

# Assessment of the COVID-19 Crisis Management in Bahir Dar City Administration Government Secondary Schools as Perceived by Teachers

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## Abstract

The purpose of the study was to examine the practices of adaptive leadership implemented by secondary school principals during the COVID-19 crisis to mitigate the pandemic's consequences on students' learning. The study employed the correlational design of the quantitative research approach. Data collected from 242 randomly selected teachers using a questionnaire were analyzed using descriptive (mean, standard deviation, one-sample t-test) and inferential statistics, including the Pearson product-moment correlation coefficient and multiple regressions. The findings from the data analyses showed that principals employed adaptive leadership in the schools to manage crises of the COVID-19 pandemic. Protecting the leadership voices below ( $\beta=.266$ ) and identifying adaptive challenges ( $\beta=.190$ ) were predictors of crisis management. Adaptive leadership contributed to 30.7% of crisis management. Giving work back to people ( $\beta=.314$ ,  $p<.05$ ) and identifying adaptive challenges ( $\beta=.269$ ) predict the pre-crisis management phase respectively. Crisis management was aided by leadership voice ( $\beta=.331$ ) and identifying adaptive challenges ( $\beta=.325$ ,  $p<.05$ ). Leadership voice ( $\beta=.395$ ,  $p<.05$ ) and distress reduction ( $\beta=.185$ ,  $p<.05$ ) were factors in post-crisis management. To conclude, principals practiced adaptive leadership; protecting the leadership voices below, and identifying adaptive challenges were the best predictors of crisis management. As a recommendation, principals should take part in identifying adaptive tasks and leave technical challenges to teachers; principals must be open to those teachers who have different views from the rest of the group and to do this, they must preserve leadership voices from below, and lastly, principals must support the tasks that teachers desire to perform depending on their interests.

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## Introduction

Although there is no universal definition of crisis, many agree that it is a condition that creates a significant threat or chaos in an organization, which can hurt the organization and its employee's performance and survival (Purnomo et al., 2021; Bundy et al., 2017). What is universally known is that crises require unique and flexible management and leadership styles

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(Ozkayran et al., 2020). That is, it should be managed carefully in a special process that produces a strategic response, through a group of well-trained managers who possess special skills to reduce losses due to crisis (Samawi, 2021).

Regarding the study area context, schools have always adapted to changing circumstances and activities, but the COVID-19 pandemic was a unique situation that had an impact on schools all across the world (UNICEF, 2021). Its effects on schools forced all levels of government to implement previously unheard-of mitigation measures. As a result, the responses of the federal, state, and local governments to the pandemic are varied, but closing schools to stop the spread of the virus was common (UNICEF, 2021). The same measures work throughout Ethiopia and particularly in the Amhara regional state secondary schools. Above all, the pandemic has undoubtedly created major shifts in human existence. Norms of living, ways of interaction, and the process of just being and becoming differ dramatically (Herron, et al, 2022). This indicates that many social issues in the study are affected by the pandemic which required the leaders' utmost effort.

Since school systems are always susceptible to changing circumstances and continuous reforms, accordingly, they require principals who are acquainted with the causes and consequences of the crisis and how to manage them. Supporting this, Purnomo et al. (2021) explained that school principals should have special skills to prepare, manage, and find solutions to the possible crisis that threatens the existence of schools.

Liu and Froese (2020), however, argued that, just like the regular duties of crisis management, educational crisis management demands a range of activities carried out both by individuals and schools. That is, principals need to plan, organize, monitor and evaluate, communicate, and lead to manage an educational crisis (Adams & Kritsonis, 2006; Liu & Froese, 2020; Purnomo et al., 2021; Samawi, 2021). Other writers (such as Aksu & Deveci as cited in Andrianopoulos, 2015; Bundy et al., 2017; Smith & Riley, 2012) supplement that a crisis can be managed by being categorized into three phases: pre-crisis (prevention and preparation for crisis), crisis response (dealing with, containing, and limiting its damage), and post-crisis (recovery from damage). According to these sources, "pre-crisis management" refers to recognizing the signs of a crisis before it arises or becoming aware of the problem's potential damage ahead of time. This stage introduces leaders to people without providing strategies to protect them from the negative effects of a crisis. The second phase refers to preparing crisis management plans for protection from crises or emergency action plans to shield against the consequences of the crisis. At this stage, for example, a crisis management team can be formed to implement the necessary safeguards. The last stage, known as the "post-crisis management phase," refers to establishing new strategies and tactics to manage the possible crisis. At this stage, leaders such as school principals are expected to transform the crises they encounter into opportunities.

In a state of crisis, consequently, organizations need a leader more than a manager (Northouse, 2019). According to Northouse, unlike management, which requires a focus on systems and abiding by rules and regulations, leadership focuses on creativity, harmony, and agility. Accordingly, in rescuing the survival and lives of human beings and nations from the crisis of the COVID-19 pandemic, leadership plays a more significant role than management. In such

times when the socio-economic foundations of society are shaken, leaders must be dynamic and flexible enough to deliver the right leadership services that suit the changing needs and risks facing them (Heifetz et al., 2009). Hence, Heifetz et al. claim that swift and bold decisions are necessary because, in crises where evolving uncertainties are diverse, leaders face a scarcity of evidence and incomplete scientific advice.

Heifetz et al. (2009) and Northouse (2019) suggest that adaptive leadership is a more appropriate and very essential leadership style during times of crisis. That is because, according to these sources, it provides more attention to four pivotal elements: situational awareness, quick decision-making, effective communication, and synergy and energy. In this respect, Heifetz et al. (2009) assert that "adaptive leadership is the practice of mobilizing people to tackle tough challenges and thrive" (p. 27). Similarly, Northouse (2019) claims that "adaptive leadership is a unique kind of leadership that focuses on the dynamics of mobilizing people to address change" (p. 395). Joy (2021) asserts that adaptive leadership "is a practical leadership model that helps people and businesses adapt and thrive in difficult situations" (p. 54). All of these scholars agree that adaptive leadership is essential for leaders because it paves the way for learning, adapting, and improving to new situations as they arise, rather than simply adhering to behavioural models that no longer serve the organization's objectives.

To Northouse (2019), the speed of change that generates crises requires principals to inspire school communities to adapt to the changing challenges they faced. For Jefferies (2017), such a situation demands that principals learn from challenges and tend to employ different approaches not practiced in earlier experiences. The inculcation of such behaviors among teachers and students will guide principals towards adapting to changes by encouraging subordinates to creatively think and introduce new and innovative solutions for problems they face (Hsieh et al., 2014; Northouse, 2019).

Other sources of literature (e.g., Fakhro, 2021; Jefferies, 2017; Taormina, 2008; Northouse, 2019) expound on the need for contingency leadership in the event of a crisis because each crisis is unique in its own right and no particular style of leadership can be applied in an organization. However, a leader who makes decisions based on the circumstances is required. Harris and Jones (2020) complement that instead of other leadership types that disempower followers and are not effective when educational institutions are faced with uncertainties, challenges, and complexities, the variant of contingency leadership known as adaptive leadership is the best style during a crisis for its empowering characteristics for followers.

In general, many scholars (e.g., Fakhro, 2021; Heifetz et al., 2009; Jefferies, 2017; Nissim & Simon, 2021) prescribe adaptive leadership as an essential remedy for managing complex situations resulting from crises. According to Northouse (2019), this leadership model is grounded in the notion that people who are exposed to the problem must be part of the solution. Heifetz et al. (2009) and Northouse (2019) also claim that adaptive leadership requires determining the currently required change while rethinking how organizations will adapt and thrive in a new environment. Accordingly, adaptive leadership is a means to manage uncertainties during a crisis (Nelson & Squires, 2017). On this basis, Bagwell (2020) suggests that principals who experience

a new test during a time of crisis can build resilience and capacity for their school to weather future disorders caused by COVID-19 by employing adaptive leadership.

Heifetz et al. (2009) and Northouse (2019) assert that six leader behaviours are very essential during crisis management or for being an adaptive leader. These include getting on the balcony, identifying adaptive challenges, regulating distress, maintaining disciplined attention, giving the work back to the people, and protecting the leadership voices from below. According to Northouse (2019), even though they have their natural sequence in the process of adaptive leadership, many of them overlap with each other, but leaders should demonstrate them at the same time.

According to Northouse (2019), getting on the balcony refers to the whole crisis system and the patterns within it to grapple effectively with a challenge that is adaptive rather than technical by a leader. It is often carried out by alternating between participating and observing. To succeed in this practice the leader must be able to get some distance from the situation and gain perspective for which s/he should be both active and reflective. Identifying adaptive challenges refers to analyzing and diagnosing the challenges by leaders, besides getting on the balcony and observing the dynamics of the complex situations faced as a result of the crisis (Heifetz et al., 2009; Owens & Valesky, 2014). Otherwise, a complete failure occurs if leaders fail to diagnose challenges correctly. Northouse (2019), in this respect, underlines that “approaching challenges with the wrong style of leadership is maladaptive” (p. 402). The key issue at this juncture, according to these sources, is distinguishing between technical challenges (clear problems that can be solved by applying technical expertise) and adaptive challenges (complex problems that involve different understood elements or elements which are not easy to identify that can bring unpredictable outcomes).

Regulating distress emphasizes the need for leaders to monitor the stress people are experiencing and keep it within a product range or regulate it (Northouse, 2019). These sources suggest three ways that leaders can use to maintain production levels of stress: an atmosphere in which people can feel safe tackling difficult problems; help people manage the uncertainty that accompanies adaptive work; and regulate distress to maintain production levels. Maintaining disciplined attention refers to encouraging subordinates to emphasize the tough work they need to undertake in times of crisis. This may include responding to distractions including scapegoating, denial and turf battles, resolving conflict openly and utilizing it as a source of creativity, deepening debate by avoiding polarized issues, and defending those who raise hard questions, generate distress, and challenge people to rethink the issues.

According to Northouse (2019), giving the work back to people refers to delegating subordinates to take risks and responsibility and encouraging them to make mistakes to instill self-confidence in them and their problem-solving capacity. With this, subordinates may not only feel secure in what they are doing but also want to get actively involved in solving problems. In addition, too much authority can obstruct an organization, decrease the confidence of people to solve problems on their own, result in dependence on leaders, inhibit involvement in adaptive activities, and suppress their creative capacities. Finally, protecting the voices of leadership from

below refers to carefully listening to the ideas of people, particularly those on the fringe, marginalized, or even deviant in their behaviour.

### **Statement of the Problem**

It has been about three years since COVID 19 has caused uproar across the world. The same experience holds in Ethiopia. The more students stay without regular schooling, the more they become exposed to distress and tensions caused by the pandemic. During the pandemic, students in Ethiopia in general, and in the current study area, in particular, stayed for a long time without the regular schooling. There were of course attempts made to provide education using home take exams through telegram and other electronic platforms, and assessment by assignments at secondary school level.

In such situations, leadership matters greatly. A complex and uncertain environment under tremendous pressure and limited resources, accordingly, prompted principals to deliver leadership that could help them resume the teaching and learning activity. In other words, the situation demanded that principals employ a leadership style that can help students learn in a different and chaotic environment instead of relying on the competencies, behaviours, and situational contingencies of individual principals. In this respect, different sources of literature reviewed above advocate that adaptive leadership skills are very essential in such times of crisis. After reviewing a wide range of literature, Bagwell (2020), for instance, suggested that "school leaders who take an adaptive leadership approach and leverage key leadership practices can support their schools in navigating the challenges of uncertain educational environments in adaptive ways." (p.1). Principals in such situations must be courageous and ready to demonstrate their highest caliber to motivate not only teachers and students but also families to return students to school, despite the challenging environment in which we all find ourselves.

The purpose of this study was therefore to investigate the experiences of principals in leading schools during the COVID-19 pandemic and the lessons learned, if any, for similar crises schools may face. The study placed particular emphasis on assessing whether principals have used adaptive leadership to manage the adaptive challenges brought about by COVID-19 in their schools. The following research questions were specified to spearhead the study.

1. To what extent did principals employ adaptive leadership behaviors or activities to manage the COVID-19 crisis in the study area?
2. Were there significant relationships between adaptive leadership behaviors and crisis management in the study area?
3. To what extent did each behavior of adaptive leadership explain the overall crisis management in the study area?
4. To what extent did each adaptive leadership activity influence its respective phase of crisis management?

## Methods

This study assessed the practice of adaptive leadership behavior practices of school principals in this crisis management. To that effect, it employed the correlational design of the quantitative research approach. Four schools were selected among eleven government secondary schools in Bahir Dar City Administration just by employing the lottery method of probability sampling. Finally, 265 teachers were recruited among a total of 785 by applying Yamane's (1973) formula mentioned below. In the meantime, the proportionate-to-size technique\* was taken into consideration to avoid sampling bias.

**Table 1**

*Sample Schools and Sample Size*

School Name	Population Size	Sample Size
Giyon Secondary School	135	78
Tana Haik Secondary School	115	67
Bahir Dar Secondary School	102	60
Fassilo Secondary School	102	60
Total	454	265

*Source.* Bahir Dar City Administration Education Department (2022)

A questionnaire was employed to gather data because it was found an appropriate instrument to fit the approach of the study. The questionnaire had a five-point Likert scale between 1=strongly disagree and 5 strongly agree. It was adopted from standardized sources and managed by dividing it into two parts. The first part was about adaptive leadership behaviors adopted by Northouse (2019). This included five items for each adaptive leadership behavior that in aggregate becomes 30 items. The second part contained 31 items on phases of crisis management in which 7 on the pre-crisis phase, 8 on the crisis phase, and 16 on the post-crisis phase – was taken from Aksu and Deveci (cited in Maya, 2014).

Before conducting a full-scale operation, the instrument was checked for its validity and reliability at Shum-Abo general secondary school teachers. In addition, an English language expert has checked the language clarity and two experienced instructors in the department of educational planning and management have assessed the content validity of the instrument. Besides the utilization of simple random sampling and testing the validity and reliability of the instruments, necessary assumptions such as normality, and multicollinearity were examined and found fit to employ the parametric test in this study. Table 2, for instance, displays the internal consistency of the instrument was at an acceptable level to pursue the next step.

\*  $n = \frac{N}{1+N(e)^2}$  Where n = sample size; N = population size; e = margin of error or confidence level

**Table 2***Reliability Test*

Variables	Dimensions	Number of Items	Cronbach's Alpha Coefficient
Adaptive Leadership	Getting on the Balcony	5	.930
	Adaptive Challenges	5	.926
	Regulating Distress	5	.919
	Disciplined Attention	5	.915
	Giving work back to the people	5	.917
	Leadership voices from below	5	.914
	Total	30	.914
Crisis Management	Pre-Crisis	7	.915
	During -Crisis	8	.914
	Post -Crisis	16	.915
	Total	31	.912

Finally, the collected data were analyzed using descriptive (mean, standard deviation, one-sample t-test) and inferential statistics (Pearson product-moment correlation coefficient (r) and multiple regressions, depending on the requirements of the research questions). A one-sample t-test was used to understand the practice of adaptive leadership by principals during the pandemic. The relationship between each adaptive leadership activity and the phases of crisis management was examined using Pearson product-moment correlation. Finally, the effect of each adaptive leadership behavior on crisis management was manipulated through stepwise multiple regression.

## Results

Out of 265 questionnaires distributed, 249 (94%) were returned. Among these, seven questionnaires were rejected as they were incomplete when filled out. As a result, 242 (91.23 %) questionnaires were found usable in this study.

### The Practice of Adaptive Leadership Style

Table 5 demonstrates the practice of adaptive leadership in the schools under study. Although all the mean scores, except getting on the balcony, were greater than the average score (3 in this case). The one-sample t-test output in the table showed that only the leadership voices below demonstrated a significant difference from the average ( $t = 2.627$ ,  $df = 241$ ,  $p < 0.01$ ). This implies that, except for protecting the leadership voices below (i.e., open-mindedness to carefully listen to the ideas of people at the edge of risk), school principals did not demonstrate the other behaviors of adaptive leadership effectively.

**Table 3***One-Sample t-test for Adaptive Leadership Practices of Principals (N=242, df =241)*

Variable	Mean	SD	Mean Difference	Test value = 3	
				t-value	Sig. (2-tailed)
Getting on the balcony	2.9306	.54611	-.06942	-1.978	.049
Identify adaptive challenges	3.0521	.67812	.05207	1.194	.233
Regulating distress	3.0653	.71257	.06529	1.425	.155
Disciplined attention	3.0802	.73107	.08017	1.706	.089
Giving work back	3.0215	.6718	.02149	0.498	.619
Protect leadership voices below	3.1149	.68015	.11488	2.627	.009

### The Link Between Adaptive Leadership Behaviors and Crisis Management

To investigate the link between each factor of adaptable leadership and crisis management, the Pearson movement correlation coefficient (r) was used. Field's (2009) descriptors were used to explain the correlation coefficients: between  $\pm .10$  and  $\pm .29$  (weak relationship); between  $\pm .30$  and  $\pm .49$  (moderate relationship); and between  $\pm .50$  and  $\pm 1.0$  (strong relationship).

**Table 4***Correlation Analysis between Principals' Adaptive Leadership Style and Crisis Management*

Variables	GB	AC	RD	DA	WB	LB	PC	DC	POC	CM	AL
GB	1										
AC	.408**	1									
RD	.315**	.746**	1								
DA	.077	.605**	.737**	1							
WB	.128*	.526**	.644**	.737**	1						
LB	.105	.542**	.634**	.732**	.806**	1					
PC	.152*	.430**	.414**	.377**	.450**	.448**	1				
DC	.241**	.455**	.418**	.346**	.399**	.458**	.769**	1			
POC	.116	.349**	.389**	.321**	.424**	.453**	.626**	.690**	1		
CM	.190**	.460**	.456**	.389**	.475**	.508**	.885**	.919**	.873**	1	
AL	.399**	.822**	.884**	.855**	.837**	.834**	.491**	.497**	.444**	.534**	1

Note. \*\*. Correlation is significant at the 0.01 level (2-tailed), \* Correlation is significant at the 0.05 level (2-tailed), GB= Getting on the Balcony, AC= Identifying Adaptive Challenges, RD= Regulating distress, DA= Disciplined Attention, WB= Giving the work Back to the people, LB= Protecting the Leadership voices from Below, PC= Pre-crisis, DC= During Crisis, POC= Post Crisis, CM= Crisis Management, AL=Adaptive Leadership



The correlation analysis between principals’ adaptive leadership style and crisis management is shown in table 4. At 0.01 alpha level, the adaptive leadership style was strongly and positively correlated with crisis management ( $r = .534$ ;  $p < 0.01$ ). Adaptive leadership style was moderately correlated with pre-crisis management ( $r = .491$ ;  $p < 0.01$ ), during crisis management ( $r = .497$ ;  $p < 0.01$ ), and post-crisis management ( $r = .444$ ;  $p < 0.01$ ) respectively. Each dimension of the adaptive leadership style has also a positive and significant correlation with each dimension of crisis management. This means that an increase in adaptive leadership style is related to an increase in the level of crisis management.

**The Effect of Adaptive Leadership Behaviors on Crisis Management**

This influence was assessed by using regression analysis. Before applying regression, the basic assumptions were considered.

**Table 5**

*Liner Regression Analysis on Adaptive Leadership Styles and Crisis Management*

Model	Sum of Squares	df	Mean Square	F	R Square	Adjusted R Square	Std. Error of Estimate	Sig.
1 Regression	16.738	1	16.738	95.974	0.324	0.307	0.41059	.000 <sup>b</sup>
Residual	41.857	240	0.174					
Total	58.595	241						

*Note.* Predictors: (Constant)= GB, AC, RD, DA, WBP, LB, Dependent Variable=CM, GB= Getting on the Balcony, AC= Adaptive Challenges, RD= Regulating Distress, DA= Disciplined Attention, WB= Giving work Back to people, LB= Protecting the Leadership voices Below, CM= Crisis Management

Regarding the impact of adaptive leadership on crisis management, a linear regression analysis was employed, and table 5 shows that adaptive leadership style predicted 30.7% of the CM R<sup>2</sup> (.324; F (1, 240), 95.974;  $p < .05$ ) significantly. To check how well the regression equation fits the data, ANOVA was carried out and the results of ANOVA (model fit) are in table 6 so that the model predicts the dependent variable (CM) significantly at  $P < .05$  and it was a good fit.

**The Effect of Each Adaptive Leadership Behavior on Overall Crisis Management**

**Table 6**

*Multiple Regression Analysis on Adaptive Leadership Style and Crisis Management*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.637	0.14		4.551	.000
2 LVB	0.266	0.046	0.366	5.715	.000
AC	0.19	0.047	0.261	4.068	.000

The result in table 6 showed that a comprehensive regression model 2 was obtained following regression model tests. Hence, the result indicated that from the adaptive leadership dimensions, leadership voice below ( $\beta=.266$ , ( $p < .05$ )) and, identifying adaptive challenges ( $\beta=.190$ , ( $p < .05$ )) were the best contributors to crisis management. The rest were excluded by the model.

### The Impact of each Adaptive Leadership Dimension on Each Phase of Crisis Management

To examine the impact of sub-dimensions of adaptive leadership style on each phase of crisis management, stepwise multiple regressions were carried out.

**Table 7**

*Multiple Regression Analysis on each Dimension of Adaptive Leadership Style and Pre-crisis Management*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	St. Error	Beta		
(Constant)	0.96	0.2		4.806	.000
2 WBP	0.314	0.067	0.309	4.707	.000
AC	0.269	0.066	0.267	4.066	.000

*Note.* Dependent Variable= CM, Predictors (constant) Variable= Adaptive leadership dimensions.

To check the effect of each dimension of adaptive leadership with the pre-crisis management phase of crisis management first, all the dimensions of adaptive leadership were entered using stepwise regression. The model excluded the rest four dimensions and only two, i.e. giving work back to people ( $\beta=.314$ , ( $p < .05$ )) and, identifying adaptive challenges ( $\beta=.269$ , ( $p < .05$ )) predict the pre-crisis management phase.

**Table 8**

*Multiple Regression Analysis on Dimensions of Each Adaptive Leadership Style During-Crisis Management*

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	0.7	0.219	.000	3.198	.000
2 LVB	0.331	0.073	.000	4.551	.000
AC	0.325	0.073	0.293	4.459	.000

*Note.* Dependent Variable= CM, Predictors (constant) Variable= Adaptive leadership dimensions.

The result in table 8 showed that from the adaptive leadership dimensions, leadership voice below ( $\beta=.331$ , ( $p < .05$ )) and, identifying adaptive challenges ( $\beta=.325$ , ( $p < .05$ )) were contributors during crisis management. The model excluded the rest of the sub-dimensions of adaptive leadership for they contribute nothing during crisis management phases of crisis management.

**Table 9**

*Multiple Regression Analysis on Dimensions of Each Adaptive Leadership Style and Post-crisis Management*

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.926	0.223		4.161	.000
2 LVB	0.395	0.084	0.346	4.688	.000
RD	0.185	0.08	0.17	2.303	.022

*Note.* Dependent Variable= CM, Predictors (constant) Variable= Adaptive leadership dimensions.

Table 9 portrayed that from the adaptive leadership dimensions, leadership voice below ( $\beta=.395$ , ( $p < .05$ )) and, reducing distress ( $\beta=.185$ , ( $p < .05$ )) greatly contribute to post-crisis management phases. From these sub-dimensions of adaptive leadership style, the leadership voice below relatively contributes higher than reducing distress. The rest dimensions were excluded by the model since they had no contribution to crisis management.

## Discussion

The first goal of this study was to look at adaptive leadership practices in secondary schools in Bahir Dar City administration during a crisis (the COVID-19 pandemic). Hence, the result showed that school principals in the study area are practicing an adaptive leadership style during the COVID-19 crisis management process. Similar to the idea, Joy (2021) also stated that "it is a practical leadership model that supports people and firms to adapt and thrive in challenging situations"(p. 54). This notion is also reinforced by Heifetz et al. (2009) and Northouse (2019), who suggest that adaptive leadership is a more appropriate and very essential leadership style during times of crisis. The rationale is that it provides more attention to creating situational awareness, quick decision-making, effective communication, synergy, and energy, which are highly required during the COVID-19 crisis. Harris and Jones, (2020) agree that the adaptive leadership style is the best during times of school crisis because of its empowering characteristics for followers. This implies that adaptive leadership is one means of overcoming the crisis, and principals practice it to overcome the challenge.

Assessing the relationship between adaptive leadership and crisis management is also another area of concern. Accordingly, a correlation analysis between principals' adaptive

leadership style and crisis management is shown, and at 0.01 alpha level, the adaptive leadership style was strongly and positively correlated with crisis management ( $r = .534$ ;  $p < 0.01$ ). More specifically, adaptive leadership style was moderately correlated with pre-crisis management ( $r = .491$ ;  $p < 0.01$ ), during crisis management ( $r = .497$ ;  $p < 0.01$ ), and post-crisis management ( $r = .444$ ;  $p < 0.01$ ) respectively. Each dimension of the adaptive leadership style also has a positive and significant correlation with each dimension of crisis management. This means an increase in adaptive leadership style is related to an increase in the level of COVID-19 crisis management. Though no exact research finding indicates this relationship in detail, most literature indicates a positive relationship between adaptive leadership and uncertainties (Heifetz et al., 2009) and Northouse (2019). This implies that adaptive leadership is highly related to the crisis management process.

Identifying the extent of the contribution of each dimension of adaptive leadership to overall crisis management is also another intention of the present study. Thus, the best predictors of crisis management are leadership voice ( $\beta = .266$ ;  $p = .05$ ) and identifying adaptive challenges ( $\beta = .190$ ;  $p = .05$ ). This regression result can be interpreted as a 1% change in leadership voice and identifying adaptive challenges; the crisis management process was 26.6 %, and 19% respectively. This will help school principals consider the leader-follower relationship and environmental issues in which leaders and followers' function since adaptive leadership is altering leadership behavior as the condition varies. The COVID-19 pandemic displays a very complex combination of adaptive and technical challenges, but identifying the adaptive challenges should be the task of leaders, leaving the technical challenges to teachers as experts in the school (Mayet, 2021). Similarly, the study by Weng (2009) also stated that adaptive leadership is a critical component in responding to crises, and that it requires both internal and external coordination at the individual and organizational levels. More similar to the finding is the idea that technical approaches to the complex problem of communication during a pandemic may have included a top-down approach where the administrator identified the problem and made decisions to solve it; whereas, an adaptive approach to the challenge may have leveraged leaders from below to present the problem and discuss the best course of action (Heifetz et al., 2009). According to the linear regression results, the dimensions of adaptive leadership style together predict a 30.7% variation in crisis management. This indicates that minimizing the impact of COVID-19 on education would increase by 30.7% if school principals used an adaptive leadership style.

Assessing the contribution of each dimension of adaptive leadership to each dimension of crisis management is also another objective of the study. Giving work back to people ( $\beta = .314$ ,  $p = .05$ ) and identifying adaptive challenges ( $\beta = .269$ ,  $p = .05$ ) were adaptive leadership dimensions that contributed to the pre-crisis management dimension. This implies that if school principals delegate responsibility to teachers and encourage them to make mistakes to instill confidence in their problem-solving capacity, the probability of managing risk during the pre-crisis phase will be enhanced by 31.4%. In the same way, if principals invest most of their time in identifying and adapting to challenges (diagnosing the challenges and observing the dynamics of the complex situations faced as a result of the crisis), their crisis management will be enhanced by 26.9%. This idea is similar to the notion suggested by Heifetz et al. (2009).

Similarly, during the crisis management phase, the best contributors were the leadership voice below ( $=.331$ ,  $p. 05$ ) and identifying adaptive challenges ( $=.325$ ,  $p. 05$ ). This indicated that the more principals carefully listened to the ideas of teachers, particularly those on the fringe, marginalized, or even deviant in their behavior, the more they could manage crises during the crisis management stage by 33.1%. Besides, the probability of predicting a crisis (32.5%) during the crisis management phases is increased by identifying adaptive challenges.

Finally, the leadership voice below ( $=.395$ ;  $p. 05$ ) and reducing distress ( $=.185$ ,  $p. 05$ ) have an effect on the post-crisis management phase. This result shows that if principals still emphasize the ideas of marginalized teachers, they play a pivotal role in the management of crises at the post-crisis level, which strongly increases crisis management by 39.5%. Furthermore, if principals focused on regulating distress (monitoring teachers' stress and regulating it), post-crisis management would improve by 18.5%.

## **Conclusion and Recommendations**

The evidence from the data shows that schools in the study area are highly affected by the COVID-19 pandemic crisis. To manage the crises as a result of the COVID-19 pandemic, principals employed adaptive leadership behaviors. Principals used an adaptive leadership style during the COVID-19 pandemic and, the likely crisis management process was increased by 30.7%, which indicates that adaptive leadership contributed to COVID-19 pandemic prevention. Teachers perceived that listening to the ideas of teachers, particularly those on the margins, marginalized, or even deviant in their behavior) and identifying adaptive challenges (analyzing and diagnosing the challenges that principals faced as a result of the crisis) is a significant behavior that contributes to COVID-19 pandemic crisis management. The findings of the study also showed that Principals involved themselves in giving work back to people and identifying adaptive challenges to manage the COVID-19 pandemic crisis. Similarly, the best contributors to COVID-19 crisis management were principals who were very active in exercising their leadership voice and identifying adaptive challenges. Regarding the post-crisis management phase, the results showed that leadership voice and reducing distress were found to be the best predictors of the post-crisis management process. Thus, teachers perceived that leaders' practice of COVID-19 crisis management in government secondary schools in Bahir Dar City Administration used adaptive leadership behaviors to the tune of 30.7%, which implies that the rest of the contribution was associated with other leadership styles left for future researchers.

Based on the findings of the study, different recommendations are forwarded. To implement crisis management in education, secondary school principals in the study area are encouraged to adopt an adaptive leadership style. To make this possible, principals should involve themselves in the identification of adaptive challenges from the technical challenges first. Adaptive challenges that principals should involve themselves with, for example, (addressing conflicts at the workplace, solving problems that call for a change in attitudes, behaviors, beliefs, roles, relationships, and approaches to how to accomplish goals) can be some of the examples of adaptive challenges that need principals' involvement. Technical challenges that require teachers' expertise

should be the responsibilities of teachers themselves. Above all, for adaptive challenges, principals should give support, challenge, or even take themselves out of the picture to mobilize others to do the work they need to do. Secondly, during uncertainties, it is strongly advised that principals must be careful enough to be open to teachers who may have different perspectives. When different decisions are made related to the management of a crisis, there should be involvement of teachers who are different in their views or beliefs. Thirdly, reducing distress is a very important issue that principals should do when uncertainties happen. This may be possible by creating a holding environment; providing direction, protection, orientation, conflict management, and productive norms; and regulating personal distress. Lastly, in relation to giving work back to people, principals should empower teachers to decide what to do in circumstances where they feel uncertain, expressing belief in their ability to solve their own problems, and encouraging them to think for themselves.

### Conflict of Interest

The authors have no conflict of interest.

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