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Online working amid COVID-19 pandemic. The role of emotional intelligence as aggression de-escalator: research reported from Islamic Republic of Pakistan

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Abstract

World has transformed to a new era after the outbreak of a virus named COVID-19 in late 2019, a virus that consequently spread worldwide, forced the governments to declare smart, partial, or complete lockdowns. The constant and prolonged lockdowns resulted in the uncertainty over disease status, inadequate information, food supplies and boredom that led to anger and confusion, emotional breakdowns, and development of aggressive behaviors. During the pandemic and constant lockdown, one of the major differences in day-to-day activities was the transformation of the working and learning environment from the physical to the online realm. The prime objective of the study is to highlight that during pandemic how transferring towards online working helped people to stabilize their emotions, anxieties, aggressions, anger and frustration. The study is designed to find out how online working has negatively connected with the development of aggression and how emotional intelligence has mediated this effect. The study design is non-experimental, correlational and comparative, followed by quantitative research analysis. The survey technique used in the data collection process where validated and reliable questionnaire were used for data collection and hypothesis testing. A sample size of 233 (144 females, 88 males, 1 participant did not disclose gender) participants from the metropolis city of Karachi participated in an online survey. Results have indicated that engaging people in online working improved mental and emotional stability as well as the suppressed level of direct, indirect and displaced aggression. Moreover, emotional intelligence has acted as a negative influencing mediator towards different forms of aggression, where an expansion in online working, positively impacted emotional intelligence and negatively co-related with direct, indirect and displaced aggression. No gender difference is found in terms of emotional intelligence, however, a distinctive difference in terms of indirect and direct form of aggression is reported. It is concluded that emotional intelligence is acting as a mediator between online working and direct, indirect and displaced aggression. It means that engaging people in online working helped to stabilize themselves in terms of emotions and helped them to control their anxieties during isolation.

KEYWORDS: Online Working, COVID-19 Pandemic, Emotional Intelligence, Direct Aggression, Indirect Aggression, Displaced Aggression, Islamic Republic of Pakistan, Pakistani Study.

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1. Introduction

The world has transformed to a new era after the outbreak of a virus named COVID-19 in late 2019, a virus that consequently spread worldwide (Chinazzi et al., 2020). Throughout the world, this pandemic forced the governments to declare smart, partial, or complete lockdowns, for the governance of the health contingencies (Fahriza et al., 2020). Constant and

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prolonged lockdowns resulted in inadequate information, food and supplies (Ahmed et al., 2020) led to anger and confusion (Brooks et al., 2020). Sundarasen et al. (2020) reported that the prime aggravations during the pandemic were economic crises, remotely professional and academic engagements and uncertainty about the future with regard to academics and career. Similarly, Chinese level of depression, stress, and fear raised during lockdown (Duan et al., 2020). From an economical point of view, many businesses were ruined such as airlines, hospitality, hotel, and the manufacturing industry. Millions of people in these sectors lose their jobs and caused enormous disruption in businesses (Kaushik & Guleria, 2020).

Due to the pandemic, people developed fear towards invisible disease and an experience of helplessness. These perceptions developed into frustration, agitation, trauma, and violence that led to aggression accessions (Mazza et al., 2020). The fear resulted in the development of chronic emotional stress introducing unfavorable biological impact on people (Bogin & Varea, 2020), with harmful effects on both the psychosocial aspect and mental health (Liang et al., 2020). Chandra (2020) reported that lockdown measures were somewhat responsible for creating a disruption among the people.

Similarly, like adults, the COVID-19 pandemic resulted in a wide range of annoyances on young children, with the terror of the contagion, limited physical interactions, boredom, inadequate information, absence of personal space at home, and family's financial loss. It is reported that emotional stress during COVID 19 in children appeared in the form of clinging, agitation and aggression (Shorer & Leibovich, 2020). In addition, parental stress has also arisen during this pandemic (Brown, 2020), as a result parent-child wellbeing was also suffered (Gassman-Pines et al., 2020). It is concluded by Mazza et al. (2020); Shorer and Leibovich (2020), circumstances during COVID-19 resulted in the development of aggression, anger, anxiety among both adults and children.

To overcome, financial loss and help people to encounter unexpected circumstances, switching towards online working and learning was considered as a key factor that contributed towards acceptance of the situation followed by planning in a new era and using technology-oriented work as a distractor. To overcome, loss of education and to meet objectives designed for an academic year, the disproportionate rise of e-learning was observed where academic tasks were undertaken remotely and on digital platforms. The Higher Education Commission in Pakistan ordered Universities to conduct online classes to overcome any academic losses and to meet educational goals designed for the academic year or semester (Today, 2020). In the same way, administrations of schools and colleges introduced online classes so that education would not be compromised and face-to-face teaching was shifted towards online teaching (Abid et al., 2021). In continuation, other businesses also moved towards online services such as advertising companies, food delivery services, online grocery stores, telemedicine housing, etc. (Hashim, 2020; Rehman, 2021; Nagra et al., 2021). Uzzaman and Karim (2017) have supported the fact that respondents showed a reduced negative emotional outburst when associated with technology-oriented tasks. In this way they were able to divert negative feelings into different constructive activities. During pandemic engaging faculty in online working also showed positive results with Indian faculty members. A study conducted with Indian faculty members showed an above-average level of emotional intelligence in the COVID-19 pandemic (Baba, 2020) when physical on-campus classes were suspended and routine tasks were completed through other means. MacIntyre et al. (2020) reported that the fear and anger developed due to lockdown situations were controlled by engaging people in online working which has not only helped for stabilization of economy as well as it has brought positive impact on human psychology, emotional stability and helping people in coping stress, where engagement with online environment demonstrated acceptance of the situation and distractions from negative thoughts resulted due to uncertainty.

Emotional intelligence is defined as "A type of social intelligence that involves the ability to monitor one's own and others' emotions, to discriminate among them, and to use the information to guide one's thinking and actions (Salovey & Mayer, 1990)", whereas Emotional Stability is the aptitude to persevere emotional balance under challenging circumstances. Abdel-Fattah (2020) expounded that emotional intelligence is directly associated with emotional stability and people with a higher level of emotional intelligence show better emotional stability. Researcher further explained that we use emotional intelligence when empathizing with coworkers, speaking deeply about our relationships, or managing an unruly or distraught child. Living a more authentic, healthy, and happy life requires connecting with others, understanding ourselves better, and understanding others. Therefore, online interactions allow people to use their emotional intelligence to empathize with others and provide moral support, thereby contributing to stability and acceptance of a transforming era.

Emotional Intelligence (EI) has also been discussed in multifold researches in relation to aggression control and has proven to be effective in controlling unwanted unfriendly behavior outbursts. (Brackett et al., 2004; Bibi et al., 2020; Castillo et al., 2013; García-Sancho et al., 2014; Masum & Khan; 2014). Moreover, several studies have highlighted that emotionally intelligent people have a tendency to overcome aggression developed due to anger and anxieties (García-Sancho et al., 2014; Masoumeh et al., 2014; Shahzad et al., 2013). In this study, the repercussion of online working in addition to emotional intelligence is associated with aggression and its subtypes. Aggression is defined as an

unacceptable behavior that is planned to damage or property or harms an individual (Baron & Richardson, 1994). Aggression has been further classified into many subtypes but in the current study three main expressions of aggression are used for annotation. Direct aggression, a behavior that provokes the person to retaliate face to face through physical or verbal means and the individual is ready to risk a direct confrontation (Richardson & Green, 2006). Indirect Aggression as explained by Buss (1961) is retaliation when a person is not ready to disclose its identity against the provocateur. A relatively contemporary reflection of aggression is displaced aggression which is defined as the behavior when a person instead of direct confrontation, displays aggression against an innocent target (Denson et al., 2006).

Previous researches have reported that online engagement and online support systems, when used effectively, have positive effects on emotional stability and emotional intelligence (Chandra, 2020). Similarly, increasing emotional intelligence has been shown to be a strong factor in controlling aggression and its consequences (Bibi et al., 2020). However, the present study seeks to understand how these factors interact during the pandemic, when a sudden shift to online tasks was imposed and high levels of anxiety and aggression were repeatedly reported (Mazza et al. 2020; Shorer & Leibovich, 2020). In this paper, the researchers attempt to show that emotional intelligence can be an effective tool for controlling anxiety and was equally effective during the pandemic.

The positive outcomes of online engagement in different settings are reported globally but in order to evaluate the circumstances in Pakistan, this study was devised. This research study is designed to explore that during pandemic how transferring towards online working and learning helped people to stabilize their emotions and how emotional intelligence helps to control anxieties, aggression, anger, and frustration. Moreover, it is reported that the level of emotional intelligence and expression of aggression varies with gender (Ahmed et al., 2019; Siddiqui et al., 2021a). This study is also intended to conceive the influence of gender differences on emotional intelligence and aggression during the pandemic lockdown.

1.1 Purpose

In the midst of the COVID-19 pandemic and constant lockdown, one of the major differences in daily routine was the transformation of working and learning from the physical to virtual realm, which led to social distancing and a sense of solitude. When interactions with humans were forbidden, anxiety and aggression levels increased. Since we are social animals, and for emotional stability, interacting with people is crucial, which was initiated through online networking during the pandemic. The study is designed to find out how this online working has correlated with the development of aggression and how emotional intelligence has mediated this effect. A correlational study with quantitative approach was carried out with reliable and valid questionnaires through an online platform to investigate associations without manipulating or controlling variables. A correlation reflects the strength and direction either positive or negative of the relationship between two or more variables (Bhandari, 2021).

2. Literature review

2.1 Introduction to online working and its negative consequences

To overcome, loss of education and to meet objectives designed for an academic year and to control economic crises the distinctive rise of e-learning and online working was observed where teaching, learning and other professional assignments were undertaken remotely and on digital platforms (Hashim, 2020; Nagra et al., 2021; Rehman, 2021; Today, 2020). For many people working online was discomforting as the home environment was reported as stressful and discouraging experience by the workers (Joshi et al., 2021). The constant rise in online tasks also brought the development of technostress among the people working online which was the potential cause of job loss or motivation to leave the professional organization in Pakistan (Siddiqui et al., 2022a). It is also reported that constant working on online media can result in the development of aggression (Sparby et al., 2017). Constant online working is responsible for the expansion of internet addiction among people leads to further complications. Machimbarrena et al. (2018); Siddiqui et al. (2021b) reported that addiction to online activities is one of the prime causes of augmented cyber aggression and displaced aggression. Similarly, internet use is also associated with the amplification of passive aggression (Waqas et al., 2016), development of direct aggression (Lim et al., 2015; Martínez-Ferrer et al., 2018), solicitude, boredom (Akin & Iskender, 2011; Glaser et al., 2018), degradation of quality of life (Cheng & Li, 2014) marital dissatisfaction (Ahlstrom et al., 2012) and loneliness (Koyuncu et al., 2014). In contrast, Glaser et al. (2018) reported that if the objective of social media use is to strengthen existing relationships it positively impacts mental health.

2.2 Online working a positive step towards pandemic frustrations

A literature review has suggested that online learning and working has positive impacts on human psychological many aspects such as motivation towards completion of tasks, self-efficacy (Siddiqui et al., 2020b) and is the source for achievement of satisfaction of psychological needs (Siddiqui et al., 2020a). Uzzaman and Karim (2017) also supported the fact that engagement with technology-oriented tasks is helpful to divert stress into different activities. Advocates of technology supportive tasks believe that it is positively

associated with an amelioration in mental health (Silva, et al., 2005) individuals wellbeing, social connections (Huang, 2012), improvement in academic achievements (Lee et al., 2016), the opportunity for the development of 21st-century skills (Pirani & Hussain, 2019), improved communication, research, discovery and collaborations skills (May & Abreh, 2017), enhancement of satisfaction (Maulana et al., 2016), increase motivation and competence (Edward et al., 2018). Beaudry and Pinsonneault (2010) expressed in their research paper that the use of information technology is positively correlated with happiness and social support. During pandemic engaging faculty in online working also showed positive results and enhances emotional intelligence level with Indian faculty members (Baba, 2020). From this study it is concluded that in the times of lockdown and pandemic, social support via online working and networking suppressed emotional trauma and anxiety faced by people that helped them to stabilize their emotional state. Similarly, MacIntyre et al. (2020) reported that the fear and anger developed due to lockdown situations were controlled by engaging people in online working which has brought a positive impact on human psychology.

2.3 Emotional intelligence association with aggression

World Health Organization's global report on violence (WHO, 2010) expressed that every year more than 1.5 million people die due to aggressive acts and being victims of violence. To inhibit and regulate aggressive behaviors, Emotional Intelligence (EI) has appeared as a reasonable relevant conception (Brackett et al., 2004). Bibi et al. (2020), García-Sancho et al. (2014), Masum and Khan (2014) reported that people with a lower level of emotional intelligence have more chances of aggressive personality and negative social associations. Castillo and associates (2013) applied two years of interventions to control aggression and to develop empathy among Spanish students using the ability model of EI, and found robust results. Liau et al. (2003) study supported outcomes that emotional intelligence is negatively correlated with aggression and hidden delinquencies in nature. García-Sancho et al. (2014); Shahzad et al. (2013); Masoumeh et al. (2014) researches also supported Liau et al. (2003) findings and suggested that there is a strong and negative association between EI and aggression. It is inferred that EI serves as a protective factor against the problems behaviors and emotionally intelligent people have a greater tendency to understand and regulate their emotions. Quebbeman and Rozell (2002) studied association of EI and workplace aggression and suggested for incorporation of emotional intelligence with the help of training for emotional intelligence, through counseling, through rewards for positive behaviors and through organization's performance appraisal to reduce triggering events. From the literature review, it is already proven that online engagement and online support systems, when used positively, has positive effects on emotional stability and emotional intelligence (Chandra, 2020). Similarly, the increase in emotional intelligence has been shown to be a strong factor in controlling aggression and its consequences (Bibi et al., 2020). However, this study seeks to understand how these factors interact during the pandemic, when a sudden switch to online tasks was imposed and high levels of anxiety and aggression were repeatedly reported. In this paper, the researchers attempt to show that emotional intelligence can be a powerful tool for controlling anxiety and was equally effective during the pandemic.

3. Research methodology

The study design is non-experimental, correlational and comparative, followed by quantitative research analysis. The survey technique used for the data collection where validated and reliable questionnaires were used for data collection and hypothesis testing. Data analysis and hypothesis testing is achieved after factor analysis of the instruments through Pearson's Correlation, independent sample t-test and testing mediation. Research model is used to identify how online working in COVID-19 has associated with emotional intelligence and development of aggression. Furthermore, emotional intelligence relation with different forms of aggression also concluded (refer to Figure 1). SPSS version 20 and AMOS version 24 were the two main software packages used for analysis. After confirmatory factor analysis and establishing validity and reliability for the questionnaires, model fit criteria were identified and approved. Pearson's correlation was used to determine the correlation between duration of online use, emotional intelligence and sub-factors of aggression. Independent sample t-test was run to find gender differences in terms of emotional intelligence and aggression. The last part of the analysis section focuses on highlighting direct, indirect, and total effects among the variables to demonstrate emotional intelligence as a mediator between duration of online working and different types of aggression. The level of significance for all statistics was set at $p<0.05$.

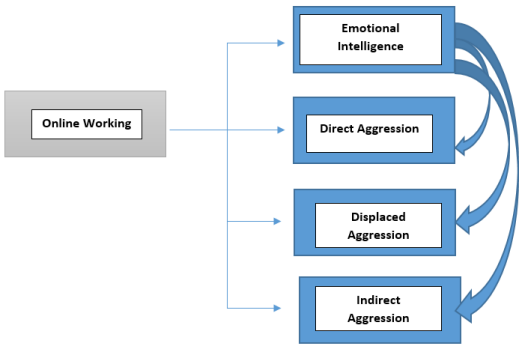

Figure 1 - Impact of Online Working on Emotional intelligence and Aggression.

3.1 Sample

A survey research questionnaire of 40 items has been used to collect the data from 233 participants. Researchers have used the convenient sampling technique, where data is collected through google forms from the participants of metropolis city Karachi. For voluntary involvement in the research activity, more than 500 forms were sent to known contacts on emails, WhatsApp, and through social media networks and were requested to fill and forward to more respondents in contact for maximum participation. A total of 233 questionnaires were returned within a time frame of one month. Due to time constraints, responses returned after the selected time frame were not accepted and data was analyzed on the final sample of 233 participants. The final sample comprises of the participants with command in the written and spoken Urdu language. In order to minimize error while entering data manually and to ensure validity, data from the Google forms converted directly to EXCEL sheets (Love, 2014). Demographic presentation of participants has shown that 211 participants were working online during the COVID-19 pandemic whereas only 22 participants were associated with jobs with a physical presence. The online tasks included teaching students online, preparing instructional materials for online classes, preparing and conducting exams through online platforms, preparing excel spreadsheets by administrators and accountants, attending meetings with colleagues and supervisors on Zoom or Google Meet platforms, and conducting research and data collection via online forums such as Zoom, Google Meet and Microsoft Teams etc. Students and professionals associated with education have used online forums for online study and to submit regular academic assignments. Among those involved in physical jobs were beauticians (though it was a lockdown, some reported that they were providing services by visiting homes), medical workers, some banking staff, personnel associated with law enforcement agencies etc. The age and gender of the participants are shown in Table 1. Moreover, information related to time spent on online work was also gathered and it was found that most of the participants (77, 33%) average time for online use was 2-4 hours per day. Figure 2 has shown the distribution of online working w.r.t time duration.

Count					
		Gender			**Total**
		Prefer not to say	**Male**	**Female**	
Age	Less than 15 years	0	1	0	1
	15-20 years	0	16	23	39
	21-25	1	18	41	60
	26-30	0	24	13	37
	31-35	0	9	19	28
	36-40	0	10	27	37
	41-45	0	4	10	14
	46-50	0	2	7	9
	More than 50 years	0	4	4	8
	Total	1	88	144	233

Table 1 - Demographics.

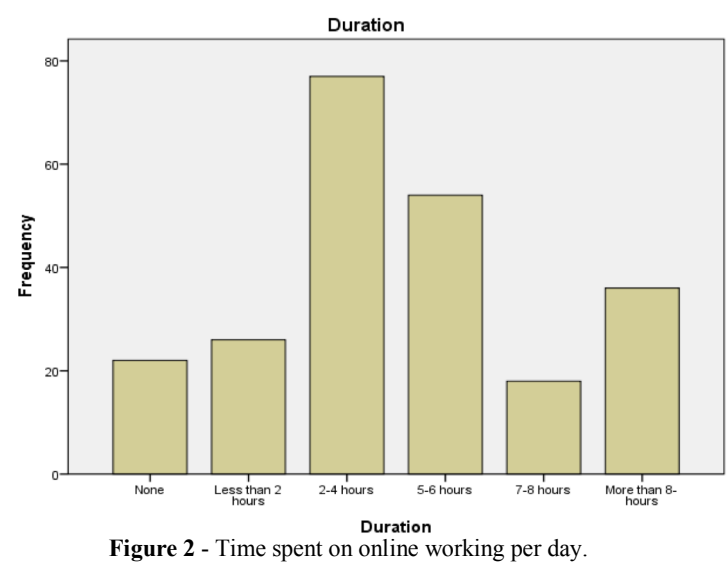

Figure 2 - Time spent on online working per day.

3.2 Measurement Instruments

3.2.1Urdu Aggression Questionnaire

Different aspects of aggression were measured through newly developed and revalidated Urdu Aggression Questionnaire (UAQ) by Siddiqui et al. (2021a); Siddiqui et al. (2022b). UAQ (2021) is a 24 items self-report questionnaire with 5 points Likert scale (never, sometimes, to some extent, often and always) with 3 factors construct: Direct Aggression (8 items) (Example item with translation: جب چیزیں میری مرضی کے خلاف ہوتی ہیں تو با آواز ِ بلند تلخ کلامی شروع کردیتا/دیتی ہوں, When things go against my will, I start speaking loudly and bitterly), Displaced Aggression (4 items) (Example item with translation: غصہ ، غصہ دلانے والے پر نہ نکال سکوں تو کسی چیز پر غصۃ نکال کر میں پر سکون ہوجاتا /ہوجاتی ہوں, If I can't take out anger on the person causing the anger, I get relief by taking it out on something), Indirect Aggression (12 items with 1 reversed statement) (Example item with translation: انصاف کا تقاضہ ہے ، بے عزتی کے بدلے بے عزتی تھپڑ کے بدلے تھپڑ اور تکلیف کے بدلے تکلیف ، I believe in the principle of vengeance: an eye for an eye). After factor analysis number of items reduced to 15 (6 items for Direct Aggression, 3 items for Displaced Aggression and 6 items for Indirect Aggression) (refer to Table 2 and Figure 3).

3.2.2 Emotional Intelligence

The EI was assessed through the Urdu translated version of Wong and Law Emotional Intelligence Scale (WLEIS; Wong & Law, 2002) translated by Zahra et al. (2020). WLEIS developed by Wong and Law (2002) is a 16-item self-report measurement on a 7-point Likert scale ranging from "1 strongly disagree to 7 strongly agree". (Example items with translation: میں ہمیشہ جانتا جانتی ہوں کہ میں خوش ہوں یا نہیں/, It is always easy for me to recognize my feelings, whether I am happy or not, میں دوسروں کے جذبات اور احساسات کے لیے حساس ہوں, I am sensitive to the emotions and feelings of others). Factor analysis of the instrument is shown in Table 2 and Figure 3.

3.2.3. Online Working/ Online Learning

Online engagement was evaluated with the number of hours people were engaged with online working or learning. Some people were not associated with online professional or academic tasks and they mentioned "zero" hours of online work per day.

4. Data analysis

For confirmatory factor analysis and calculating mediating effects, AMOS version 24 is used.

Factor Loadings	Emotional Intelligence (EI)	Direct Aggression	Displaced Aggression	Indirect Aggression
EI-1	.594			
EI-2	.771			
EI-3	.649			
EI-4	.630			
EI-5	.621			
EI-6	.665			
EI-7	.691			
EI-8	.567			
EI-9	.647			
EI-10	.622			
EI-11	.696			
EI-12	.796			
EI-13	.576			
EI-14	.565			
EI-15	.465			
EI-16	.561			
Direct Aggression-1		.546		
Direct Aggression-2		.725		
Direct Aggression-3		.731		
Direct Aggression-4		.682		
Direct Aggression-5		.713		
Direct Aggression-6		.622		
Displaced Aggression-1			.759	
Displaced Aggression-2			.815	
Displaced Aggression-3			.780	
Indirect Aggression-1				.728
Indirect Aggression-2				.819
Indirect Aggression-3				.906
Indirect Aggression-4				.470
Indirect Aggression-5				.437
Indirect Aggression-6				.537

Table 2 - Factor loadings.

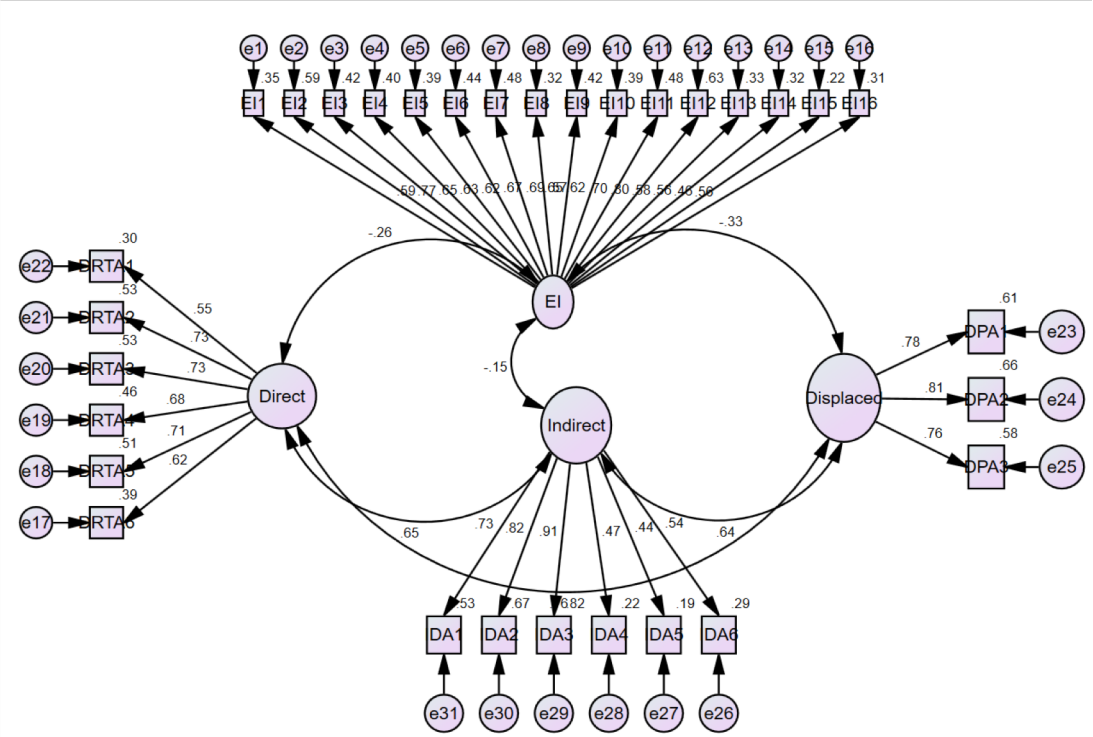

Figure 3 - Factor loadings for the model.

Independent sample t-test and Pearson's Correlation were also performed for the data analysis, using SPSS version 20. The level of significance for all statistics was set at $p<0.05$. Data analysis and hypothesis testing is achieved after factor analysis of the instruments through Pearson's Correlation, independent sample t-test and testing mediation.

4.1 Factor Analysis, Validity and Reliability

Both confirmatory and exploratory factor analysis are statistical methods used to uncover latent variables with the help of observed indicators. However, in CFA, researcher has prior assumptions and model construct. Main purpose of confirmatory factor analysis is to confirm or reject construct based on existing measurement theory or factors of instrument already tested, validated and used. Usually in confirmatory factor analysis researcher confirms or rejects hypothetical model based on theoretical framework or previously used references. For confirmatory factor analysis for Emotional Intelligence Scale and Urdu Aggression Questionnaire AMOS version 24 is used. Factor loadings for each factor are shown in Table 2 and Figure 3. Reliability statistics and model fitness criteria for emotional intelligence and factors of aggression are reported in Table 3.

Theoretical constructs after factor analysis elaborated that a 4-factor for assessing emotional intelligence and three forms of aggression may provide the most meaningful interpretation. Factor loadings with value above 0.32 are acceptable and has also assured construct validity of the instrument (Tabachnick & Fidell, 2014; Tavakol & Wetzel, 2020). Construct validity is defined as how well a test measures what it is claims or supports to measure. Data reliability is measured through Cronbach's alpha values that should be greater than 0.5 for each variable (Cronbach, 1951). In this case data is reliable as Cronbach's values are higher than 0.5 for every construct (Refer to Table 3).

Model Fitness describes the relationship between a response variable and one or more predictor variables. Parsimony fit indices values are between 0 to 1 where values above 0.50 are considered acceptable (Mulaik et al., 1989, Soleimani et al., 2016).

S.No	Factor	No. of Items	Cronbach's Value	Model Fitness	
1	Emotional Intelligence	16	0.913	PCFI	0.671
2	Direct Aggression	6	0.826	Recommended	>0.5
3	Displaced Aggression	3	0.828	PNFI	0.606
4	Indirect Aggression	6	0.808	Recommended	>0.5
5	Overall Aggression	15	0.896		

Table 3 - Reliability statistics and model fitness.

4.2 Pearson's Correlation

Associations between duration of online use, emotional intelligence and sub factors of aggression such as direct aggression, displaced aggression and indirect aggression were expressed with the help of the SPSS version 20 following the procedure suggested by Hair et al. (2006). Table 4 has manifested significant negative correlations between emotional intelligence with different forms of aggression. It is interpreted that increase in emotional intelligence is negatively correlated with different forms of aggression. Moreover, it is seen that duration for online working has a positive correlation with emotional intelligence and is negatively affiliated with direct and indirect aggression but has an insignificant impact on displaced aggression. Additionally, it is highlighted that rise in one form of aggression are positively associated with other forms of aggression too. It is concluded from correlation results that an increase in online use is acting as a source of emotional intelligence and is negatively associated towards different forms of aggression.

4.3 Gender

Difference on Aggression and Emotional Intelligence

A significant difference in terms of direct and indirect aggression among male and female participants concluded from Table 5, where independent sample t-test used for concluding gender differences at p-value <0.05. The comparison of mean values has indicated that male participants have significantly higher level of direct and indirect aggression as compared to women. However, no differences in terms of displaced aggression and emotional intelligence reported.

4.4 Emotional intelligence mediating effect between duration of online working and aggression

Table 6 regression analysis at the set significant value of 0.05 has clearly indicated that duration of online working has significantly and positively influenced emotional intelligence, where the rise in duration is responsible for a higher level of emotional intelligence. Moreover, direct and negative association of online working is also pointed out toward the direction of aggression, which shows that engagement in online working is suppressing the level of direct aggression. In addition, higher level of emotional intelligence is negatively associated with direct and displaced aggression.

The indirect (mediated) effect of duration of online working on indirect aggression is -.007. That is, due to the indirect (mediated) effect of duration on indirect aggression, when duration goes up by 1, indirect aggression goes down by 0.007. This is in addition to any direct (unmediated) effect that duration of online engagement may have on indirect aggression. Similarly, the indirect effect of duration on displaced aggression is -.021and on direct aggression is -.013 that is clearly indicating that emotional intelligence is acting as a mediator between online working and different forms of aggression (refer to Table 7 and Figure 4). It is found that working online has direct as well as indirect associations with different forms of aggression where emotional intelligence mediated effect is proven.

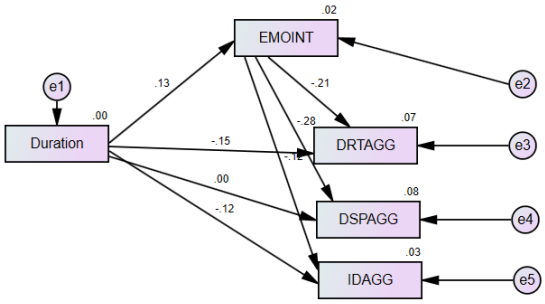

Figure 4 - Emotional Intelligence acting as a mediator between online working/learning duration and aggression (Duration = Online Working Hours; EMOINT =Emotional Intelligence; DRTAGG= Direct Aggression; DSPAGG= Displaced Aggression; IDAGG= Indirect Aggression).

5. Discussions

Multifold studies have indicated that lockdown situation during pandemic had negatively influenced both the psychosocial aspect and mental health (Liang et al., 2020) and the measures taken to suppress health crises were somewhat responsible for creating disturbances in the routine lifestyle of the people (Chandra, 2020). The inadequate information and household supplies resulted from constant and prolonged lockdowns (Ahmed et al., 2020) led to anger and confusion (Brooks et al., 2020) and emotional stresses resulted in the development of frustration and aggression among the children and elders (Shorer & Leibovich, 2020). To overcome such boredoms and to maintain economic status of the country as well as for continuous education, online working and learning was adopted as a replacement of regular routine physical jobs and schools. This study was designed to check how online engagement has impacted the emotional intelligence and stability of the people as well as controlling level of aggression.

The results of the current study expounded that the duration of online assignments has positively significance towards emotional intelligence and is negatively correlated with aggression. The study is supporting the outcomes of Beaudry and Pinsonneault (2010) where technology is positively correlated with happiness and social support. From this study it is concluded that in the times of lockdown and pandemic, social support via online working and networking suppressed emotional trauma and anxiety faced by people that helped them to stabilize their emotional state. The study results are in support of the results of MacIntyre et al. (2020), Uzzaman and Karim (2017) where the fear and anger developed due to lockdown situations were controlled by engaging people in online

	Duration	Emotional Intelligence	Direct Aggression	Displaced Aggression	Indirect Aggression
Duration	1				
Emotional Intelligence	.132*	1			
Direct Aggression	-.174**	-.231**	1		
Displaced Aggression	-.040	-.283**	.622**	1	
Indirect Aggression	-.139*	-.136**	.563**	.558**	1

**. Correlation is significant at the 0.05 level (2-tailed).*
***. Correlation is significant at the 0.01 level (2-tailed).*

Table 4 - Correlations.

	Gender	N	Mean	Std. Deviation	T	Df	Sig. (2-tailed)	Mean Difference
Emotional Intelligence	Male	88	5.1527	.87433	-.947	230	.345	-.12334
	Female	144	5.2760	1.01215				
Direct Aggression	Male	88	1.7955	.69238	2.752	230	.006	.24569
	Female	144	1.5498	.63932				
Displaced Aggression	Male	88	1.7576	.81136	.906	230	.366	.10017
	Female	144	1.6574	.82119				
Indirect Aggression	Male	88	1.8617	.82048	4.606	230	.000	.41498
	Female	144	1.4468	.53967				

Table 5 - Impact of gender on variables, Independent Sample t-test.

			Estimate	S.E.	C.R.	P
EI	<---	Duration	.088	.043	2.026	0.043
Direct Aggression	<---	EI	-.146	.044	-3.319	***
Displaced Aggression	<---	EI	-.237	.053	-4.448	***
Indirect Aggression	<---	EI	-.085	.046	-1.842	0.065
Direct Aggression	<---	Duration	-.067	.029	-2.300	0.021
Displaced Aggression	<---	Duration	-.002	.036	-.051	.959
Indirect Aggression	<---	Duration	-.058	.031	-1.894	.058

At P-value <0.05
****. Significant at the 0.001 level*

Table 6 - Regression Weights.

Variables			Direct Effects	Indirect Effects	Total Effects
EI	<---	Duration	.088	-------	.088
Direct Aggression	<---	EI	-.146	-------	-.146
Displaced Aggression	<---	EI	-.237	-------	-.237
Indirect Aggression	<---	EI	-.085	-------	-.085
Direct Aggression	<---	Duration	-.067	-.013	-.080
Displaced Aggression	<---	Duration	-.002	-.021	-.023
Indirect Aggression	<---	Duration	-.058	-.007	-.066

Table 7 - Direct, Indirect and Total Effects.

working that helped people in coping stress, where engagement with an online environment demonstrated acceptance of the situation and distractions from negative thoughts resulted due to uncertainty. Online engagement at the time of the pandemic was also helpful to reduce negative and unexpected emotional outbursts and are able to divert stressful thoughts into different activities knowingly or unknowingly, which is one of the coping strategies. These conclusions were aligned with the recommendations suggested by Abdel-Fattah (2020) where adaptability to the rapidly changing environment through the use of technology was significantly and positively associated with emotion intelligence and stability. Chandra (2020) also demonstrated that engagement with online activities suppressed negative feelings of social distancing since students were able to see that the separation was physical, rather than psychological. Additionally, innovation and the creation of online communities after the COVID-19 pandemic have expanded the use of online platforms to promote social, emotional and psychological wellbeing (Beard et al., 2021). Moreover, online platforms were also used by educators as an outlet to provide emotional and social support to students during pandemic (Zieher et al., 2021).

In continuation of the studies by García-Sancho et al. (2014), Shahzad et al. (2013), Masoumeh et al. (2014), the current study has supported the fact that emotional intelligence is negatively correlated with aggression. The current study has revealed that the rise in the use of online assignments not only positively influenced level of emotional intelligence but also helped in the suppression of aggressive behavior. These results are supporting research of Castillo and associates (2013) who applied two years of interventions to control aggression and to develop empathy among Spanish students using the ability model of EI.

It shows that emotional intelligence is acting as a mediator between online working and direct, indirect, and displaced aggression. It is inferred that engaging people in online tasks helped to stabilize themselves in terms of emotions and assisted them to control their anxieties.

This study is in contrast to the study conducted by Ahmed et al. (2019) but supporting outcomes of a study conducted by Kazmi et al. (2021) in terms of emotional intelligence, where no significant differences among male and female participants observed. It is concluded that despite differences in the brought up of male and female participants in Pakistan (Mahmood & Kausar, 2019; Siddiqui et al., 2021a), the pandemic has equally affected the emotional intelligence and stability of participants. However, a significant difference in terms of direct and indirect aggression observed among the men and women respondents. These are results in contrast with the study conducted by Siddiqui et al. (2018) and in support of the study conducted by Siddiqui et al. (2021a) where a significant difference in terms of indirect aggression observed. The mean differences have indicated that male participants have more tendency to release their anger and frustration through the direct and indirect forms of aggression. However, females' participants have shown a lesser tendency to show their anger.

COVID-19 gave institutions and professionals a new insight into online working and its huge applications in a variety of fields. A distinct rise in online working and learning was initiated during the pandemic to address the educational shortfall, meet targets for an academic year, and save the economy from collapsing. Nevertheless, recent studies in the same vein have produced many different and novel results from a variety of researchers extending the use of online platforms for a variety of purposes. According to Chandra (2020), engagement in online activities suppressed negative feelings of social isolation among students and despite physical separation, online interactions saved them from feeling lonely in spite of their physical segregation. In the same way, the expansion of online communities and social networking during pandemics, for example, has led to a change in the way that online networking can be used for psychological well-being and for remote counseling and guidance (Beard et al., 2021). Moreover, initiatives were taken to keep the masses aware of the situation, precautions, preventions and treatments through online mental health education with communication programmes, such as WeChat, Weibo, and TikTok during the outbreak (Liu et al., 2021). In addition, several books on COVID-19 prevention, control, and mental health education have been swiftly published and free electronic copies have been provided for the public (Liu et al., 2021). The current study also provided a new insight that technologically-oriented developmental models can be used to reduce anxieties, aggressions, and to enhance emotional intelligence by using online communication and activities.

6. Recommendations

Though online learning is an influential step towards the working in a new era but there are certain harms associated and one of the issues is called internet additions. Siddiqui et al. (2021b) have reported that the rise in the level of internet addiction is one of the major causes of cyberbullying and other forms of aggression. So, it is suggested that interventions should be introduced to avoid the development of negative impacts of technology on human nature.

Moreover, it is reported by Siddiqui et al. (2022a) that rise in the use of technology developed technostress among the pupil, so it is recommended to plan interventions and trained people before engaging them for technology-oriented tasks and to maintain their emotional stability.

Emotional intelligence has acted as a key factor in the suppression of aggression. It is recommended to introduce platforms for online training, where people

can be provided with emotional support to reduce anxieties and to elevate their level of emotional intelligence.

7. Limitations and directions for future research

The sampling strategy adopted was convenient sampling as due to the lockdown, access to participants was limited. Convenient sampling is non-probability sampling strategy and is considered weak to generalize findings for the whole population (Siddiqui et al., 2019). It is suggested to replicate the studies with probability sample technique. The second limitation of the study is the self-reported instrument. The use of self-completed questionnaires is reasonable and inexpensive, however, it is not considered flawless, as information gathered may be inaccurate owing to recall problems (Siddiqui et al., 2021a). It is recommended to use multiple measures for each construct to ensure more reliable results. The study design is cross-sectional that used to investigate measures and the outcome of the study of participants at the same time (Setia, 2016) where forecasting is comparatively difficult to achieve. It is recommended to recreate the study with longitudinal research approach. One of the other major limitations of the study is the skewed data where there is considerable difference between the number of participants working online (211) and on-site (22). Due to the lockdown, physical contact was restricted, which made it difficult for researchers to trace and meet more people still engaged in on-site jobs. Moreover, it was uncertain when the government would lift its lockdown and everyone would begin working physically again. Therefore, researchers analyzed the data collected within one month of the lockdown and did not continue to collect more data. It is recommended that in the future, for comparative analysis, there should be less difference in the number of participants in two groups when compared.

Ethical approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee.

Conflict of interest

The authors declare that they have no conflict of interest.

Informed consent

Participants voluntarily involved in the survey research and were informed about maintenance of anonymity before data was collected.

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