

Relationships Between Depressive Symptoms and Physical Resilience in Adulthood

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Background

- Aging is a natural and multi-faceted process with changes in cognitive, psychological, and physical functioning.
- Resilience is crucial as it contributes to sustained physical functioning, personal well-being, and cognitive competence, in addition to facilitating adjustment to change in capacity, activity motivations, and participation in everyday life activities.¹
- Depressive symptoms have been associated with psychomotor slowness and slower walking patters, which negatively impacts physical resilience.^{2,3}

Purpose

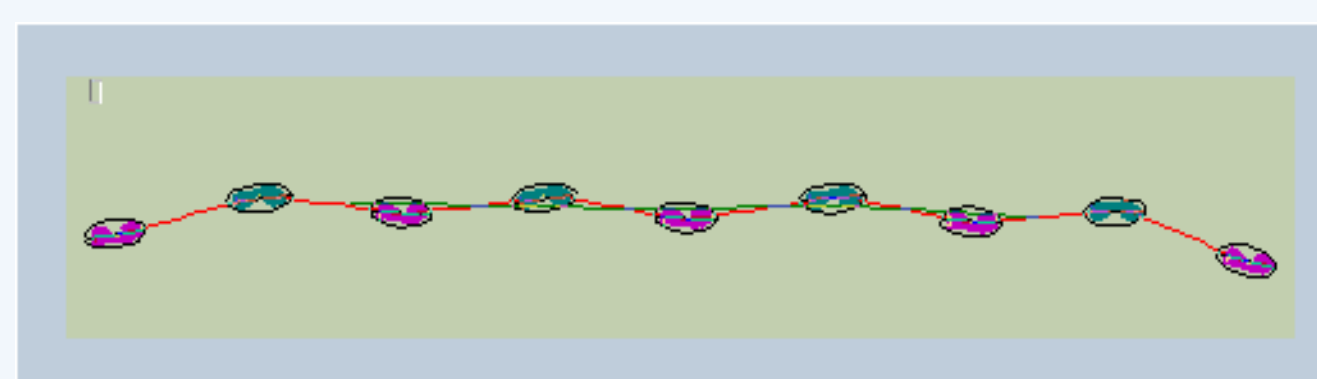
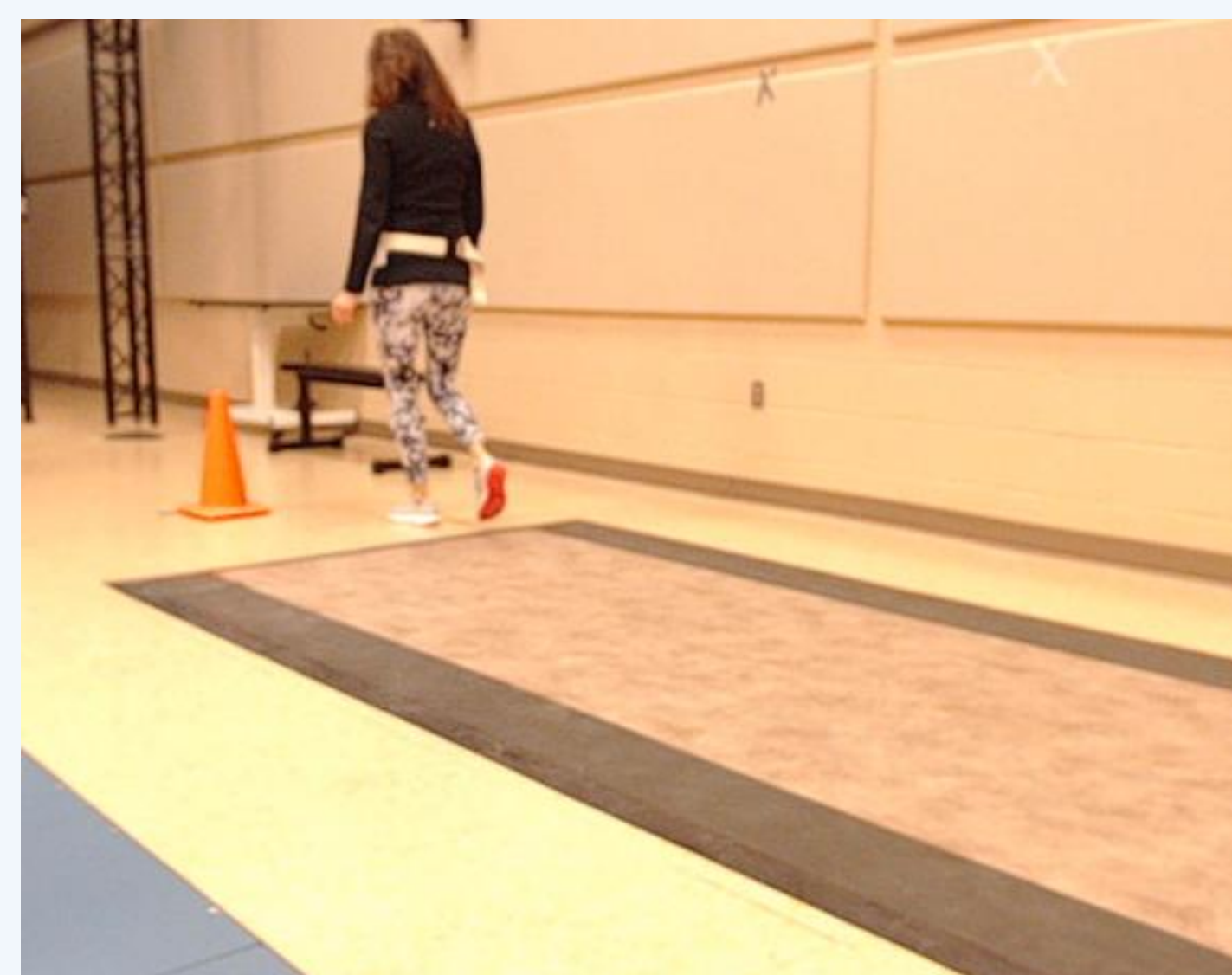
To investigate how depressive symptoms and total resiliency scores are related to physical resiliency.

Participant Demographics

- Participants (N=13; 7 females and 6 males; Table 1)

Table 1. Demographics means (standard deviation)

N	Age (years)	CES_D (score)	BRS (score)	Speed (m/sec)
13	59.08 (10.84)	9.85 (5.83)	3.81 (0.62)	1.24(0.14)



Method

- **The participants** completed three one-minute walking trials and two questionnaires.
 - 1) Walking performance
 - The participant walked on a pressure-sensing walkway at a self-selected pace for one minute. Walking speed (meters/second) was an indicator of physical resiliency.
 - 2) The Brief Resilience Scale (BRS)
 - Consisted of a 6-item self-report measure to assess the ability to recover from stressors. The score was defined as total resiliency. Higher scores indicate more resiliency.
 - 3) Center for Epidemiological Studies Depression Scale (CES-D)
 - Consisted of a 20-item self-report measure used to assess depressive symptoms. Higher scores indicate high depressive symptoms.
- **Analysis:** Correlations and multiple regressions analysis were conducted to examine relationships between the independent variables (age, depression and total resiliency (BRS)), and the dependent variable (physical resiliency-walking speed).

Results

- The correlations analysis indicated that the dependent variable (walking speed) was not significantly correlated with the independent variables age, depression, and total resiliency (Table 2).
- Although there were not significant correlations, the directions were meaningful (Table 2).
 - ❖ There were negative associations between the relationships for age, depression, and total resiliency.
- The multiple regression analysis of walking speed on age, total resiliency, and depression was not significant, indicating that age, total resiliency, and depression were not significant predictors of walking speed (Table 3).

Results

Table 2. Correlations between Age, Depression, Total Resiliency, and Speed

Variables	1	2	3	4
1. Age	-			
2. CES-D	-.32	-		
3. BRS	-.09	-.35	-	
4. Speed	.14	.31	.09	-

Table 3. Multiple Regression of Speed on Age, Depression, and Total Resiliency

Variables	B	β	t	95%CI
Intercept	0.60		1.31	[-0.44, 1.63]
Age	0.004	.33	1.05	[-0.01, 0.01]
CES-D	0.01	.52	1.55	[-0.01, 0.03]
BRS	0.07	.30	0.93	[-0.10, 0.23]

Discussion

- Although this study did not find significant relationships between walking speed and age, depression, and total resiliency, walking speed needs to be considered a crucial indicator of physical resiliency with increasing age, greater depressive symptoms, and total resiliency.
- While depressive symptoms were lower at higher ages, the total resiliency score was also lower; better understanding relationships between these variables and potential changes with age is necessary.
- There were power limitations due to the small sample size.

References

1. Wells, M. (2014). *Top Geriatr Rehabil*, 30(3), 176-180.
2. Prizer, et al. (2016). *Aging Ment. Health*, 20(1), 13-21.
3. Pieruccini-Faria, et al. (2018). *Exp. Gerontol*, 108, 106-111.

Funding Sources

This work was supported by the University of Nebraska at Omaha Graduate Research and Creative Activity Fund.