ORIGINAL ARTICLE

COVID-19 Concern and Stress in Bangladesh: Perceived Social Support as a Predictor or Protector

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Abstract

The insidious coronavirus disease-2019 (COVID-19) has been a global public health concern affecting almost everyone physically and/or psychologically. The psychological consequences like concern about COVID-19 and increased perceived stress are primarily results of preventive measures like social distancing, lockdown, etc. The present study examined whether perceived social support predicts stress or lessens the effect between concern and stress during social distancing. More specifically, we tested whether (a) the greater social support is associated with lesser perceived stress, and (b) the greater an individual perceives social support, the weaker will be the concern-to-stress relationship (a prediction from buffering hypothesis). We utilized the data from the Bangladeshi respondents ($n = 204$, 54% males) as part of the COVIDiSTRESS global survey. The three-step hierarchical regression analysis revealed social support as a predictor of stress along with coronavirus concerns rather than protector. The findings have implications for professionals (in providing psychological support to vulnerable people), policymakers (in implementing steps in the future that would less impact on perceived social support), and future researchers (in solving the ultimate role of social support to the association between fear and stress).

Keywords COVID-19 · Coronavirus concern · Social support · Perceived stress · Buffering hypothesis

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Introduction

The COVID-19 (WHO, 2020) has set the ground for a socio-psychological and economic crisis by putting most parts of the world in lockdown. The infected people suffer from fear of death; the quarantined people suffer from fear of infection, isolation, loneliness, anger, depression, anxiety, and stress (Khalaf, 2020). The overall conditions serve as stressors due to the fear of contracting the disease, heightened anxiety and uncertainty about the future, lack of supplies, and financial losses (Bao et al., 2020; Brooks et al., 2020; Garfin et al., 2020; Keeter, 2020; Wang et al., 2020). These stressors may increase the risk of clinical effects and foster feelings of isolation, loneliness, frustration, anger, anxiety, confusion, or boredom (Liu et al., 2020; Wang et al., 2020). It is a general prediction that any contagious epidemic manifestation has a deleterious effect on individuals and society (Duan & Zhu, 2020). The rise of the COVID-19 and its outcomes has led to fears, worries, concerns, and anxiety among individuals worldwide (Ahorsu et al., 2020). During the COVID-19 outbreak in Bangladesh, several factors such as population density, poverty and limited resources, social structure, cultural norms, and environmental factors have exacerbated a complex fear, socioeconomic crisis, and mental stress among people (Shammi et al., 2020). The country also has been facing other epidemics (e.g., panic buying, stigma, fear, and hatred) in the lockdown of the COVID-19 pandemic (Shammi et al., 2020).

Psychologists are always looking for interventions to reduce stress, depression, and anxiety as these are the most prevalent and global psychological problems among people (Bilgel & Bayram, 2014; Bukhari & Khanam, 2015; Kessler & Bromet, 2013). In a more global understanding, the term stress may result as a cumulative response to events or life situations experienced as threatening and otherwise demanding (Cohen et al., 1983; Robinson, 2018a, b). It is anything that places strong demands on individuals that creates an imbalanced state in individuals' mindsets. It can be defined as "a pattern of cognitive appraisals, physiological responses, and behavioral tendencies that occurs in response to a perceived imbalance between situational demands and the resources needed to cope with them" (Passer & Smith, 2009). Individuals may start to experience stress if a given event is assessed as incriminating or exceeding their resources and endangering their well-being (Lazarus & Folkman, 1984). Thus, they may remain in a state of global stress for longer periods, not necessarily dependent on the objective quality of one event but rather on combinations of stressors, response behaviors, personal and contextual factors. General states of emotional and cognitive depletion may vary among individuals experiencing the same global situation and thus influence the state of global stress (Cobb, 1976; Cohen et al., 1983; Lazarus & Cohen, 1977; Palmwood & McBride, 2019; Steigen & Bergh, 2019). Based on the survey data from 41 countries, the perceived stress scores were found to be significantly higher among students, youths, women, and among those who expressed coronavirus concern and those who perceived increased susceptibility to the COVID-19 (Gamonal-Limcaoco et al., 2020).

Social support is an important variable of the present study can be defined as "access to people to whom you can turn in a time of need" (Rohall et al., 2014, p. 230). Stress theorists Cohen & McKay, (1984) proposed that social support acts as a stress buffer, promotes health, and well-being by facilitating psychological resources under highly stressful circumstances. This stress buffer function of social support was supported by the findings of Dour et al., (2014), in which social support mediates symptoms of anxiety and depression in patients. Perceived support is typically explained as resulting from objectively supportive actions that buffer stress (Lakey & Orehek, 2011). A new approach to explain a link between perceived support and mental health, a relational regulation theory (RRT) of Lakey and Orehek, (2011), hypothesizes that the actual main effects occur when people regulate their effect, thoughts, and actions through ordinary yet effectively consequential conversations and shared activities, rather than through conversations about how to cope with stress. There are a number of studies on the relationship between perceived social support and psychological problems such as stress, anxiety, and depression (e.g., Awang et al., 2014; Bukhari & Afzal, 2017; Safree et al., 2010; Wang et al., 2014). In these researches, perceived social support was negatively associated with depression, anxiety, and stress. There was a strong negative relationship between perceived social support and psychological problem (e.g., Backs-Dermott et al., 2010; Pedersen et al., 2009). In some studies (e.g., Liu et al., 2020), anxiety and depression were negatively correlated with perceived social support, and mental health was positively correlated with perceived social support.

Some common reactions to COVID-19 are concern about protecting oneself, concern that regular medical care or community services may be disrupted, fear of being socially isolated, guilt, and increased levels of distress due to some social stigma (Center for Community Practice, 2020). Social support can help people to reduce these concerns (e.g., stress, depression, anxiety, and isolation), as well as promote self-esteem and well-being, while a lack of social support has the opposite effect (Albrecht & Goldsmith, 2003). Social support has not only a direct impact on our health and well-being through the benefits of social relationships, but it also acts as a buffer against stressful circumstances and promotes coping mechanisms and quality of life (Gariepy et al., 2016). The positive perception of social support directly affects mental health, regardless of stress (Berkman & Glass, 2000). Though social support is inaccessible in some serious life events and crises, some forms of support are particularly important and extremely valuable (Hauken et al., 2015). As a protecting factor, social support has been shown to mitigate the negative impact of stress on individuals' physical and psychological health (Ni et al., 2015; Thoits, 2011) to increase understanding of different domains of resilience (Cohen, 1988). Social support exerted a full mediation effect on the relationship between life stress and anger (Jun et al., 2018).

Many studies on perceived social support show that people who perceive adequate social support find fewer psychological consequences than those who perceive little or no support at all (e.g., Dunkley et al., 2000; Nezlek & Allen, 2006). Assessment on all domains of perceived social support (e.g., significant others, family, friends) indicates an association between social support and stress (Alnazly et al., 2021). Social support is not only associated with lower rates of stress in

the present COVID-19 pandemic (e.g., Cao et al., 2020) but was also associated with lower rates of mental health problems before the COVID-19 pandemic (e.g., Chew et al., 2020). Social support was a significant moderating factor in several psychological studies conducted on the consequences of COVID-19 (e.g., Li et al. 2021; Liu et al., 2021). Moreover, it was a buffering as well as a protecting factor in the connection between COVID-19 concern and stress (Szkody et al., 2021). Thus, social support is regarded as the moderator in the relation between stressors and psychological outcomes (Romero et al., 2015) that can help to reduce the negative effects of stress on psychological adjustment in any psychological crisis situations including COVID-19 pandemics (e.g., Lee et al., 2014; Li et al., 2020; Ruthig et al., 2009; Schwarzer & Knoll, 2007).

Aim and Hypothesis of the Study

There are three aims in the present study. The first aim was to determine the levels of coronavirus concern, stress, and social support adopted by the Bangladeshi people in the COVID-19 pandemic situation. The second aim was to identify the relationships between stress, social support, and coronavirus concern. The third aim was to verify the moderating effect of social support on the relationship between coronavirus concern and life stress. Two hypotheses were formed to fulfill the third aim of the present study. First, it was hypothesized that perceived social support would be a predictor to stress. Second, perceived social support would have a moderating effect on the relationship between coronavirus concerns and stress. More specifically, it was predicted that people with higher levels of perceived social support would be less concerned with a corona in response to a stressor than people with lower levels of perceived social support.

Method

Participants

In the present study, we utilized data from the COVIDiSTRESS global survey (Yamada et al., 2021)—an international collaborative initiative that gathers open data on people's psychological and behavioral responses during the COVID-19 pandemic from multiple countries. Although the data collection was completed on May 31, 2020, in our study, we used data from the first data extraction that includes responses collected between March 29 and April 19, 2020. There was a total of 412 Bangladeshi people participated in this survey. We excluded missing responses in the study variables and the sample size of this study was 204. A priori power calculation was utilized to assess the minimum sample size of the present study. With a statistical power of 0.80 to detect the small-sized correlation coefficient, a minimum of 194 respondents is required (https://www.sample-size.net/correlation-sample-size/).

Among respondents, 93 (45.6%) were female and 111 (54.4%) were male. The mean age was 28.17 ($SD = 6.403$) and ranged from 18 to 54 years. About the

educational level, 1.5% held a PhD degree, 8.8% had a bachelor or master degree, 18.1% had some college, continuing education or equivalent, 22.5% had up to 12 years of schooling, 23.5% up to 9 years, 13.7% had less than 6 years of schooling, 10.8% none, and 1.5% missing. In terms of employment status, 48.5% were in full-time employment, 5.4% were in part-time employment, 35.8% were students, 2% were self-employed, 7.8% were unemployed, and 0.5% were missing. In terms of marital status, 44.1% were married/cohabiting, 53.9% single, 0.5% divorced/widowed, and 1.5% others.

Measures

Concern about COVID-19

Participants' concern about the consequences of COVID-19 was assessed by a Bangla translated questionnaire (Ahmed, 2020) originally developed by the COVIDiSTRESS global survey (Yamada et al., 2021) team. It measures an individual's concern by asking questions like "To what degree are you concerned about the consequences of the COVID-19, "for yourself," "for your family," "for your close friends," "for your own country," and "for other countries." The responses were recorded on a 6-point Likert-type scale (1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = slightly agree, 5 = agree, and 6 = strongly agree). The possible range of score is between 5 and 30, where higher score is indicative of greater concern and vice versa. The Cronbach alpha for the present study was 0.84. Confirmatory factor analysis from the present study data suggested acceptable model fits of the COVID-19 concerns scale (χ^2 = 18.32, df = 4, p = 0.001, CFI = 0.97, TLI = 0.92, RMSEA = 0.13, SRMR = 0.04).

Social Provision Scale (SPS)

Participants' perceived social support was assessed through the 10-item Bangla version SPS (Ahmed, 2020) validated by Caron, (2013) based on the original 24-item SPS of Cutrona & Russell, (1987). The SPS-10 assesses five forms of social provisions: attachment (items 1 and 10), guidance (items 2 and 7), social integration (items 3 and 8), reliable alliance (items 4 and 6), and reassurance of worth (items 5 and 9). Each item is rated on a 4-point Likert-type scale (1 = strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = slightly agree, 5 = agree, and 6 = strongly). A continuous scale score is computed by summing responses to the 10 questions, with values ranging from 10 to 60. The SPS-10 summary score is not computed for respondents with data missing on any items. Higher scores can be interpreted as having higher levels of social support. The coefficient alpha for the portion of the study was 0.89. Confirmatory factor analysis from the present study data suggested acceptable model fits of the social provision scale (χ^2 = 86.28, df = 23, p < 0.001, CFI = 0.94, TLI = 0.88, RMSEA = 0.12, SRMR = 0.06).

Perceived Stress Scale (PSS-10)

Participants' perceived stress level for the past month was assessed using the Bangla version (Islam, 2020) of the perceived stress scale (Cohen et al., 1983). PSS-10 is a 5-point 10-item Likert-type self-report measure (0 = never, 1 = almost never, 2 = sometimes, 3 = fairly often, 4 = very often). Individual scores on the PSS can range from 0 to 40, with higher scores indicating higher perceived stress. Scores ranging from 0 to 13 would be considered low stress, scores ranging from 14 to 26 would be considered moderate stress, and scores ranging from 27 to 40 would be considered high perceived stress. The reliability of the scale is reported as 0.84 (Taylor, 2015). In this study, PSS-10 had an acceptable internal consistency (Cronbach α = 0.80). Confirmatory factor analysis from the present study data suggested acceptable model fits of the perceived stress scale (χ^2 = 60.49, df = 34, p = 0.003, CFI = 0.94, TLI = 0.92, RMSEA = 0.06, SRMR = 0.05).

Procedure

Participants were recruited utilizing the snowball sampling technique. The survey was announced via social and traditional media, email groups, personal acquaintances, and other online means. Participation in the study was voluntarily and was not compensated. Participants received information on the aims of the study, confidentiality, and the right to withdraw at any phase of the survey. Information about demographics and survey questions were collected using Qualtrics survey software™. The survey took approximately 20 min. The validation process of translation-back translation procedures was implemented in countries where the measures of the study had no established language adaptations (Yamada et al., 2021).

Ethics

The COVIDiSTRESS global survey received a waiver to proceed from Aarhus University's Research Ethics Committee, and approval was granted post hoc on June 10, 2020 (2020-0066175). In compliance with General Data Protection Regulation standards, all data were anonymous. This survey was conducted in Bangladesh following the Declaration of Helsinki and its later amendments or comparable ethical standards. As it was an online survey, signed informed consent was not possible to take. After reading research objectives, confidentiality, and other related information, there was an option about whether participants agreed or not. If they clicked on I understand and agree to participate, they got access to the survey questionnaire.

Data Analysis

All statistical analyses were conducted using IBM SPSS Statistics (Version 20.0). Before proceeding with the analyses, data were screened for missing values,

Table 1 Descriptive statistics for coronavirus concern, social support, and perceived stress ($N = 204$)

Variables	Possible range	Scale midpoint	Actual range	M	SD	CV
Coronavirus concern	05–30	17.5	05–30	24.78	4.02	0.16
Social support	10–60	35.5	21–60	47.91	7.52	0.16
Perceived stress	00–40	20.0	00–33	18.35	5.84	0.32

Table 2 Zero-order correlation between each variable with each of the other variables ($N = 204$)

Variable	1	2	3	4
1. Age	--			
2. Coronavirus concern	−0.03	--		
3. Social support	−0.05	0.22**	--	
4. Perceived stress	−0.29**	0.26**	−0.25**	--

Note. **$p < 0.001$

outliers, and normality. As mentioned earlier, we included observations that had no missing values in the study variables. The normality of the distribution was assessed through regression residuals. Regression residuals ranged between −2.77 and 2.50. The Kolmogorov–Smirnov and Shapiro–Wilk p-values of the residuals were 0.200 and 0.753, respectively. If there was no outlier and data were normally distributed, data were suitable for the parametric tests. Next, internal consistency reliability (Cronbach alpha) of the Corona Concern-5, PSS-10, and SPS-10 were assessed. Descriptive (e.g., mean, standard deviation, and correlation) and inferential (e.g., t-test, F-test, and hierarchical regression analysis) statistics were applied.

Results

The possible range, scale midpoint, actual range, mean, standard deviation, and coefficient of variation (CV) for the key variables are presented in Table 1 to assess the first objective. The figures in Table 1 showed that the mean concern about the consequences of COVID-19 was very high ($M = 24.78$) with low dispersion. Also, perceived social support was very high ($M = 47.91$) with low dispersion. However, perceived stress was moderate ($M = 18.35$) with moderate dispersion. To assess the association between study variables (the second objective), Pearson-product moment correlation coefficients were computed and the results are presented in Table 2. Table 2 shows the correlation coefficients for each pair of key variables. Perceived stress was moderately and negatively related to both age and social support. Concern about coronavirus was moderately and positively related to both social support and perceived stress.

In order to test our prediction (the third objective), a hierarchical regression analysis was conducted. In step 1, we entered gender and age as covariates to control

these two demographic variables' possible effects. In step 2, we entered COVID-19 concern and social support. Perceived stress was entered as the dependent variable. In step 3, product variables were entered to assess the possible interaction between concern and social support. It is evident in Table 3 that gender and age as covariates accounted for significant variance in stress where the effect of gender was though nonsignificant ($R^2 = 0.093$, $F_{(2, 201)} = 10.33$, $p < 0.001$). Adding coronavirus concern and social support in the second step accounted for a significant variance in stress ($R^2 = 0.248$, $F_{(4, 199)} = 20.54$, $p < 0.001$). For the last step, the interaction term (coronavirus concern × social support) was added. However, the model was not significant ($R^2 = 0.257$, $F_{(5, 198)} = 2.39$, $p > 0.05$). The main effect of corona concern and the interaction effect was not significant. This nonsignificant result rejected the second hypothesis that social support moderated the association between corona concern and stress. However, the main effects of age and social support were significant ($\beta = -0.221$, $p < 0.01$; $\beta = -0.840$, $p < 0.05$). These results confirmed the first hypothesis that social support was a significant predictor of stress. Based on this, we ended up with the second model which shows 24.8% variance in stress can be explained jointly by age, concern, and social support ($\beta = -0.224$, $p < 0.05$; $\beta = 0.317$, $p < 0.01$; $\beta = -0.315$, $p < 0.001$). To visualize the role of social support in

Table 3 Hierarchical regression assessing the effect of a continuous moderating variable (social support) on the concern-to-stress relationship where age and gender as covariates ($N = 204$)

	Model	Unstandardized coefficients		Standardized coefficients	R^2	ΔR^2	t	p
		B	SE	B				
1.	(Constant)	26.660	1.870		0.093	0.093***	14.260	0.000
	Age	−0.229	0.066	−0.251	(0.084)		−3.459	0.001
	Gender	−1.203	0.849	−0.103			−1.417	0.158
2.	(Constant)	26.252	3.383		0.248	0.155***	7.759	0.000
	Age	−0.204	0.061	−0.224	(0.233)		−3.366	0.001
	Gender	−1.185	0.780	−0.101			−1.520	0.130
	Coronavirus concern	0.461	0.092	0.317			5.014	0.000
	Social support	−0.245	0.049	−0.315			−4.988	0.000
3.	(Constant)	45.952	13.175		0.257	0.008	3.488	0.001
	Age	−0.201	0.061	−0.221	(0.239)		−3.323	0.001
	Gender	−1.202	0.777	−0.103			−1.548	0.123
	Coronavirus concern	−0.369	0.544	−0.254			−0.678	0.499
	Social support	−0.652	0.268	−0.840			−2.435	0.016
	Concern × support	0.017	0.011	0.860			1.547	0.124

***F change is significant at $p < 0.001$. Note. Values in parentheses are adjusted R^2
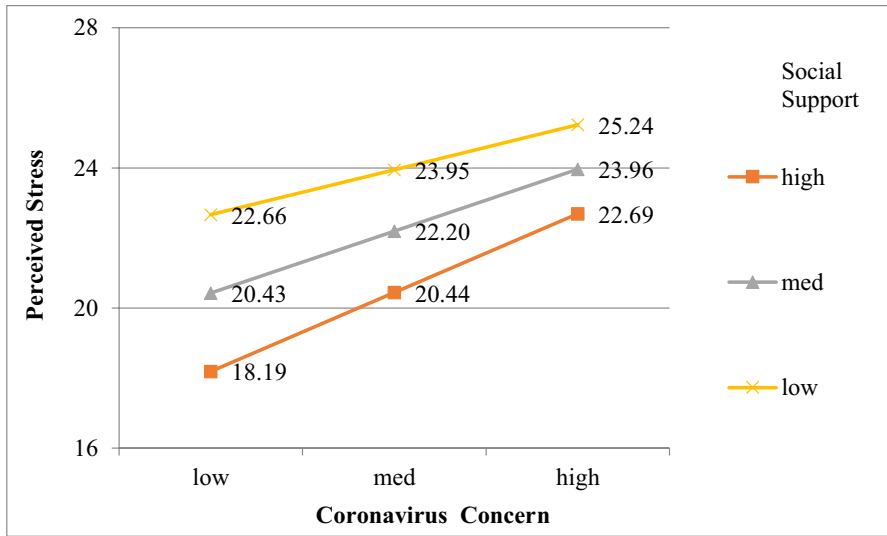
Fig. 1 Depiction of the moderating effect of social support on the association between coronavirus concern and perceived stress

perceived stress, we plotted the results using ModGraph (Jose, 2013). Figure 1 is a classic triangle pattern showing the fan effect on the left side. It shows that there is a very positive slope to the lines, which reflects the significant main effect of coronavirus concern on stress. Also, there is a moderate spread or separation of the lines, which signifies the main effect of social support on stress. However, the lines are essentially parallel, which indicates a nonsignificant interaction. It means the relationship between concern and stress did not differ by different levels of social support. Simple slope analyses as presented in Table 4 clearly demonstrated that all three lines are significantly different from zero with decreasing regression weights for high, medium, and low social support groups ($\beta = 0.56$, $p < 0.001$; $\beta = 0.44$, $p < 0.001$; $\beta = 0.32$, $p < 0.05$).

In summary, participants had higher coronavirus concern, social support, and moderate perceived stress. Study variables had low but significant correlations between them. Age, coronavirus concern, and social support were significant predictors of stress that explained the 28.4% variability of stress. Social support didn't moderate (buffer) the association between coronavirus concern and stress.

Table 4 Test of significance of simple slopes of three moderation lines of social support		High	Medium	Low
	Simple slopes	0.56	0.44	0.32
	Standard errors	0.12	0.09	0.13
	t-values	4.85	4.78	2.45
	p-values	0.00	0.00	0.02

Discussion

A number of studies suggested the psychological vulnerability among people during the current pandemic (Ahmed et al., 2020; Wang et al., 2020). The present study examined whether social support would be a protective factor to reduce stress induced by the current pandemic. The data were collected during the early lockdown imposed by the Bangladesh government. The present study suggested participants had higher concerns regarding the COVID-19 outbreak in the country, and it strongly predicted higher perceived stress. This study revealed a negative association between social support and perceived stress during the current pandemic, where social support was a strong predictor rather than a protector of the stress along with concerns related to the COVID-19 outbreak in the country.

In a recent study, Ahmed et al., (2021) have found that around 80% of participants were worried about COVID-19 infection. They suggested normative response to the COVID-19 outbreak in the country and neurotic personality traits as predictors for such higher COVID-19 concern. Bangladeshi people are experiencing for the first time such pandemic and related measures taken by the government. Therefore, it might be a reason for higher COVID-19 concerns. As a developing country, the health service system of Bangladesh is not sufficient to meet the treatment need of the large population of the country. Even with developed health facilities, developed countries like the USA, UK, etc., are facing serious trouble during the COVID-19 outbreak in these countries. Insufficient treatment facilities overflow of misleading information over Facebook (as Facebook is the most popular social media in Bangladesh) might raise concerns about COVID-19 infections.

Several studies regarding COVID-19 impacts on mental health have suggested that symptoms of stress, post-traumatic stress disorder, anxiety, depression, etc., were increased during the COVID-19 pandemic than earlier (Ahmed et al., 2020; Baculinao et al., 2020; Liu et al., 2020). Desclaux et al., (2017) suggested that people worry about their health during an epidemic outbreak, and this worry increases if they find any physical symptoms similar to the infection. However, social support becomes an important factor in a stressful situation. The result regarding the association between social support and stress is consistent with previous studies (e.g., Awang et al., 2014; Bukhari & Afzal 2017; Safree et al., 2010; Wang et al., 2014) that suggested a negative association between these two variables. However, regarding the role of social support, predictor or protector/buffer, this study suggested social support as a predictor of stress that supported earlier studies (Bell et al., 1982; Cohen et al., 1982; Frydman, 1981; Lin et al., 1979; Monroe, 1983; Williams et al., 1981). This finding did not support the stress-buffering model (Cohen & Wills, 1985) that social support is a protector against the adverse effect of stress. Some studies found that social support is a protector against self-isolation, social distancing, worry about coronavirus, etc. (Banerjee et al., 2020; Nelson et al., 2020). Szkody et al., (2021) reported that social support did not buffer (protector) the association between worry about COVID-19 and psychological health among college students in the USA during the early

pandemic. Social support buffered only while the number of days in self-isolation was lower and worry about COVID-19 infection was higher. However, Lui et al., (2021) have found a "reverse buffer effect" of social support on the association between risk perception in COVID-19 and mental health symptoms. Similar to the present study and Szkody et al., (2021), which study was conducted early on the current pandemic in China. Differences in results about the role of social support across studies might be due to differences in cultures. Dryhurst et al., (2020) found differences in COVID-19 risk perception across countries due to socio-cultural differences among these countries.

The Bangladesh Government implemented countrywide lockdown and stay-home orders to citizens from very early of the pandemic. During the lockdown, people stayed at home with family members and close others. The weak tie and strong tie theory (Granovetter, 1983) suggests that family members and intimate friends are strong ties and other people (i.e., colleagues, etc.) are weak ties. Strong ties provide supports like emotional and practical, whereas weak ties provide information support. People received more social support from their family members that had an impact on their perceived stress. From the authors' observations, several COVID-19 positive survivors have faced some unexpected problems like total isolation from their neighbors, having to leave the rented house when they get well, and even attacking survivors' houses. Even doctors, nurses, and police officers of civil administration face the same problem. This news has created a fear of loss of social support. Therefore, people having social support had lower perceived stress. People's degree of integration into a large community is an important factor for social support and stress relationships (Cohen & Wills, 1985).

However, the scenario regarding COVID-19 concern and compliance with health instructions reduced largely. From the authors' observation, Bangladeshi people are now less worried about COVID-19 compared to what they were at the very beginning of the outbreak. As Bangladesh govt. has started the COVID-19 vaccination program, mass people are becoming reluctant to comply with govt. health directions. There is a total of 1,571,906 people who tested COVID-19 positive, and 27,907 people died on November 12, 2021 (WHO, 2021, November 14). The current rate of tested positive is below 5%. It seems that people are more concerned about their livelihood rather than COVID-19. They receive support from other people to do so as they see that other people are not also following and motivated to comply with govt. health instructions. This social support might be a factor to reduce stress due to COVID-19 as well as concern about it.

Limitations and Future Directions

The present study had several limitations. Firstly, there was no information about mental health information before the pandemic. An individual with poor mental health may have more coronavirus concerns and perceive less social support than an individual with sound mental health. Therefore, a longitudinal study can better explain the research question that was investigated in this study. Secondly, data of the present study was collected via online tools. So, responses were provided by

only people who had devices and internet access and were also educated enough. Information regarding concerns about COVID-19, perceived stress, and social support of people having no education or lack of internet access was unknown in this study. Thirdly, as data came from educated people who updated the world's current situation, social normative concern about COVID-19 might affect the data. Therefore, some online data might be over judged or misleading. Fourthly, online data could be subjected to selection bias. We should be cautious about generalizing these findings to the overall Bangladeshi people.

There is a contradiction among studies about the role of social support, whether predictor or protector, at the early of the current pandemic. Further exploratory studies would be designed to conclude the role of social support on the association between concern about coronavirus and mental health, including stress. These studies may consider the cross-cultural data that would help to explain the role of the culture. Studies would also be taken to understand the role of social support on the association between coronavirus concern and mental health variables at the current stage of the pandemic.

There would be a possible suppression of social support during the data collection period as the lockdown was imposed during that period. This might shift the place of social support from the protector to the predictor. To determine the actual role of social support, further study would include data from the participants living in the same house, frequency of offline and online contacts, quality of the relationship, etc.

Conclusions

Due to the COVID-19 pandemic, the world becomes stagnant and causes elevated psychological problems. This study showed that COVID-19 concerns as a predictor of stress that result in psychological problems. During the pandemic, social support also impacted perceived stress as a predictor rather than a protector. Currently, Bangladeshi people are not much concerned about the COVID-19 infection as they are receiving more support from mass people to not worry about it. This may reduce stress-related to COVID-19 as well. The present study findings would be helpful to mental health practitioners to prepare and implement treatment and therapies for those exhausted by stress during this COVID-19 pandemic. They can design effective coping strategies to reduce stress by taking measures to mitigate coronavirus concerns and increase social support.

Data Availability Data will be available on request. Besides, data **is** also available at the following link - https://osf.io/z39us

Declarations

Ethics Approval All procedures followed in the study were in accordance with the ethical standards of the Helsinki Declaration of 1975. The COVIDiSTRESS global survey received a waiver to proceed from Aarhus University's Research Ethics Committee, and approval was granted post hoc on June 10, 2020 (2020-0066175). In compliance with General Data Protection Regulation standards, all data were anonymous.

Consent to Participate Informed consent was obtained from all individual participants who participated in the study.

Consent for Publication NA

Conflict of Interest The authors declare no competing interests.

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