Does Self-Compassion Have A Role in Resource Index and Vulnerability Index Of Resilience in First-Year University Students?

Imam Setyawan[1]

{imam.setyawan@live.undip.ac.id[1]}

Faculty of Psychology Diponegoro University, Prof. Mr. Sunario, SH. Street, Tembalang Campus, Semarang, Indonesia 50275[1]

Abstract. This research aims to prove whether empirically self-compassion has a role in the resource index and vulnerability index (as a resilience score index) in first-year university students. A descriptive quantitative approach was used to see existing correlation and role, with simple linear regression analysis as the primary statistical test. The subjects were 81 first-year students (12 males and 69 females) at universities in Central Java, obtained through convenience sampling. Data collection was carried out using the Indonesian version of the Resiliency Scale for Children and Adolescents (RSCA) and the self-compassion scale. Self-compassion plays a positive role in the resource index (R= .36, p< .001) with an effective contribution of 13.2% (R2= .132) and a negative role in the vulnerability index (R=- .49, p< .001) with an effective contribution of 24.4% (R2= .244). Self-compassion has been shown to play an essential role in the resilience of first-year university students.

Keywords: self-compassion; resource index; vulnerability index; resilience

1 Introduction

The initial year of higher education can prove to be a formidable period for students, characterized by numerous challenges and impediments that necessitate navigation. During this inaugural year, students may confront a plethora of difficulties that, if inadequately addressed, could culminate in psychological strain, suboptimal academic outcomes, and diminished overall well-being [1], potentially prompting them to seek mental health assistance [2]. Commonly encountered challenges during the transitional phase to university life encompass insufficient social support, feelings of isolation, homesickness (particularly for those relocating to or from the institution), rigorous academic demands, financial hardships, and anxieties regarding prospective debt [3], [4]. Furthermore, students may grapple with a diminished sense of efficacy, alongside difficulties in establishing their identity and role within an unfamiliar social and academic milieu. Coming to terms with these challenges is important in the early years of

college as it can predict higher education success. Research consistently shows that students who experience difficulties in adjusting to university are at greater risk of terminating their studies in the first and second year of their studies [5], [6].

Resilience refers to an individual's ability to adapt well when faced with challenges that can threaten daily functioning, coping skills, and the future [7]. Anxiety, feelings of helplessness, and physical symptoms such as heart palpitations often arise when a challenge is seen as too stressful, overwhelming, and intense [8]. Resilience is needed by individuals so as not to drown in the downturn they feel.

The Three-Factor Theory of Personal Resilience [9] pertains to individual resources that facilitate the navigation of challenges, conceptualized as a resource index. The two components constituting the resource index are sense of mastery and sense of relatedness [10]. Sense of mastery encompasses an individual's assessment of their capacity to confront specific issues, which is comprised of the subscales of optimism, self-efficacy, and adaptability [9]. Conversely, sense of relatedness reflects an individual's awareness of their connection to the surrounding context, which includes the subscales of trust, support, comfort, and tolerance [9]. This score index illustrates an individual's personal strength in equivalent measures [11]. The resource index, incorporating both sense of mastery and sense of relatedness, plays a crucial role in the examination of individual resilience, as individuals who perceive themselves as possessing personal strengths, in accordance with resilience theory, are likely to exhibit greater resilience and display fewer psychopathological symptoms [12].

Individuals are classified as resilient not solely based on a high resource index but also on a low vulnerability index [13]. The vulnerability index is derived from the assessed disparity between the inherent risk (emotional reactivity) and the individual's perception of personal strengths (resource index) [14]. Emotional reactivity refers to the propensity of individuals to exhibit emotional responses to stimuli, which encompasses subscales of sensitivity, recovery, and disturbance [9] A low vulnerability index is achieved when an individual's personal resource score (resource index) exceeds their emotional reactivity score [15]. In contrast, a high vulnerability index score signifies that the individual's personal strengths are insufficient compared to their level of emotional reactivity [12]. The vulnerability index is critical in assessing individual resilience, as this index score reflects the necessity for individuals to possess personal strengths that surpass their personal risks in order to maintain robust resilience.In a review of the nature of mindfulness and resilience to trauma, Thompson, Arnkoff, & Glass stated that mindfulness orientation and acceptance of experiences help prevent ruminative and depressive thoughts, thereby increasing psychological resilience after trauma [16]. Resilience is more prominent in mindful individuals, in part because they engage in less rumination and worry habits [17, [18], but maintain a more solution-focused outlook. Mindfulness shows potential for fostering resilience because mindful people are better able to respond to difficult situations without reacting automatically and non-adaptively. Mindfulness can be a predictor of resilience [19]. The combination of mindfulness and acceptance of self and experience can be seen comprehensively in self-compassion.

Self-compassion is a form of self-acceptance that represents the level of acceptance of undesirable aspects of ourselves and the life we go through [20]. According to Neff, self-compassion is described as an attitude of caring and kindness towards oneself when facing various difficulties in life or shortcomings in oneself [21]. Individuals with higher self-

compassion have an understanding that suffering, failure and shortcomings are part of human life. Neff emphasized that the theoretical basis of self-compassion is not based on evaluating one's own or others' performance to meet ideal standards, but rather on the application of feelings of compassion as a recognition of common humanity. Self-compassion consists of three aspects: (a) kindness and understanding of oneself (self-kindness), (b) the ability to see one's experience as a broad human experience (common humanity), (c) mindfulness, which is the ability to handle painful thoughts and feelings with full awareness [21].

Growing evidence suggests that self-compassion is an internal resource that fosters resilience. Its aspects facilitate short-term and long-term adaptation processes. Several studies have shown that self-compassion during adolescence is a particularly valuable attribute, as it appears to protect against common developmental vulnerabilities such as feeling isolated in experiences of personal struggle [22], and mood instability, such as increased anxiety and depression [23]. In the challenging conditions of the first year, it is important to consider potential protective factors that may reduce students' vulnerability to mental health difficulties and facilitate their adjustment to the university environment. Therefore, self-compassion is particularly relevant to the current study. There are various studies that look at the role of other variables on resilience, such as forgiveness [24], [25]. There are many studies that examine the role of self-compassion on resilience, in school students [26], in college students [27], [28], [29], in the workplace setting [30] and various other studies. However, studies that examine the role of self-compassion on the resource index and vulnerability index of first-year college students' resilience separately are still limited. It is important to look at the role of self-compassion separately, so that the comparison of the role on the two resilience score indices can be known. This study aims to empirically prove whether self-compassion has a role in the resource index and vulnerability index (as a resilience score index) in first-year students. The hypothesis developed is that there is a significant role of self-compassion in the resilience score index.

2 Method

A quantitative descriptive approach was used to examine the relationship and role of self-compassion on the resource index and vulnerability index of resilience. Simple linear regression analysis was used as the main statistical test to prove the existing hypothesis. The subjects of the study were 81 students (12 males and 69 females) in their first year of college in Central Java, obtained through convenience sampling.

Data collection was carried out using the Indonesian version of the Resiliency Scaled for Children and Adolescents (RSCA) (α= .88) and the self-compassion scale (α= .91). The Indonesian version of the RSCA used was an adaptation of Puspitaningrum & Pudjiati, from the RSCA compiled by Prince-Embury in 2007 [31]. The RSCA consists of 64 items divided into 3 main scales, namely sense of mastery (20 items), sense of relatedness (24 items), and emotional reactivity (20 items). From the three scales, two index scores were obtained, namely the resource index (Cronbach's α = .70) and the vulnerability index (Cronbach's α = .70). The resource index score is obtained by adding the sense of mastery and sense of relatedness scores. The vulnerability index score is obtained from the emotional reactivity score minus the resource index score. Meanwhile, self-compassion is measured using the self-compassion scale from Hatari and Setyawan [27]. The self-compassion scale is arranged based on aspects of self-

kindness, common humanity and mindfulness, consisting of 30 items. Data analysis only used JASP 0.18.3 statistical software.

3 Result and Discussion

The research data were obtained from 81 first-year students (12 males and 69 females) of universities in Central Java, through convenience sampling technique. The subjects were aged between 18-20 years (M=18.53). To prove the research hypothesis, a simple linear regression test was conducted, with the results shown in table 1.

Table 1. Simple regression test results

Variables	Regression Coefficient (R)	F	Effective Contribution (%)	p	Regression equation
Self-compassion and resource index	.36	17.533	13.2	$< .001$	$y = 83.291 + 0.44x$
Self-compassion and vulnerability index	- .49	25.43	24.4	$< .001$	$y = -23.636 + (-0.822x)$
Self-compassion and sense of mastery	- .41	15.862	16.7	$< .001$	$y = 39.129 + 0.214x$
Self-compassion and sense of relatedness	.296	7.587	8.8	$< .001$	$y = 44.162 + 0.226x$
Self-compassion and emotional reactivity	- .505	26.988	25.5	$< .001$	$y = 59.656 + (-0.381x)$

3.1 Self-compassion and resource index

The results of the simple regression test show a positive role of self-compassion on the resource index, with an effective contribution of 13.2%. Self-compassion significantly provides a positive role on the resource index. The simple linear regression test produces the following regression equation, $y = 83.291 + 0.44x$, which shows that every increase in self-compassion will be followed by an increase of .44 in the resource index value.

3.2 Self-compassion and vulnerability index

A negative role is shown by self-compassion on the vulnerability index. Compared to the resource index, self-compassion provides a greater effective contribution to the vulnerability index, which is 24.4%. The role given by self-compassion on the vulnerability index is significant with a negative relationship direction. The regression equation obtained between the

two variables is y = -23.636 + (-0.822x). This equation illustrates that every increase in the self-compassion score as a predictor will be followed by a decrease of .822 in the vulnerability index value.

In addition to the two resilience score indices, a simple regression test was also conducted on the role of self-compassion in the three aspects of resilience, namely, sense of mastery, sense of relatedness and emotional reactivity.

3.3 Self-compassion and sense of mastery

The positive and significant role of self-compassion in sense of mastery can be seen from the results of the simple regression test. An effective contribution of 16.7% is shown by self-compassion. With the regression equation y = 39.129 + 0.214x, it shows an increase of .214 in sense of mastery, for each increase in the self-compassion score.

3.4 Self-compassion and sense of relatedness

Similar to sense of mastery, the results of the simple regression test show that self-compassion has a significant positive role in sense of relatedness. However, the effective contribution is smaller, which is 8.8%. The regression equation obtained is y = 44.162 + 0.226x, which means that each increase in the self-compassion score as a predictor will be followed by an increase of .226 in the sense of relatedness value.

3.5 Self-compassion and emotional reactivity

The last regression test was conducted on self compassion and emotional reactivity. The results of the statistical test showed a significant negative role of self-compassion on emotional reactivity. Compared to the contribution to other variables and score indices, self-compassion showed the largest effective contribution (25.5%) to emotional reactivity. Meanwhile, the regression equation obtained was y = 59.656 + (-0.381x), meaning that every increase in the self-compassion score will be followed by a decrease of .381 in the emotional reactivity value.

Tabel 2. Social Support

The highest source of social support	Mean	
	vulnerability index	resource index
Father & mother	-88.093	118.535
Father	-81.000	112.857
Mother	-90.786	122.500
Siblings	-84.000	115.000
Friends	-70.200	107.500
No social support	-51.800	87.000

This study also tried to identify the greatest source of social support felt by the subjects, and the results, most subjects chose father & mother (53.1%) as the highest source of social support, followed by mother (17.3%), friends (12.3%), father (8.6%), none (6.2%), siblings (2.5%).

However, the highest average resource index was in subjects who stated that their greatest source of social support was their mother, followed by social support from father & mother, siblings, father, friends and no social support. While the highest average vulnerability index was

in subjects who stated that their greatest source of social support was none, followed by social support from friends, father, siblings, father & mother and mother (see table 2).

University students tend to have increased vulnerability to mental illness which reflects low resilience in dealing with stress and academic change [32]. The purpose of this study was to empirically prove the role of self-compassion on the resource index and vulnerability index (as a resilience score index) in first-year students. The results obtained from the study on first-year students showed that there was a significant role of self-compassion on the resource index and vulnerability index (as a resilience score index). Self-compassion has a significant positive role on the resource index, meaning that the higher the self-compassion, the higher the resource index, and vice versa. Adolescents, in this case first-year university students, who develop self-compassion, actively being kinder to themselves in difficult times (which is the self-kindness aspect of self-compassion), can increase their sense of self-esteem. When adolescents are aware that they will be kind to themselves in difficult situations, they are more comfortable taking positive risks [26]. This dynamic will encourage an increase in self-mastery which is part of the resource index. The common humanity aspect, one of which is the awareness that others also sometimes fail and experience negative emotions as a result, provides a much-needed sense of social support and "belonging" [33], and encourages the acceptance of new experiences. Increases in self-relatedness, another part of the resource index, will be driven by the sense of support and comfort that first-year students have. The results showing the positive role and contribution of self-compassion on self-mastery and self-relatedness separately, strengthen the significance of the role of self-compassion on the resource index of first-year students' resilience.

On the other hand, self-compassion has a significant negative role on the vulnerability index. Increasing self-compassion will decrease the vulnerability index, conversely, the lower the self-compassion, the higher the vulnerability index. A plausible explanation for the relationship between self-compassion and the vulnerability index of resilience is that the mindfulness aspect of self-compassion helps first-year students stay grounded in challenging times, thereby enabling them to respond constructively, rather than ruminating or reacting impulsively [33]. Mindfulness and self-kindness would likely lead to less time spent ruminating and in other negative emotional states [26]. The role of the vulnerability index is reinforced by the results of a separate simple regression test, which shows a negative-significant role of self-compassion on emotional reactivity. When self-compassion successfully suppresses emotional reactivity, it will widen the gap between the resource index and the vulverability index, and ultimately increase the resilience of first-year students.

The effective contribution of first-year students' self-compassion to the vulnerability index (24.4%), is greater than the contribution to the resource index (13.2%). This may be supported by the reality that psychological vulnerability is actually an inseparable part of the individual. Psychological vulnerability is actually a natural human condition and each individual is given a level of vulnerability that can cause psychological problems when experiencing stressful conditions. Thus, the ability to see one's own experience as a broad human experience, as one part of self-compassion, plays a significant role in how first-year students respond to vulnerability. Integration with full awareness in developing kindness and understanding of oneself, will make first-year students able to suppress this vulnerability at a compromise level.

Self-compassion makes individuals have a positive perception of themselves, and experience a high level of connection with others [26]. This condition will help first-year students to increase self-mastery and self-relatedness which make up the resource index. The higher contribution of self-compassion to the vulnerability index, with a negative role direction, indicates that self-compassion has helped the resource index to develop higher than emotional reactivity. As stated by Prince-Embury that the vulnerability index will be low when the resource index score is higher than the emotional reactivity score [15].

With self-compassion, first-year students can optimize their resource index and reduce the vulnerability index. Students face stressful challenges by not following the tendency to be emotionally reactive in responding to something, even to failure. Those who face academic failure in a warm, accepting way, and develop self-compassion, tend to be at peace with themselves and continue their lives with the drive to improve themselves; for example, making changes to study habits [34]. Cultivating empathy and enhancing academic self-compassion will be significant resources for students as they foster a positive perspective on the challenges inherent in the transitional processes of their inaugural year in higher education [35]. Students can adeptly recontextualize vulnerability by exemplifying emotional fortitude, cultivating interpersonal relationships, engaging in resilient collaboration, and initiating profound and genuine impact within their relationships, leadership roles, and overall interactions.

Regarding the results of the identification of the largest sources of social support for first-year students, they felt that joint support from fathers and mothers was the most significant source. Social support is a form of concern, appreciation, information and other forms given by people around the individual, and can help him overcome the problems faced every day [36]. According to Ye et al., emotional support that is usually obtained by students in the form of empathy, attention, and concern [37]. Parental support as the closest caregiver and a good collaboration of motherhood and fatherhood, has a meaningful value for first-year students, with various challenges and adaptations that must be faced. Support provided by parental partners to children is identified as an important protective factor in increasing academic resilience [38]. However, specifically related to the resource index and vulnerability index, maternal social support showed the highest level. It is very likely that this is related to Craig's findings that mothers spend more time with their children than fathers [39]. So, it is more likely to provide higher social support in intensity and frequency.

Although within the scope of Central Java Province, this study used a relatively limited number of subjects. Further research can be developed with a more representative sample and taken using probability sampling. The validation of the research hypothesis elucidates the necessity for enhancing self-compassion among first-year students, thereby augmenting its significance in elevating the resource index and diminishing the vulnerability index. Self-compassion itself is modifiable [40], [41], [42], [43], [44], so efforts can be made to improve self-compassion. However, this study is limited to the correlational domain, and does not offer any interventions. Further studies should be developed to examine effective interventions that can be used to foster and enhance self-compassion, thereby strengthening the resilience of first-year students.

4 Conclussion

Self-compassion has a significant role in the resource index and vulnerability index of resilience, where a positive and significant role is shown by self-compassion towards the resource index, conversely a significant negative role is shown by self-compassion towards the vulnerability index. In general, self-compassion has a positive role in the resilience of first-year students.

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