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**RESEARCH PAPER**

# Development and Validation of School Crisis Prevention/ Preparedness and Management (SCPP&M) Scale

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| PAPER INFO | ABSTRACT |
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| **Corresponding Author:** mehwish.awan17@gmail.com | This research study was to develop a valid and reliable school crisis prevention/ preparedness and management scale in the context of managing educational crisis. A blended research approach was utilized to accomplish the goals' exploration. As a feature of the foundation to this examination, the instructive setting of Punjab Province is considered. The school crisis communication theory (SCCT), itself holding a solid reason in regards to its applications and qualities, which were steady in giving the method of reasoning for this investigation. Five point Likert scale was used for this purpose. The scale, would therefore explore the perceptions of 278 sampled primary school teachers of the Punjab responsible for the management of educational crisis against School Crisis Prevention/Preparedness and Management Scale (SCPP&M). As they were already seven major elements (Crisis Identification, Challenge, Communication, Reduction, Reconstruction, Sustainability and Evaluation). Each construct measured through Exploratory Factor Analysis. The results of the scale development comprised on four factors (Prevention, Preparedness, Response & Recovery). This study is based on the claim that it is one of the pioneer efforts in developing school crisis management strategy at all educational levels. |

## Introduction

Education is basic for all children yet it is particularly earnest for the a great many children influenced by crises, be they man-made or catastrophic events. However, for children influenced by crisis and emergencies, their entitlement to education remains an unfulfilled guarantee. Other than cataclysmic events happening in Pakistan there are

likewise strife influenced zones where schools, teachers and students face brokenness in their education. Teaching framework exists inside the substances of its socio-world of politics. Enhancements in the division can't be supported (and even started) without setting off an adjustment in the point of view of the key stakeholders.

The Quran stresses the importance of reading, studying, reflecting, investigating and this is a commandment prescribed to all Muslims. All Muslims both male and female has right to seek knowledge because it's a sacred duty.

Read! In the name of your Lord who created (all the exists) "اِقْرَأْ بِاسْمِ رَبِّكَ الَّذِئ خَلَقَ"

From Islamic perspectives, the purpose of this Surah is to reflect on the educational importance in development process. The first word "Iqra" was revealed to our Prophet Muhammad (Peace Be Upon Him) from Allah Taala (SWT). So, the meaning of word is Read, educate yourselves, to seek knowledge and be educated.

According to the Prophet Muhammad (PBUH):

Knowledge seeking is mandatory on all Muslim "طَلَبُ الْعِلْمُ فَرِيْضَةَ عَلَى كُلِّ مُسْلِمٍ"

Mitroff and Anagnos (2002) recommends, "an emergency is an occasion that effects or can possibly influence the entire of an institute". In the event that something influences just a little and detached piece of an institute, it might be notable crisis for an organization.

A few calamities would make an emergency in any school on the grounds that effect would overpower even the most proficient staffs. However, different episodes may not occur at any point in light of handy anticipation. As per Herman (2015), a school crisis is a transitory occasion or condition that influences a school, making people experience dread, powerlessness, shock and terribleness; a school crisis requires unprecedented activities to reestablish a feeling of mental and physical security. The source of crisis need not be school-based; outside occurrences and conditions likewise can make an emergency for a school. This definition includes the term condition to highlight the possibility that a crisis may extend over time (such as in the case of unresolved, repeated bomb threats or a natural disaster with long term effects). An emergency is a hazard portrayed by time-related pressure activated by an occasion. The activating occasions at present can be different, including, a bomb scam, a student grab, a gas spill from a neighboring property, or a kid misuse media claim against a staff part. Being badly arranged for or misusing the worry of the occasion in some cases can be the more harming than the hidden occasion.

Crisis management includes: reacting expertly to this time-basic worry in a way that tends to the basic needs of the time while quieting as opposed to intensifying the pressure experienced by different members (Farmer, 2018). The board emergency is enormously helped by readiness that guarantees the required assets is promptly accessible, for instance: student records and parental contact subtleties being open

offsite. Reacting to a crisis requires school pioneers to act unexpectedly, however, with the help of cautious arranging. School pioneers' abilities and certainty are altogether upgraded by emergency recreation and testing.

The target of organizational crisis management the board is to settle on auspicious choices dependent on best certainties and consistent discernment when working under phenomenal conditions (Pearson, 2002). In the event that one has, an intensive comprehension of the basic fundamentals of emergency the executives the effects of all emergencies can be reduced.

Fagerli& Bjorn (2003) guarantee that in the talk of crisis management, terms, for example, recognizing, breaking down, detecting, diagnosing, and evaluating possess large amounts of the different portrayals. Fruitful execution of these exercises empowers organizations maybe not to maintain a strategic distance from crisis however unquestionably to be proactive in that they can get ready for and conceivably anticipate them. They further contend that what associations need to accentuation is maybe not emergency the board but rather emergency arranging.

The investigation aim is to develop school crisis Prevention/Preparedness and management scale for Educational organization especially for Punjab Government's Primary schools to sustain these educational crises. It may be critical to attempt investigation which tends the inquiries of what really intends to be re-addressed, regarding advance necessities and difficulties of the marvels.

**Theoretical Framework**

The system of the investigation depends on the hypothetical supporting situational emergency correspondence theory (SCCT). This theory was initially created by Coombs in 2007, a teacher in correspondence learns at Eastern Illinois University, where he shows the board emergency, corporate correspondence and advertising.
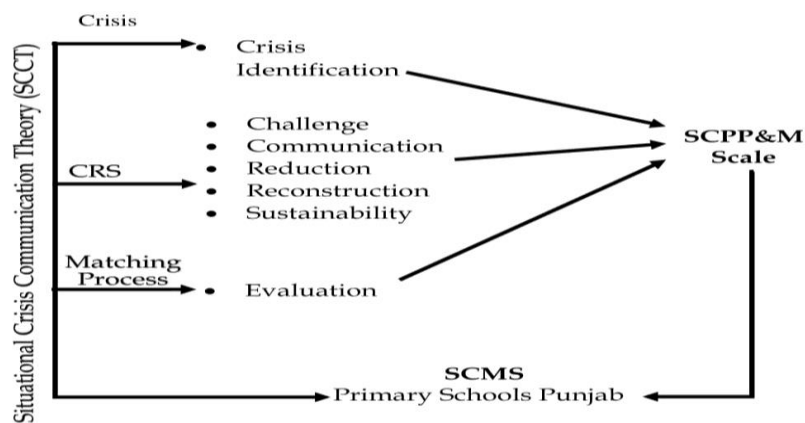


Figure **Error! No text of specified style in document.**: Theoretical framework of the study

His Situational Crisis Communication Theory (SCCT) is a theory based and experimentally tried strategy for choosing emergency reaction systems. Coombs presented the SCCT in 1995 as an emblematic way to deal with emergency correspondence, however, he tried during the most recent 13 years, refined, and formed it into a progressively rational theory. Figure 1 shows a theoretical framework of the study which based in SCCT. This hypothesis comprises of three center components: (1) the emergency circumstance, (2) emergency reaction methodologies, and (3) a framework for coordinating the emergency circumstances and emergency reaction procedures (Coombs, 2006).

The conviction is that the adequacy of correspondence procedures is subject to qualities of the emergency circumstances. By understanding the emergency circumstance, an emergency supervisor can pick the most fitting reaction. SCCT is an endeavor to comprehend, to clarify, and to give prescriptive activities to emergency correspondence (Heath & Coombs 2006). In this framework, all these three elements are further comprised of seven factors. Crisis and matching process are consisted of two factors whereas crisis response strategies consisted of five factors. All factors contributed to scale development and school crisis management strategy formulation

## Research Methodology

A questionnaire was utilized as an information gathering procedure since it could be managed to a bigger example. Utilizing the data from various writing as (Kerr, 2019; Hajer, Thayaparan &Kulatunga, 2016: Liou, 2014; McCarty, 2012; Thompson, 2012) the analyst's very own understanding and the ideas noted in hypothetical structure, the survey was intended to investigate the view of school partners in regards to class emergency the board. The questionnaire contained a lot of scales to investigate the recognitions on seven dimensions/factors about school crisis prevention/preparedness and management scale. This piece of poll estimated every measurement on five point Likert scale. Notwithstanding the seven elements of the crisis management that were gotten from the hypothetical structure. The information was breaking down and decoded in various ways determined in the information investigation segment.

## Development of School Crisis Prevention/Preparedness & Management Scale (SCPP&M)

In the present study, the scale, would therefore explore the perceptions of school stakeholders responsible for the management of educational crisis against School Crisis Prevention/Preparedness and Management Scale (SCPP&M). As they were already seven major elements (Crisis Identification, Challenge, Communication, Reduction, Reconstruction, Sustainability and Evaluation) given by Coombs (2007) in his theory and each element further comprised of at least six to eight factors.

**Table 1**
**School crisis prevention/preparedness & management scale Factors/Elements**

|  | Sub Factors |
|---|---|
| Crisis Identification | 1. Team Building |
|  | 2. Informal discussion to determine cause |
|  | 3. Availability of Crisis Management Plan |
|  | 4. Feeling secure from physical and verbal attacks |
|  | 5. Students identification with academic & social needs |
|  | 6. Funds continuity to procurement maintenance |
| Challenge | 7. Learning expectation with students |
|  | 8. knowledge about academic & behavioral expectations |
|  | 9. Evaluation of pre-employment background |
|  | 10. Visibility about crisis |
|  | 11. Heads' ability: identification & prediction about crisis |
|  | 12. Reformation & inspection of events |
| Communication | 13. Possibility of two-way communication |
|  | 14. Communication access from classroom to office |
|  | 15. Effective communication b/w parents & teachers |
|  | 16. Crisis networking system of parents |
|  | 17. Strong chain of command |
|  | 18. Ability to reduce risk of communication |
| Reduction | 19. Involvement of PR team in reaching decision |
|  | 20. Awareness program about threatening/illegal activities |
|  | 21. Provision of safety educational opportunities for parents |
|  | 22. Development of crisis committee |
|  | 23. Head decision making power |
|  | 24. Staff participation in safety actions |
| Reconstruction | 25. People treated with respect |
|  | 26. Freely participation students & staff |
|  | 27. Educational opportunity for suspended/expelled students |
|  | 28. Communication & coordination with hospital/others |
|  | 29. Continuity of routine performance in crisis |
|  | 30. Planning facilities to response crisis |
| Sustainability | 31. Budget allocation to address the crisis |
|  | 32. Conduction of health and safety training |
|  | 33. Networking with staff , students & parents |
|  | 34. Involvement of parents to develop a sense of community |
|  | 35. Provision of health services |
|  | 36. Ability to read the reports of events and crisis |
| Evaluation | 37. Communication gap |
|  | 38. On-going evaluation of the prevention program |
|  | 39. Availability of crisis team |
|  | 40. Proceeding on automating routine or complex acts |
|  | 41. Evaluation of crisis management data |
|  | 42. Maintenance of victimized students |
|  | 43. Accountability of personal duty performance in crisis |
|  | 44. Evaluation of personal safety actions |

In table 1, there were six factors given for the element of Crisis Identification, Challenge, Communication, Reduction, Reconstruction, Sustainability and eight factors of Evaluation. Therefore, the overall in SCCT Theory, there were seven elements or dimensions which were further comprised of 44 sub factors. For the development of an appropriate school crisis prevention/preparedness and management scale (SCPP&M), after a critical review of the theory a group of 120 items was made of each element of theory. Items were carefully generated after a thorough review on SCCT theory. Second draft of the scale (SCPP&M) was articulated which was consisted of seven dimensions with 65 items again. Finally, the third scale draft comprised on 44 items/factors. The response format of SCPP&M scale was decided to be a five point Likert scale: Strongly Agree (SA) =5, Agree (A) =4, Undecided (UD) =3, Disagree (DA) =2 & Strongly Disagree (SDA) =1 which allowing clear ratings.

**Exploratory Factor Analysis (EFA)**

So as to quantify the SCPP&M scale's validity and reliability, factor analysis was implemented on the grounds that the SCPP&M size of this investigation was legitimately created from the 44 sub-elements of seven elements of SCCT theory. Before the factor analysis, SCPP&M questionnaire was comprised on 44 sub factors produced from seven variables of situational crisis communication theory. Along these lines, it was chosen to apply EFA on this scale because this is one of the compelling techniques for factor analysis. In this analysis, EFA was performed just once through SPSS. By and large, after factor analysis the seven variables converged in to four elements (Prevention, Preparedness, Response and Recovery) and in the interim, forty-four sub components decreased to thirty-three factors so as to improve the unwavering quality worth. In table 2 after factor analysis, last maintenance of things just as decrease in the quantity of sub scale is given.

**Construct Validity of the Scale**

The fundamental goal to utilize the EFA to find out the structure of develop and analyzed factors its unwavering quality. It is an information driven procedure. Consequently, forty-four things of School Crisis Prevention/Preparedness & Management scale were analyzed through EFA with the information of 278 respondents. For evaluating information appropriate to be the factor broke down, after suppositions were observationally tried. The scientist proposed the number of alternatives to be pursued for testing the test ampleness. The example for performing EFA was chosen, keeping in view the criteria which given by the Field (2009). The sample size was comprised on 278 respondents and it was additionally exactly tried through the KMO and Bartlett tests. KMO=.758 which is genuinely sufficient to perform the factor analysis.

**Table 2**
**Eigen values of 33 sub factors of seven dimensions of SCPP&M scale, S.F=Sub-factors, V= variance, C= Cumulative, SL= Squared Loadings**

| Components | S.F | Initial Eigenvalues | | | Extraction Sums of SL | | |
|---|---|---|---|---|---|---|---|
| | | T | % V | C% | T | % V | C% |
| **Prevention** | 1 | 8.576 | 19.491 | 19.491 | 8.576 | 19.491 | 19.491 |
| | 2 | 5.192 | 11.801 | 31.291 | 5.192 | 11.801 | 31.291 |
| | 3 | 4.255 | 9.670 | 40.961 | 4.255 | 9.670 | 40.961 |
| | 4 | 3.696 | 8.400 | 49.361 | 3.696 | 8.400 | 49.361 |
| | 5 | 3.120 | 7.092 | 56.453 | 3.120 | 7.092 | 56.453 |
| | 6 | 2.354 | 5.351 | 61.804 | 2.354 | 5.351 | 61.804 |
| | 7 | 2.270 | 5.158 | 66.962 | 2.270 | 5.158 | 66.962 |
| | 8 | 1.882 | 4.276 | 71.238 | 1.882 | 4.276 | 71.238 |
| | 9 | 1.573 | 3.575 | 74.813 | 1.573 | 3.575 | 74.813 |
| | 10 | 1.276 | 2.900 | 77.713 | 1.276 | 2.900 | 77.713 |
| | 11 | 1.186 | 2.695 | 80.408 | 1.186 | 2.695 | 80.408 |
| **Preparedness** | 1 | 5.939 | 19.798 | 19.798 | 5.939 | 19.798 | 19.798 |
| | 2 | 4.257 | 14.189 | 33.987 | 4.257 | 14.189 | 33.987 |
| | 3 | 2.736 | 9.121 | 43.109 | 2.736 | 9.121 | 43.109 |
| | 4 | 2.302 | 7.674 | 50.782 | 2.302 | 7.674 | 50.782 |
| | 5 | 2.203 | 7.343 | 58.125 | 2.203 | 7.343 | 58.125 |
| | 6 | 1.816 | 6.055 | 64.180 | 1.816 | 6.055 | 64.180 |
| | 7 | 1.637 | 5.455 | 69.635 | 1.637 | 5.455 | 69.635 |
| **Response** | 1 | 4.076 | 21.453 | 21.453 | 4.076 | 21.453 | 21.453 |
| | 2 | 3.237 | 17.035 | 38.488 | 3.237 | 17.035 | 38.488 |
| | 3 | 1.742 | 9.168 | 47.656 | 1.742 | 9.168 | 47.656 |
| | 4 | 1.570 | 8.264 | 55.921 | 1.570 | 8.264 | 55.921 |
| | 5 | 1.341 | 7.060 | 62.981 | 1.341 | 7.060 | 62.981 |
| **Recovery** | 1 | 6.826 | 20.077 | 20.077 | 6.826 | 20.077 | 20.077 |
| | 2 | 3.733 | 10.979 | 31.056 | 3.733 | 10.979 | 31.056 |
| | 3 | 3.389 | 9.967 | 41.023 | 3.389 | 9.967 | 41.023 |
| | 4 | 3.165 | 9.310 | 50.332 | 3.165 | 9.310 | 50.332 |
| | 5 | 2.422 | 7.124 | 57.457 | 2.422 | 7.124 | 57.457 |
| | 6 | 2.037 | 5.992 | 63.448 | 2.037 | 5.992 | 63.448 |
| | 7 | 1.847 | 5.433 | 68.881 | 1.847 | 5.433 | 68.881 |
| | 8 | 1.524 | 4.484 | 73.365 | 1.524 | 4.484 | 73.365 |
| | 9 | 1.386 | 4.076 | 77.441 | 1.386 | 4.076 | 77.441 |

| | 10 | 1.167 | 3.431 | 80.872 | 1.167 | 3.431 | 80.872 |
|---|---|---|---|---|---|---|---|

In this study, the interpretations of component matrix were used as most researchers translate design network. It contains data about the special commitment of a variable to a factor. In this examination, Oblique or Oblimin turn strategy was utilized on the grounds that the components were theoretical situation. As indicated by Field (2009), the factor loadings are the check of the functional significance of an offered variable to a given factor. Regularly, take a stacking of a flat out values of more than 0.3 to be significant. In any case, the importance of a factor stacking will rely upon the example size, for the example of 200 it ought to be more noteworthy than 0.364. This worth depends on an alpha level. In this analysis table 3.7, 3.8, 3.9, 3.10, presents the loadings of the sub-factor of the four components of SCPP&M Scale.

**Internal consistency of SCPP&M scale**

Factor examination was raced to comprehend the factorial authenticity of the questionnaire. In order to find out the inside consistency of the hard/fast scale and also sub-factors' reliability analysis was run and internal consistency was investigated on controlling test whereupon the school crisis shirking/status and the Likert scale (SCPP&M) was made (n=278). The internal consistency of everything of all factors were resolved and the estimation of Cronbach's Alpha were given for everything of all data driven factors in tables 3.8, 3.9, 3.10, 3.11.

**Results of EFA on Each Factors of SCPP&M Scale**

In this analysis, through Statistical Package for Social Sciences (SPSS) 25, exploratory factor analysis (EFA) was directed to analyze the impression of school stakeholders to dependable the school crisis management as an extensive factual system of factor analysis.

After pilot study, the under seven primary components of SCPP&M scale (Crisis Identification, Challenge, Communication, Reduction, Reconstruction, Sustainability and Evaluation) with forty-four things were chosen.

Generally speaking, the aftereffects of EFA uncovered that out of forty-four items, thirty-three items were held and eleven items (2,7,10,14,18, 21, 22, 28, 30, 32, 36) were disposed of as these items held their personality in isolation introducing one factor lastly it was chosen not to incorporate them in definite group of items which were available as a gathering exhibiting a solitary factor as well. Accordingly, seven components were converged to four elements and contextualized their names (Prevention, Preparedness, Response and Recovery) due to disposed of things (table,3).

Thusly a scale holding thirty-three items of every one of the four measurements was settled. An assessment of the items showing up in four variables demonstrated that they were moderately reasonably corresponded however inside each SCPP&M scale elements are demonstrating a solid positive relationship. A detail record of the EFA

results on each factor for the build legitimacy of SCPP&M scale is given in the accompanying tables:

**Table 3**
**SCPP&M factors after EFA**

| Factors/Elements | Data Driven Competency Factors |
|---|---|
| Prevention | 1. Involvement of parents to develop a sense of community |
| | 2. Provision of health services |
| | 3. Students identification with academic & social needs |
| | 4. Funds continuity to procurement maintenance |
| | 5. knowledge about academic & behavioral expectations |
| | 6. Maintenance of victimized students |
| | 7. Team Building |
| | 8. Heads' ability: identification & prediction about crisis |
| | 9. Networking with staff , students & parents |
| | 10. Communication gap |
| | 11. People treated with respect |
| Preparedness | 12. Awareness program about threatening/illegal activities |
| | 13. Evaluation of personal safety actions |
| | 14. Educational opportunity for suspended/expelled students |
| | 15. Freely participation students & staff |
| | 16. Feeling secure from physical and verbal attacks |
| | 17. Availability of crisis team |
| | 18. Strong chain of command |
| Response | 19. Involvement of PR team in reaching decision |
| | 20. Accountability of personal duty performance in crisis |
| | 21. Reformation & inspection of events |
| | 22. Budget allocation to address the crisis |
| | 23. Crisis networking system of parents |
| Recovery | 24. On-going evaluation of the prevention program |
| | 25. Proceeding on automating routine or complex acts |
| | 26. Evaluation of crisis management data |
| | 27. Availability of Crisis Management Plan |
| | 28. Possibility of two-way communication |
| | 29. Staff participation in safety actions |
| | 30. Effective communication b/w parents & teachers |
| | 31. Continuity of routine performance in crisis |
| | 32. Evaluation of pre-employment background |
| | 33. Head decision making power |

Before factor analysis, this factors contain six sub-factors under the label of crisis identification (1,2,3,4,5,6). Maximum number of sub factors loaded on factor 1. But after the EFA on this dimension (table 4), finally eleven items (1, 5, 6, 8, 11, 25,33, 34, 35, 37, 42) were retained except one item (2) which reported a high loading on factor three in isolation.

**Table 4**
**Factor leadings, item total correlations on Prevention and sub-factors (FL= Factor Loadings, I.T.C= Item Total Correlation, α=Cronbach Alpha)**

| Factor | | Data Driven Items | FL | I.T.C | A |
|---|---|---|---|---|---|
| **Prevention** | **34.** | Involvement of parents to develop a sense of community | .805 | .686 | |
| | **35.** | Provision of health services | .757 | .680 | |
| | **5.** | Students identification with academic & social needs | .741 | .671 | |
| | **6.** | Funds continuity to procurement maintenance | .644 | .622 | |
| | **8.** | knowledge about academic & behavioral expectations | .639 | .595 | |
| | **42.** | Maintenance of victimized students | .627 | .625 | .873 |
| | **1.** | Team Building | .588 | .725 | |
| | **11.** | Heads' ability: identification & prediction about crisis | .572 | .690 | |
| | **33.** | Networking with staff , students & parents | .552 | .650 | |
| | **37.** | Communication gap | .543 | .535 | |
| | **25.** | People treated with respect | .528 | .517 | |

This item was had loading on <.5 while the standard value for the factor loading is > .5 so this item was discarded on the basis of results. Therefore, the item was excluded from the final scale. Moreover, eight items shifted (8, 11 from 2nd factor, 25 from 5th factor, 33, 34, 35 shifted from 6th factor and 37, 42 shifted from 7th factor to this factor) to this factor. These items typically presented crisis identification/ prevention, identification of problems, cause/ reasons of the crisis from students' academic and social needs to people be treated with respect manners, so factor-1 Crisis identification was named with Prevention as indicated by the factor loadings of all things in this measurement. In this space the scope of sub factor stacking is .805 to .528 while the scope of thing complete connection is .517 to .725 lastly, the scope of Cronbach Alpha is .873 and 19.49% of the difference is represented by factor-1.

**Table 5**
**Factor leadings, item total correlations on Preparedness and sub-factors (FL= Factor Loadings, I.T.C= Item Total Correlation, α=Cronbach Alpha)**

| | | Data Driven Items | FL | I.T.C | A |
|---|---|---|---|---|---|
| **Preparedness** | **20.** | Awareness program about threatening/illegal activities | .664 | .693 | |
| | **44.** | Evaluation of personal safety actions | .662 | .691 | |
| | **27.** | Educational opportunity for suspended/expelled students | .646 | .631 | |
| | **26.** | Freely participation students & staff | .628 | .587 | .675 |
| | | Feeling secure from physical and verbal attacks | .573 | .610 | |
| | **39.** | Availability of crisis team | .568 | .576 | |
| | **17.** | Strong chain of command | .551 | .716 | |

Before factor analysis, this factors contain six sub-factors under the label of Challenges (7,8,9,10,11,12). But after the EFA on this dimension (table 5), finally seven

items (04,17,20,26,27,39,44) were retained except one item (7) which reported a high loading on factor seven in isolation. The item was discarded because it loading on <.5 while the standard value of the factor loading is > .5. so, the item was excluded from the final scale. Moreover, seven items shifted (04 from factor-1, 17 from factor-3, 20 from factor-4, 26,27 shifted from factor-5 and 39, 44 shifted from factor-7 to this factor) to this factor. These items typically presented challenges/ preparedness regarding awareness program, safety actions, risk n availability of crisis team and chain of command so factor-2 Challenges was named with Preparedness as per the factor loadings of all things in this measurement. In this area the scope of sub factor stacking is .664 to .551 while the scope of thing all out relationship is .576 to .717 lastly, the scope of Cronbach Alpha is .675 and 19.79% of the difference is represented by factor-2.

**Table 6**
**Factor leadings, item total correlations on Response and sub-factors (FL= Factor Loadings, I.T.C= Item Total Correlation, α=Cronbach Alpha)**

| Factor | | Data Driven Items | FL | I.T.C | A |
|---|---|---|---|---|---|
| **Response** | 19. | Involvement of public relations team in reaching decision | .667 | .923 | |
| | 43. | Accountability of personal duty performance in crisis | .667 | .921 | |
| | 12. | Reformation & inspection of events | .617 | .853 | .620 |
| | 31. | Budget allocation to address the crisis | .612 | .833 | |
| | 16. | Crisis networking system of parents | .518 | .710 | |

Before factor analysis, this factors contain six sub-factors under the label of Challenges (13,14,15,16,17,18). But after the EFA on this dimension (table 6), finally five items (12,16,19,31,43) were retained except two items (14,18) which reported a high loading on factor-2 and on factor-1 in isolation.

These items were discarded on the basis of results because these had loading <.5 while the standard value of loading factor is > .5. So, these items were excluded from the final scale. Moreover, four items shifted (12 from factor-2, 19 from factor-4, 31 from factor-6 and 43 shifted from factor-7) to this factor. These items typically presented communication/Response regarding decision making power, accountability and crisis networking system for parents, so factor-3 Communication was named with Response as per to the factor loadings in this dimension of all items. In this domain the range of sub factor loading is .667 to .518 so, the item total correlation range is .710 to .923 and finally, the Cronbach Alpha value is .620 and 21.45% of the variance is calculated for by factor-3.

Before factor analysis, this factor was comprised on four dimensions which reduction, reconstruction and sustainability contain six sub-factors each under the label of reduction (19,20,21,22,23,24), reconstruction (25,26,27,28,29,30), sustainability (31,32,33,34,35,36) and lastly evaluation contains eight sub-factors (37,38,39,40,41,42,43,44).

**Table 7**
**Factor leadings, item total correlations on Recovery and sub-factors (FL= Factor Loadings, I.T.C= Item Total Correlation, α=Cronbach Alpha)**

| Factor | | Data Driven Items | FL | I.T.C | A |
|---|---|---|---|---|---|
| **Prevention** | **38.** | On-going evaluation of the prevention program | .686 | .646 | |
| | **40.** | Proceeding on automating routine or complex acts | .618 | .648 | |
| | **41.** | Evaluation of crisis management data | .607 | .832 | |
| | **3.** | Availability of Crisis Management Plan | .591 | .823 | |
| | **13.** | Possibility of two-way communication | .518 | .953 | |
| | **24.** | Staff participation in safety actions | .515 | .952 | .636 |
| | **15.** | Effective communication b/w parents & teachers | .546 | .915 | |
| | **29.** | Continuity of routine performance in crisis | .535 | .915 | |
| | **9.** | Evaluation of pre-employment background | .518 | .761 | |
| | **23.** | Head decision making power | .510 | .590 | |

But after the EFA on these dimensions (table,7), finally ten items (3,9,13,15,23,24,29,38,40,41) were retained except six items (21,22,28,30,32,36,) which reported a high loading of 21 on factor-4, 22 on factor-7, 28 on factor-3, 30 on factor-2, 32 on factor-2 and 36 on factor-7 in isolation. As a result, these items were discarded because these had loading <.5 while the standard value for the factor loading should be > .5. therefore, these items were excluded from the final scale. Moreover, four items shifted (3 from factor-1, 9 from factor-2, and 13, 15 from factor-3) to this factor.

All these four factors were merged in one factor due to low numbers of sub-factors in each factor. These items typically presented Recovery process regarding on-going evaluation, effective communication, continuity of routine performance and evaluation of pre-background of employment to make better plans for future, so factors-4,5,6 & 7 were merged in one factor and was named with Recovery as indicated by the factor loadings of all things in this measurement. In this area the scope of sub factor stacking is .686 to .510 while the scope of thing complete connection is .590 to .952 lastly, the scope of Cronbach Alpha is .636 and 20.07% of the change is represented by factor-4.

**Conclusion**

After factor examination of forty-four things of the School Crisis Prevention/Preparedness and Management (SCPP&M) scale dependent on information of 278 respondents utilizing Oblimin turn strategy, factorial legitimacy of the scale was set up on observational, method of reasoning and theoretical grounds. The last scale developed with thirty-three information driven things and four very much characterized elements. They concluded theses crisis management factors playing an important role in development of crisis management strategy. Their findings support to findings of the school crisis preparedness, prevention and management scale. This SCPP&M scale dependent on educational crisis elements can be utilized as a "viable apparatus" in Punjab and somewhere else through the educational stakeholders, chairmen, policy maker for getting to the crisis management systems of educational institutes.

**References**

Coombs, W. T. (1995). Choosing the right words: The development of guidelines for the selection of the appropriate crisis response strategies. *Management Communication Quarterly, 8*, 447-476.

Coombs, W. T., & Holladay, S. J. (2007). The negative communication dynamic: Exploring the impact of stakeholder affect on behavioural intentions. *Journal of Communication Management, 11*(4), 300-312.

P., & Bjorn, R. J. (2003). *Crisis Management. In Corporate Communication: A Strategic Approach to Building Reputation.* (P. S. Bronn, & R. Wiig, Eds.) Oslo: Gyldendal Akademisk.

Farmer, D. (2018). Risk and crisis management for school. *Guide for School Leaders.* Retrieved from http://www.austega.com/: http://www.austega.com

Field, A. (2009). *Discovering statistics using SPSS* (3rd ed.). Los Angeles, London: Sage.

Hannah, M., & Thompson, B. S. (2012). *An Assessment of Crisis Preparedness In Ohio Dairy Companies.* M.Sc. Thesis, Ohio State University, Graduate School.

Heath, R. l., & Commbs, W. T. (2006). *Today's Public Relations: An Introduction.* Sage Publications, Inc.

Herman, J. (2015). In *Trauma and recovery: The aftermath of violence – from domestic abuse to political terror.* New York, NY, US.

Kerr, M. M., & King, G. (2019). *School crisis prevention & intervention* (2nd ed.). Pittsburgh, PA, United State of America: Waveland Press, INC.

McCarty, D., & Nielsen, L. (2004). From Crisis to Community: What Elementary Principals Learned on 9/11. *The Journal of Research for Educational Leaders, 2*(2), 35-54.

Pearson, C. M. (2002). A blueprint for crisis management. *Ivey Business Journal*, 69-73.

Pearson, C. M., & Mitroff, I. I. (1993). From crisis prone to crisis prepared: a framework for crisis management. *Academy of Management Executive, 7*(1), 49-59.