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Impostorism, subjective age, and perceived health among aging veterans

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ABSTRACT

Rationale: Aging veterans often suffer from increased vulnerability, manifested among other things in old subjective age and poor perceived health. Though research has documented the contribution of trauma related variables to these negative appraisals, their associations with impostorism (i.e., the subjective experience that one is less adequate than others perceive) remain unexamined. Objective: Filling this gap, this study explored the relations between impostorism and subjective age and perceived health among aging combat veterans. Method: The study was conducted among 146 Israeli veterans of the 1973 Yom Kippur War. Participants were assessed for combat exposure, Posttraumatic Stress Disorder (PTSD) symptoms, and health-related behaviors during middle adulthood (1991; T1), and for subjective age, perceived health, impostorism, PTSD symptoms, and depressive symptoms during old age (2018; T2). Results: The veterans' impostorism was associated with relatively old subjective age and poor perceived health, above and beyond the effects of age, health-related behaviors, combat exposure, depressive symptoms, and PTSD symptoms. Conclusions: The current results suggest that impostorism may contribute to veterans' stress and negatively affect their evaluations regarding age and health.

1. Introduction

Participation in combat often receives notoriety for its negative physical and mental repercussions on those involved. Concomitantly, battle experiences may potentially exacerbate combat veterans' vulnerability as they age (Davison et al., 2015). Possible mental health consequences include myriad combat stress injuries (Figley and Nash, 2007), the most conspicuous of which is posttraumatic stress disorder (PTSD), which may last for decades after combat concludes (Smith et al., 2016; Steenkamp et al., 2017). Depressive symptoms have also been found to follow combat experiences with relatively high prevalence (Stander et al., 2014). Studies that utilized objective measures indicated that combat exposure and posttraumatic distress are associated with detrimental effects on physical health (e.g., El-Gabalawy et al., 2018; Nichter et al., 2019) and premature aging (Bersani et al., 2016). Furthermore, research revealed that aging veterans appraise their age and health in a negative fashion; when compared to similar demographic groups, veterans report relatively older subjective age and poorer perceived health (Ahmadian et al., 2019; Avidor et al., 2014; Lahav et al., 2015). Though subjective age and perceived health rely on individuals' evaluations, and thus might differ from objective indicators of health (Schnurr and Green, 2004), research revealed that these appraisals are predictors of detriments in mental and physical health and wellbeing (Spuling et al., 2013; Westerhof et al., 2014). Thus, uncovering factors that contribute to veterans' subjective age and perceived health bears clinical significance.

The present study aimed to expand our understanding of the link between combat veterans' psychosocial appraisals and their subjective evaluations of their age and physical health. Specifically, the study explored whether impostorism - entailing perceived self-fraudulence - may contribute to veterans' stress and explain their subjective age and perceived health.

The term *subjective age* denotes the manner in which individuals perceive and appraise their age (Kotter-Grühn et al., 2016). Research has shown that typically, from midlife and onwards, individuals report younger subjective age compared to their chronological age (Kleinspehn-Ammerlahn et al., 2008). Moreover, this trend has been empirically associated with positive outcomes such as enhanced life satisfaction (Mirucka et al., 2016), improved functioning (e.g., Stephan et al., 2013), and higher longevity (e.g., Kotter-Grühn et al., 2009).

In contrast, this favorable bias seems to be thwarted among veterans who suffer from posttraumatic distress. Research among trauma survivors indicates that trauma exposure, PTSD symptoms (e.g., Hoffman et al., 2016; Palgi et al., 2019; Schafer, 2009), and depressive symptoms

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(Avidor et al., 2018) occur simultaneously with reports of relatively older subjective age. In a similar vein, studies among veterans with PTSD symptoms (Avidor et al., 2014; Solomon et al., 2009) or depressive symptoms (Lahav et al., 2018) revealed older subjective ages among this population.

A similar trend has been documented concerning veterans' *perceived health*, which refers to perceptions regarding one's own physical health (Schnurr and Green, 2004; Schnurr et al., 2007). Research indicates that veterans and particularly those with PTSD or depressive symptoms reported more somatic complaints (Bourn et al., 2016; Lahav et al., 2015; Sikharulidze et al., 2017) and negative health-related appraisals (Aversa et al., 2012; Kramarow and Pastor, 2012; Tsur et al., 2019) compared to control groups. Although conducted among samples comprised of relatively young participants, a study among veterans who served in Iraq and Afghanistan revealed that PTSD severity was related to an increased likelihood of rating one's health as poor or fair as well as reporting that one's physical health limits participation in various daily activities (Schry et al., 2015). Along the same line, a systematic review and meta-analysis indicated that PTSD and PTSD symptoms were related to decreases in physical health related evaluations of quality of life in veteran samples (Pacella et al., 2013).

One possible mechanism explaining poor perceived health and older subjective age among veterans with PTSD or depression relates to the accumulation of stress, also known as *allostatic load* (Danese and McEwen, 2012; McEwen, 1998; McFarlane, 2010). According to this perspective, initiation and accumulation of stress require substantial efforts to maintain homeostasis. Short-term stressors demand survival-promoting reactions, which entail the activation of the hypothalamic-pituitary-adrenal axis and the sympathetic-adrenal-medullary system, employing “stress hormones” (Rohleder et al., 2010). While efficient for surviving short-term stressors, the repeated activation of the stress response burdens the body's normal functioning in the face of chronic stressors; thus causing an ‘allostatic load’ that wears down the physiological system, leading to deleterious health related outcomes (Danese and McEwen, 2012).

Humans are more prone to stress-related health impediments than other inhabitants of the natural world (Sapolsky, 2004). In comparison to other animals, whose stress systems are activated mostly in the face of acute life-threatening events, our stress systems are also activated in response to continuous or intermittent perceptions of quotidian events that bare no actual threat, yet maintain an ongoing stress-mode (e.g., work load, driving, social threats, etc.). Thus, while veterans’ PTSD or depressive symptoms may produce stress in their own right and create an overload for the physiological system (McEwen, 2003; McFarlane, 2010), additional stress-evoking phenomena, such as the *imposter phenomenon,* may contribute to health deterioration.

1.1. Impostorism and stress among veterans

The *imposter phenomenon* (Clance and Imes, 1978; Sakulku, 2011) or *impostorism* (Barrow, 2018), are terms that denote the self-perception that one's accomplishments are erroneously highly valued by one's surroundings and the concomitant fear that eventually one will be exposed as a fraud (Barrow, 2018). Typically, those who are in contact with individuals characterized by impostorism perceive them as highly successful and meritorious, but nevertheless those with impostorism fail to endorse such evaluations of themselves, regardless of, and at times as a consequence of, other's expressions of appreciation (Leary et al., 2000; McElwee and Yurak, 2010).

To date, research on impostorism has been predominantly conducted in the sphere of higher education (Parkman, 2016) and the advancement of populations that are considered disadvantaged in this domain (i.e., affirmative action; e.g., Peteet et al., 2015; Stone et al., 2018; Tao and Gloria, 2019). Nevertheless, the singular challenges that combat veterans often face suggest that this population might be susceptible to impostorism. Unlike other survivors of traumatic events, combat veterans are socially constructed as war heroes (Purtle, 2016; Woolf, 2012). The social attribution of heroism, which often exists concurrently with masculine stereotypes (Hinojosa, 2010; Hutchings, 2008), is perceived as an apex of human behavior (Franco et al., 2011) and receives particular prominence in societies that worship heroism (Allison and Goethals, 2016; Klapp, 1949).

Though being perceived as heroes might enable veterans to enjoy social recognition or benefits (Ben-Tzedef, 2017), it might simultaneously eventuate in impostorism. Combat veterans may experience a significant discrepancy between their own perceptions regarding their behavior or achievements while fighting in the battlefield and the heroic qualities that some bestow upon them (Stein & Solomon, 2020). Viewing themselves as less competent and altruistic, more vulnerable, or even morally accountable for wrongdoings during wartime, some combat veterans might feel unworthy of the praise and admiration that they receive as “war heroes.”

Concerned that their “true” self could be exposed as a fraud may pose an additional burden and strain for combat veterans. Given that one's interpretation of situations may be conducive to subsequent stress reactions (McEwen, 2003), veterans' impostorism might contribute to ongoing stress. Specifically, various situations wherein veterans confront the incongruity between their self-perceptions and the “hero” identity attributed to them by society might be interpreted as threatening, giving rise to stress reactions (Feinstein, 2015; Woolf, 2012). These may be added to the numerous stress-evoking paradoxes that amount to the mental health challenges that combat veterans face aside from PTSD (Castro et al., 2015).

Empirical evidence indicates negative consequences of impostorism on individuals’ mental health. A previous study among students found impostorism to be a predictor of mental health (Cokley et al., 2017). Impostorism has been found to be positively correlated with psychological distress (Henning et al., 1998; Peteet et al., 2015), anxiety (Cokley et al., 2017; Cusack et al., 2013; Sonnak and Towell, 2001), and depression (Austin et al., 2009; McGregor et al., 2008). Nevertheless, to the best of our knowledge, impostorism has attracted no scientific attention in the study of somatic implications of accumulated stress in the general population as well as among aging combat veterans.

1.2. The current study

In an attempt to fill this gap, the aim of the present study was to explore the link between impostorism and both subjective age and perceived health among aging Israeli combat Veterans of the 1973 Yom Kippur War. Drawing on the Allostatic model (Danese and McEwen, 2012; McFarlane, 2010) as our point of departure, it was postulated that impostorism contributes to the individual's overall stress and thus bears negative implications for aging veterans' health, which may be evident in negative appraisals regarding their age and health (i.e., relatively older subjective age and poorer perceived health).

Accordingly, it was hypothesized that impostorism would be associated with veterans' old subjective age and negative perceived health. Furthermore, it was hypothesized that impostorism would have a unique contribution in explaining veterans’ old subjective age and negative perceived health, above and beyond the effects of combat exposure, PTSD symptoms, depressive symptoms, chronological age, and health-related behaviors.

2. Method

2.1. Participants and procedure

A cohort of 201 Israeli veterans who participated in the 1973 Yom Kippur War, some of whom were decorated for their meritorious acts of valor on the battlefield, was initially approached in 1991 (T1; for more details see Dekel et al., 2004) and revisited in 2018 (T2). Of the entire cohort, 171 (85% participation rate) participated at T1 and 146 (73%

participation rate) participated at T2.

To create a reliable dataset that accounts for potential dropout biases, the current analyses were conducted only among participants who participated in both waves of measurement (n = 146). Overall, 0–6.2% of data were missing across the study's variables. To decide whether the data had missing values in a pattern that was random (i.e., MCAR; missing completely at random), we conducted Little's Missing Completely at Random (MCAR) test (Collins et al., 2001). The analysis revealed that the data were not missing completely at random, $\chi^2(128) = 279.779, p < .001$. Supplementary analyses indicated that participants with missing data on combat exposure at T1, endorsed significantly lower PTSD symptoms at T1 (t = 7.40, p < .001) than participants without missing data.

As the mechanism of missingness was unknown and there were indications that the missingness was related to the observed data, we assumed that the data were missing at random (MAR; Sidi and Harel, 2018). Missing data were handled with maximum likelihood (ML) via SPSS 25. Compared to conventional methods, such as arithmetic mean, listwise, or pairwise deletion, ML method was recommended as an optimal method for attrition (Collins et al., 2001). Thus, the final sample consisted of 146 participants.

To assure that ML imputation did not lead to biased results, we ran the study's analyses also while utilizing listwise deletion (n = 128). These analyses yielded the same trends of results while utilizing ML imputation (n = 146), therefore suggesting that the ML imputation did not lead to biased findings.

Table 1 presents the demographic characteristics of the participants. The mean age of the participants was 68.4 years (SD = 5.10; range = 51–88). The majority of the sample were secular, with an over-average income. The vast majority reported non-smoking and not consuming alcohol on a regular basis.

Participants were identified via IDF records. They were approached by phone and informed of the purpose of the study prior to being asked to participate. Before filling out the questionnaires, the participants signed an informed consent form. The Tel Aviv University Institutional Review Board (IRB) approved all procedures and instruments.

2.2. Measures

Impostorism, perceived health, subjective age, and depressive symptoms were measured at T2. Combat exposure was measured at T1; PTSD symptoms were measured at T1 and T2.

Table 1
Demographic characteristics and description of 146 veterans participated in the study (n = 146).

	M (*SD*) or (%)
Age, *M* (*SD*)	68.4 (5.1)
Years of education, *M* (*SD*)	12.22 (2.34)
Employment, (%)	
Unemployed	27.8%
Part time	12.8%
Full time	59.4%
Marital status, (%)	
Married	85.5%
Unmarried	14.5%
Religiosity, (%)	
Secular	70.9%
Religious/traditional	29.1%
Income, (%)	
Below-average income	13.4%
Average income	19.9%
Over-average income	66.7%
Smoking, (%)	
Smokers	23.1%
Non-smokers	76.9%
Alcohol consumption, (%)	
Yes	5.6%
No	94.4%

Subjective age (T2). Drawing on subjective age measure (Barak and Schiffman, 1981), and adapted from a previous study, subjective age was assessed by five statements concerning subjective perceptions of age: (a) Felt age: "I feel as though I am …", (b) Age appearance: "I look as though I am …", (c) Behavior age: "I act as though I am …", (d) Age-related interests: "My interests are mostly those of a person …", and (e) Vitality age: "I feel vital as though I am …" compared with one's age group. The average score was used as a composite subjective age score with a higher score reflecting an older subjective age. The measure demonstrated high internal consistency in the current study (Cronbach's α = 0.90).

Perceived health (T2). Participants' perceived health was assessed via three questions concerning health: (a) Becoming ill more easily (i.e., "I think that I get ill more easily compared to people my age"); (b) Having negative expectations regarding health in the future (i.e., "I expect my health to deteriorate"); and (c) Perceived functional difficulties due to health problems (i.e., "During the past month to what an extent did your health hinder your ability to take part in social activities with family members, friends etc.'?)". Participants were requested to rate their agreement with each of the first two statements on a scale ranging from 1 ("*very much agree*") to 5 ("*completely disagree*"). Regarding the third question, participants' responses related to the extent of disturbance on a scale ranging from 1 ("*to a great extent*") to 5 ("*not at all*"). Lower scores on each of the indices represented more negative perceived health. The three domains evaluated in the current study correspond with those commonly assessed when examining the relation between trauma related psychopathology and perceived health (e.g., Ahmadian et al., 2019). Each participants' perceived health final score was calculated as the mean of the three items.

Impostorism. Impostorism was assessed at T2 utilizing the 20-item Clance Impostor Phenomenon Scale (CIPS; Chrisman et al., 1995). The CIPS captures the impostor self-concept in a multifaceted manner, assessing among other things the fear of being evaluated, the fear of failing to reproduce an achievement, as well as the tendency to overestimate others (e.g., "When people praise me for something I've accomplished, I'm afraid I won't be able to live up to their expectations of me in the future"). Respondents were required to indicate the degree that each sentence represents them on a 5-point scale ranging from 1 'not at all' to 5 'extremely'. For the purpose of the current study we used the total score as a continuous variable. The CIPS has strong reliability (Burton, 1961), and has shown high internal consistency in the current study (α = 0.90).

Combat exposure (T1). Combat exposure was assessed via a 20-item questionnaire. The items depicted various scenarios during war (e.g., killed enemy soldiers, witnessed dead Israeli Defense Force soldiers, witnessed dead enemy soldiers, counted dead bodies, etc.). Participants rated their experience of the depicted incidents on a 4-point scale ranging between 0 (*did not experience*) and 3 (*experienced to a great extent*). A final score was calculated as the mean of all answers. This questionnaire was utilized in previous studies among Israeli veterans and demonstrated strong psychometric properties (e.g., Bachem et al., 2019).

PTSD symptoms (T1, T2). PTSD symptoms were assessed via the PTSD Inventory (PTSD-I; Solomon et al., 1993), a well-validated, 17-item, self-report questionnaire. The items on the PTSD-I corresponding to the DSM-IV-TR diagnosis for PTSD (American Psychiatric Association, 2000) were utilized. Respondents rated symptoms experienced in the previous month on a scale ranging from 0 (not at all) to 4 (almost always). The number of positively endorsed symptoms was calculated by the items answered as 3 (often) or 4 (almost always), as these responses best capture the DSM–IV–TR criteria of a persistent experience of trauma symptoms. This was the most recent edition of the DSM to which the PTSD-I could be adequately adapted to and used comparatively with criteria from the time that the study was initiated (Solomon et al., 1993; Solomon and Horesh, 2007). In this study, total

scores of PTSD symptoms at T1 and T2 were computed. Internal consistencies were high (α = 0.81, 0.93 at T1 and T2, respectively).

Depressive Symptoms (T2). Depressive Symptoms were assessed using the depression subscale of the Brief Symptom Inventory-53 (BSI-53; Derogatis and Melisaratos, 1983) that consists of six items. Respondents were asked to indicate to what degree they experienced each symptom of depression over the last two weeks on a 5-point scale ranging from 0 (*not at all*) to 4 (*extremely*). A final score was calculated as the mean of all answers. Internal consistency was high (α = 0.90).

Control variables. Participants' chronological age, and health-related behaviors served as control variables. Health-related behaviors consisted of cigarette smoking (yes/no) and alcohol abuse (yes/no).

2.3. Analytic strategy

To explore the associations between impostorism, subjective age, and perceived health, Pearson correlation analyses between the variables were conducted. To explore the unique contribution of impostorism in explaining subjective age and perceived health, above and beyond the effects of age, combat exposure, health-related behaviors, depressive symptoms, and PTSD symptoms, two linear regression models were conducted. In each regression analysis, either preceived health or subjective age served as the dependent variable, while impostorism, combat exposure, depressive symptoms, and PTSD symptoms served as independent variables. Chronological age and health-related behaviors served as control variables. To determine whether including the independent and control variables in the regression analyses was adequate, we assessed for multicollinearity and examined the variance inflation factors (VIFs) for the study's variables. Findings indicated that all were within the acceptable range (all VIFs were fewer than two), indicating that multicollinearity was not a problem in the analyses.

3. Results

The Pearson analyses (see Table 2) revealed significant associations between impostorism, perceived health, and subjective age. Higher scores of impostorism were related to lower scores of perceived health, indicating more negative perceptions regarding one's health. In addition, higher scores of impostorism were related to higher subjective age, indicating older subjective age.

Regression models (see Table 3) were significant and explained 30.0% of the variance in subjective age, $F(8,137) = 7.32$, $p < .001$; and 33.0% of the variance in perceived health variance, $F(8,137) = 8.41$, $p < .001$. As hypothesized, impostorism was significantly associated with both subjective age and perceived health, above and beyond the effects of chronological age, combat exposure, health-related behaviors, depressive symptoms, and PTSD symptoms.

Table 3
Regression Standardized Coefficients Predicting Subjective Age and Perceived health (n = 146).

	Perceived health		Subjective age	
	SE	β	SE	β
Age	.46***	.08	-.15*	.07
Combat exposure (T1)	-.04	.08	.04	.08
Smoking (T1)	.09	.08	-.03	.08
Alcohol consumption (T1)	.12	.08	.11	.08
PTSD symptoms (T1)	-.06	.08	-.01	.08
PTSD symptoms (T2)	-.18	.13	-.19	.13
Depressive symptoms (T2)	.34*	.13	-.12	.13
Impostorism (T2)	.19*	.08	-.39***	.08

Note. Values for smoking and alcohol consumption - '0' = no, '1' = yes * = $p < .05$; *** = $p < .001$.

Higher scores in impostorism were associated with older subjective age, as well as with more negatively perceived health.

4. Discussion

The self-perception that one's accomplishments are erroneously highly evaluated by others and the concomitant fear that eventually one will be exposed as an imposter (i.e., impostorism; Barrow, 2018) could categorize various situations as stressful. To date, research has indicated that the manifestation of such an imposter phenomenon hinders mental health and intensifies emotional distress (Austin et al., 2009; Peteet et al., 2015; Sonnak and Towell, 2001).Within this framework, the present investigation examined whether impostorism plays a role in aging veterans' subjective age and perceived health. The findings indicated that the implications of impostorism go beyond the mental domain and might shape the somatic realm as well. Supporting our hypotheses, the results revealed associations between higher rates of impostorism and negative appraisals of age and health, which were manifested in older subjective age and poorer perceived health (see Table 2). Further supporting the hypotheses of the study, these associations were found above and beyond the effects of veterans' combat exposure, depressive symptoms, PTSD symptoms, chronological age, and health-related behaviors (i.e., cigarette smoking and alcohol abuse; see Table 3). It should be noted that although subjective age and perceived health rely upon individuals' evaluation, research has suggested that these appraisals are predictors of detriments in mental and physical health (Spuling et al., 2013; Westerhof et al., 2014) as well as mortality (Kotter-Grühn et al., 2009; Schnurr and Green, 2004). Hence, the present findings suggest that aging veterans who suffer from impostorism might be particularly susceptible to the somatic ramifications of its associated distress.

Table 2
Inter-correlations between the study variables (n = 146).

Measure	1	2	3	4	5	6	7	8	9	10
1. Age	1									
2. Combat exposure (T1)	.17*	1								
3. Smoking (T1)	-.13	.16	1							
4. Alcohol consumption (T1)	-.10	-.02	.25**	1						
5. PTSD symptoms (T1)	-.16*	.04	.17*	.22**	1					
6. PTSD symptoms (T2)	-.08	.19*	.12	.18*	.38***	1				
7. Depressive symptoms (T2)	-.12	.04	.09	.11	.30***	.82***	1			
8. Impostorism (T2)	-.06	-.09	.01	.15	.27**	.34***	.40***	1		
9. Subjective age (T2)	.41***	.01	.05	.11	-.01	.12	.21*	.24***	1	
10. Perceived health (T2)	-.10	.01	-.02	.02	-.17*	-.39***	-.41***	-.48***	-.25**	1
M	68.4	1.64	–	–	1.46	2.37	.44	2.14	51.62	4.13
(*SD*)	(5.1)	.66	–	–	2.41	3.55	.71	.55	8.85	.89
Range	37.0	2.79	–	–	13.0	16.0	3.61	3.30	44.0	4.00

Note. Values for smoking and alcohol consumption - '0' = no, '1' = yes * = $p < .05$; ** = $p < .01$; *** = $p < .001$.

Three explanatory routes may serve to further our understanding of the present findings. The first is rooted in the Allostatic Model (Danese and McEwen, 2012). According to this perspective, veterans' imposter fears and anxieties may lead to negative interpretation of various situations as threatening, and consequently to ongoing stress reactions (McEwen, 2003). These reactions, in turn, wear down the physiological system, and gradually lead to health detriments and accelerated aging, which are reflected in negative perceived health and older subjective age.

A second explanation for the current findings refers to impostorism in the specific context of resource loss associated with stress management and psychological trauma. According to the conservation of resources (COR) theory (Hobfoll, 2002), people are motivated to gain resources and avoid losing resources and, therefore, act in manners that further these goals. Concomitantly, the negative effects of trauma exposure thwart resource gain and promote resource loss (Hobfoll, 2001). Resources may be defined as objects, personal characteristics, conditions, or energies valued as means that facilitate the achievement of personal goals or otherwise are conducive to securing additional valued resources (Diener and Fujita, 1995; Halbesleben et al., 2014; Hobfoll, 2001). Hobfoll (2001) enumerates 74 resources that are available to individuals. The list includes resources related to self-esteem such as self-perceptions of success and accomplishment as well as relational resources associated with the quality of social ties, including affection from others and the loyalty of friends. Exposure to a traumatic event, such as combat, poses a threat to existing resources as it may deplete an individual's resources in the attempt to cope. This depletion of resources may lead to intensified vulnerability (King et al., 1999), as individuals who possess fewer resources are the most susceptible during the acute posttraumatic stage, as well as the more chronic stages when they face further demands in the aftermath of combat.

From a COR theory perspective, impostorism might be understood as a personality predisposition that hampers veterans' capacity to maintain resources. One might suggest that veterans who suffer from impostorism do not only experience resource loss due only to the deleterious toll of combat, but they also struggle to utilize potential social resources. As they conceal their vulnerability and eschew potential social support and self-enhancement offered by praises that they receive from others (Gardner et al., 2019), they cannot draw upon these to replenish their psychological resource reservoirs. Furthermore, the imposter fears of being exposed as fraud might convert potential resources linked with the veterans' accomplishments into taxing experiences (e.g., compliments become threats). In this way, impostorism among veterans may exacerbate their resource deficiency, leading to intensified distress associated with maladaptive coping (Whitman and Shanine, 2012), which may result in negative appraisals of health and age.

Lastly, the present findings regarding the relations between impostorism, subjective age, and perceived health, may reflect the usage of the somatic channel as a mechanism for inner conflict resolution (Waitzkin and Magana, 1997). Individuals who suffer from impostorism may experience opposing emotions and needs. On the one hand, they may be concerned that others would see them for what they truly are, which is, according to their perception, a fraud. On the other hand, they may be eager to unburden themselves from the cumbersome façade they labor to maintain and to express their 'true self', as vulnerable as that self may be. Conveying their authentic negative self-perceptions via the somatic channel may serve as a resolution for this conflict, enabling reserved and secretive manifestations of imposters' 'true self' via the somatic territory without the risk of being fully exposed by others. Thus, the negative appraisals of old subjective age and poor perceived health that were associated with veterans' impostorism in the current study may reflect this phenomenon of communicating negative self-perceptions through the somatic channel.

Undeniably, the various explanations above are, at this point, speculative. Future research is needed in order to empirically determine the mechanism that links impostorism to maladaptive perceptions of physical health and subjective age.

4.1. Study limitations

The present findings must be understood in the face of several limitations. First, the current study relied on self-report measures, which may be subject to response biases and shared method variance. Second, the lack of data regarding participants' objective medical state do not enable distinguishability between the subjective appraisals and actual level of health. Future studies should include additional methods of data collection such as clinical interviews and biological indicators. Third, the current investigation included concurrent (i.e., cross-sectional) measures of impostorism, subjective age, and perceived age. Hence, the study design precludes any causal inferences and one cannot infer the directionality of the associations found. Fourth, the present study did not include data regarding potential mechanisms within the relationship among impostorism, subjective age, and perceived age, such as somatization. Future longitudinal studies should assess these variables to reveal the processes underlying the relationship among impostorism, subjective age, and perceived physical health. Lastly, it is important to point out that the present study did not explore whether impostorism among veterans was related to their traumatic past, or whether the imposter phenomenon has singular focus among this population. That is to say, that the study did not examine why or in what domains the veterans view themselves as imposters. While there may be a uniform answer to this question, there may also be individual differences in this respect. Future qualitative studies may delve into this aspect of impostorism in this population and establish whether some domains are more susceptible to the deleterious impact of impostorism than others.

5. Conclusions

Notwithstanding these limitations, this study has important theoretical and clinical implications. The current findings suggest that impostorism might play a significant role in exacerbating aging veterans' negative appraisals of age and health, which ultimately may predict health impediments and mortality (e.g., Kotter-Grühn et al., 2009; Spuling et al., 2013; Westerhof et al., 2014). Our findings indicate the need for clinicians who treat veterans to inquire about patients' impostorism and to encourage authentic expressions and self-disclosure within therapy and beyond. Though authentic expressions and self-disclosure are essential components in psychotherapy in general, the present study implies that they might be particularly crucial when treating veterans who evince high levels of impostorism. Enabling veterans to express feelings of self-doubt regardless of their achievements and accomplishments may lessen the stress and internal conflict stemming from impostorism and may alleviate their suffering.

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CRediT authorship contribution statement

Yael Lahav: Conceptualization, Methodology, Writing - original draft. **Jacob Y. Stein:** Writing - review & editing. **Rachel Hasson:** Writing - review & editing. **Zahava Solomon:** Supervision.

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