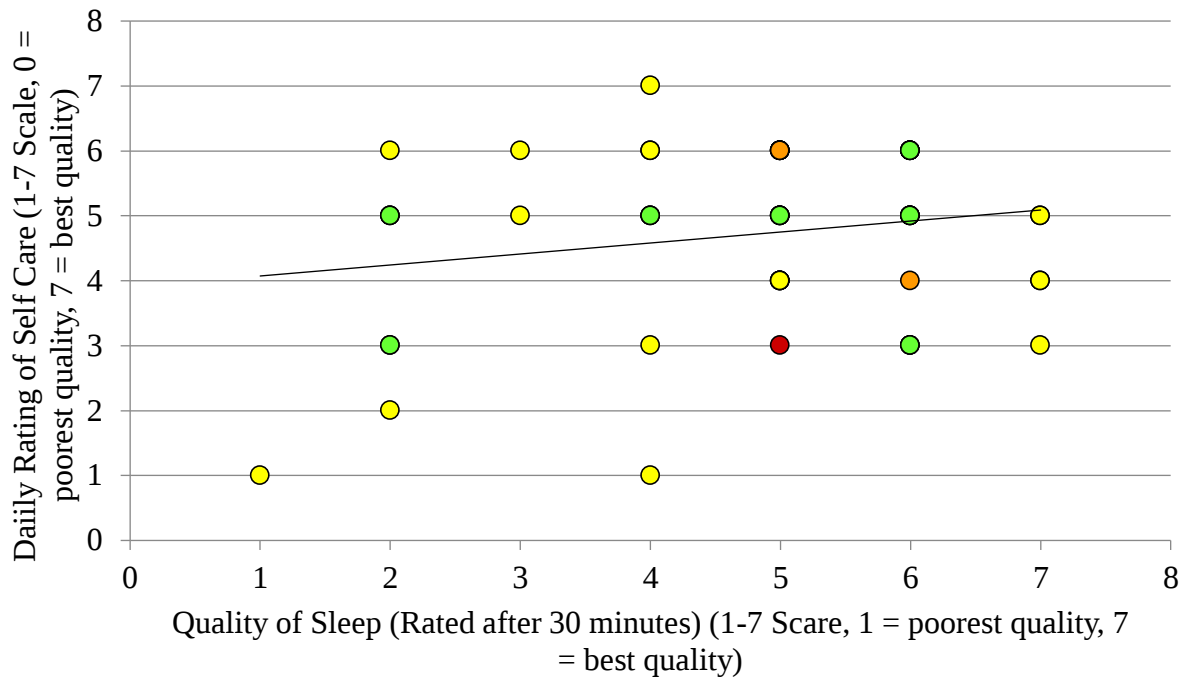


Marker color indicates which participant data is from: red = participant #1, orange = participant #2, yellow = participant #3, and green= participant #4. Some data might not be visible in the figure due to overlapping markers.

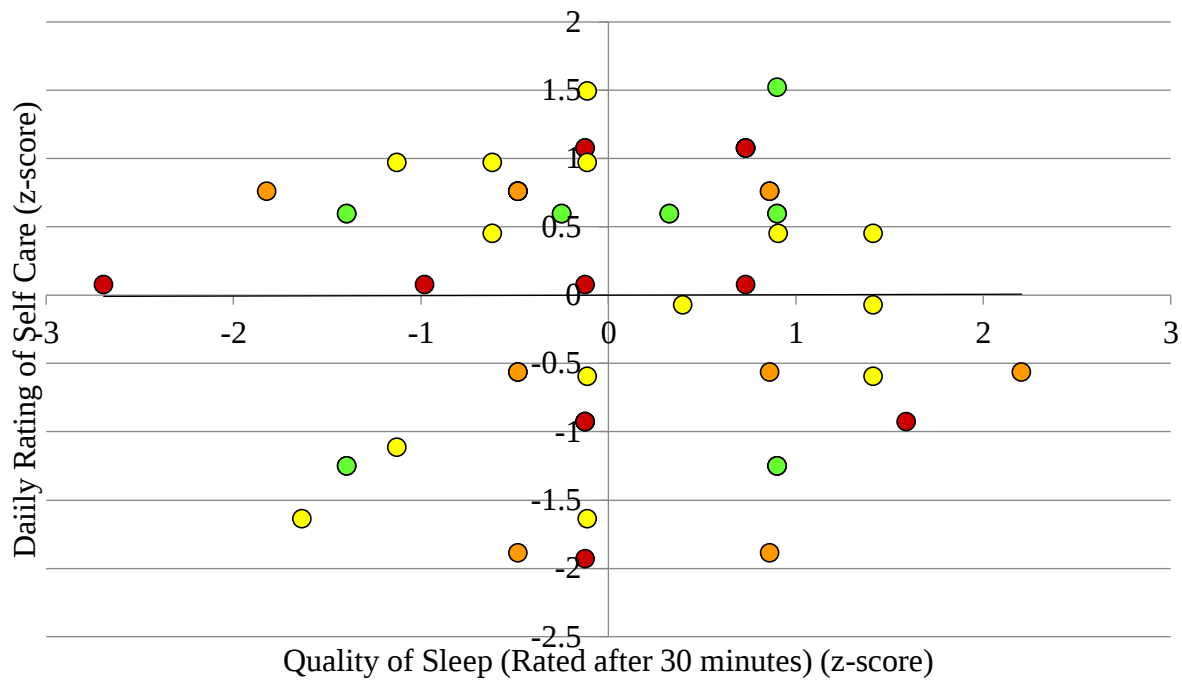
Figure 2

Scatterplot of quality of sleep and quality of self-care using pooled (A) raw and (B) standardized data across participants.

A.



B.

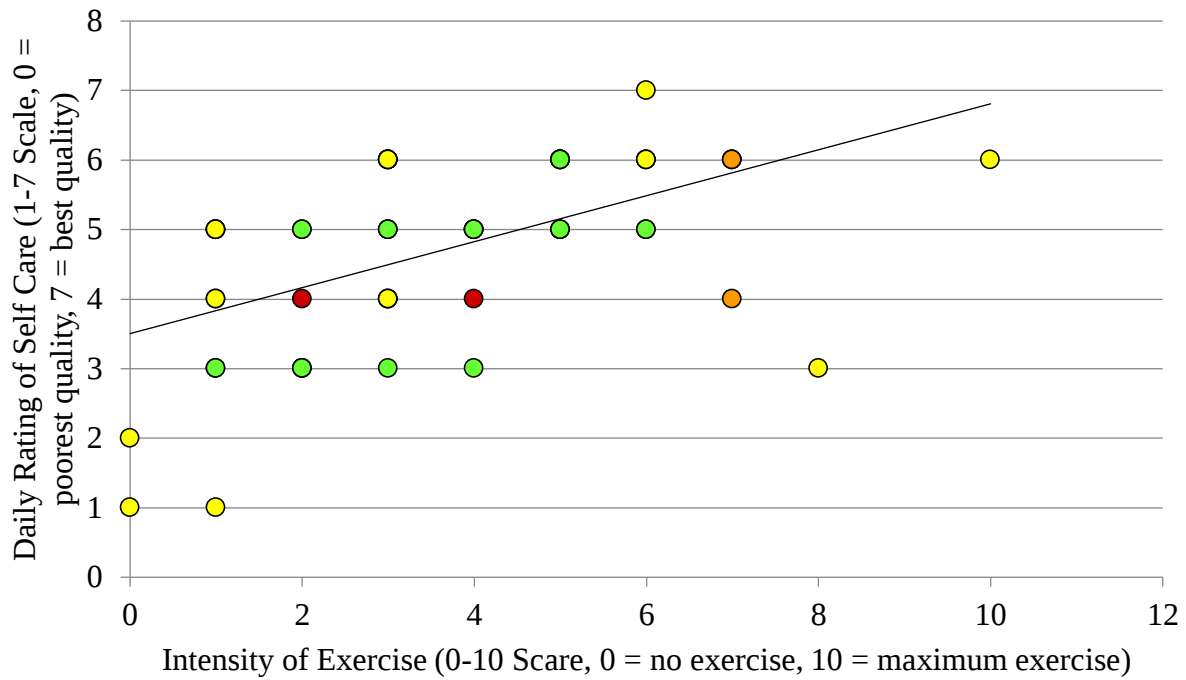


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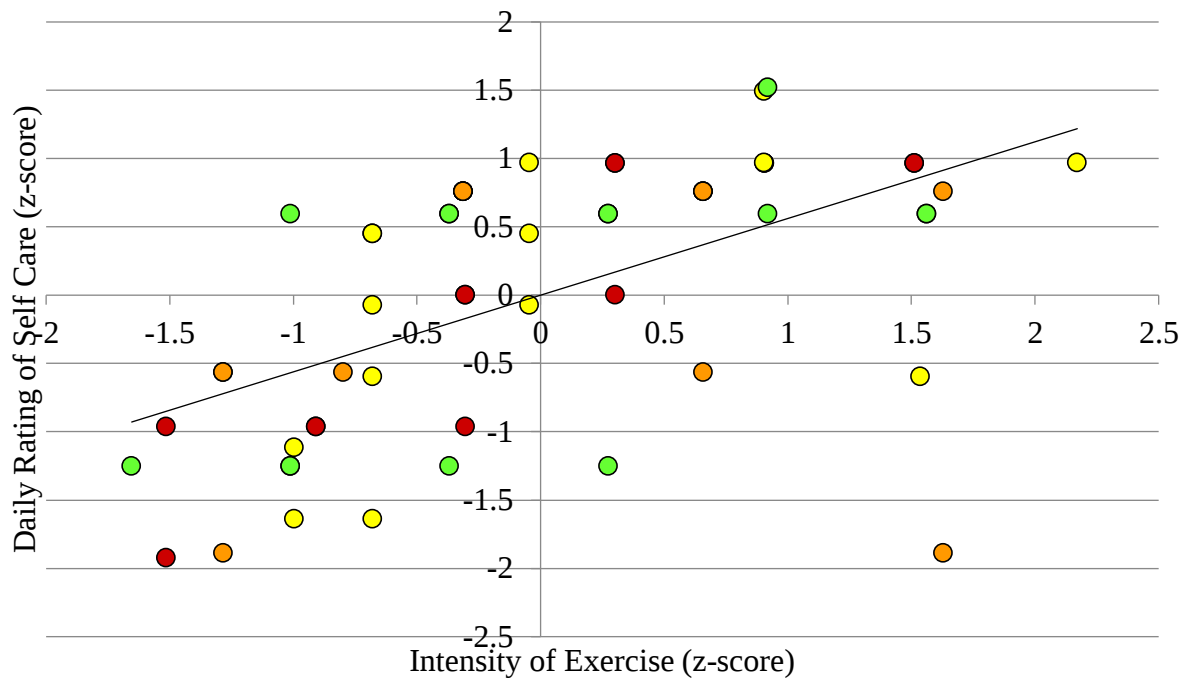
Figure 3

Scatterplot of intensity of exercise and quality of self-care using pooled (A) raw and (B) standardized data across participants.

A.



B.

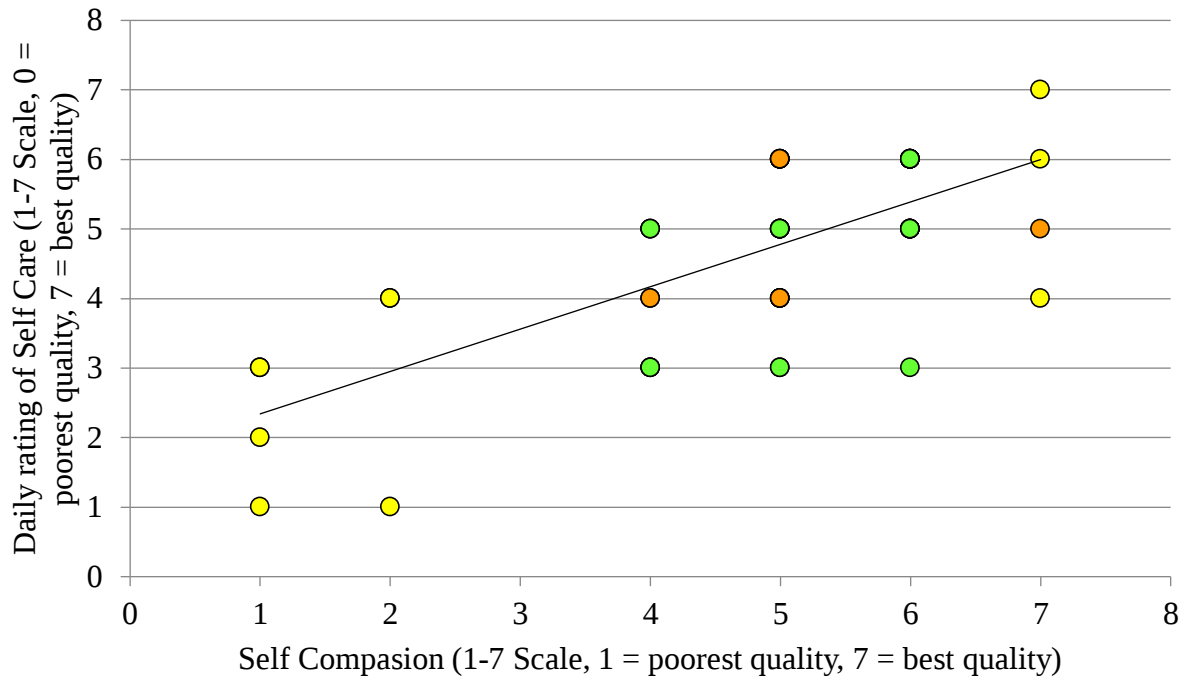


Marker color indicates which participant data is from: red = participant #1, orange = participant #2, yellow = participant #3, and green= participant #4. Some data might not be visible in the figure due to overlapping markers.

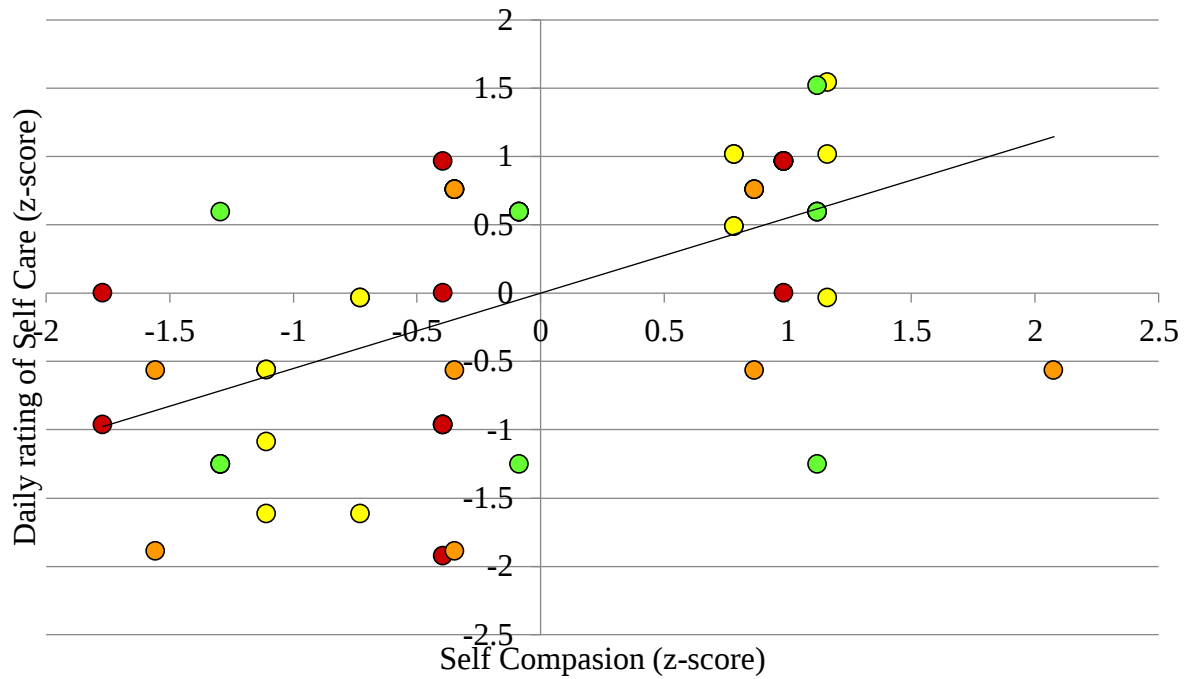
Figure 4

Scatterplot of feelings of self-compassion and quality of self-care using pooled (A) raw and (B) standardized data across participants.

A.



B.



Marker color indicates which participant data is from: red = participant #1, orange = participant #2, yellow = participant #3, and green= participant #4. Some data might not be visible in the figure due to overlapping markers.