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PSYCHOSOCIAL AND ECONOMIC IMPACT OF COVID-19: INVESTIGATING THE MODERATING ROLE OF AWARENESS AND MOVEMENT RESTRICTION THROUGH THE LENS OF HERD IMMUNITY MODEL

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KEYWORDS	ABSTRACT
COVID-19, Pandemic, Psychological, Economic, Social impacts, Societal Business, Awareness, and Movement Restrictions'	The study was aimed to investigate the impact of severe acute respiratory syndrome coronavirus-2 (SARS-COV-2) or novel coronavirus disease COVID-19 that swept whole world. It has far-reaching psychological, economic, and social impacts on whole world since it brings the world to a standstill. It killed thousands of people and exposed the frailties of health systems around the globe. Psychological and social stress erupts the individual and social life. PRISMA and SLR techniques were used for literature review. A quantitative cross-sectional survey was used for primary data collection. The study found that awareness and movement restrictions acted as moderate moderators upon predictors and criterion variables except for awareness for economic factors and societal business. The study concludes that it is obligatory for individuals, groups, and administrative machinery to revisit their thoughts, policies, and plans to minimize the severity of the crisis. The study suggests development of a comprehensive sector by sector socio-economic plan so that robust and sustainable ideas and solution models could flourish, and help society get rid of the psychological, economic, and social sufferings of the menace.
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INTRODUCTION

COVID-19, a disease that is caused by severe acute respiratory syndrome coronavirus-2 (SARS-COV-2) has a very harmful, and ripple effect on people. The novel coronavirus disease which appeared at the end of 2019 in the Chinese city of Wuhan started to put in danger the health and lives of millions of people around the globe. The W.H.O regional office in China was informed on December 31, 2019, about the incident of the few cases of pneumonia in Wuhan City located in the Hubei Province of China, the cause of which was not known. Later, the Chinese officials stated that they had found a new virus responsible for that illness on January 7, 2020. Earlier the SARS-CoV was transmitted from animals like civet cats to humans in 2002 in China, and

MERS-CoV in the Saudi Arabia from the dromedary camels to humans in 2012. The virologist believed that the COVID-19 started in animals, and in most cases, it appeared in the seafood and animal market of Wuhan city. The highest contagious COVID-19 results in severe respiratory disease and even deaths (Sohrabi, Alsafi, O'Neill, Khan, Kerwan & Jabir, 2020). As COVID-19 pandemic precipitously moves around the planet, it is generating a substantial amount of the panic, nervousness, and fear among people in general, and certain groups like the older adults, healthcare providers, and people with underlying health conditions in particular (Loeb AB Avi, 2020). Thus, as a response to control the spread, most of governments immediately enforced travel restrictions through border shutdowns and quarantine (Coronavirus: Al Jazeera News, 2020).

COVID-19 has changed the world as it has severe psychological, social and economic repercussions and implications both for developed as well as developing nations (Monica, March 20, 2020). This disease was declared as pandemic by WHO on 30th January 2020 (Buck, Arnold, Chazan & Cookson, 2020) since it rapidly influences the governments, and the public health systems, as result, it was retorted by declaring public health emergency at national, later on, at global level. Governments throughout world adopted extraordinary measures to contain transmission and keep effects of outbreaks limited. COVID-19 significantly changed world that is demanding a multi-level stress-coping adjustment (Robson, 2020). As public health is the main area of focus by WHO, it has started to work with its partners to create a set of new tools on the mental health and psychosocial support aspects of COVID-19. WHO guidelines were issued to manage the biomedical and psychological effects associated with COVID-19 (Robson, 2020). Inter alia psychological, social and economic impacts on society, it is advised by WHO to launch awareness campaigns and put-upon restrictions on movement of people for minimum interaction. This study is aimed to critically bring into core psychological, social and economic impacts of COVID disease upon social business and to suggest a way forward to the government in particular how to tackle this issue. Since this issue is novel and consequences are far-reaching, whereas, no study was available before emergence of this pandemic, thus, it was imperative to conduct such a study.

LITERATURE REVIEW

This section discusses theoretical perspective using critical review, PRISMA and SLR approaches (Massaro Dumay, & Guthrie, 2016) to explore and critically analyze psychological, economic, and social impacts of coronavirus disease 2019 in background of developed and less developed countries. The study used psychological impacts that refers to disturbance to psyche of people happening because of covid-19, the economic impacts on business and individuals, and social impacts that implies influence of covid19 that brought disturbances in social fabric and interactive relations.

Psychological Impacts

The threat of COVID-19 has dominated mind and thinking of people irrespective of nationality, age and gender. Since its outbreak, nearly every television channel and newspaper are telecasting and publishing stories on the dangers of coronavirus pandemic in prime-times news, shows, and front pages inter alia, social media platforms are bursting with terrifying statistics (Buck, Arnold, Chazan, Cookson, 2020). This constant bombardment resulted in heightened anxiety, depression, and hypertension that have immediate psychological effects on people's health (Sohrabi, Alsafi, Neill, Khan, Kerwan, Jabir, 2020). Further, reports issued by health scientists

have triggered xenophobia which represents much graver social and psychological shift (ISAC, 2020). In terms of public mental health, main psychological impact of COVID-19 could be seen as increased stress and anxiety specially new jargon that emerged and practiced i.e., isolation has a significant effect on people's normal activities, routines, and livelihood (Robson, 2020). It has increased the level of lonesomeness, hopelessness, the use of harmful alcohol, and drugs, and more importantly, self-harm for example, like suicidal behavior (WHO, 2020; Wikipedia, 2020).

Marisa and Bellware (2020) have reported in the Washington Post on April 29, 2020, that the American doctors working in New York, dealing with COVID-19 patients are under severe stress. The newspaper further reports that according to New York police, a 48-year-old lady doctor Lorna Breen who was living with her family in Virginia injured herself and succumbed to her injuries. She was working in emergency department of the Presbyterian Allen Hospital in New York where she was treating a large number of COVID-19 patients. In this connection, though the cause of her death is unknown, police and her family have stated that since the outbreak of the pandemic, she was hyper tense and depressed. Her father told the media personnel that she was highly professional and brave. "She tried to do her job, and it killed her," Dr. Lorna Breen's father said. In this connection, in Virginia, Charlottesville's police head Mr. RaShall Brackney believed that doctors treating COVID-19 patients are under high mental stress, and depression, which is badly affecting their mental and physical health. Besides, its impact on the human psychology, COVID-19 would have been one of the greatest threats to our existence. Though the human immune system has a few wonderful systems to search and then kill the pathogenic invaders, however, regrettably, these reactions bring us to the state of the feeling sleepy and lethargic.

Furthermore, fear of COVID-19 made us more cautious and less accepting of the idiosyncrasy, thus, it changed the psyche. The people are now making harsher moral judgments. Likewise, sexual attitudes have become more conservative (Sohrabi, Alsafi, Neill, Khan, Kerwan & Jabir, 2020). The scarcity of vaccines and medicines on one hand, and the shortage of food supply on other has badly influenced life during this crisis, whereas, during this crisis, non-availability of treatment and shortage of food emerged as one of the major issues. According to Mark Schaller at the University of British Columbia in Vancouver "getting sick, and allowing this wonderful immune system to work, is costly". It almost doubled the healthcare cost and put enormous pressure on the system, while meager resources do not allow them to handle the crisis since healthcare professionals could not work remotely, educational institutions, and businesses that are using online services (Feuer, 2020-03-20). Since we social species and gregarious evolved to live in big groups, thus, less interaction with people or in other popular terms of COVID-19 i.e., social distancing to minimize the spread of disease, leading to a kind of instinctive social distancing (Buck, Arnold, Chazan, & Cookson, 2020). People's response to social distancing is quite rough, since then, they have no understanding of the particular effects of this contagious disease.

Economic Impacts

COVID-19 has squarely affected the economies in most of developed countries at large, however, its impact is more severe in developing countries (Abdullah, 14 February 2020). The business centers, grocery shops, government, and private businesses have been shut down under COVID-19 protocols. As a result, world economies due to the sparking fear of the contagious COVID-19

are facing the impending economic crisis and recession (Buck, Arnold, Chazan, & Cookson, 2020). In this section, this study reviewed four sectors i.e., business, healthcare, education, and oil. The fear emerging out of COVID-19 resulted in economic recession and financial collapse, which calls for iron nerves and strong leadership to decide and implement the measures for the revival of the economies, and to lower effects of economic turmoil on the downtrodden (Levine & McKibbin, 2020). This recession and financial turmoil forced private sector, in particular, to lay off and downsize their workforce, thus, the great number of people lost their jobs (OECD, 2020). Similarly, closure of shopping malls and grocery stores not resulted in unemployment but also a shortage of food supply and a price hike. This necessitates midterm as well as long-term planning on how the economy could be rebalanced and re-rejuvenated after the crisis is over.

Experts believe that comprehensive socio-economic development sector-wise ecofriendly plan could best help not only encourage business activities but, robust, and sustainable business models to flourish and revive the economies (Buck, Arnold, Chazan & Cookson, 2020). It has drastically affected the economies of oil-producing countries, where prices fall to the lowest in the last three decades. It will be wise that government and all the stakeholders should go hand in hand especially since the role of financial institutions will be more important to relentlessly re-consider and re-assess the state of play and guarantee that the 'whatever it takes' pledge is honestly dispensed. In this connection, besides business sector, COVID-19 pandemic has posed an extraordinary challenge to the health sector around the globe. Consequently, particularly, it puts the healthcare workers at risk, and several precious healthcare physicians and paramedics breathe last, which is one of the highest vulnerabilities being faced by the healthcare systems. Likewise, cost and shortage of protective equipment i.e., N95 face masks, lack of the medical capacity, lack of ICU beds, and most importantly, the shortage of ventilators has tripled effect of COVID-19 (Borster, 24 January 2020) on the health sector, hence it also exposed weaknesses of healthcare systems both in developed and developing countries (Boseley Sarah, 7 February 2020).

Healthcare experts are showing concerns and even in some countries like Pakistan, physicians and paramedics are agitating against the non-availability, or substandard equipment, absence of health insurance, as they are exposed to an increased risk of epidemiologic infection leading to a significant financial consequence in case of illness (Feuer, 20 March 2020). In 2019 and 2020, COVID-19 also affected the education sector, and smooth working in most of countries. During the ongoing session/ semester, all of a sudden total closure of the schools, colleges, and universities was announced worldwide (UNESCO, 2020b). According to UNICEF (2020a), approximately 1.725 billion students were affected due to the closure of schools during the pandemic in 186 countries, which affected almost 98.5% population globally. The closure of the educational institutions not only has an impact on students learning process (Lindzon, 2020-03-12). As a result of this shutdown, the technologically advanced countries went on the step ahead towards digital learning or the open education platforms, and assessment of the student outcomes, yet, compared to developed economies, the students suffered at large due to lack of the digital learning facilities in the less developed nations globally (Karp & McGowan, 23 Marc, 2020).

Furthermore, we could see that due to interrupted learning, the impact is more serious on the disadvantaged children and their families (Time, 2020), who compromised on their nutrition

inter alia the issues of childcare and resultant economic cost to these families who lost their jobs (UNESCO, 2020a). Likewise, the instability in the market especially, the oil market is also facing a recession. Since most of the countries have restricted movements including air travel suspension, banned intercity road transport, and curfew enforcement have negatively affected the oil market (Jack & Simon, 2020). This recession and financial turmoil forced private sector, in particular, to lay off and downsize their workforce, thus, the great number of people lost their jobs. COVID-19 led to disruptions in the demand together with its remarkable influence on the financial markets since there is no or very nominal consumption, which on one hand led to rapid price swings and on other has badly affected the economy of oil-producing countries (Burns, 2020). The lowering oil prices seem to be a foreboding sign about the outlook for an economy kicked in the teeth by the COVID-19 pandemic. Thus, oil market sunk by the collapse in demand because of the coronavirus outbreak, though one cannot ignore, a pithy but nasty price war between Russia and Saudi Arabia, which added fuel to the oil market crisis (William, 2020).

Social Impacts

The continued lockdown and the social distancing measures introduced by the governments were taken to prevent the spread of the coronavirus also intensified the fears of increasing the domestic violence such as physical violence inter alia emotional and sexual abuse (Johnson, 12 April 2020). The concentrated time spent during lockdown implies that vulnerable people are more likely exposed to violence and abuse, particularly in the developing world (David et al., 21 April 2020), where, in such circumstances seeking help and assistance is almost very difficult (Fisher & Bubola, 15 March 2020). Several incidents of the violence took place in developing countries, for example, on April 27, a young boy was killed riding on a motorbike by his friend in Lahore Pakistan, while a minor 8-year-old baby girl was shot dead by her uncle in a home while, she was playing and jubilating in her backyard reported by daily Jang Lahore and daily Mashriq Peshawar (April 28, 2020). Similarly, considerable effect of the coronavirus pandemic is being witnessed within the computer and internet industry. The individuals with enforced self-isolation /or staying at home under stringent governmental controls are more involved in social media, and in some cases, involved in online gaming (Gualt, March 2, 2020), since the number of players has been recorded high in history of the online gambling (Jordan, 2020-03-22).

Awareness and Movement Restrictions

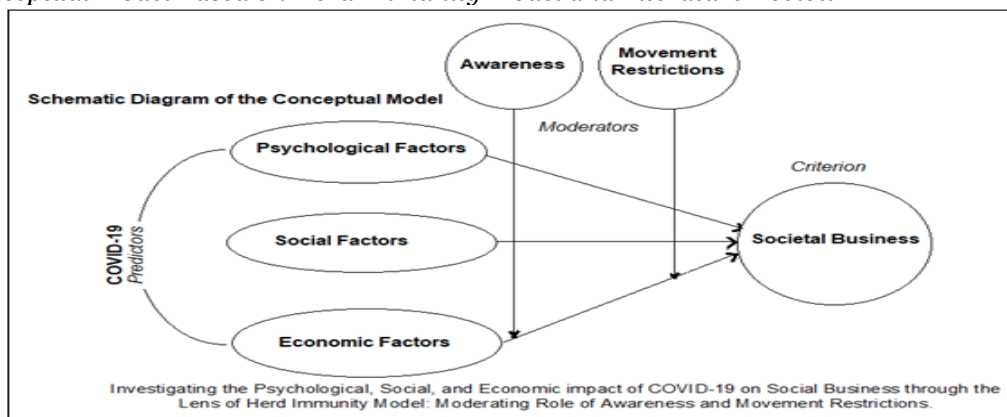
Since the magnitude of spread is unprecedented, the studies reported that the fast spread of the virus is result of social and cultural background in eastern societies (Anwar & Adnan, 2020). With herd immunity, transmissibility in population is sufficiently decreased over immunological mechanisms (Peter Hall, 2020). This concept is derived from zoology. This approach states that the population can resist infection caused by a pathogen like a coronavirus. According to this approach, large number of persons in population possess humoral immunity at a personal level, and person's immune system can develop antibodies against a specific infectious agent in the instant case of the coronavirus. These societies are orchestrated in such social settings that strengthened the social and cultural values of intimacy and close social relationships. People interact frequently whereas shaking hands and hugging is a common day experience (Peter Hall, 2020). The WHO recommended controlling the spread, hence it is imperative to create awareness among the masses to keep distance of at least two meters, wash hands for at least 40

seconds with good quality soap, use sanitizers, self-quarantine, and avoid handshaking (WHO, 2021).

It was further guided to control the interaction, movement restrictions might be imposed (Schnell & Krampe, 2020). With this, throughout the words, educational institutions, markets, restaurants, and recreational places were shut down (Chaturvedi, Vishwakarma, Singh, 2021). Due to increasing concerns from the social media activists, several countries have introduced guidelines on how to recognize and report domestic violence and abuse with an announcement for the available services. Heavy penalties were announced for deviants. International borders i.e., air, sea, and land were closed down. It was expected that this measure could help prevent and control the spread of disease, yet on other hand, these restrictions aggravated the already worsened situation which squarely affected the education, business, and life of the people and generated a new breed of unemployment (Ali, Siddiqui, Arshad, Iqbal & Arif, 2021). Ye, Yang, Zeng, Wang, Shen, Li and Lin (2020) explored moderating role of awareness and movement restriction of coronavirus disease and the social business and reported significant relations. Schnell and Krampe (2020) findings are consistent with Ali, Siddiqui, Arshad, Iqbal and Arif (2021).

Figure 1

Conceptual Model Based on Herd Immunity Model and Literature Review



Conceptual Model

The above given schematic diagram of the conceptual model is based on Herd Immunity Model of Youyang Gu who retitled the name of his famous COVID-19 forecasting model i.e., 'Path to Herd Immunity' into the 'Path to Normality' (Christie Aschwanden, 2021). This approach states that a person can defend against infection triggered by a pathogen, for example, coronavirus. This model states that a sufficient number of individuals in society acquire humoral immunity at the individual level, where immune system of an individual can develop antibodies against particular infectious agent of coronavirus. This closure has far-reaching social and economic outcomes especially, it has greatly affected the private sector, it did lay off teaching staff and in most of the developing countries, they are denied of their monthly salaries, and thus, in some more cases, cuts on their salaries. Based on findings of the previous studies it is assumed that psychological, social, and economic factors influence the social business negatively, however,

the spread could be prevented if the awareness inter alia educating the masses is adequately planned and implemented besides imposing the movement restrictions. The model shows the relationship between psychological, social, and economic influence of Covid-19 on day-to-day business, consequently, this relationship is however moderated by awareness and movement restrictions.

RESEARCH METHODOLOGY

The available secondary sources were thoroughly reviewed. PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) was employed for the review and write-up of the article. Moher (2013) introduced PRISMA for an evidence-based minimum set of items to be reported in the systematic reviews and meta-analyses. It is aimed to improve the reporting of systematic reviews and meta-analyses. It provides guidelines and steps, which are useful in systematic review of literature inter alia critical literature analysis and meta-analysis. Moher (2013) PRISMA is founded on 4-steps including identification, screening, eligibility and inclusion. Besides PRISMA, researchers use different methods to review, classify, and arrange literature systematically, mostly argumentation, still, scholar has used SLR (Massaro, Dumay & Guthrie, 2016), hermeneutics, discourse, and heuristics during literature review and analysis (James, 1992; Max, 1990; Moustakas, 1990). Population was finite from health and education sectors, Krejcie and Morgan's (1970) table was used to determine sample size (396). Quantitative cross-sectional survey was used. The correlation, regression, and moderation analysis were done over SPSS-23.

RESULTS OF STUDY

This section briefly presents the quantitative results and findings of the study that may help in obtaining the required information through application of statistical procedure in reaching the conclusion.

Table 1
Factor Loadings and Reliability of Measurement Model

Variable	Items	Loadings	AVE	CR	Reliability
Psychological Factors	PF1	0.674			0.877
	PF2	0.716			
	Pf3	0.472			
Social Factors	SF1	0.712			0.871
	SF2	0.596			
	SF3	0.703	0.433		
Economic Factors	EF1	0.584			0.769
	EF2	0.792			
	EF3	0.619			
Awareness	AW1	0.579			0.806
	AW2	0.683			
	AW3	0.756	0.415		
Movement Restrict	MR1	0.450			
	MR2	0.747			
	MR3	0.598			
Societal Business	SB1	0.552			

	SB2	0.718	0.439	0.756	0.727
	SB3	0.657			
	SB4	0.709			
KMO	0.889				
BTS & p Value	826.822	p<0.05			

The value of factor loads less than 0.4 is not acceptable (Field, 2013), likewise, the value of AVE must be > 0.5 however, if the value of CR is > AVE then in such case the scale is also considered reliable and valid (Lam, 2012). Furthermore, the value of Cronbach alpha must be > 0.7 (Field, 2013). Since all the values in table 1 report that the psychometric properties of the scale are consistent, reliable, and valid to measure the responses, consequently, we proceed with further analysis.

Table 2
Correlation Analysis

		1	2	3	4	5
PF	r	1				
SF	r	.721**	1			
EF	r	.582**	.670**	1		
Awareness	r	.544**	.559**	.517**	1	
Movement	r	.577**	.617**	.468**	.585**	1
SB	r	.596**	.594**	.564**	.469**	.547**

** Correlation is significant at the 0.01 level (2-tailed).

It could be seen from table 2 that all variables have a highly significant relationship except awareness with societal business is weak i.e., .469. This implies Covid-19 has the significant psychological factors (PF), social factors (SF), and economic factors (EF) influence on societal business (SB).

Table 3
Moderation Results

DV	IV	R	R2	F	β	p
SB	Constant	0.627	0.394	20.81		0.000
	Psychology Factors				0.399	0.000
	Awareness				0.160	0.092
	Interaction				-0.096	0.239
$\Delta R^2=0.0088$						

Results in table 3 and figure 2 show the findings of hierarchical multiple regression suggested by Aiken and West (1991), Field (2013), and Hair et al. (2017). It could be seen from the results that $R^2 = 39.4\%$ variance is explained by PF upon SB. With the inclusion of moderator i.e., awareness and interaction term product of the PF and the awareness shows a change i.e., $\Delta R^2 = 0.0088$. Though the p-value of the interaction term is insignificant, however, Jaccard et al. (1989) $\Delta R^2 = 0.0088$ show .88% variance by awareness of the relationship between PF and SB, so based on Jaccard and Wan (1995) the moderate variance suggests the acceptance of the hypothesis.

Figure 2
Moderating Graph for Psychological Factors and Awareness

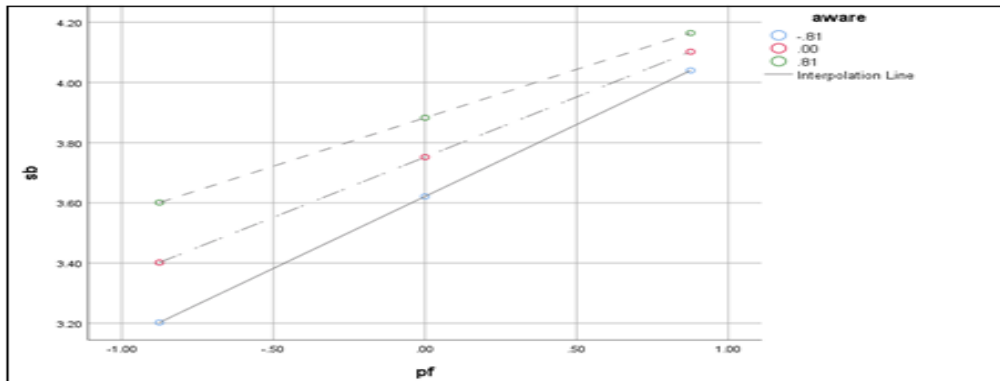


Table 4
Moderation Results

DV	IV	R	R2	F	β	p
SB	Constant	0.625	0.391	20.57		0.000
	Social Factors				0.365	0.000
	Awareness				0.146	0.132
	Interaction				-0.099	0.188
$\Delta R2=0.0111$						

Figure 3
Moderating Graph for Social Factors and Awareness

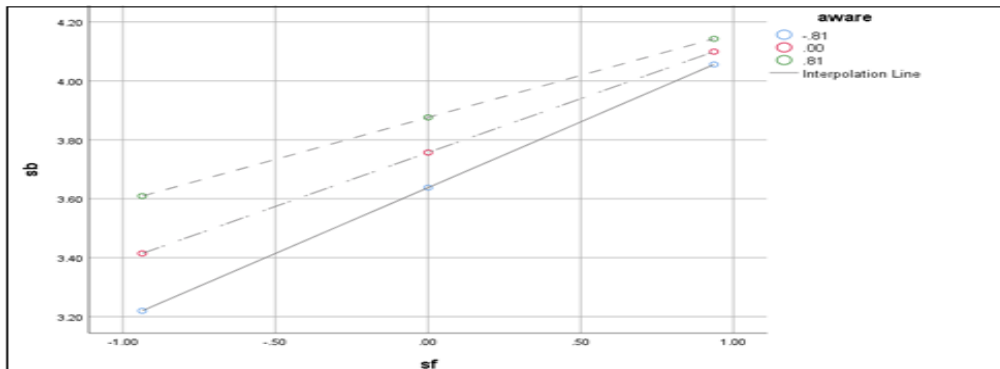


Table 4 and figure 3 describe the direct impact of social factors upon societal business i.e., R^2 0.391 explain 39% variance in the criterion variable significant at p-value 0.000, however after using interaction term the R^2 was significantly changed into $\Delta R^2=0.0111$, though p-value for interaction term is insignificant, [Jaccard and Wan \(1995\)](#) recommendation, since moderate variance is shown by moderator between social factors and societal business so we accept the hypothesis.

Table 5
Moderation Results

DV	IV	R	R2	F	β	p
SB	Constant	0.600	0.361	18.077		
	Economic Factors				0.3964	0.000
	Awareness				0.2332	0.014
	Interaction				0.0107	0.899
$\Delta R2=0.0001$						

Figure 5
Moderating Graph for Economic Factors and Awareness

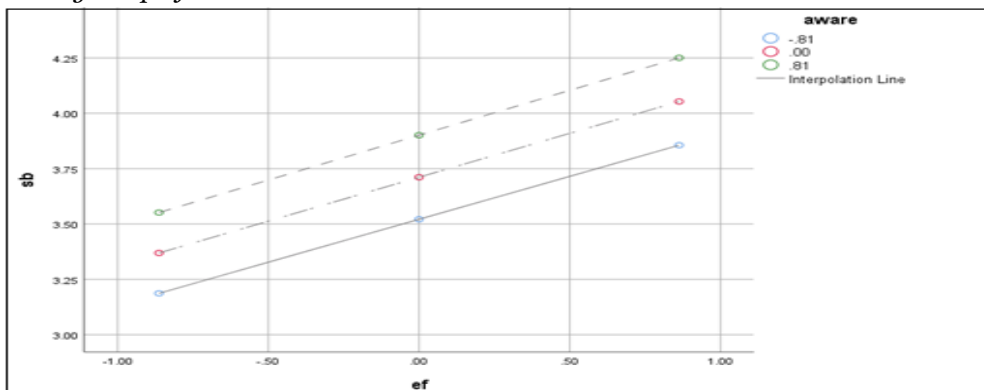


Table 5 and figure 5 demonstrate that there is no moderation of awareness upon SB as p-value 0.899 is insignificant and there is no change in $\Delta R2=0.0001$, therefore, the result does not support our proposed hypothesis hence it is not substantiated.

Table 6
Moderation Results

DV	IV	R	R2	F	β	p
SB	Constant	0.674	0.454	26.68		
	Psychological Factors				0.324	0.002
	Movement Restrictions				0.232	0.017
	Interaction				-0.189	0.011
$\Delta R2=0.0377$						

Table 6 and figure 6 point out that PF results in 45% variance since value of R2 0.454 stands significant at a 0.002 level of significance. With use of MR as a moderator the interaction term shows $\Delta R2=0.0411$ which is significant at 0.008, this suggests the acceptance of our proposed hypothesis.

Figure 6
Moderating Graph for Psychological Factors and Movement Restrictions

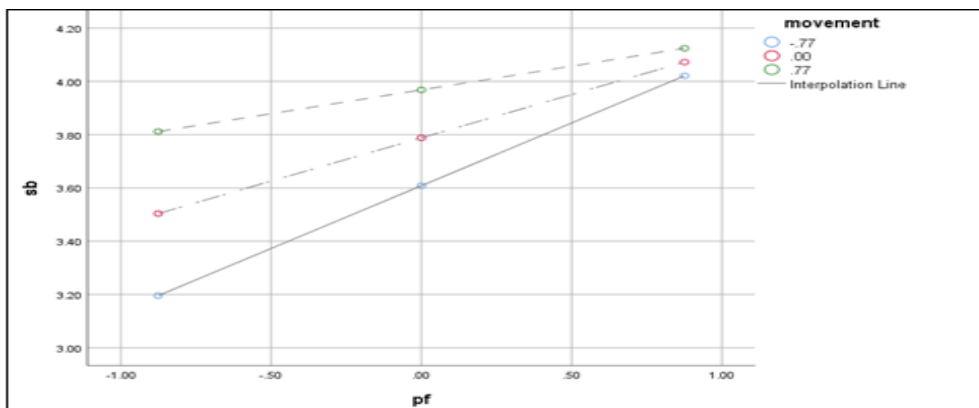
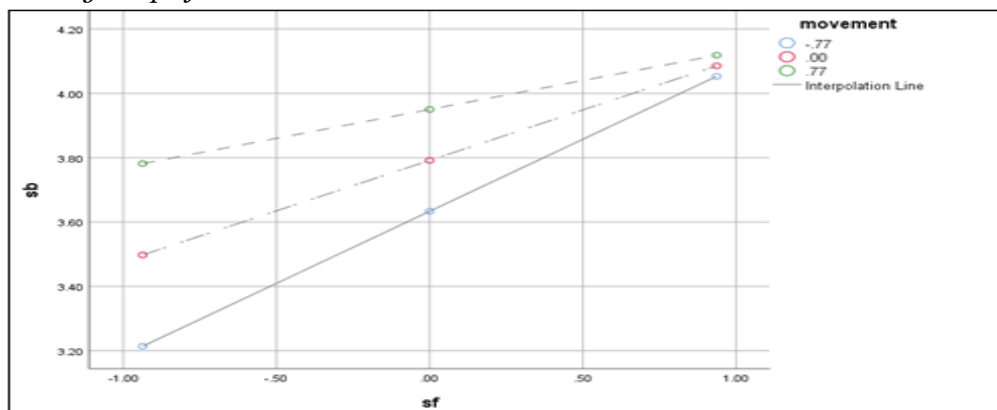


Table 7
Moderation Results

DV	IV	R	R2	F	β	p
SB	Constant	0.668	0.446	25.786		
	Social Factors				0.313	0.002
	Movement Restrictions				0.205	0.046
	Interaction				-0.173	0.008
$\Delta R2=0.0411$						

Figure 7
Moderating Graph for Social Factors and Movement Restrictions



If we look into results in table 7 with figure 7, it could be seen that R2 0.446 brings 44% variance in dependent variable, whereas significant variance is shown by the moderator MR upon the relationship between social factors and societal business, which is evident from the $\Delta R2=0.0104$. Again, study has followed Jaccard & Wan's (1995) criterion since the interaction term p-value is moderate significant i.e., 0.008, therefore our hypothesis is substantiated and accepted.

Table 8
Moderation Results

DV	IV	R	R2	F	β	p
SB	Constant	0.656	0.430	24.200		
	Economic Factors				0.3251	0.001
	Movement Restrictions				0.3224	0.000
	Interaction				-0.1070	0.188
$\Delta R2=0.0104$						

Figure 8
Moderating Graph for Economic Factors and Movement Restrictions

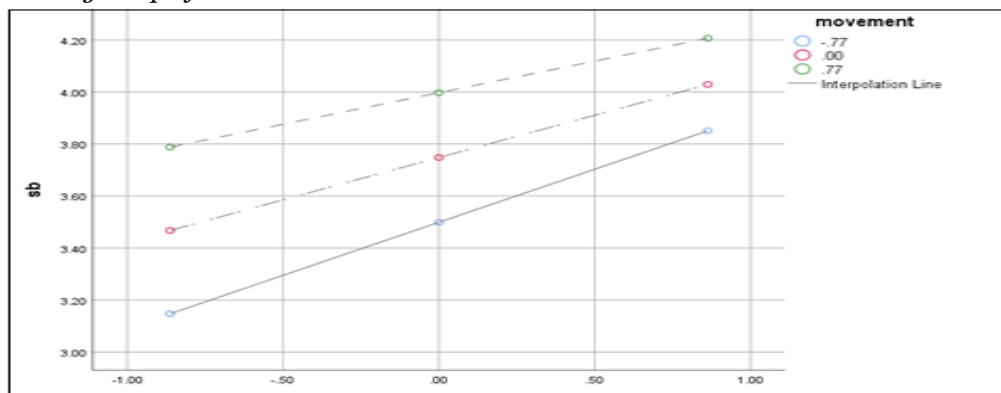


Table 8 and figure 8 describe moderation results for the hierarchical multiple regression. The results point out that R2 explains 43.0% variance by EF upon SB. The use of moderator i.e., MR and interaction term product of EF 7 MR shows change is $\Delta R2=0.0104$. Though p-value of the interaction term is insignificant, however, the $\Delta R2=0.0104$ indicates a one % variance by MR on relationship between EF and SB. This suggests hypothesis acceptance with moderate variance.

DISCUSSION AND CONCLUSION

The COVID-19 pandemic spread fear among individuals, communities and countries regarding personal, social, and economic concerns, yet psychological disturbances are more severe them all. The effects are enormous and far-reaching. It will take a time to recover from the effects of COVID-19 psychologically, socially, and economically since till now, vaccination is still going on in most of the countries to contain the pandemic. However, pace of vaccination is slow since there is lack of certainty and mistrust about vaccines. Therefore, it is obligatory for individuals, groups, and administrative machinery to revisit their thoughts, policies, and plans to minimize the severity of the negatives of COVID-19 pandemic especially, for the leadership of healthcare, business, government, and largely to social leadership. Further, the need of the hour is to plan and implement sustainable solutions, undertake emergency relief measures and adjust for those that may fall through cracks to coop with impacts of the COVID-19 pandemic. This study used the herd immunity model to investigate psychological, social, and economic impacts on social business. The study added two moderators i.e., awareness and movement restriction that how

effective they are in containing and controlling spread of this pathogen disease. Psychometric properties of instruments were checked using [Field \(2013\)](#), [Lam \(2012\)](#) criteria. Study found the instrument reliable and valid since all psychometric properties were consistent with threshold values.

The relationship between the predictors, moderators, and criterion was reported to be highly significant except for one factor i.e., awareness with societal business showed weak relationship. These results state that Covid-19 has a significant psychological, social, and economic influence on societal business. Furthermore, the study followed criteria given by [Aiken and West \(1991\)](#), [Field \(2013\)](#), [Hair et al. \(2017\)](#), and [Jaccard and Wan \(1995\)](#) while exploring role of moderators. Awareness showed moderate variance upon the relationship between psychological factors and societal business, similarly, moderate variance is shown by awareness between social factors and societal business. Yet, awareness did not act as a moderator between economic factors and societal business since p-value was reported is insignificant and no significant indirect effect is reported. Movement restriction was found significant moderator between psychological factors and societal business and similar were findings for movement restriction between social factors and societal business. Likewise, the significant variance is shown by the moderator movement restrictions upon relationship between social factors and societal business, though interaction term reported an insignificant p-value for interaction terms for movement restriction upon economic factors and societal business however, the results point to a significant change in ΔR^2 .

Since COVID-19 psychological impacts are grave, therefore, based on review of literature this study suggests that the needs of people with physical disabilities must be satisfied through a sustainable support system, and caregivers shall need to be placed inside the quarantine areas. Likewise, as for children are concerned, there is need to arrange healthy activities and message system to help the children cope with stress during this crisis, besides opportunities could be provided to them to play and relax along with explaining the facts, what is happening inter alia clear child-friendly information on how to avoid and prevent and reduce the risk of infection and stay safe in simple and plain words that they could understand. In this regard, one of the best ways could be to practically demonstrate, for example, effective handwashing, etc. More, adults are required to abstain from speculations and rumors in front of minors. The study has also found that the psychological harms of the COVID-19 are more severe on the caregivers, therefore, it is recommended that support mechanisms must be developed for the caregivers together with activities with the children during isolation/ quarantine at home. They need to be motivated and encouraged for doing regular physical exercises, for example, stretching, yoga, and tai chi along with cognitive, and relaxing exercises like meditation, mindfulness, breathing, etc. Similarly, reading books and magazines could also be helping to avoid the depression and stress.

One of most important suggestions of this empirical study and its findings is that since print and electronic media's bombardment of unauthenticated and non-reliable information causes severe psychological disturbances, so there is a need that people must reduce time they spent watching television channels or reading newspapers, they must access information only from the reliable sources, likewise, people have to reduce searching for information into one or two times a day instead of minute by minute or every hour. Succinctly, ensuring the provisions and strategies explained above with strictest implementation for both physically disabled, children,

adult quarantined, healthcare providers, and people responsible including workers, managers could reduce the anxiety and depression among these to decrease its physical and psychological harms. Further, each individual during this crisis should become a role model and practice self-care strategies to mitigate the stress. In this connection, based on the critical review and results for the impact of psychological, economic, and social factors covid-19 and moderating role of awareness and movement restrictions, this study, therefore, suggests that since the lack of the robust healthcare has been recognized globally, therefore, the first step should be a cooperative health response by scaling up the health spending to cater the needs and meet the challenge.

This will help expand treatment facilities on one hand and ensure sufficient medical supplies, more healthcare workers, and preparedness of responsive health system on the other to coop with the physical and psychological effects of the pandemic. The planning must include short, medium- and long-term plans as well on how to rebalance, and reengineer society, institutions, and economies following the crisis of COVID-19 pandemic. This necessitates a comprehensive sector-by-sector socio-economic development plan to encourage individuals and entrepreneurs so that those who hold robust and sustainable ideas and solution models could flourish to help society get rid of the psychological, economic, and social sufferings. Similarly, vivid support must be offered to boost the multilateral efforts and to contend with the spread of contagion to stop the pandemic. This needs to initiate scientific collaboration to find an effective treatment, and vaccine besides, universal access to vaccines and treatment in respectful, and dignified way without any stigma. The second step that needs to be taken is ensuring the people's lives and their livelihoods. Planning to boost and reengineer real economy. By real economy, this study means direct support and resources may be provided to workers, and households, for example, health, and unemployment insurance, increased social security inter alia support to business entities, especially to SMEs. This could be done through redesigning the fiscal, and monetary systems.

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