

# Yoke of corporate governance and firm performance: A study of listed firms in Pakistan

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## ABSTRACT

**Purpose:** The objective of this exploration is to show the relation among corporate governance tools (board size, board independence, CEO status, Board Education, and Established Years of the firm) and firm performance which is determined by return on asset (ROA). **Methodology:** Quantitative data are used to discover the association between the variables. The top 75 companies registered on the Pakistan Stock Exchange involving the period from 2010 to 2019 are taken as a sample. **Findings:** The research found that there is a connection between performance of the firm with the overall extent of directors, board independence, and average education of board representatives. Insignificant results came for CEO duality and established years of the firm. The result predicted that an increase in total board members and average education of board members will increase firm performance (ROA), whereas a reduction in board independence will reduce firm performance (ROA) which explains the importance of corporate governance for the success of a firm performance. **Originality of the Study:** Unlike the previous studies, this study tried to find a long-term influence of corporate governance on firm performance by analyzing five different variables for the listed firms of Pakistan. **Implication of the Study:** The study provides the importance of corporate governance tools and their effectiveness for the success of the organizations, especially in Pakistan.

**Key words:** Board education, board independence, board size, CEO duality, corporate governance, firm performance, Pakistan, return on asset

**JEL Classification:** G3: Corporate Finance and Governance: G30

## INTRODUCTION

Corporate governance is the procedure and relation managed by numerous groups to manage and run a business (Cadbury Committee, 1992). Corporate governance has to turn out to be a prevalent debate in the growing economies. The general view is that corporate governance implementation improves the performance

of the firm and safeguards the interest of shareholders (Switzer and Tahaoglu, 2015). Corporate governance is necessary to ease differences of opinion among the stakeholders, especially shareholders and executives, so that organization's performance can be improved. However, the implementation of corporate governance is different in every country because of its economic, political, and other local structures (Chan and Cheung,

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2012). Most businesses are inherited businesses and are the building blocks for the economy (Zellweger, 2017). According to Daily and Dalton (1997a), stock exchange listed businesses are the backbone of the economy and overall stock exchange results show the growth or decline of the economy. Miller and Breton-Miller (2006) found that firms run better when they have the aim to lead business for the next generations, and to achieve this vision, they must follow certain frameworks. For example, in developed countries, firms work under well-managed regulatory frameworks but in the developing countries like Pakistan, political instability and economic crises affect the implementation of such frameworks badly.

Listed corporations of Pakistan are an important pillar of the economy and are operated under Pakistan corporate governance act which was established in 2002. Many businesses started implementing corporate governance acts in their firms (Hussain and Safdar, 2018) but these corporations are either ignorant of the principle of corporate governance or do not want to focus on the corporate governance of the firm (Jan et al., 2021). Although corporate governance has been discussed worldwide in many ways, there is inadequate study on the firms of Pakistan. Therefore, the goal of this research work is to fulfill this disparity and improve the firm performance of listed companies in Pakistan.

## LITERATURE REVIEW

It is known that the world's leading organizations are listed firms (Casillas and Pastor, 2015). Corporate governance features are inclined by law which opens the opportunity for new investors (Houcine et al., 2021). In the non-presence of a defined structure, investors find it difficult to know about their investments. Furthermore, it makes it easy for internal management to find flaws for misusing the assets which affect the shareholder's wealth and firm performance. A strong link is found between corporate governance and performance of the firm (Sami et al., 2011). According to Shaheen and Nishat (2005), corporations that do not follow corporate governance procedures usually bear the loss or a lack in their desired profits. They also state that firms with no or fewer corporate governance practices achieve fewer financial advantages. Firms with competent corporate governance procedures pay high value to the investors (Nandelstadh and Rosenberg, 2003). Corporate governance also improves the environmental performance (Khan and Johl, 2019; Toha et al., 2020), reporting (Khan et al., 2021) firm innovation ability (Khan and Johl, 2020), and address the stakeholders.

In addition, the corporate governance procedures address every sector within the organization and set a rule to improve the functional capability of the organization. The goal of every organization is to increase the shareholder's wealth (Gompers et al., 2003) and to do so corporate governance processes need to be followed.

Internationally, there has been plenty of research, but the empirical evidence varies from country to country. Almost, researchers have found results from their work but these results have never been consistent. The result has been going around in both ways.

According to one school of thought, CEO duality, firm size, board sovereignty, and ownership structure have a constructive effect on performance of the firm, whereas other schools of thought state opposite to it by claiming that these variables harm firm performance.

The result of adverse relation of board size and performance of the firm was found by Mashayekhi and Bazaz (2008) and Yermack (1996). Whereas constructive result was found in the study by Abor (2007); Kiel and Nicholson (2003) when comparing board size and corporate performance. Some researchers also found no correlation between firm size and the performance of the firm in their studies (Mohd Ghazali, 2010).

In the studies related to independent directors and business performing, Jackling and Johl (2009); Mashayekhi and Bazaz (2008); Rosentein and Wyatt (1990) found the independent board members are certainly related to firm performance whereas Agrawal and Knoeber (1996) stated that independent directors harm the firm performance. Furthermore, some researchers found no relation of outside directors on the firm (Coles et al., 2001)

CEO duality is considered to harm the profitability of firm performance in the corporate governance procedure but in different studies, opposite results were found, according to Abor (2007), CEO duality has a positive relationship whereas according to Ehikioya (2009), CEO duality harms the performance of the firm. Jackling and Johl (2009) stated no relationship between the CEO duality and firm performance.

The Sri Lankan researcher, Guo and Kumara (2012) tried to find the procedures of corporate governance in the Columbian stock market and found an inverse connection between performance and board size. He also noticed that independent directors have a destructive relation with firm performance.

For the Chinese market, Sami et al. (2011) found positive relations among the board size and education of directors with firm performance. According to Lam and Lee (2008), different theories give different results and he suggested that mixture of both agency and stewardship theory can only improve quality and performance relationship. The result of Lam and Lee (2008) found a favorable impact of CEO duality on non-family firms but an adverse effect on family firms. According to Hermalin and Weisbach (1998), board success relies on the structure of the board whereas Ehikioya (2009) states that there is no relationship between the structure of the board and business performance. Ujunwa (2012) recommended that an inverse link exists between the board size and the performance of the organization. Li et al. (2008) recommended a beneficial link between outside directors and organizational performance. According to Eloumi and Gueyie (2001), firms that have financial crises are mostly found with few or no independent directors. Krivogorsky (2006) endorsed many studies and states a positive relation of board independence with profitability ratios in European companies. Yermack (1996) insisted on the shaky relationship between the board size and performance, whereas Vafeas (1999) and Golden and Zajac (2001) forecasted that no link exists between performance and the board size. No link was found by Abdullah (2004) and Daily and Dalton (1992) of the creation of the board and firm performance. Donaldson and Davis (1991); Brickley et al. (1997); and Coles et al. (2001) stated that board structure should have consisted of independent and dependent directors. According to Ujunwa (2012), Nigerian firms have negative relation of firm performance with CEO duality but if board size is small, then CEO duality provides a better impact on firm performance. Kang and Zardkoohi (2005) explained in their research that CEO duality result compared with firm performance is still not sure and requires more research. Fama and Jensen (1983) stated the result that CEO duality is the cause of agency cost as it gives equal chance to the CEO to keep control on board decisions and an eye on management. Laing and Weir (1999) found in their research that the CEO dual role is unfavorable for investors' money as more self-interest decisions are made in the dual role rather than maximize the shareholder's wealth.

There has been plenty of work done on the investigation of different corporate governance procedures and measurement of firm performance but still outcomes are confusing. No one-line statement can be provided. As corporate governance style differs from country to country (Gulzar and Wang, 2010), so no solution has been found to date. The only point that is common among all research is that the future of any organization is conditional to the

successful implementation of corporate governance and that is why Porfirio and Carrilho (2020) emphasis applying corporate governance in every firm.

Hence, this issue is still unresolved, especially for the firms of Pakistan. To resolve this dispute, we took sample of Pakistani listed firms and linked the corporate governance and performance, expecting to obtain valuable findings which will improve the firm performance of listed companies of Pakistan.

## THEORETICAL FRAMEWORK

Agency theory is one of the most popular academic frameworks which have led to the development of the Anglo-Saxon model of corporate governance. The model is widely used to help the board of directors for curbing excessive executive power in the hands of management (Pande and Ansari, 2014).

The Agency Theory, Stakeholder Theory, Stewardship Theory, and Resource Dependency support our research which aims to improve the firm performance with the help of corporate governance instruments. Corporate governance has significant importance, especially to examine the performance of the board of directors. As a result, the theories which best explain the structure and reporting practices are being used for better understanding and increasing performance.

Corporate governance has been focused on the separate entity concept which results in a principal-agent problem. It is the view that the board of directors has a key responsibility to minimize any conflict between managers and owners of the business. The intention behind the theory is to minimize self-interest and boost the value of the firm by minimizing agency costs and implementing accounting procedures (Deegan, 2004). The agency problem is different in each country. In some countries, if investors are not satisfied with the performance of management, they leave the organization which results in a reduction in share price whereas vice versa in some countries, majority shareholders are dominant on minority shareholders and management, and they control them according to their needs (Spanos, 2005).

Stakeholder theory was introduced by Milton Friedman (Dmytriiev et al., 2021) which expresses the significance between business and the stakeholders such as investors, employees, and customers. The stakeholder's philosophy is the expansion of agency theory where the obligation

of the board of directors is added from investors to other key participants attached to the business. According to the theory, not only increase in the shareholder's wealth be the priority of the firm management but also growth is essential. The theory also states that if policies are applied properly, it will cover all rights of shareholders and the business life cycle of the firm will be increased.

Resource dependency theory explains that the inner structure of an organization needs to match with the external environment which can be fulfilled by the existence of the board, its size, and competent board members. The theory states that the directors bring knowledge, talent, and different policies from the outside world to the organization for the improvement of the performance of the organization.

Stewardship theory considers the managers as a good steward who acts in the best interest of the organization. The concept is established on the behavior of executives. According to [Smallman \(2004\)](#), when investors' capital is boosted, management will get the reward as well. Stewardship theory considers the position of CEO and Chairman similar and as no need for non-executive directors as theory explains that all the individuals will be working in the favor of the organization.

Corporate governance covers the following practices:

- A1: Boards with CEO duality will have high performance
- A2: More the executive directors, better the performance of the company
- A3: Smaller boards have better performance
- A4: Young board member leads to better performance
- A5: Higher average education of board results in better performance
- A6: Similarity in the interest of board members and management results in better performance
- A7: Lower level of board independence leads to better results in performance.

The primary focus of corporate governance procedures is to understand how humans can be motivated to contribute to the achievement of organizational vision ([Chrisman, 2009](#)). According to [Fan et al. \(2011\)](#), corporate governance has two main models:

1. Anglo-American Model
2. German Model

Anglo-American model focus is on the management by a single board of directors and the purpose of this is to supervise and manage the company ([Floyd and Lane, 2000](#)).

This concept is mostly used in the US, the UK, Canada, and other countries. The board is designed from the executive directors who work as the manager of the company whereas others are independent directors who work as a supervisor and bring external experience to the company whereas the German model is mostly used in Europe such as in Germany, the Netherland, and Sweden ([Fan et al., 2011](#)) and this model includes two-tier structures. It has a supervisory board as well as other boards. The supervisory board includes non-executive directors whereas the board consists of managers. Clearly, as the name suggests, the supervisory board supervises the activities of the company by directly managing the management which is included in the board.

As stated by [Goergen et al. \(2008\)](#), the other main difference between both models is that the Anglo-American model does not cover the interest of stakeholders in the corporate governance and non-executive directors do not have sufficient supremacy to take part in controls whereas, in the German model, the interest of all stakeholders is taken care of, especially the banks, workers, and suppliers. To adopt the best corporate governance practice, both models can be combined and policy for the company can be adopted.

The quantitative approach is used in the research by us. The approach helps us to find the link among the variables. Many studies have already used the regression test to check the procedures of corporate governance and we will also use the same. The study consists of the data of the top 75 companies registered in the Pakistani stock market.

Selecting the top 75 companies in the sample of the total registered company of stock exchange is because it performs a significant role in GDP and helps in generalizing the result as most of these companies have been in the top position since 2005. The information for corporate governance procedures is gathered from the approved internet site of the stock exchange and the reports are disclosed with the corporate governance practice of all the enterprises. The record for the financial report is taken from Pakistan Stock Exchange (PSX) official website and shows the annual reports of all listed company registered in the Pakistani stock market.

The correlation test is used to measure the relationship between each assumption to see the firm performance. The result will help in finding the direct and significant relation whereas a regression run will help to predict the stewardship policy practice in the firm performance.

## THE MODEL

The model used for analysis is as follows:

$$FP_{it} = \alpha + \beta_1 TDIR_{it} + \beta_2 INDIR_{it} + \beta_3 EST\ YEAR_{it} + \beta_4 CEOD_{it} + \beta_5 AVGED_{it} + u_{it}$$

Where:

$FP_{it}$  = Firms performance is measured by return on asset (ROA)

$\beta_1 TDIR_{it}$  = Total number of directors

$\beta_2 INDIR_{it}$  = Board independence

$\beta_3 EST\ YEAR_{it}$  = Established years of firm

$\beta_4 CEOD_{it}$  = CEO duality

$\beta_5 AVGED_{it}$  = Average education of board of directors

$u_{it}$  = Error term.

## DATA AND SAMPLE

The data include the top 75 Pakistani organizations registered on PSX over the period 2010–2019. We collected data for total members of the board, board independence, CEO duality, average education of board members, and years of the establishment of the firm from the yearly reports of the firms available at the PSX database. (figure 1) The sample data include total assets, net income, leverage, and other financial variables covering 2010–2019. Firms are divided into five different categories according to PSX. We manually collected board size, their independence, CEO dual role, education of board members, and year of establishment of each company. These data come from: (i) Financial website for securities (PSX.com), (ii) annual reports for 2010–2019, and (iii) Google and related search engines.

ROA which is the dependent variable (Akhtar et al., 2020) is calculated in the same method as has been calculated in the previous studies (Parkinson, 1980) which are dividing the total assets by net income. Return on equity has been calculated by dividing net income with shareholder equity. The result shows how much shareholders are earning on the investment they have made.

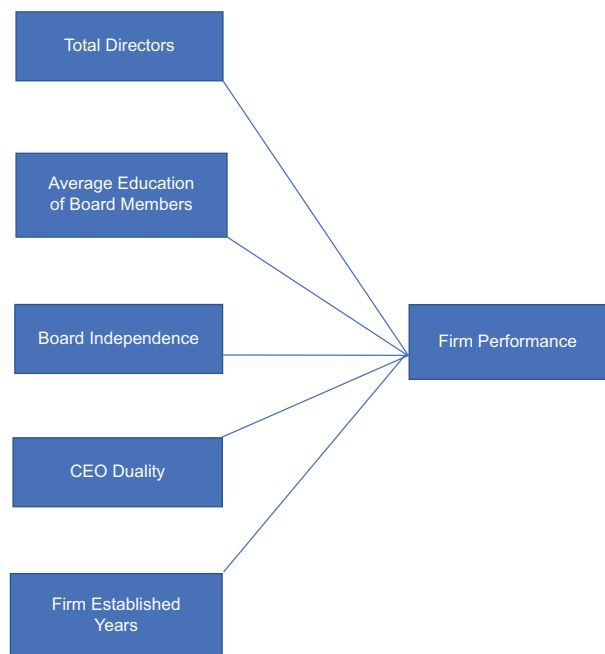
## FINDING AND ANALYSIS

The summary of descriptive figures is shown in Table 2. Mean is the quantity of significant propensity. The evocative figures for the 75 firms (75 companies) were determined individually to relate the firm performance in this research paper.

The sample consists of 75 firms registered in PSX from 2010 to 2019 making 750 observations in total. The average ROA for the sample is 6.36%. The average education and established year of the firm in the test have an average percentage of 1.19% and 1.54%.

The result of Table 3 shows that variables certainly connected. Therefore, multicollinearity cannot be seen. The p-value of INDDIR, EST YEAR, and CEOD is less than or equal to 0.010 resulting in rejecting Ho and showing a bond between variables.

Table 4 shows the result of regression analysis. The establishment and implementation of board independence show a negative impact on ROA, whereas total directors and average education show a positive impact on ROA. In this model, a 10% increase in board independence will reduce the ROA by 36%, whereas a 10% increase in total



**Figure 1:** Impact of total directors, average education of board members, board independence, CEO duality, and firm establishment on the firm performance

**Table 1: Summary of research design**

| Research design |                      |                   |
|-----------------|----------------------|-------------------|
| 1               | The type of study    | Explanatory study |
| 2               | The method of data   | Secondary source  |
| 3               | The purpose of study | Causal research   |
| 4               | The time dimension   | Panel data        |



**Table 2: Descriptive analysis of the variables**

|              | ROA       | TDIR     | INDDIR   | EST YEAR  | CEOD     | AVGED    |
|--------------|-----------|----------|----------|-----------|----------|----------|
| Mean         | 6.367441  | 0.900063 | 0.021368 | 1.548560  | 0.153333 | 1.197908 |
| Median       | 4.960000  | 0.903090 | 0.020408 | 1.580000  | 0.000000 | 1.197000 |
| Maximum      | 68.20000  | 1.146128 | 0.160000 | 1.851000  | 1.000000 | 1.334000 |
| Minimum      | -40.02000 | 0.698970 | 0.000000 | 0.301000  | 0.000000 | 1.079000 |
| Std. Dev.    | 12.06999  | 0.069740 | 0.019933 | 0.230492  | 0.360549 | 0.030121 |
| Skewness     | 0.596291  | 1.258765 | 1.974041 | -2.312266 | 1.924277 | 0.422760 |
| Kurtosis     | 5.682277  | 4.363297 | 9.536696 | 12.68558  | 4.702841 | 7.018919 |
| Jarque-Bera  | 269.2770  | 256.1419 | 1822.367 | 3599.897  | 553.4698 | 527.0817 |
| Probability  | 0.000000  | 0.000000 | 0.000000 | 0.000000  | 0.000000 | 0.000000 |
| Sum          | 4775.581  | 675.0475 | 16.02576 | 1161.420  | 115.0000 | 898.4310 |
| Sum Sq. Dev. | 109,117.7 | 3.642934 | 0.297596 | 39.79188  | 97.36667 | 0.679531 |
| Observations | 750       | 750      | 750      | 750       | 750      | 750      |

**Table 3: Correlation matrix between the variables**

|          | ROA       | TDIR      | INDDIR   | EST YEAR  | CEOD      | AVGED    |
|----------|-----------|-----------|----------|-----------|-----------|----------|
| ROA      | 1.000000  |           |          |           |           |          |
| TDIR     | 0.120454  | 1.000000  |          |           |           |          |
| INDDIR   | -0.021723 | -0.041845 | 1.000000 |           |           |          |
| EST YEAR | -0.081087 | -0.053836 | 0.150597 | 1.000000  |           |          |
| CEOD     | -0.061315 | -0.139979 | 0.017068 | 0.063646  | 1.000000  |          |
| AVGED    | 0.153412  | 0.148553  | 0.155634 | -0.050596 | -0.011731 | 1.000000 |

**Table 4: Result of regression analysis**

Dependent variable: ROA

Method: Panel least squares

Date: 10/25/21

Time: 21:36

Sample: 2010 2019

Periods included: 10

Cross-sections included: 75

Total panel (balanced) observations: 750

| Variable            | Coefficient | Std. error            | t-Statistic | Prob.    |
|---------------------|-------------|-----------------------|-------------|----------|
| C                   | -48.88100   | 15.26688              | -3.201768   | 0.0014   |
| TDIR                | 10.26046    | 5.340334              | 1.921314    | 0.0551   |
| INDDIR              | -36.34014   | 18.75258              | -1.937874   | 0.0530   |
| EST YEAR            | -1.528253   | 1.605281              | -0.952016   | 0.3414   |
| CEOD                | -1.192693   | 1.019310              | -1.170098   | 0.2423   |
| AVGED               | 39.77355    | 12.42869              | 3.200141    | 0.0014   |
| R-squared           | 0.327046    | Mean dependent var    |             | 6.367441 |
| Adjusted R-squared  | 0.321611    | S.D. dependent var    |             | 12.06999 |
| S.E. of regression  | 9.941365    | Akaike info criterion |             | 7.440575 |
| Sum squared resid.  | 73431.24    | Schwarz criterion     |             | 7.483696 |
| Log likelihood      | -2783.216   | Hannan-Quinn criteria |             | 7.457191 |
| F-statistic         | 60.18115    | Durbin-Watson stat.   |             | 1.651846 |
| Prob. (F-statistic) | 0.000000    |                       |             |          |

**Table 5: Relationship of the variables**

| S. No. | Variables                          | Nature      | Exp. relation | Symbol   |
|--------|------------------------------------|-------------|---------------|----------|
| 1      | Return on assets                   | Dependent   |               | ROA      |
| 2      | Board independence                 | Independent | –             | INDDIR   |
| 3      | Total board members                | Independent | +             | TDIR     |
| 4      | CEO duality                        | Independent | –             | CEOD     |
| 5      | Average education of board members | Independent | +             | AVGED    |
| 6      | Established years of firm          | Independent | –             | EST YEAR |

directors and average education of directors will increase ROA by 10% and 39%, respectively. As CEO duality and established years of the firm give insignificant value, it means that EST YEAR and CEOD do not affect ROA. However, 32.7% ( $R^2 = 0.32$ ) shows that the model explains all the adaptability of the information around its mean and the values are acceptable in panel data.

In the studies by [Ehikioya \(2009\)](#), she recommends the inverse relation between CEO duality and performance of the firm, whereas [Lam and Lee \(2008\)](#) revealed in their research that years of establishment of the firm have a positive link with the performance but in our result for the period of 2010–2019 for top 75 companies of Pakistan, the result shows no relation and gives insignificant values.

Table 5 shows the establishment and implementation of board independence, the total number of directors, and their education have effects on ROA. It can be seen from the table of covariance analysis that all the independent variables other than CEOD and EST YEAR are affecting the dependent variable either inversely or positively.

The increase in board independence will affect the ROA negatively, hence meeting the standards for the corporate governance be followed in Pakistan. Moreover, the increase in total director and average education will affect ROA positively. CEO duality and established year of firm will not affect ROA. Hence, total directors and their education do have a big effect on the firm performance. Moreover, 32.7 ( $R$  square = 0.32) shows that the pattern describes the changes in the numbers around its mean. Many studies have tried to measure the firm performance by a different measure, but we tried to measure it by ROA. The statistical significance is 1%, 5%, and 10%. Moreover, our result shows significance at 5%.

## CONCLUSION

The study intended to assess the present state of corporate governance in Pakistan and to see if the corporate

governance practice affects firm performance. Several hypotheses were tested using secondary data to find the corporate governance difference of the instruction by international corporate governance standard and the one followed in Pakistan. The first crucial remark is that we validate that corporate governance procedures do play role in the firm performance. [Sharma and Irving \(2005\)](#) have already discussed that procedures are a great tool for the success of the organization. “High commitment management policy” is related to corporate governance philosophy and promotes free exchange of ideas, workers equality, and the formation of confidence. Second, we have preferred using the Anglo-American model which consists of one line of the board of directors having executive and non-executive directors as well as further having two committees: Operational committee and control committee. Finally, after applying corporate governance procedures, we have found the relation between firm performance and independent variables which are board independence, the total number of directors, and their education. CEO duality and years of the establishment of the firm have not shown significance in the case of Pakistan.

It is found during research that board independence has a key role in the firm performance, and in most companies, the board independence is very low ([Vieira, 2018](#)). The main reason figured is that either most of the firms are family oriented in Pakistan and board independence is not taken seriously or the same board members are also part of the other committees which can be a conflict of interest. As the result shows that the more board independence is lost, the negative ROA will become. It can be proved from the result that a 10% change in board independence will move 36.3% positive ROA.

Earlier studies have revealed that average education performs a significant role in the success of the organization ([Sheikh et al., 2018](#)). The board leads the organization, and the more educated board member exists, the more modern way of communication will be transferred lower in the hierarchy. Our result shows that the average education of the

board members affects firm performance and a 10% change in executive compensation will affect 39.6% in ROA.

To wrap up the research, it can be concluded that board independence, the total board size, and the education of board members have a significant effect on the Pakistani firm's performance which can be measured by ROA, whereas CEO duality and established years of the firm have an insignificant effect on firm performance. Hence, it is suggested for the cooperate sector to more focus on board characteristics rather than CEO duality and its life. The formation, functionality, and operationalization of the board are key for corporate success.

## AUTHORS' CONTRIBUTIONS

Conceptualization, citation: Jawad Ahmed and Sabahat Nisar, data collection citation: Sabahat Nisar, formal analysis, citation: Amjad Ali, methodology, citation: Wajid Alim, writing – original draft, citation: Jawad Ahmed, and writing – review and editing, citation: Amjad Ali and Wajid Alim. All authors have read and agreed to the published version of the manuscript.

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## CONFLICTS OF INTEREST

The authors have no conflicts of interest to declare. All coauthors have seen and agree with the contents of the manuscript and there is no financial interest to report. We certify that the submission is original work.

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