

SELF-COMPASSION AS PREDICTOR OF STRESS AND COPING STRATEGIES: A STUDY ON UNDERGRADUATE STUDENTS

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Abstract

The present study explored the relationship between self-compassion as predictor of stress, and coping strategies in undergraduate students. Data of 234 undergraduate students were selected from Karachi, Pakistan. It was hypothesized self-compassion would be a predictor of perceived level of stress and coping strategies and there will be a significant difference in levels of self-compassion, levels of perceived stress and coping strategies between male and female undergraduate students. Convenience sampling was used to collect data. The participants gave demographic information and filled the Self-Compassion Scale - short form (SCS-SF), Perceived Stress Scale-10 (PSS-10) and Brief COPE scale. Correlation, Regression, Independent Sample *t*-Test and ANOVA were used for analysis of results. Results verified that self-compassion is related to coping strategies and there is a difference in levels of self-compassion between boys and girls. Implications of the study are discussed.

Keywords: *self-compassion, perceived stress, coping strategies, undergraduate students*

Self-compassion is a form of compassion that reassures individuals when they feel inadequate or experience failure. It involves a sympathetic attitude towards one's self when mistakes are made and failure ensues, and rather than evaluating oneself harshly a sympathetic approach is taken towards one's self (Gilbert et al., 2004, Neff, 2003). Literature shows that self-compassion leads to wellbeing of an individual. According to Leary et al., (2007), it is associated with more productive and less self-critical responses to negative life events occurring every day. Breines et al., (2012) found that it promotes healthy responses when we do a mistake, and is linked to less negative response to academic failure (Neff, et al., 2005). In their study, Krieger et al., (2015), found self-compassion was associated with less perceived stress on daily basis, they have fewer negative moods and have more positive moods. Self-compassion could be inborn trait and it could be adapted as well. Trait self-compassion is seen as an inherent strategy of emotion regulation in making an individual more accepting and less judgmental towards possible internal and external stressors (Svendsen et al., 2016).

Stress can be experienced from our environment, our body, our thoughts and from all life events (Blake, 2017; Tachè et al., 1985). Stress becomes negative when we face challenges without break between stressors. It has the ability to negatively impact on our lives psychologically, emotionally and physically. For example, it can cause panic attacks, apprehension, anger, irritability, fear, frustration, sadness, restlessness, excessive worries etc. (Mental Health Foundation, 2020; Annu, 2005).

Researches have shown that both real and perceived stress are experienced in the same manner. Grobecker (2016) mentioned in her study that people evaluate their real or perceived situations in same way and respond to stress as a threat. In the process of dealing with stress, coping mechanisms pursue to conquer, minimize and/or tolerate stress that occurs in everyday life. Coping strategies are specific steps that individuals adapt to manage stress (Al-Dubai et al., 2011). These coping strategies become individual style to face and deal the stress. They are generally categorized as emotion-focused/ non effective or problem-focused/ effective coping. They can be also either positive or negative. Positive strategies are those that are proved to be effective in satisfactorily dealing with stress (Seaward, 2004). Rathod et al. (2011) found in their study that people seek support mostly in stressful situation which is a positive approach to deal stress and as a negative coping strategy they found that most of the people opted worrying, going on as if everything is fine and driving self-harder.

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Like everyone, students also have many stresses which could be of personal and academic in nature. They face these stresses throughout their student life and it has very deep impact on their wellbeing. Students experience high levels of stress in many areas of life (Dunkel-Schetter et al., 1990). Colleges and universities have stressful environment which includes academic pressure on top as they are expected to learn and master a huge amount of knowledge and skills. Shah et al., (2010) also found in their research that students have higher level of perceived stress. According to Pascoe et al., (2019) students in higher education perceive academic life as stressful and challenging. Stressors have negative impact on students' wellbeing including physical, emotional and psychological. Generally, academic institutes are more focused on academic achievements which are essential but only focusing on academic achievements and ignoring their wellbeing is not enough. Only few colleges and universities realize the fact that only spending on academics cannot be beneficial for students for long time (Zahra, 2010). While some amount of stress is essential for students as it acts as a motivation for students, excessive stress can interfere with their daily functioning (Malik, 2018). Rizwan (2011) found in his study that academic stress has led number of universities going students towards hopelessness, depression and even in extreme cases students attempted suicide. Some of the stressors students face during college/university life includes financial stress, family expectations, deadlines, roommate stress if living in a hostel, academic deadlines, maintaining lifestyles, peer pressures, intimate relationships, starting a professional career etc. (Malik, 2018). Fasoro et al. (2019) suggested that students should be taught coping skills to deal with stress by developing coping strategies.

Literature has shown that students coping strategies might affect their academic performance as well. A result of study done by Kausar (2010) on coping and academic stress among students shows that students coping methods are different from others and they are reflected on their personality which has impact on their coping styles. Struthers et al., (2000) found in their study that problem-focused coping and motivation influenced student's academic stress and grades rather than emotion-focused coping. Jose et al., (2019) also found in their study that the students who were under less stress and more in problem-focused coping were also the students who made more academic achievement. Khater, et al., (2014) study revealed that students sometimes use combined strategies of coping that include problem solving and avoidance behaviors. If the person uses effective coping strategy i.e., problem focused, emotions can be adjusted and balanced ultimately it reduces the negative effects of stress.

Along with other factors as self-compassion also have impact on stress and coping styles. While examining the association between self-compassion, wellbeing and distress among students, Fong et al. (2016) found that higher self-compassion was associated with lower distress in students. According to Allen et al. (2010), people having self-compassion perceive and deal stressful situations in ways that

improves coping. Kyeong (2013) also found that self-compassion moderates the relationships between psychological well-being, burnout and depression of university students. Zhang et al. (2016) checked self-compassion, emotion and chronic stress of students. They found that self-compassion had positive effect on student's affect and further they found that it was negatively related to stress related to learning and negative affect.

Researchers suggest that self-compassion is a healthy and adaptive strategy in times of emotional sufferings. According to Australian Bureau of Statistics (2007; 2010), only few researches have been conducted to investigate the possible facilitating role of self-compassion on the relationships between the factors that might contribute to psychological issues e.g., stress among adolescent and young adult populations. This makes it important to explore the relationship of self-compassion with perceived level of stress and effective coping strategies among undergraduate students. Furthermore, it emphasizes the need to investigate the relationship of self-compassion as predictor of perceived stress and coping strategies in undergraduate students. Additionally, to see the gender role on levels of self-compassion, levels of perceived stress and coping strategies can be another objective. Following hypotheses were formulated after literature review.

1. There will be a negative relationship between self-compassion and perceived stress level among undergraduate students.
2. Self-compassion would be a predictor of perceived level of stress among undergraduate students.
3. Self-compassion would be a predictor of problem focused coping strategies among undergraduate students.
4. There will be a significant difference in levels of self-compassion, levels of perceived stress and coping strategies between boys and girls.

The present study was conducted to assure students will benefit and learn from the results. Thus, they will be motivated to learn healthy coping with high self-compassion.

It was also aimed to help psychologists and student counselors in developing intervention programs such as counseling programs and seminars for students to enhance their self-compassion, reduce stress level and educate effective coping strategies. Student counselors may develop also positive interpersonal and intrapersonal skills in students so that they become more productive individual and live healthy life.

Further the study would also help teachers. Seminars with teachers can be developed in which they can learn about self-compassion and its effects on students. Thus, they will be able to understand more about stress of students and learn how to deal them so that students' self-compassion is enhanced.

This study was also aimed to benefit researchers, as it will help them to do research on self-compassion, perceived stress and coping strategies with different population such as with school going students, master level students and post graduates even with different professionals by overcoming the limitations of the current study.

Method

Sample

A convenient sample of 234 undergraduates was taken from different colleges and universities of Karachi, Pakistan. Among them 158 were

females and 76 were males and their ages ranged from 18 to 25 ($M = 20.73$ $SD = 1.906$) years.

Table 1

Demographic Characteristics of the Participants (N=234)

Demographic Variable	N
Age	
18-19	66 (28.21%)
20-22	126 (53.85%)
23-25	42 (17.94 %)
Gender	
Males	76 (32.48%)
Females	158 (67.52%)
Family structure	
Joint family	50 (21.36%)
Nuclear family	184 (78.64%)
Family Monthly Income	
Below 50,000	24 (10.26%)
50,000-99,000	136 (58.11%)
1 lac +	74 (31.7%)

Note: N= Number of participants, %=Percentage of participants

Instruments

The Self-Compassion Scale, Short Form (SCS-SF). Raes, Pommier, Neff and Van Gucht (2011) developed and validated the SCS-SF, which comprises of 12 items measured on a 5-point Likert-type scale (Almost Never “1” to Almost Always “5”), where negative items are reversed scored. The composite scores of SCS-SF range from 12-60 where higher scores reflect greater self-compassion. The scale has adequate internal consistency (Cronbach alpha is $\alpha = .86$ for all samples) and a near perfect correlation to the SCS long form ($r > .97$) for all samples (Raes et al., 2011). The original Self-Compassion Scale and SCS-SF has subscales however subscales were not used in this study because they were less reliable as per test developer i.e. Raes et al., (2011) and thus the composite scores for the overall scale were analyzed.

Perceived Stress Scale (PSS-10). This scale is a self-report measure of perception of the stress (Cohen et al., 1983) and has a

high internal consistency (Cronbach alpha is $\alpha = .89$) and an adequate reliability ($r = .78$), which is superior to PSS-4 ($r = .60$) and PSS-14 ($r = .75$) (Roberti et al., 2006; Lee, 2012). The scale measures feelings and thoughts about stress during the last month through 10 items that measured on a 5-point Likert-type scale (Never “0” to Very Often “4”) where four items (4, 5, 7, & 8) were reversed score. The composite scores of PSS-10 range from 0-40 where higher scores depict greater stress.

Brief-Coping Orientation to Problems Experienced (Brief-COPE). It is an inventory revised by Carver (1997a), with moderate internal consistency (Cronbach alpha is $\alpha = .68$, Carver, 1997a). The inventory is a 28 items self-report measure with three subscales of coping, viz., problem focused (Items 2, 7, 10, 12, 14, 17, 23, 25), emotion focused (Items 5, 9, 13, 15, 18, 20, 21, 22, 24, 26, 27, 28) and avoidant coping (Items 1, 3, 4, 6, 8, 11, 16, 19). The scale has 14

facets of coping, based on two items each. Each item is measured on a 4-point Likert-type scale that ranged from 1 (I have not been doing this at all) to 4 (I have been doing this a lot). The scale does not have an overall composite score; the composite scores for problem focused coping range from 8-32; emotion focused coping from 12-48; and avoidant coping from 8-32.

Procedure

Due to COVID-19, data was collected online. Participants provided their consent before completing demographic information and the scales for the study. This took about 30-40 minutes. After data collection, results were analyzed using correlation, regression, independent sample *t*-test and ANOVA using Statistical Package for the Social Sciences (SPSS) software version 21 (IBM Corp. Released, 2012).

Ethical Considerations

Participants were briefed about purpose of the study and were asked to agree to an informed consent before they began the completing information. They were ensured that personal information and data would be confidential and would only be used for research purposes. They were also given right to withdraw from the study at any time and they were ensured that their decision will be fully respected and will be not questioned. Participants were encouraged to ask questions about the study and were told that if felt uneasy after completing the study they could discuss that with the researcher through email. All participants were thanked for taking part in the study.

Results

Table 1

Correlation between Level of Self-Compassion, Perceived Level of Stress and Types of Coping Strategies (N=234)

	Levels of PS	Types of CS
Levels of SC	0.08	-0.27**
Levels of PS	-	-0.00

Note: SC= Self-Compassion, PS = Perceived Stress, CS = Coping Strategies

***.* Correlation is significant at the 0.01 level.

Table 1 shows correlation analysis between levels of self-compassion, perceived stress level and types of coping strategies. The results indicate that a statically insignificant relationship exists between self-compassion and perceived stress level ($r=0.08$). However, it showed significant relationship between self-

Compassion and types of coping strategies ($r=0.27$). This shows that there is an insignificant relationship between self-compassion and perceived stress level and negative significant relationship between self-compassion and types of coping strategies among undergraduate students.

Table 2

Liner Regression Results Showing Self-compassion as Predictor of Perceived Stress and Coping Strategies (N=234)

	P	R	R ²	ΔR
Level of SC & Level of PS	0.179	0.088	0.008	0.003
Level of SC & Types of CS	0.000**	-0.279**	0.078	0.074

*Note: Note: SC = Self-Compassion, PS= Perceived Stress, CS = Coping Strategy, p= significant value, Coefficient, R2=R square, ΔR = Adjusted R Square *. Correlation is significant at the 0.01 level.*

Table 2 shows the regression analysis for self-compassion & perceived stress level and self-compassion & types of coping strategies. The result indicates that self-compassion is not a predictor of perceived stress level in undergraduate students at p -value < 0.01

($p=0.179$). However, self-compassion is seen as a predictor of effective coping strategies in undergraduate students at p -value < 0.01 ($p=0.00$) though the self-compassion predicts types of coping strategies.

Table 3

T-test Results Comparing Self-Compassion, Perceived Stress and Coping Strategies among Females and Males (N=234)

		95% CI						
		M	SD	T	df	p (two-tailed)	LL	UL
Levels of Self-Compassion	Females	2.06	0.708	3.544	232	0.000	0.148	0.519
	Males	1.73	0.617					
Levels of Perceived Stress	Females	1.99	0.241	1.498	129.89	0.137	-0.019	0.134
	Males	1.94	0.295					
Types of Coping Strategies	Females	1.94	0.271	-1.080	232	0.281	-0.109	0.032
	Males	1.97	0.226					

Note: M= Mean, SD= Standard Deviation, t = t value, df = degree of freedom, p = significant value, CI=Confidence Interval, LL=Lower Limit, UL=Upper Limit

Table 3 represents the difference of levels of self-compassion, perceived level stress and types of coping strategies between male and female undergraduate students. Results indicate that a statistical significant difference in levels of self-compassion between males and

females exists at $p < 0.05$ ($p = 0.00$). There was no statistically significant difference in perceived stress levels between males and females at $p > 0.05$ (0.137) and in coping strategies between males and females $p < 0.05$ ($p = -1.080$).

Table 4

Anova Results Comparing Levels of Self-Compassion and types of Coping Strategies among undergraduate students (N=234)

		95% CI						
		M	SD	Anova	df	p	LL	UL
Levels of Self-Compassion	Problem Focused	40.57	9.41	2.970	2	0.05	35.14	46.01
	Emotions Focused	35.16	8.01				34.09	36.23
	Avoidant Coping	34.00	7.07				-29.53	97.53

Note: M= Mean, SD= Standard Deviation, ANOVA, df = degree of freedom, p = significant value, CI=Confidence Interval, LL=Lower Limit, UL=Upper Limit

Table 4 represents the difference of levels of self-compassion types of coping strategies between male and female undergraduate students. Results do not indicate statistical significant difference in levels of self-compassion between problem focused, emotion focused and avoidant coping strategies at $p < 0.05$ ($p = 0.053$).

Discussion

In present study it was assumed that there will be a relationship between self-compassion and perceived stress level and self-compassion will predict perceived stress level among undergraduate students. Statistical result shows that there was no significant difference when levels of self-compassion were correlated with

perceived stress level ($p=0.17$) at 0.01 significance level. This means only 0.8% of the sample of the study showed relationship between self-compassion and perceived stress level. If we analyze the data, it can be observed that 93% of the participants perceived stress as moderate that means they did not perceived stress neither high nor low. Among them only 5% perceived low stress and 2% among them perceived high stress level. This could be due to the reason that the study was conducted during pandemic situation across the globe. The COVID-19 pandemic has changed every aspect of life of an individual which includes health, work, education and exercise and even how we perceive stress. (APA, 2020; Salman et al., 2020). Generally, stress is associated with demands like everyday jobs, commitments, or obligations (Farhan et al., 2015). Ross et al., (1999)

found in their research that top five sources of stress reported by students in their study included change in their sleep routine, vacations or breaks, when eating habits are changed, a lot of work load and new responsibilities. Since the present study was conducted during locked down and students were at home almost whole day and they did not have much to do might be that is why they did not perceive stress as much as they might perceive in normal routine. Neff (2020), said self-compassionate person recognize that suffering and personal inadequacy is part of the shared human experience that is they accept the fact that they are not alone in this problem. The current study was conducted during pandemic situation across the globe might be that's why participants perceived the stress as shared experience and thus their self-compassion was not different when its effect was observed with perceived stress or it could be due to personality factors of participants. The personality has deeper impact on our perception regarding the stress. Muris et al., (2019) found that self-compassion is associated with greater levels of positive cognitive responses and lower levels of negative cognitive responses while controlling neuroticism. In current study personality traits were not measured neither controlled might be that is the reason why relationship between self-compassion and perceived stress level was not verified. Or the sample age (i.e., 18 to 25 years) might have affected the results. This is the age when people explore numerous possibilities in life as they move toward making lasting choices. Through trying out these different possibilities, they develop a more definite identity, which includes the understanding of who they are, what they are capable of, what are their limitations, what they believe in, what they value more and how they fit into the society around them (Arnett, 2000). It tends to be an age of high hopes and great expectations with life and self, because few of their dreams have been tested in the real life (Munsey, 2006). Moreover, researches have shown that first year students have higher level of perceived stress. Javed and Nawaz (2018), found in their study that fresh enrolling students had high level of perceived stress than others. This could be another reason for insignificant results as very few of the participants of current study belonged to first year (23.92%). Or maybe results are affected by strong stresses in student's personal life during current research duration. Result indicates that 73% of the participants reported that they had stress before joining college / university. Might be those stresses were continued till current research that is why their self-compassion did not predict perceived stress. Some of the stresses reported by students were financial issues, relationship issues, studies stress and family stresses. Around 79% of the students in current study belong to nuclear family system. Saleem & et al. (2016), found in their study that adolescents from nuclear family structure had higher levels of family dysfunction than to adolescents who belong to joint family structure. Cheng & et al. (2017), also found significant effect of family functioning on mental wellbeing. It was also observed that around 58% of the population of the current study belonged to family whose monthly income was between Rs.50,000 to Rs.99,000. As the study was conducted during locked down might be because of that most of the student's self-compassion and perceived stress were moderate.

However, statistically significant results between self-compassion & effective coping strategies have been found. Results verify relationship between self-compassion & effective coping strategies ($p=0.000$). Literature also supports current study findings that is self-

compassion and coping mechanisms are significantly correlated (Contreras, 2019). However, the assumption that high self-compassion would be a predictor of problem focused coping strategies among undergraduate students was not proved. It was observed the relationship between them is negative however the relationship is weak ($r=-0.279$). The square of correlation was 0.078. This means only 7.8% of the sample showed relationship between self-compassion and types of coping strategies which indicates weak correlation. Result indicates that among students who has high level of self-compassion, only 21% students use problem focused coping strategy. However, most of the students who use problem focused coping strategy has moderate level of self-compassion (37%). Neff (2005) and Leary et al. (2007) also found that self-compassion did not correlate significantly with the tendency to use of the problem-focused strategies. Researches suggests that problem focused coping is very helpful when people are able to correct the problem (Lazarus et al., 1985) and self-compassionate people likes to actively engage with the environment rather than to be passive observers (Allen et al. 2010)^b. Due to pandemic situation across the globe the psychological and emotional impact is also effected. Might be that is why the difference was not that much as everyone was uncertain about future. They were unable to control the stressful situation. The only thing to control the situation was social distancing and staying at home which is itself a stressor for students as they are use to of going colleges.

Results also indicates significant difference in levels of self-compassion between males and females ($t(233) = -3.605, p = .885$). In Yarnell & et al (2015) research, males reported slightly higher levels of self-compassion than females. Whereas in current study it was observed that females had slightly higher self-compassion than males as 77% females reported moderate to high self-compassion whereas 66% males reported moderate to high self-compassion and only 23 % females reported low self-compassion whereas 34% males reported low self-compassion. This could be again due to pandemic situation around the world. As because of Covid-19, everyone was locked down at home and people were either working from home or either they were not doing office work at all. Additionally, there was job insecurity as well as. As in Pakistan mostly males are responsible for all expanses in family might be that's why their self-compassion was compromised. Whereas in our culture females are usually use to of staying at home. Results also indicates significant difference in coping strategies between males and females ($t(122.12) = -2.196, p = 0.030$). Though the difference between females and males of current study were found but results also shows that the difference was not major. Result indicates that 75% of the females and 66% males of current study use problem focused coping strategy and 24% females and 28% males use emotion focused coping strategy to deal the stress. Bamuhair et al., (2015) also found in their study that female student's coping strategies were better than males. Further researches also shows that females use adaptive coping strategies, whereas men usually use avoidance coping strategies (Gentry, 2007; Matheny et al., 2005).

Researches have shown that female perceive higher stress than males (Russo et al., 1985; Shah et al., 2010^b; American Psychological Association, 2011; Shaw et al., 2017; Torres-Montiel et al., 2017; Guruprakash et al., 2018). However, in current study insignificant difference in levels of perceived stress between males and females were found ($t(129.89) = 1.498, p = 0.137$). Literature shows that

females and males are stress by different types of situations thus they perceive stress differently. Males usually have finance related or work-related stress whereas females are stressed out by family and health related situations (Matud, 2004; McDonough et al., 2001). When the study was conducted there was crises in overall world and because of multiple stresses particularly of health (because of Covid-19) and finance (because of locked down) everyone was uncertain about future. Might be that is why difference between females and males perceived level was not found.

If we overlook the results, it is observed that most of the students of current study reported moderate level of self-compassion (52%), 26% among them reported low level of self-compassion and 22% high level of self-compassion. It is also indicating that most of the students perceived stress at moderate level i.e. 93% among total population of the current study. And it is also observed that 72% of the students reported that they use problem focused coping strategy to deal the stress.

Implications of the study:

- The findings of the research can be used by psychologists in developing intervention programs such as counseling programs and seminars with students to enhance self-compassion, reduce stress and educate effective coping strategies to undergraduate students.
- The findings are useful for student counselors also. They will get help in developing positive interpersonal and intrapersonal skills in students so that student become more productive individual and live better life.
- Further the study would help teachers as well. Seminars with teachers can be developed in which they can learn about self-compassion and its effects on students. Even they can benefit by adding such teaching skills that might help students grow professionally.

Limitation and Future Recommendations of the Study

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- The present study has some limitations among which the biggest limitation is of generalizability. As the study was conducted only in one city of Pakistan (i.e. Karachi) so the results cannot be generalized with all undergraduate students across Pakistan. Secondly since the data was collected through online medium, it was quite challenge to approach males and females at equal numbers. And the medium itself used in this study which is online might have affected the results of the study.
- It is recommended to collect data from different cities of Pakistan so the results can be generalized among Pakistani population. And to gather data hand to hand rather than online to the authenticity of data is confirmed. Equal number of males and females should be taken so the results are generalized in both populations. And scales in native language can be use so the scales are understood in better way.

Conclusion

Results of present study verify that students having high level of self-compassion have effective coping strategies than students having low level of self-compassion thus self-compassion predicts coping strategies among undergraduate students. It also shows the difference in levels of self-compassion and coping strategies between females and males.

However, results do not indicate significant differences in results of correlation between self-compassion and perceived stress thus self-compassion does not predict stress level among undergraduate students. Statistically insignificant difference between perceived levels of males and females were also found in study. All these findings could be due to time of conducting the study that is the study was conducted when pandemic situation across globe was there. However, results indicate that most of the people (both males and females) of age 18 to 25 has moderate level of self-compassion and they do not perceive stress to the extent that their life is vulnerable or neither that low as they do not perceive stress at all. It also indicates the coping strategies students mostly use to deal stress is problem focused rather than emotion focused.

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